



PACIFIC  
ENVIRONMENTAL  
GROUP, INC.

STD 3014

June 25, 1999  
Project 340-083.9A

Ms. Eva Chu  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, California 94502-6577

Re: **Quarterly Monitoring Report - Fourth Quarter 1998**  
Former Texaco Service Station  
930 Springtown Boulevard at Lassen Road  
Livermore, California

Dear Ms. Chu:

The following presents the results of the fourth quarter 1998 monitoring program for the site referenced above. This letter has been prepared for Equiva Services LLC (Equiva) by Pacific Environmental Group, Inc. (PEG). Equiva is managing the subject site on behalf of Texaco, Inc.

## FINDINGS

Ground-water monitoring wells were gauged and sampled by Blaine Tech Services, Inc. (Blaine) at the direction of PEG on November 4, 1998. Blaine's ground-water monitoring report, which includes the Ground Water Chemical Analytical Data Table, field data, and the certified analytical report, are presented as Attachment A.

Ground-water elevation contours for this sampling event is shown on Figure 1. The Ground Water Chemical Analytical Data Table presents the ground-water elevation data for ground-water monitoring wells gauged this quarter.

All wells sampled were analyzed for total purgeable petroleum hydrocarbons (TPPH), benzene, toluene, ethylbenzene, xylenes (BTEX compounds), and methyl tert-butyl ether (MtBE) by EPA Methods 8015 (modified) and 8020. The presence of MtBE was confirmed in selected wells by EPA Method 8260. TPPH, benzene, and MtBE concentrations for the November 1998 sampling date are shown on Figure 2. Ground-water analytical data are presented in the Ground Water Chemical Analytical Data Table.

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MANAGEMENT

## DISCUSSION

Concentrations of TPPH and benzene were reported in four of the six monitoring wells, sampled on-site during the fourth quarter 1998. Concentrations of TPPH ranged from 230 parts per billion (ppb) detected in Well MW-3 to 24,000 ppb detected in Well MW-B. Concentrations of benzene ranged from 11 ppb detected in Well MW-3 to 150 ppb detected in Well MW-B. All on-site wells reported non-detectable concentrations of MtBE with the exception of upgradient Well MW-3, which reported a concentration of 14 ppb MtBE by EPA Method 8260.

Wells MW-4 and MW-8 located downgradient of the site reported non-detectable concentrations of TPPH and MtBE. Benzene was non-detect in Well MW-4, but was detectable in Well MW-8 at a concentration of 1.2 ppb.

Concentrations of TPPH, BTEX compounds, and MtBE for ground-water samples collected during the fourth quarter 1998 appear to be consistent with historic levels for all of the sampled wells. PEG will conduct ground-water monitoring activities on an annual basis in the fourth quarter 1999.

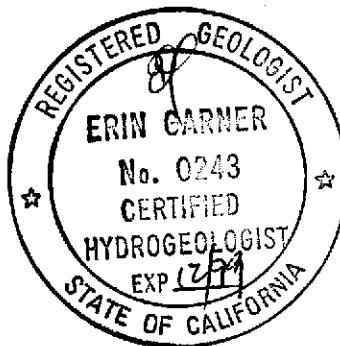
PEG submitted a *Work Plan for Soil Vapor Sampling* dated December 3, 1998 to the Alameda County Health Care Services Agency (ACHCSA). The work plan was approved by the ACHCSA on June 11, 1999. The proposed work activities involve the collection of soil and soil vapor samples, and this additional data which will be used to revise the *Risk-Based Corrective Action (RBCA) Analysis* dated October 31, 1997 submitted by Kaprelian Engineering, Inc. PEG is currently in the process of obtaining permits for the proposed work activities and seeks case closure once the revised RBCA analysis is approved by the ACHCSA.

If you have any questions or comments regarding this site, please contact me at your convenience at (408) 441-7500.

(408) 453-7300  
Sincerely,

Pacific Environmental Group, Inc.

  
Erin Garner  
Senior Geologist  
CHG 0243

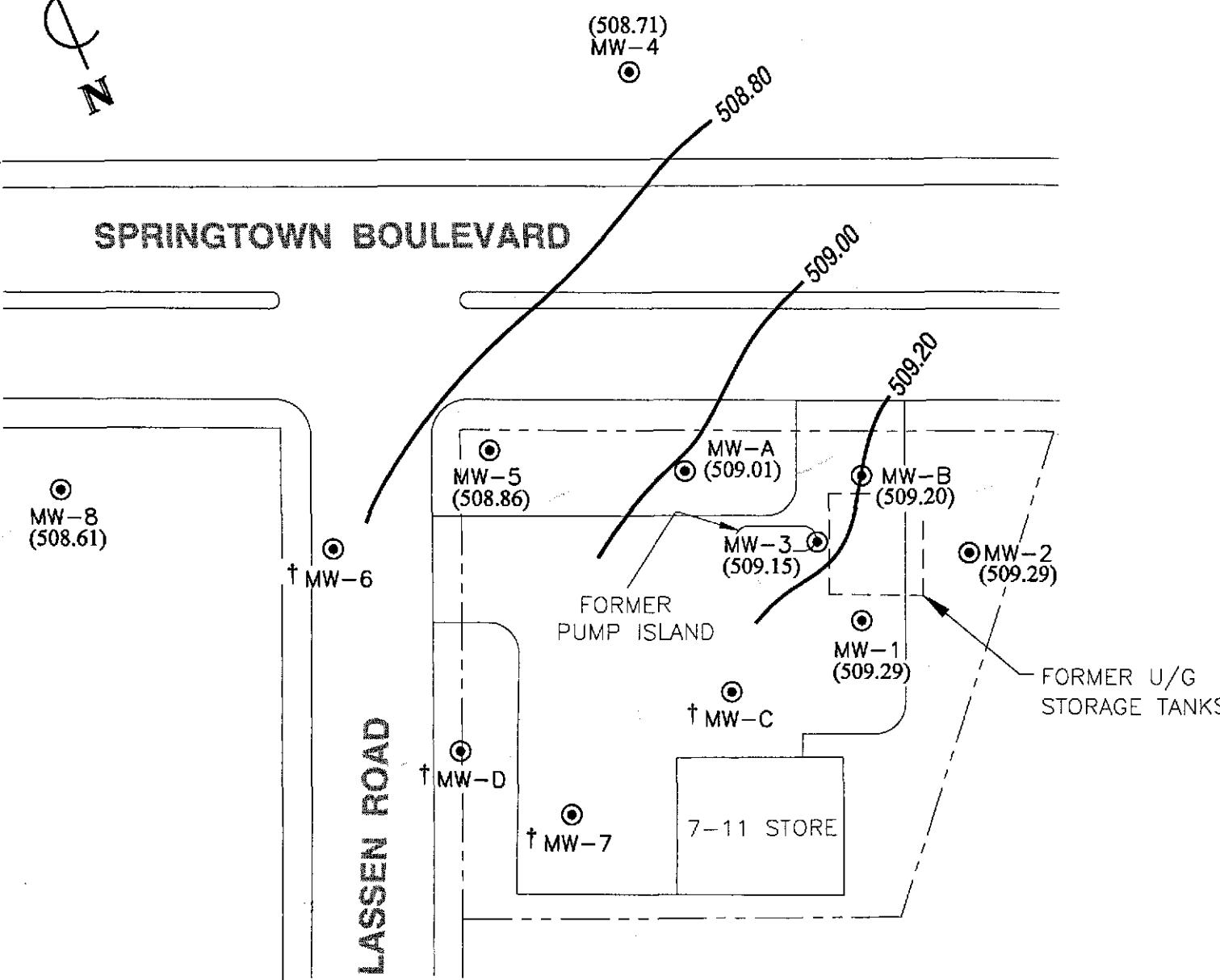


June 25, 1999

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Attachments      Figure 1 – Ground-water Elevation Contour Map  
                      Figure 2 – TPPH/Benzene/MtBE Concentration Map  
                      Attachment A – Groundwater Monitoring Report

cc:     Ms. Karen Petryna, P.E., Equiva Services LLC, P.O. Box 6249, Carson, CA 90749-6249  
          Mr. Leo Pagano, 1127 Lincoln Avenue, Alameda, CA 94602  
          Ms. Juliet Shin, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway,  
          Alameda, CA 94502-6577



#### LEGEND

- MW-2 (●) GROUND-WATER MONITORING WELL LOCATION AND DESIGNATION
- (509.29) GROUND-WATER ELEVATION IN FEET—MSL, 11-4-98
- 509.00 — GROUND-WATER ELEVATION CONTOUR IN FEET—MSL, 11-4-98
- † REMOVED FROM GAUGING PROGRAM



APPROXIMATE DIRECTION OF GROUND-WATER FLOW

APPROXIMATE GRADIENT = 0.003

SCALE



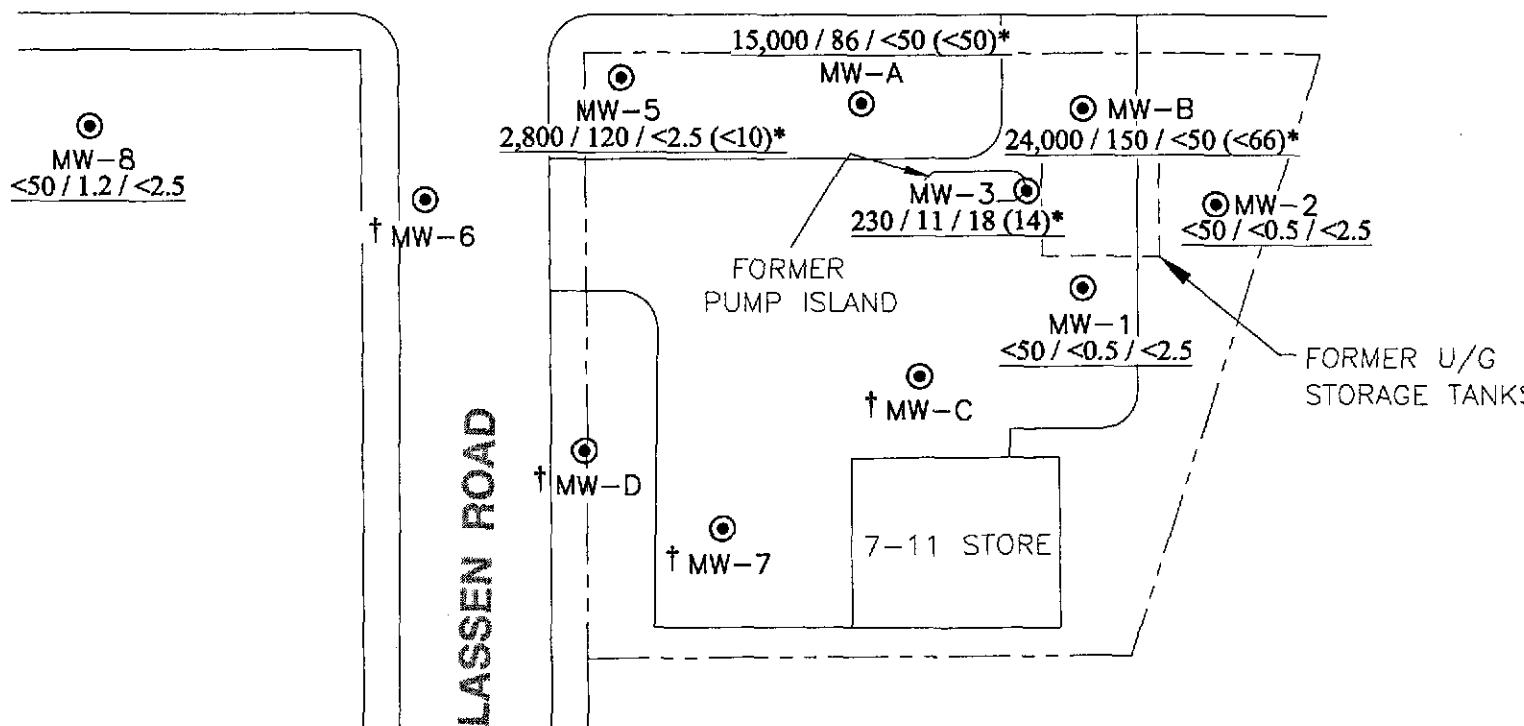
PACIFIC  
ENVIRONMENTAL  
GROUP, INC.

TITLE: <b>GROUND-WATER ELEVATION CONTOUR MAP</b>			
PREPARED FOR: <b>FORMER TEXACO SERVICE STATION</b> 930 Springtown Boulevard at Lassen Road Livermore, California			
DATE: 6/24/99	PROJECT: 340-083.9A	SCALE: AS SHOWN	FIGURE: 1



$<50 / <0.5 / <2.5$   
MW-4  
◎

## SPRINGTOWN BOULEVARD



### LEGEND

MW-2 ◎ GROUND-WATER MONITORING WELL LOCATION AND DESIGNATION

$<50 / <0.5 / <2.5$  TPPH/BENZENE/MtBE CONCENTRATION IN GROUND WATER, IN PARTS PER BILLION, 11-4-98

† REMOVED FROM SAMPLING PROGRAM

\* MtBE CONFIRMED BY EPA METHOD 8260

SCALE



TITLE:

TPPH/BENZENE/MtBE CONCENTRATION MAP

PREPARED FOR:

FORMER TEXACO SERVICE STATION  
930 Springtown Boulevard at Lassen Road  
Livermore, California

DATE: 6/24/99 PROJECT: 340-083.9A SCALE: AS SHOWN FIGURE: 2

**ATTACHMENT A**

**GROUNDWATER MONITORING REPORT**



BLAINE  
TECH SERVICES INC.  
1680 ROGERS AVENUE  
SAN JOSE, CA 95112-1105  
(408) 573-7771 FAX  
(408) 573-0555 PHONE

December 22, 1998

**Groundwater Monitoring and Sampling  
Fourth Quarter, 1998  
at the  
Former Texaco Service Station  
930 Springtown Boulevard  
Livermore, California**

This report presents the results of groundwater monitoring and sampling conducted by Blaine Tech Services, Inc. on November 4, 1998 at the site referenced above. Table 1 lists historical groundwater monitoring data and analytical results. The certified analytical report, chain-of-custody, and field data sheets are in the Appendix. Equilon Enterprises LLC's Standard Operating Procedures may be found in the fourth quarter, 1994 monitoring report.

*Erika Witschi for:*

Deidre Kerwin  
Operations Manager  
Blaine Tech Services, Inc.

DK:ck

**TABLE 1**  
**GROUND WATER CHEMICAL ANALYTICAL DATA**  
**Texaco Branded Service Station**  
**930 Springtown Blvd.**  
**Livermore, CA**

Sample Date	Measured GW Depth (ft)	GW Elevation (ft)	SP	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE EPA 8020 (ug/L)	MTBE EPA 8260 (ug/L)	Comments
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MW-A	Top of Casing Elevation in feet: 520.10										
02-Jan-92	13.61	506.49	0.00	NA	NA	NA	NA	NA	NA	NA	
02-Apr-92	12.44	507.66	0.00	27000	1200	570	1700	2300	NA	NA	
21-Jul-92	13.35	506.75	0.00	57000	1500	1800	2700	7100	NA	NA	
09-Oct-92	12.92	507.18	0.00	56000	2900	2600	4600	12000	NA	NA	
11-Jan-93	11.78	508.32	0.00	NA	NA	NA	NA	NA	NA	NA	
05-May-93	11.39	508.71	0.00	NA	NA	NA	NA	NA	NA	NA	
09-Aug-93	12.80	507.30	0.00	NA	NA	NA	NA	NA	NA	NA	
14-Oct-93	13.48	506.62	0.00	NA	NA	NA	NA	NA	NA	NA	
24-Jan-94	12.74	507.36	0.00	1400000	6900	2100	15000	38000	NA	NA	
31-May-94	12.28	507.82	0.00	48000	1200	900	1900	4200	NA	NA	
31-Aug-94	13.20	506.90	0.00	24000	140	120	830	1500	NA	NA	
02-Nov-94	13.15	506.95	0.00	15000	230	360	1100	1800	NA	NA	
20-Feb-95	11.71	508.39	0.00	12000	290	330	570	1300	NA	NA	
09-May-95	12.37	507.73	0.00	1200	6.1	5.9	12	15	NA	NA	
21-Aug-95	11.37	508.73	0.00	9600	85	140	250	860	160	NA	
20-Oct-95	12.04	508.06	0.00	360	5.2	7.9	15	43	NA	NA	
07-Feb-96	10.11	509.99	0.00	6100	130	180	320	840	NA	NA	
30-Apr-96	10.28	509.82	0.00	410	1.2	0.67	1.2	1.5	NA	NA	
14-Aug-96	10.82	509.28	0.00	3000	65	75	170	460	57	NA	
22-Nov-96	10.97	509.13	0.00	6300	100	170	310	710	64	NA	
14-Feb-97	10.00	510.10	0.00	8100	140	180	700	1600	<300	NA	
23-May-97	11.36	508.74	0.00	24000	340	520	1600	3800	<2000	NA	

**TABLE 1**  
**GROUND WATER CHEMICAL ANALYTICAL DATA**  
**Texaco Branded Service Station**  
**930 Springtown Blvd.**  
**Livermore, CA**

Sample Date	Measured GW Depth (ft)	GW Elevation (ft)	SP	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE EPA 8020 (ug/L)	MTBE EPA 8260 (ug/L)	Comments
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25-Jul-97	11.66	508.44	0.00	440	<0.5	<0.5	<0.5	<0.5	<30	NA	
31-Oct-97	11.56	508.54	0.00	3700	21	48	200	430	35	NA	
06-Feb-98	9.00	511.10	0.00	1500	2.1	4.4	55	77	<30	NA	
19-May-98	9.85	510.25	0.00	32000	310	380	1800	3700	1300	NA	
31-Jul-98	10.04	510.06	0.00	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	
02-Aug-98	11.09	509.61	0.00	15000	86	180	960	1800	<50	<50	

MW-B		Top of Casing Elevation in feet: 518.05									
02-Jan-92	11.27	506.78	0.00	NA	NA	NA	NA	NA	NA	NA	
02-Apr-92	10.18	507.87	0.00	1900	ND	39	24	35	NA	NA	
21-Jul-92	11.27	506.78	0.00	16000	180	1600	270	1100	NA	NA	
09-Oct-92	11.64	506.41	0.00	38000	490	8300	1400	5100	NA	NA	
11-Jan-93	9.65	508.40	0.00	NA	NA	NA	NA	NA	NA	NA	
05-May-93	9.28	508.77	0.00	NA	NA	NA	NA	NA	NA	NA	
09-Aug-93	11.02	507.03	0.00	NA	NA	NA	NA	NA	NA	NA	
14-Oct-93	11.34	506.71	0.00	NA	NA	NA	NA	NA	NA	NA	
24-Jan-94	10.54	507.51	0.00	23000	110	1700	600	1900	NA	NA	
31-May-94	10.19	507.86	0.00	13000	780	310	370	1400	NA	NA	
31-Aug-94	10.98	507.07	0.00	35000	160	2800	1000	4500	NA	NA	
02-Nov-94	10.90	507.15	0.00	2500	170	3200	1100	4700	NA	NA	
20-Feb-95	9.47	508.58	0.00	10000	46	1400	330	1200	NA	NA	
09-May-95	10.58	507.47	0.00	4100	9.1	47	26	30	NA	NA	
21-Aug-95	9.34	508.71	0.00	4000	9.6	110	120	270	98	NA	

**TABLE 1**  
**GROUND WATER CHEMICAL ANALYTICAL DATA**  
**Texaco Branded Service Station**  
**930 Springtown Blvd.**  
**Livermore, CA**

Sample Date	Measured GW Depth (ft)	GW Elevation (ft)	SP	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE EPA 8020 (ug/L)	MTBE EPA 8260 (ug/L)	Comments
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20-Oct-95	9.83	508.22	0.00	9300	35	1300	370	1300	NA	NA	
07-Feb-96	7.85	510.20	0.00	8900	33	700	110	360	NA	NA	
30-Apr-96	8.02	510.03	0.00	5500	17	460	120	400	NA	NA	
14-Aug-96	8.66	509.39	0.00	9000	<5	260	120	320	<300	NA	
22-Nov-96	8.70	509.35	0.00	560000	56	2400	1600	5500	<3000	NA	
14-Feb-97	7.75	510.30	0.00	4600	5.2	110	72	210	<300	NA	
23-May-97	9.05	509.00	0.00	34000	75	1700	590	2100	1800	NA	
25-Jul-97	9.37	508.68	0.00	39000	250	5200	1600	5900	<800	NA	
31-Oct-97	9.29	508.76	0.00	36000	130	2600	1200	4800	<800	NA	
06-Feb-98	6.68	511.37	0.00	4800	10	120	72	200	<80	NA	
19-May-98	7.57	510.48	0.00	25000	200	900	410	1600	570	NA	
31-Jul-98	8.03	510.02	0.00	580	<0.5	<0.5	<0.5	<0.5	14	NA	
04-Nov-98	8.35	509.20	0.00	24000	150	1400	850	2400	<50	<50	

MW-1		Top of Casing Elevation in feet	520.61								
02-Jan-92	14.11	506.50	0.00	16	6	ND	ND	ND	NA	NA	
02-Apr-92	12.98	507.63	0.00	ND	ND	ND	ND	ND	NA	NA	
21-Jul-92	13.92	506.69	0.00	<50	3.2	<0.5	<0.5	<0.5	NA	NA	
09-Oct-92	14.25	506.36	0.00	<50	8.5	<0.5	<0.5	<0.5	NA	NA	
11-Jan-93	12.30	508.31	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
05-May-93	11.88	508.73	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
09-Aug-93	13.63	506.98	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
14-Oct-93	13.91	506.70	0.00	440	16	2.9	2.9	11	NA	NA	

**TABLE 1**  
**GROUND WATER CHEMICAL ANALYTICAL DATA**  
**Texaco Branded Service Station**  
**930 Springtown Blvd.**  
**Livermore, CA**

Sample Date	Measured GW Depth (ft)	GW Elevation (ft)	SP	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE EPA 8020 (ug/L)	MTBE EPA 8260 (ug/L)	Comments
24-Jan-93	13.12	507.49	0.00	NA	NA	NA	NA	NA	NA	NA	
31-May-94	12.74	507.87	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
31-Aug-94	13.68	506.93	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
02-Nov-94	13.48	507.13	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
20-Feb-95	12.02	508.59	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
09-May-95	12.83	507.78	0.00	450	22	25	23	100	NA	NA	
21-Aug-95	11.93	508.68	0.00	58	<0.5	1.5	1.8	4.5	<10	NA	
20-Oct-95	12.40	508.21	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
07-Feb-96	10.42	510.19	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
30-Apr-96	10.48	510.13	0.00	NA	NA	NA	NA	NA	NA	NA	
14-Aug-96	11.18	509.43	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
22-Nov-96	11.10	509.51	0.00	NA	NA	NA	NA	NA	NA	NA	
14-Feb-97	10.25	510.36	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
23-May-97	11.48	509.13	0.00	NA	NA	NA	NA	NA	NA	NA	
25-Jul-97	11.99	508.62	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
31-Oct-97	11.74	508.87	0.00	NA	NA	NA	NA	NA	NA	NA	
06-Feb-98	9.27	511.34	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
19-May-98	10.51	510.10	0.00	NA	NA	NA	NA	NA	NA	NA	
31-Jul-98	10.41	510.20	0.00	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	
04-Nov-98	11.32	509.23	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	

MW-2	Top of Casing Elevation in feet: 518.29									
02-Jan-92	11.96	506.33	0.00	ND	ND	ND	ND	ND	NA	NA

**TABLE 1**  
**GROUND WATER CHEMICAL ANALYTICAL DATA**  
**Texaco Branded Service Station**  
**930 Springtown Blvd.**  
**Livermore, CA**

Sample Date	Measured GW Depth (ft)	GW Elevation (ft)	SP	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE EPA 8020 (ug/L)	MTBE EPA 8260 (ug/L)	Comments
02-Apr-92	10.89	507.40	0.00	ND	ND	ND	ND	ND	NA	NA	
21-Jul-92	11.55	506.74	0.00	NA	NA	NA	NA	NA	NA	NA	
31-May-94	10.37	507.92	0.00	NA	NA	NA	NA	NA	NA	NA	
31-Aug-94	11.16	507.13	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
02-Nov-94	11.07	507.22	0.00	NA	NA	NA	NA	NA	NA	NA	
20-Feb-95	9.66	508.63	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
09-May-95	10.14	508.15	0.00	NA	NA	NA	NA	NA	NA	NA	
21-Aug-95	9.58	508.71	0.00	<50	<0.5	<0.5	<0.5	<0.5	<10	NA	
20-Oct-95	9.91	508.38	0.00	NA	NA	NA	NA	NA	NA	NA	
07-Feb-96	8.00	510.29	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
30-Apr-96	8.21	510.08	0.00	NA	NA	NA	NA	NA	NA	NA	
14-Aug-96	8.88	509.41	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
22-Nov-96	8.88	509.41	0.00	NA	NA	NA	NA	NA	NA	NA	
14-Feb-97	7.92	510.37	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
23-May-97	9.25	509.04	0.00	NA	NA	NA	NA	NA	NA	NA	
25-Jul-97	9.51	508.78	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
31-Oct-97	9.30	508.99	0.00	NA	NA	NA	NA	NA	NA	NA	
06-Feb-98	6.88	511.41	0.00	<50	<0.5	<0.5	<0.5	1.4	<30	NA	
19-May-98	8.35	509.94	0.00	NA	NA	NA	NA	NA	NA	NA	
31-Jul-98	8.14	510.15	0.00	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	
04-Nov-98	9.30	509.29	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	

MW-3	Top of Casing Elevation in feet: 519.60						
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**TABLE 1**  
**GROUND WATER CHEMICAL ANALYTICAL DATA**  
**Texaco Branded Service Station**  
**930 Springtown Blvd.**  
**Livermore, CA**

Sample Date	Measured GW Depth (ft)	GW Elevation (ft)	SP	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE EPA 8020 (ug/L)	MTBE EPA 8260 (ug/L)	Comments
02-Jan-92	12.87	506.73	0.00	340	0.4	ND	ND	ND	NA	NA	
02-Apr-92	11.97	507.63	0.00	160	5	ND	0.3	0.5	NA	NA	
21-Jul-92	12.60	507.00	0.00	260	1.7	<0.5	<0.5	<0.5	NA	NA	
09-Oct-92	12.93	506.67	0.00	88	<0.5	<0.5	<0.5	<0.5	NA	NA	
11-Jan-93	11.16	508.44	0.00	130	<0.5	<0.5	<0.5	<0.5	NA	NA	
05-May-93	10.72	508.88	0.00	340	1.8	<0.5	1.3	<0.5	NA	NA	
09-Aug-93	12.34	507.26	0.00	610	18	<0.5	2.4	0.9	NA	NA	
14-Oct-93	12.71	506.89	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
24-Jan-94	12.03	507.57	0.00	320	3.5	<0.5	<0.5	<0.5	NA	NA	
31-May-94	11.54	508.06	0.00	830	11	12	5.0	1.2	NA	NA	
31-Aug-94	12.60	507.00	0.00	660	2	<0.5	1	<0.5	NA	NA	
02-Nov-94	12.16	507.44	0.00	1500	260	36	34	76	NA	NA	
20-Feb-95	11.05	508.55	0.00	410	1.2	1.9	1.4	2.2	NA	NA	
09-May-95	11.97	507.63	0.00	730	23	43	21	95	NA	NA	
21-Aug-95	7.60	512.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<10	NA	
20-Oct-95	11.46	508.14	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
07-Feb-96	9.42	510.18	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
30-Apr-96	9.60	510.00	0.00	NA	NA	NA	NA	NA	NA	NA	
14-Aug-96	10.24	509.36	0.00	<50	<0.5	0.60	<0.5	<0.5	<30	NA	
22-Nov-96	10.34	509.26	0.00	NA	NA	NA	NA	NA	NA	NA	
14-Feb-97	9.38	510.22	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
23-May-97	10.67	508.93	0.00	NA	NA	NA	NA	NA	NA	NA	
25-Jul-97	11.11	508.49	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	

**TABLE 1**  
**GROUND WATER CHEMICAL ANALYTICAL DATA**  
**Texaco Branded Service Station**  
**930 Springtown Blvd.**  
**Livermore, CA**

Sample Date	Measured GW Depth (ft)	GW Elevation (ft)	SP	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE EPA 8020 (ug/L)	MTBE EPA 8260 (ug/L)	Comments
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31-Oct-97	10.86	508.74	0.00	NA	NA	NA	NA	NA	NA	NA	
06-Feb-98	8.41	511.19	0.00	63	1.5	2.8	0.77	8.6	<30	NA	
19-May-98	9.40	510.20	0.00	NA	NA	NA	NA	NA	NA	NA	
31-Jul-98	9.04	510.56	0.00	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	
31-Dec-98	10.46	509.15	0.00	<30	11	72	1.36	13	10	14	

MW-4		Top of Casing Elevation in feet: 518.79														
02-Jan-92	12.22	506.57	0.00	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA			
02-Apr-92	11.03	507.76	0.00	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA			
21-Jul-92	12.36	506.43	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA			
09-Oct-92	12.40	506.39	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA			
11-Jan-93	10.72	508.07	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA			
05-May-93	10.21	508.58	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA			
09-Aug-93	12.25	506.54	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA			
14-Oct-93	12.58	506.21	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA			
24-Jan-94	11.72	507.07	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA			
31-May-94	11.29	507.50	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
31-Aug-94	12.00	506.79	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA			
02-Nov-94	11.96	506.83	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
20-Feb-95	10.42	508.37	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA			
09-May-95	11.22	507.57	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
21-Aug-95	10.51	508.28	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	NA			
20-Oct-95	10.86	507.93	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA			

**TABLE 1**  
**GROUND WATER CHEMICAL ANALYTICAL DATA**  
**Texaco Branded Service Station**  
**930 Springtown Blvd.**  
**Livermore, CA**

Sample Date	Measured GW Depth (ft)	GW Elevation (ft)	SP	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE EPA 8020 (ug/L)	MTBE EPA 8260 (ug/L)	Comments
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07-Feb-96	8.93	509.86	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
30-Apr-96	9.03	509.76	0.00	NA	NA	NA	NA	NA	NA	NA	
14-Aug-96	9.84	508.95	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
22-Nov-96	9.73	509.06	0.00	NA	NA	NA	NA	NA	NA	NA	
14-Feb-97	8.85	509.94	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
23-May-97	10.15	508.64	0.00	NA	NA	NA	NA	NA	NA	NA	
25-Jul-97	10.61	508.18	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
31-Oct-97	10.36	508.43	0.00	NA	NA	NA	NA	NA	NA	NA	
06-Feb-98	7.46	511.33	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
19-May-98	8.91	509.88	0.00	NA	NA	NA	NA	NA	NA	NA	
31-Jul-98	8.99	509.80	0.00	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	
01-Nov-98	10.06	508.71	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	

MW-5		Top of Casing Elevation in feet: 521.19									
02-Jan-92	14.56	506.63	0.00	1800	74	41	84	94	NA	NA	
02-Apr-92	13.58	507.61	0.00	ND	ND	ND	ND	ND	NA	NA	
21-Jul-92	13.77	507.42	0.00	1000	69	16	40	31	NA	NA	
09-Oct-92	14.09	507.10	0.00	3400	890	51	110	110	NA	NA	
11-Jan-93	12.24	508.95	0.00	15000	460	110	900	370	NA	NA	
05-May-93	11.90	509.29	0.00	4500	160	19	280	110	NA	NA	
09-Aug-93	13.35	507.84	0.00	2300	180	19	130	80	NA	NA	
14-Oct-93	13.89	507.30	0.00	2200	160	27	90	64	NA	NA	
24-Jan-94	13.32	507.87	0.00	2600	69	11	65	25	NA	NA	

**TABLE 1**  
**GROUND WATER CHEMICAL ANALYTICAL DATA**  
**Texaco Branded Service Station**  
**930 Springtown Blvd.**  
**Livermore, CA**

Sample Date	Measured GW Depth (ft)	GW Elevation (ft)	SP	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE EPA 8020 (ug/L)	MTBE EPA 8260 (ug/L)	Comments
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31-May-94	12.75	508.44	0.00	3100	130	64	140	120	NA	NA	
31-Aug-94	14.34	506.85	0.00	600	20	2.9	14	7.1	NA	NA	
02-Nov-94	14.22	506.97	0.00	2300	68	18	52	54	NA	NA	
20-Feb-95	12.78	508.41	0.00	12000	130	<30	240	138	NA	NA	
09-May-95	13.41	507.78	0.00	2500	57	60	54	37	NA	NA	
21-Aug-95	12.32	508.87	0.00	11000	91	28	140	120	<100	<100	
20-Oct-95	13.28	507.91	0.00	2300	38	3.8	28	19	NA	NA	
07-Feb-96	11.31	509.88	0.00	1800	35	8.1	37	20	NA	NA	
30-Apr-96	11.52	509.67	0.00	NA	NA	NA	NA	NA	NA	NA	
14-Aug-96	12.03	509.16	0.00	3500	130	22	170	47	71	NA	
22-Nov-96	12.22	508.97	0.00	3500	160	15	190	28	<200	NA	
14-Feb-97	11.20	509.99	0.00	2900	150	54	330	68	<300	NA	
23-May-97	12.55	508.64	0.00	10000	170	98	380	68	<200	NA	
25-Jul-97	12.93	508.26	0.00	2700	110	<0.5	33	<0.5	<30	NA	
31-Oct-97	12.78	508.41	0.00	NA	NA	NA	NA	NA	NA	NA	
06-Feb-98	10.26	510.93	0.00	67	<0.5	<0.5	<0.5	<0.5	<30	NA	
19-May-98	11.12	510.07	0.00	4200	120	25	360	76	510	NA	
31-Jul-98	11.79	509.40	0.00	270	<0.5	<0.5	<0.5	<0.5	<2.5	NA	
02-Nov-98	12.33	508.86	0.00	2300	120	14	590	140	426	<10	

MW-6		Top of Casing Elevation in feet: 522.18								
02-Jan-92	16.64	505.54	0.00	23	ND	0.3	0.6	3	NA	NA
02-Apr-91	15.61	506.57	0.00	ND	ND	ND	ND	ND	NA	NA

TABLE 1

**GROUND WATER CHEMICAL ANALYTICAL DATA**  
**Texaco Branded Service Station**  
**930 Springtown Blvd.**  
**Livermore, CA**

Sample Date	Measured GW Depth (ft)	GW Elevation (ft)	SP	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE EPA 8020 (ug/L)	MTBE EPA 8260 (ug/L)	Comments
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21-Jul-92	15.53	506.65	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
09-Oct-92	15.69	506.49	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
09-Aug-93	14.50	507.68	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
14-Oct-93	NA	NA	0.00	NA	NA	NA	NA	NA	NA	NA	
24-Jan-94	15.09	507.09	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
31-May-94	14.64	507.54	0.00	NA	NA	NA	NA	NA	NA	NA	
31-Aug-94	15.32	506.86	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
02-Nov-94	15.32	506.86	0.00	NA	NA	NA	NA	NA	NA	NA	
20-Feb-95	14.07	508.11	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
09-May-95	14.30	507.88	0.00	NA	NA	NA	NA	NA	NA	NA	
20-Oct-95	14.31	NA	0.00	NA	NA	NA	NA	NA	NA	NA	
25-Jul-97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	No Longer Monitored or Sampled

**TABLE 1**  
**GROUND WATER CHEMICAL ANALYTICAL DATA**  
**Texaco Branded Service Station**  
**930 Springtown Blvd.**  
**Livermore, CA**

Sample Date	Measured GW Depth (ft)	GW Elevation (ft)	SP	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE EPA 8020 (ug/L)	MTBE EPA 8260 (ug/L)	Comments
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20-Oct-95	8.61	513.58	0.00	NA							
25-Jul-97	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	No Longer Monitored or Sampled

MW-8	Top of Casing Elevation in feet: 524.03										
02-Jan-92	18.42	505.61	0.00	12000	32	980	200	760	NA	NA	
02-Apr-92	17.39	506.64	0.00	ND	ND	ND	ND	ND	NA	NA	
21-Jul-92	14.02	510.01	0.00	NA	NA	NA	NA	NA	NA	NA	
31-May-94	19.65	504.38	0.00	NA	NA	NA	NA	NA	NA	NA	
31-Aug-94	17.40	506.63	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
02-Nov-94	17.38	506.65	0.00	NA	NA	NA	NA	NA	NA	NA	
20-Feb-95	15.99	508.04	0.00	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
09-May-95	16.54	507.49	0.00	NA	NA	NA	NA	NA	NA	NA	
21-Aug-95	15.77	508.26	0.00	<50	<0.5	<0.5	0.67	0.62	<10	NA	
20-Oct-95	16.24	507.79	0.00	NA	NA	NA	NA	NA	NA	NA	
07-Feb-96	14.42	509.61	0.00	<50	7.0	<0.5	<0.5	<0.5	NA	NA	
30-Apr-96	14.65	509.38	0.00	61	9.6	<0.5	<0.5	<0.5	NA	NA	
14-Aug-96	15.08	508.95	0.00	<50	0.73	<0.5	<0.5	<0.5	<30	NA	
22-Nov-96	15.35	508.68	0.00	120	5.9	2.2	2.4	8.3	<30	NA	
14-Feb-97	14.32	509.71	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
23-May-97	13.35	510.68	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
25-Jul-97	16.05	507.98	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
31-Oct-97	15.86	508.17	0.00	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	
06-Feb-98	13.62	510.41	0.00	180	17	<0.5	<0.5	6.0	<30	NA	

**TABLE 1**  
**GROUND WATER CHEMICAL ANALYTICAL DATA**  
**Texaco Branded Service Station**  
**930 Springtown Blvd.**  
**Livermore, CA**

Sample Date	Measured GW Depth (ft)	GW Elevation (ft)	SP	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE EPA 8020 (ug/L)	MTBE EPA 8260 (ug/L)	Comments
19-May-98	14.23	509.80	0.00	<50	4.9	<0.5	<0.5	<0.5	<2.5	NA	
31-Jul-98	14.95	509.08	0.00	140	<0.5	<0.5	<0.5	<0.5	<2.5	NA	
24-Nov-98	15.42	508.61	0.00	<50	1.2	0.6	1.9	7.6	<2.5	NA	

Abbreviations:

TPPH = Total Purgeable Petroleum Hydrocarbons carbon range C6 to C12 by EPA Method 8015 (Modified)

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8020

MTBE = methyl-tertiary-butyl ether

<x = Not detected at detection limit of x

NA = Not analyzed or not available

Oxygenates = TBA, MTBE, DIPE, ETBE, and TAME by EPA Method 8260

Top of casing elevations referenced to mean sea level!



Sequoia  
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Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Sample Descript: MW-A  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9811076-01

Sampled: 11/04/98  
Received: 11/05/98  
Analyzed: 11/07/98  
Reported: 11/21/98

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	15000
Methyl t-Butyl Ether	50	N.D.
Benzene	10	86
Toluene	10	180
Ethyl Benzene	10	960
Xylenes (Total)	10	1800
Chromatogram Pattern:		C6-C12
Surrogates		
Trifluorotoluene	Control Limits % 70	% Recovery 130      73

Analyses reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Peggy Perther  
Project Manager

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**Sequoia  
Analytical**

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Blaine Tech Services  
1680 Rogers Avenue  
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Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Sample Descript: MW-A  
Matrix: LIQUID  
Analysis Method: EPA 8260  
Lab Number: 9811076-01

Sampled: 11/04/98  
Received: 11/05/98  
  
Analyzed: 11/13/98  
Reported: 11/21/98

QC Batch Number: MS111298MTBEH6A  
Instrument ID: H6

### Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	50	N.D.
Surrogates 1,2-Dichloroethane-d4	Control Limits % 76	% Recovery 114 91

Analyses reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Peggy Penner  
Project Manager

Page:

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Analytical**

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Blaine Tech Services  
1680 Rogers Avenue  
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Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Sample Descript: MW-B  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9811076-02

Sampled: 11/04/98  
Received: 11/05/98  
  
Analyzed: 11/07/98  
Reported: 11/21/98

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	24000
Methyl t-Butyl Ether	50	N.D.
Benzene	10	150
Toluene	10	1400
Ethyl Benzene	10	850
Xylenes (Total)	10	2400
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70      130	87

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1849**

Peggy Penner  
Project Manager

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**Sequoia  
Analytical**

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Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Sample Descript: MW-B  
Matrix: LIQUID  
Analysis Method: EPA 8260  
Lab Number: 9811076-02

Sampled: 11/04/98  
Received: 11/05/98  
Analyzed: 11/13/98  
Reported: 11/21/98

QC Batch Number: MS111298MTBEH6A  
Instrument ID: H6

### Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	66	N.D.
Surrogates 1,2-Dichloroethane-d4	Control Limits % 76	% Recovery 114

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Peggy Penner  
Project Manager

Page:

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**Sequoia  
Analytical**

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FAX (650) 364-9233  
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FAX (916) 921-0100  
FAX (707) 792-0342

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
  
Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Sample Descript: MW-1  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9811076-03

Sampled: 11/04/98  
Received: 11/05/98  
  
Analyzed: 11/07/98  
Reported: 11/21/98

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70                  130	83

Analyses reported as N.D. were not present above the stated limit of detection.

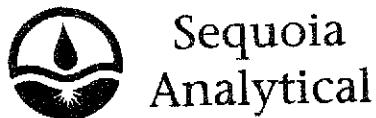
**SEQUOIA ANALYTICAL - ELAP #1849**

Peggy Penner  
Project Manager

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680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8 1455 McDowell Blvd. North, Ste. D	Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954	(650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865	FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342
---	--	--	--

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Sample Descript: MW-2  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9811076-04

Sampled: 11/04/98  
Received: 11/05/98  
Analyzed: 11/07/98  
Reported: 11/21/98

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70      130	97

Analyses reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Peggy Penner  
Project Manager



Sequoia  
Analytical

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FAX (916) 921-0100  
FAX (707) 792-0342

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Sample Descript: MW-3  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9811076-05

Sampled: 11/04/98  
Received: 11/05/98  
Analyzed: 11/07/98  
Reported: 11/21/98

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	230
Methyl t-Butyl Ether	2.5	18
Benzene	0.50	11
Toluene	0.50	7.2
Ethyl Benzene	0.50	7.6
Xylenes (Total)	0.50	33
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	93

Analyses reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Peggy Penner  
Project Manager



**Sequoia  
Analytical**

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FAX (707) 792-0342

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112

Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Sample Descript: MW-3  
Matrix: LIQUID  
Analysis Method: EPA 8260  
Lab Number: 9811076-05

Sampled: 11/04/98  
Received: 11/05/98  
Analyzed: 11/13/98  
Reported: 11/21/98

QC Batch Number: MS111298MTBEH6A  
Instrument ID: H6

### Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.0	14
Surrogates 1,2-Dichloroethane-d4	Control Limits % 76	% Recovery 114

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Peggy Perrier  
Project Manager

Page:

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**Sequoia  
Analytical**

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Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Sample Descript: MW-4  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9811076-06

Sampled: 11/04/98  
Received: 11/05/98  
Analyzed: 11/07/98  
Reported: 11/21/98

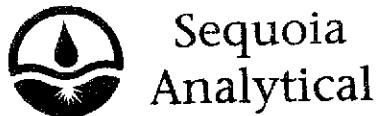
### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	90

Analytics reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1849**

Peggy Penner  
Project Manager



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FAX (707) 792-0342

Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Sample Descript: MW-5  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9811076-07

Sampled: 11/04/98  
Received: 11/05/98  
Analyzed: 11/07/98  
Reported: 11/21/98

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	2800
Methyl t-Butyl Ether	25	N.D.
Benzene	5.0	120
Toluene	5.0	14
Ethyl Benzene	5.0	590
Xylenes (Total)	5.0	140
Chromatogram Pattern:		C6-C12
Surrogates		Control Limits %
Trifluorotoluene	70	130
		% Recovery
		83

Analytics reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Peggy Penner  
Project Manager

Page: 10



**Sequoia  
Analytical**

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Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112

Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Sample Descript: MW-5  
Matrix: LIQUID  
Analysis Method: EPA 8260  
Lab Number: 9811076-07

Sampled: 11/04/98  
Received: 11/05/98  
Analyzed: 11/13/98  
Reported: 11/21/98

QC Batch Number: MS111298MTBEH6A  
Instrument ID: H6

### Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	10	N.D.
Surrogates 1,2-Dichloroethane-d4	Control Limits % 76	% Recovery 114 90

Analyses reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Peggy Penner  
Project Manager





Sequoia  
Analytical

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Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Sample Descript: MW-8  
Matrix: LIQUID  
Analysis Method: 8015Mod/8020  
Lab Number: 9811076-08

Sampled: 11/04/98  
Received: 11/05/98  
Analyzed: 11/07/98  
Reported: 11/21/98

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	1.2
Toluene	0.50	100
Ethyl Benzene	0.50	1.9
Xylenes (Total)	0.50	7.8
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	93

Analyses reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1849

Peggy Penner  
Project Manager



**Sequoia  
Analytical**

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Blaine Tech Services, Inc.  
1680 Rogers Ave.  
San Jose, CA 95112  
Attention: Deidre Kerwin

Client Project ID: Texaco 930 Springtown Blvd.  
Matrix: Liquid

Work Order #: 9811076 -01-09

Reported: Dec 2, 1998

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	11V8150	11V8150	11V8150	11V8150
Analy. Method:	EPA 8015M/8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

<b>Analyst:</b>	-	-	-
LCS/LCSD #:	8110051	8110051	8110051
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	11/6/98	11/6/98	11/6/98
Analyzed Date:	11/7/98	11/7/98	11/7/98
Instrument I.D. #:	-	-	-
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L
 <b>Result:</b>	20	20	58
<b>LCS % Recovery:</b>	100	100	97
 <b>Dup. Result:</b>	20	20	59
<b>LCSD % Recov.:</b>	100	100	98
 <b>RPD:</b>	0.0	0.0	1.7
<b>RPD Limit:</b>	0-30	0-30	0-30

<b>MS/MSD</b>			
<b>LCS</b>	80-120	80-120	80-120
<b>Control Limits</b>			

SEQUOIA ANALYTICAL  
Elap #1849

Peggy Penner  
Project Manager

Please Note:  
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9811076.BLA <1>



Sequoia  
Analytical

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Blaine Tech Services, Inc.  
1680 Rogers Ave.  
San Jose, CA 95112  
Attention: Deldre Kerwin

Client Project ID: Texaco 930 Springtown Blvd.  
Matrix: Liquid

Work Order #: 9811076-01-02, 05, 07

Reported: Dec 2, 1998

## QUALITY CONTROL DATA REPORT

Analyte: MTBE

QC Batch#: MS111298MTBEH6A

Analy. Method: EPA 8260

Prep. Method: N.A.

Analyst: T. Costello  
MS/MSD #: 981159802

Sample Conc.: 6.1

Prepared Date: 11/12/98

Analyzed Date: 11/12/98

Instrument I.D. #: H6  
Conc. Spiked: 50 µg/L

Result: 50  
MS % Recovery: 88

Dup. Result: 50  
MSD % Recov.: 88

RPD: 0.0  
RPD Limit: 0-25

LCS #: LCS111398

Prepared Date: 11/13/98

Analyzed Date: 11/13/98

Instrument I.D. #: H6  
Conc. Spiked: 50 µg/L

LCS Result: 44  
LCS % Recov.: 88

MS/MSD 60-140  
LCS 70-130  
Control Limits

SEQUOIA ANALYTICAL

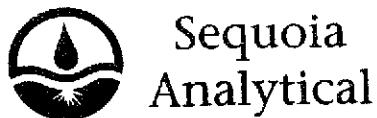
Peggy Penner  
Project Manager

### Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9811076.BLA <2>



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Blaine Tech Services  
1680 Rogers Avenue  
San Jose, CA 95112  
Attention: Deidre Kerwin

Client Proj. ID: Texaco 930 Springtown Blvd  
Lab Proj. ID: 9811076

Received: 11/05/98  
Reported: 11/21/98

### LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 14 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Peggy Penner  
Project Manager





# SEQUOIA ANALYTICAL CHAIN OF CUSTODY

680 Chesapeake Drive • Redwood City, CA 94063 • (650) 364-9600 FAX (650) 364-9233  
 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100  
 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600 FAX (510) 988-9673

Company Name: TRMI EH&S			Project Name: 981104-L1
Address: Texaco Loc. #618571050, 930 Springtown Blvd.			Billing Address (if different): 108 Cutting Boulevard
City: Livermore	State: CA	Zip Code:	Richmond, California 94804
Telephone: (510) 236-3541 FAX #: (510) 237-7821			PO# engineer : Karen Petryna
Report To: Deidre Kerwin (BTS)		Sampler:	
		QC Data: <input type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

Turnaround  10 Working Days  3 Working Days  2 - 8 Hours  
 Time:  7 Working Days  2 Working Days  
 5 Working Days  24 Hours 98-11-076

Drinking Water  
 Waste Water  
 Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH-8/BTEX/MTBE	TPH Diesel	DG/TRPH (418.1)	Nitrate	Sulfate	Total Sulfide	Comments
1. MW-A	11-4-98/205	WATER	3	40ml	01	X						*CONFIRM
2. MW-B	11-4-98/1415	HCL	3		02	X						MJBE BY 8260 IF DETECTED OR IF DETECTION LIMIT RAISED
3. MW-1	11-4-98/1320	VOA	3		03	X						
4. MW-2	11-4-98/1145		3		04	X						
5. MW-3	11-4-98/1220		3		05	X						ABOVE 5 PPB
6. MW-4	11-4-98/1110		3		06	X						
7. MW-5	11-4-98/1338		3		07	X						
8. MW-8	11-4-98/1350		3		08	X						
9. EB	11-5-98/1155		3		09	X						
10.												

Relinquished By: <u>M. K.</u>	Date: <u>11/5/98</u>	Time: <u>10:45</u>	Received By: <u>G. White</u>	Date: <u>11/5/98</u>	Time: <u>10:45</u>
Relinquished By: <u>G. White</u>	Date: <u>11/5/98</u>	Time: _____	Received By: _____	Date: _____	Time: _____
Relinquished By: _____	Date: _____	Time: _____	Received By Lab: <u>M. K.</u>	Date: <u>11/5/98</u>	Time: <u>13:15</u>

Were Samples Received in Good Condition?  Yes  No

Samples on Ice?  Yes  No

FS

Page 1 of 1

Pink - Client

Yellow - Sequoia

White - Sequoia


**SEQUOIA ANALYTICAL  
CHAIN OF CUSTODY**

Rev. 0000

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 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600 FAX (510) 988-9673

Company Name: TRNI EH&S			Project Name: 981104-L1		
Address: Texaco Loc. #618571050, 930 Springtown Blvd.			Billing Address (if different): 108 Cutting Boulevard		
City: Livermore	State: CA	Zip Code:	Richmond, California 94804		
Telephone: (510) 236-3541 FAX #: (510) 237-7821			<i>Print: engineer : Karen Petryna</i>		
Report To: Deidre Kerwin (BTS)		Sampler:		QC Data: <input type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

Turnaround  10 Working Days  3 Working Days  2 - 8 Hours  
 Time:  7 Working Days  2 Working Days  
 5 Working Days  24 Hours

Drinking Water  
 Waste Water  
 Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Analyses Requested						Comments
						TPE-8/BTEX/MTBE	TPE Diesel	O&G/TPH (418.1)	Nitrate	Sulfate	Total Sulfide	
1. MW-A	11-4-98/205	WATER	3	40ml		X						*CONFIRM MTBE BY 8260 IF DETECTED OR IF DETECTION LIMIT RAISED ABOVE 5 PPB
2. MW-B	11-4-98/1435		3	HCL		X						
3. MW-1	11-4-98/1520		3	VQA		X						
4. MW-2	11-4-98/1145		3			X						
5. MW-3	11-4-98/1220		3			X						
6. MW-4	11-4-98/1110		3			X						
7. MW-5	11-4-98/1335		3			X						
8. MW-8	11-4-98/1350		3			X						
9. EB	11-5-98/1155	Y	3	Y		X	CANCEL					need to cancel 2 samples that we submitted out to you
10.												

Relinquished By: <i>M. R. S.</i>	Date: <i>11-5-98</i>	Time: <i>10:45</i>	Received By: <i>G. Miller</i>	Date: <i>11-5-98</i>	Time: <i>10:45</i>
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____
Relinquished By: _____	Date: _____	Time: _____	Received By Lab: _____	Date: _____	Time: _____

Project Name: TEX # 618571050  
Project Number: 981104-L1

## Well Gauging Data

Date: 11-4-96

Recorded By: LAD GILCHRIST

TOC = Top of casing

DTB = Depth to bottom in feet below TOC

DTP = Depth to product in feet below TOC

**DTW = Depth to water in feet below TOC**

PT = Product thickness in feet

# TEXACO WELL MONITORING DATA SHEET

Project #: 981104-L1	Texaco ID#: 618571050
Sampler: LAD	Date: 11-4-98
Well I.D.: MW-A	Well Diameter: (2) 3 4 6 8
Total Well Depth: 16.45	Depth to Water: 11.09
Depth to Free Product:	Thickness of Free Product:

All Measurements are referenced to TOC. Meter used is Myron LpDS pH/EC Meter. All temperatures taken in degrees Fahrenheit.

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.17	5"	1.02
3"	0.38	6"	1.50
4"	0.66	8"	2.60
4.5"	0.83	Other	radius <sup>2</sup> * 0.164

Purge Method: S.S. Bailer  
 Teflon Bailer  
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: S.S. Bailer  
 Teflon Bailer  
 Extraction Port  
 Other: \_\_\_\_\_

0.9	x	3	=	2.7	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
1200	70.4	7.1	1300,	>200,	1.	ODOR
1202	70.0	7.1	1400,	>200	2.	LIGHT SHEEN
1204	69.4	7.1	1300,	>200,	3.	

Did well dewater? Yes <input checked="" type="checkbox"/> No	Gallons actually evacuated: 3
Sampling Time: 1205	Sampling Date: 11-4-98
Sample I.D.: MW-A	Laboratory: Sequoia
Analyzed for: Tph-G <input checked="" type="checkbox"/> BTEX <input type="checkbox"/> Tph-D	Other: MTBE
Equipment Blank I.D.: EB-1155	Analyzed for same as primary sample AFTER MW-2

# TEXACO WELL MONITORING DATA SHEET

Project #: 981104-L1	Texaco ID#: 618571050
Sampler: LAD	Date: 11/4/98
Well I.D.: MW-B	Well Diameter: (2) 3 4 6 8
Total Well Depth: 71.82	Depth to Water: 8.85
Depth to Free Product:	Thickness of Free Product:
All Measurements are referenced to TOC. Meter used is Myron LpDS pH/EC Meter. All temperatures taken in degrees Fahrenheit.	

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.17	5"	1.02
3"	0.38	6"	1.50
4"	0.66	8"	2.60
4.5"	0.83	Other	radius <sup>2</sup> * 0.164

Purge Method: S.S. Bailer      Sampling Method: S.S. Bailer  
 Teflon Baile~~X~~      Teflon Baile~~X~~  
 Middleburg      Extraction Port  
 Electric Submersible      Other: \_\_\_\_\_  
 Extraction Pump  
 Other: \_\_\_\_\_

$$\frac{2.2}{\text{1 Case Volume (Gals.)}} \times \frac{3}{\text{Specified Volumes}} = \frac{6.6}{\text{Calculated Volume}} \text{ Gals.}$$

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
1402	68.0	7.2	2000	50.6	2.5	odor
1406	68.2	7.1	2000	30.6	5.0	sheen
1410	68.0	7.1	2000	30.6	7.5	

Did well dewater? Yes No Gallons actually evacuated: 7.5

Sampling Time: 1415      Sampling Date: 11/4/98

Sample I.D.: MW-B      Laboratory: BC Analytical

Analyzed for: Tph-G TTEX Tph-D Other: MTBE

Equipment Blank I.D.:      Analyzed for same as primary sample

# TEXACO WELL MONITORING DATA SHEET

Project #: 981104-L1	Texaco ID#: 618571050
Sampler: LAD	Date: 11-4-98
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 25.55	Depth to Water: 17.32
Depth to Free Product:	Thickness of Free Product:

All Measurements are referenced to TOC. Meter used is Myron LpDS pH/EC Meter. All temperatures taken in degrees Fahrenheit.

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.17	5"	1.02
3"	0.38	6"	1.50
4"	0.66	8"	2.60
4.5"	0.83	Other	radius <sup>2</sup> * 0.164

Purge Method: S.S. Bailer  
 Teflon Bailer  
 Middleburg  
 Electric Submersible X  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: S.S. Bailer X  
 Teflon Bailer  
 Extraction Port  
 Other: \_\_\_\_\_

9.2	x 3	= 27.7 Gals.
1 Case Volume (Gals.)	Specified Volumes	Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
315 13:15	69.0	7.0	2200	81.2	10	
316 13:15	69.0	7.0	2200	63.5	20	
317 15:15	69.0	7.0	2200	87.6	30	

Did well dewater? Yes (No) Gallons actually evacuated: 30

Sampling Time: 1320 Sampling Date: 11-4-98

Sample I.D.: MW-1 Laboratory: Sequoia

Analyzed for: Tph-G BTEX Tph-D Other: MTBE

Equipment Blank I.D.: Analyzed for same as primary sample

# TEXACO WELL MONITORING DATA SHEET

Project #: 981104-L1	Texaco ID#: 618571050
Sampler: LAD	Date: 11/4/98
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 22.66	Depth to Water: 9.00
Depth to Free Product:	Thickness of Free Product:

All Measurements are referenced to TOC.

Meter used is Myron LpDS pH/EC Meter.

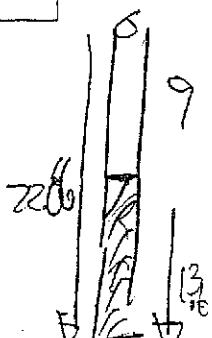
All temperatures taken in degrees Fahrenheit.

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.17	5"	1.02
3"	0.38	6"	1.50
(4")	0.60	8"	2.60
4.5"	0.83	Other	radius <sup>2</sup> * 0.164

Purge Method: S.S. Bailer  
 Teflon Bailer  
 Middleburg  
 Electric Submersible Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: S.S. Bailer  
 Teflon Bailer  
 Extraction Port  
 Other: \_\_\_\_\_

~~9.0~~ 9.0 x 3 = ~~27~~ 27 Gals.  
 1 Case Volume (Gals.) Specified Volumes Calculated Volume



Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
1135	70.6	7.0	2000.	143.0	9.	
1137	69.2	7.0	2300.	135.	18	
1139	68.4	7.0	2300.	133.	27.	

Did well dewater? Yes  No Gallons actually evacuated: 27

Sampling Time: 1145 Sampling Date: 11-4-98

Sample I.D.: MW-2 Laboratory: Sequoia

Analyzed for: Tph-G BTEX Tph-D Other: MTBE

Equipment Blank I.D.: Analyzed for same as primary sample

# TEXACO WELL MONITORING DATA SHEET

Project #: 981104-L1	Texaco ID#: 618571050
Sampler: LAD	Date: 11/4/98
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8
Total Well Depth: 21.43	Depth to Water: 12.33
Depth to Free Product:	Thickness of Free Product:
All Measurements are referenced to TOC. Meter used is Myron LPDS pH/EC Meter. All temperatures taken in degrees Fahrenheit.	

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.17	5"	1.02
3"	0.38	6"	1.50
4"	0.66	8"	2.60
4.5"	0.83	Other	radius <sup>2</sup> * 0.164

Purge Method: S.S. Bailer  
 Teflon Bailer   
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Sampling Method: S.S. Bailer  
 Teflon Bailer   
 Extraction Port  
 Other: \_\_\_\_\_

1.5	x	3	=	4.5	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
34070	69.0	7.1	2000	48.9	1.5	odor
3412	69.6	7.1	2000	7.9	3	
3445	69.4	7.1	2000	3.3	4.5	

Did well dewater? Yes <input checked="" type="checkbox"/> No	Gallons actually evacuated: 5.
Sampling Time: 1348 1358	Sampling Date: 11-4-98
Sample I.D.: MW-5	Laboratory: BC Analytical
Analyzed for: Tph-G BTEX Tph-D	Other: MTBF
Equipment Blank I.D.:	Analyzed for same as primary sample

# TEXACO WELL MONITORING DATA SHEET

Project #: 981104-L1	Texaco ID#: 618571050
Sampler: LAD	Date: 11/4/98
Well I.D.: MW - 8	Well Diameter: 2 3 (4) 6 8
Total Well Depth: 24.21	Depth to Water: 15.42
Depth to Free Product:	Thickness of Free Product:

All Measurements are referenced to TOC. Meter used is Myron LpDS pH/EC Meter. All temperatures taken in degrees Fahrenheit.

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.17	5"	1.02
3"	0.38	6"	1.50
4"	0.63	8"	2.60
4.5"	0.83	Other	radius <sup>2</sup> * 0.164

Purge Method: S.S. Bailer Sampling Method: S.S. Bailer  
 Teflon Bailer Extraction Port  
 Middleburg  
 Electric Submersible  
 Extraction Pump  
 Other: \_\_\_\_\_

Other: \_\_\_\_\_

5.8	x	3	=	17.4	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
13.29	66.6	7.1	2000	64.8	6	
13.35	55.7	7.0	2000	67.0	12	
13.41	75.0	7.1	(900)	66.4	18	

Did well dewater? Yes No Gallons actually evacuated: 18

Sampling Time: 13:50 Sampling Date: 11-4-98

Sample I.D.: MW - 8 Laboratory: Sequoia

Analyzed for: Tph-G BTEX Tph-D Other: mtBE

Equipment Blank I.D.: Analyzed for same as primary sample