Texaco Refining
and Marketing Inc.

108 Cutting Boulevard
Richmond CA 94804

ENVIRONMENTAL
PROTECTION

96 NOV 20 PM 3:51

November 18, 1996

ENV - STUDIES, SURVEYS, & REPORTS
930 Springtown Blvd., Livermore, California
Quarterly Monitoring Report

Ms. Eva Chu
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Fl. 2
Alameda, CA 94502-6577

Dear Ms. Chu:

This letter presents the results of groundwater monitoring and sampling conducted by Blaine Tech Services, Inc. on August 18, 1996, at the site referenced above (see Plate 1, Site Vicinity Map). Based on groundwater level measurements, the areal hydraulic gradient was estimated to be north-northwest (see Plate 2, Groundwater Gradient Map) at .003 ft. per ft. TPHg and benzene concentrations are shown on Plate 3. Tables 1 and 2 list historical groundwater monitoring data and analytical results, respectively. As requested by Alameda County Department of Environmental Health, monitoring wells **MW-2, MW-4, MW-6, and MW-8 are sampled semi-annually in February and August**; monitoring wells **MW-1, MW-3, MW-5, MW-A, and MW-B are sampled quarterly**; and monitoring wells MW-A, MW-B, and MW-1 through MW-8 are gauged quarterly.

The certified analytical report, chain-of-custody, field data sheets, bill of lading, and quarterly summary report are in the Appendix. Texaco's Standard Operating Procedures may be found in the fourth quarter, 1994 monitoring report.

If you have any questions or comments regarding this site, please call the Texaco Project Coordinator, Ms. Karen Petryna at (510) 236-9139.

Best Regards,

Rebecca Digerness
Environmental Assistant

Karen E. Petryna, P. E.
Civil Engineer
Texaco Refining and Marketing, Inc.

REGISTERED PROFESSIONAL ENGINEER
KAREN E PETRYNA
C55126
Exp 6/30/00
CIVIL
STATE OF CALIFORNIA

RBD:hs
C:\QMR\930S\QMR.LET

Enclosure

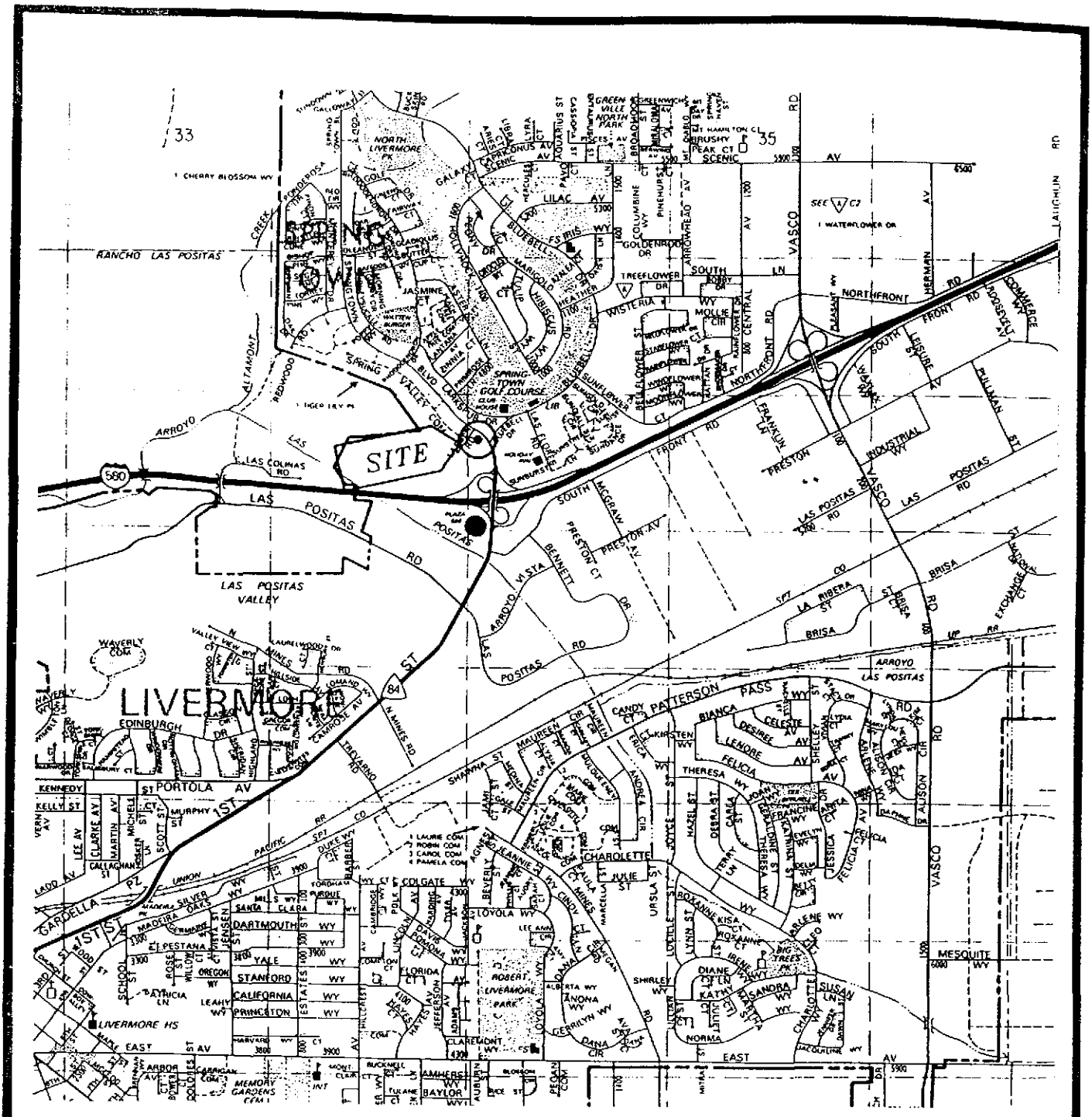
cc: Mr. Timothy Ross
Kaprealian Engineering, Inc.
2401 Stanwell Dr., Suite 400
Concord, CA 94520

Mr. Bob DeNinno
The Southland Corporation
19033 West Valley Hwy., D-104
Kent, WA 98032

RRZielinski (w/o enclosure) RAOFile-UCPFile (w/enclosure)

pr.

GROUNDWATER MONITORING AND SAMPLING
Third Quarter, 1996
at the
Former Texaco Service Station
930 Springtown Boulevard
Livermore, California



SOURCE:
1993 THE THOMAS GUIDE
ALAMEDA COUNTY, PAGE 51 (C3)

N

0 1/4 1/2 3/4 1
MILE
1" = 2200'

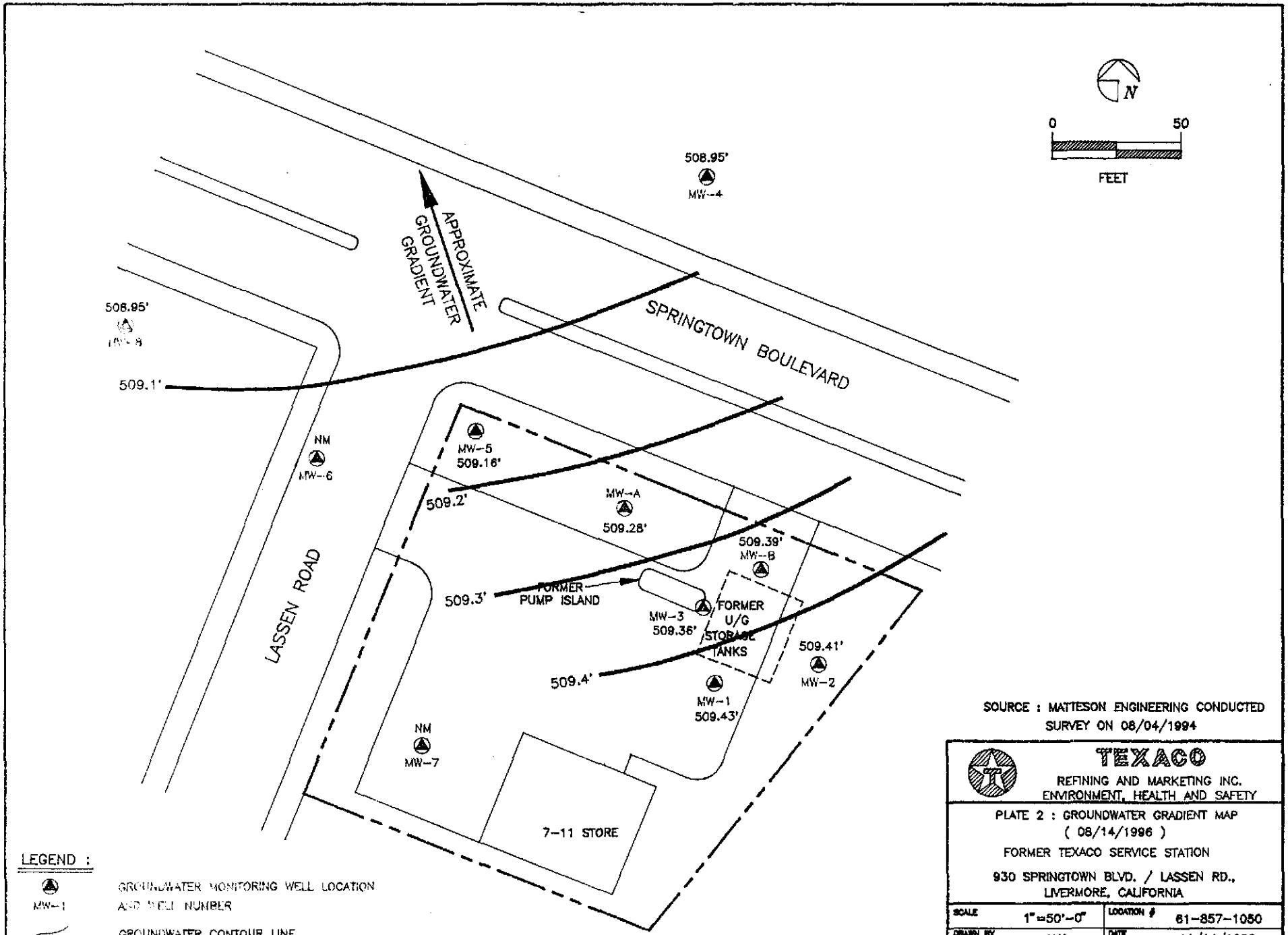
TEXACO
REFINING AND MARKETING, INC.
TEXACO ENVIRONMENTAL SERVICES

PLATE 1

SITE VICINITY MAP

FORMER TEXACO SERVICE STATION

930 SPRINGTOWN BLVD. / LASSEN RD.,
LIVERMORE, CALIFORNIA



LEGEND :

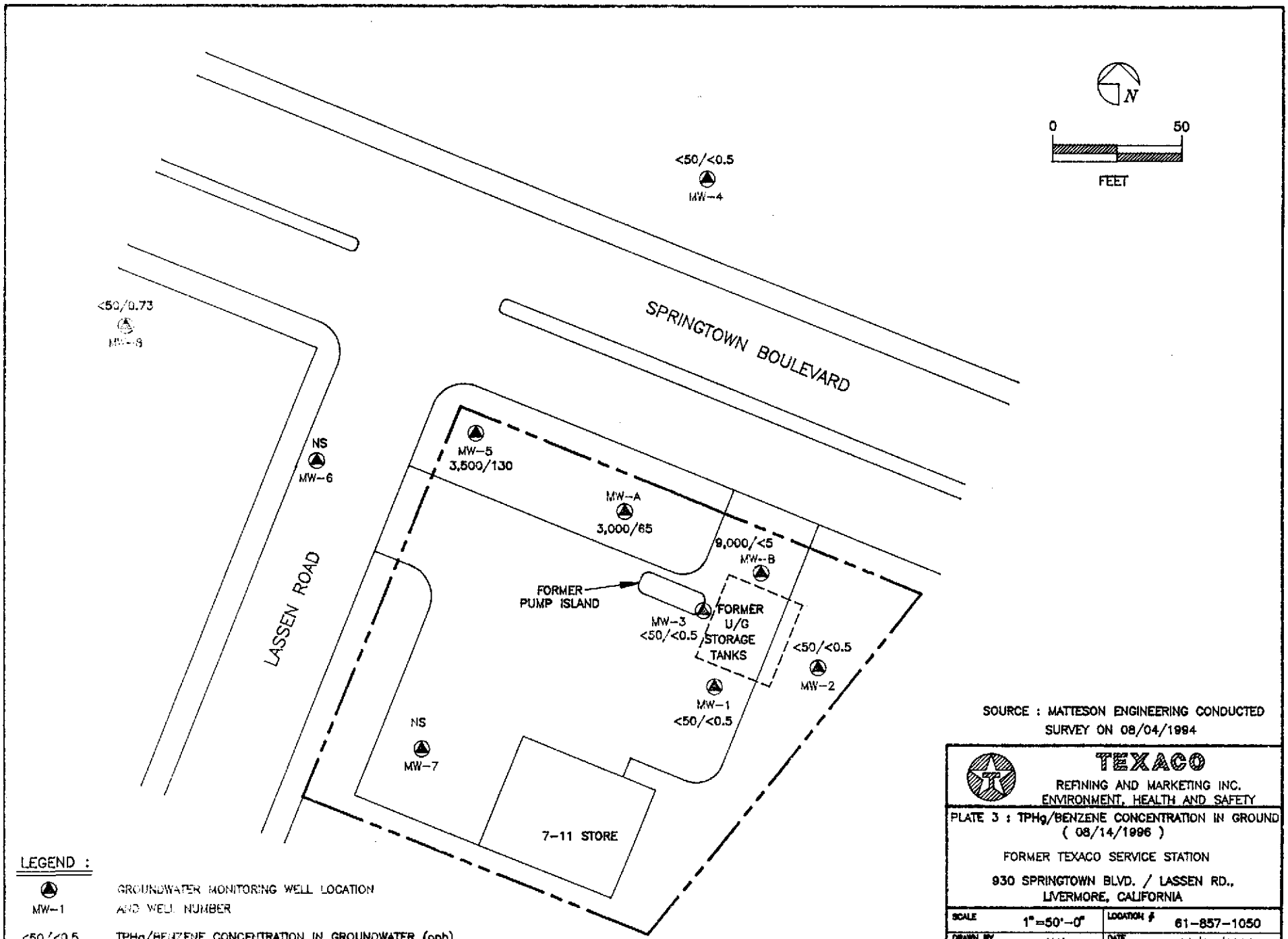
MW-1	GROUNDWATER MONITORING WELL LOCATION AND WELL NUMBER
	GROUNDWATER CONTOUR LINE
509.43'	GROUNDWATER ELEVATION (ABOVE MSL)
NM	NOT MONITORED

SOURCE : MATTESON ENGINEERING CONDUCTED SURVEY ON 08/04/1994

TEXACO
REFINING AND MARKETING INC.
ENVIRONMENT, HEALTH AND SAFETY

PLATE 2 : GROUNDWATER GRADIENT MAP
(08/14/1996)
FORMER TEXACO SERVICE STATION
930 SPRINGTOWN BLVD. / LASSEN RD.,
LIVERMORE, CALIFORNIA

SCALE	1"=50'-0"	LOCATION #	61-857-1050
DRAWN BY	AMA	DATE	11/14/1996
CHECKED BY	KBG	DATE	11/18/96
DRAWING NO.	(LIVERMORE) ST-LA-LI.DWG		



LEGEND :

▲ MW-1	GROUNDWATER MONITORING WELL LOCATION AND WELL NUMBER
<50/<0.5	TPHg/BENZENE CONCENTRATION IN GROUNDWATER (ppb)
NS	NOT SAMPLED

SOURCE : MATTESON ENGINEERING CONDUCTED SURVEY ON 08/04/1994

TEXACO
REFINING AND MARKETING INC.
ENVIRONMENT, HEALTH AND SAFETY

PLATE 3 : TPHg/BENZENE CONCENTRATION IN GROUND (08/14/1996)

FORMER TEXACO SERVICE STATION

930 SPRINGTOWN BLVD. / LASSEN RD.,
LIVERMORE, CALIFORNIA

SCALE	1"=50'-0"	LOCATION #	61-857-1050
DRAWN BY	AMA	DATE	11/14/1996
CHECKED BY	KBLP	DATE	11/18/96
DRAWING NO.	(LIVERMORE) ST-LA-LI.DWG		

Table 1
Groundwater Elevation Data
930 Springtown Boulevard, Livermore, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)		Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)	Floating Product
MW-A						
	1/10/91	519.85				
	1/2/92			13.61	506.24	---
	4/2/92			12.44	507.41	---
	7/21/92			13.35	506.50	---
	10/9/92			12.92	506.93	SD
	1/11/93			11.78	508.07	SD
	5/5/93			11.39	508.46	SD
	8/9/93			12.80	507.05	SD
	10/14/93			13.48	506.37	SD
	1/24/94			12.74	507.11	SD
	5/31/94			12.28	507.57	---
	8/31/94	520.10	*	13.20	506.90	SD
	11/2/94			13.15	506.95	SD
	2/20/95			11.71	508.39	---
	5/9/95			12.37	507.73	---
	8/21/95			11.37	508.73	---
	10/20/95			12.04	508.06	---
	2/7/96			10.11	509.99	---
	4/30/96			10.28	509.82	---
	8/14/96			10.82	509.28	---
MW-B						
	1/10/91	518.16				
	1/2/92			11.27	506.89	---
	4/2/92			10.18	507.98	---
	7/21/92			11.27	506.89	---
	10/9/92			11.64	506.52	SD
	1/11/93			9.65	508.51	SD
	5/5/93			9.28	508.88	SD
	8/9/93			11.02	507.14	SD
	10/14/93			11.34	506.82	SD
	1/24/94			10.54	507.62	SD
	5/31/94			10.19	507.97	---
	8/31/94	518.05	*	10.98	507.07	SD
	11/2/94			10.90	507.15	SD
	2/20/95			9.47	508.58	---
	5/9/95			10.58	507.47	---
	8/21/95			9.34	508.71	---
	10/20/95			9.83	508.22	---
	2/7/96			7.85	510.20	SD
	4/30/96			8.02	510.03	---
	8/14/96			8.66	509.39	SD

Table 1
Groundwater Elevation Data
930 Springtown Boulevard, Livermore, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)		Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)	Floating Product
MW-1						
	1/10/91	520.76				
	1/2/92			14.11	506.65	---
	4/2/92			12.98	507.78	---
	7/21/92			13.92	506.84	---
	10/9/92			14.25	506.51	---
	1/11/93			12.30	508.46	---
	5/5/93			11.88	508.88	---
	8/9/93			13.63	507.13	---
	10/14/93			13.91	506.85	---
	1/24/93			13.12	507.64	---
	5/31/94			12.74	508.02	---
	8/31/94	520.61	*	13.68	506.93	---
	11/2/94			13.48	507.13	---
	2/20/95			12.02	508.59	---
	5/9/95			12.83	507.78	---
	8/21/95			11.93	508.68	---
	10/20/95			12.40	508.21	---
	2/7/96			10.42	510.19	---
	4/30/96			10.48	510.13	---
	8/14/96			11.18	509.43	---
MW-2						
	1/10/91	518.46				
	1/2/92			11.96	506.50	---
	4/2/92			10.89	507.57	---
	7/21/92			11.55	506.91	---
	10/9/92			Not Monitored		
	1/11/93			Not Monitored		
	5/5/93			Not Monitored		
	8/9/93			Not Monitored		
	10/14/93			Not Monitored		
	1/24/94			Not Monitored		
	5/31/94			10.37	508.09	---
	8/31/94	518.29	*	11.16	507.13	---
	11/2/94			11.07	507.22	---
	2/20/95			9.66	508.63	---
	5/9/95			10.14	508.15	---
	8/21/95			9.58	508.71	---
	10/20/95			9.91	508.38	---
	2/7/96			8.00	510.29	---
	4/30/96			8.21	510.08	---
	8/14/96			8.88	509.41	---

Table 1
Groundwater Elevation Data
930 Springtown Boulevard, Livermore, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)		Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)	Floating Product
MW-3						
	1/10/91	519.30				
	1/2/92			12.87	506.43	—
	4/2/92			11.97	507.33	---
	7/21/92			12.60	506.70	---
	10/9/92			12.93	506.37	---
	1/11/93			11.16	508.14	---
	5/5/93			10.72	508.58	---
	8/9/93			12.34	506.96	---
	10/14/93			12.71	506.59	---
	1/24/94			12.03	507.27	---
	5/31/94			11.54	507.76	---
	8/31/94	519.60	*	12.60	507.00	---
	11/2/94			12.16	507.44	---
	2/20/95			11.05	508.55	---
	5/9/95			11.97	507.63	---
	8/21/95			7.60	512.00	---
	10/20/95			11.46	508.14	---
	2/7/96			9.42	510.18	---
	4/30/96			9.60	510.00	---
	8/14/96			10.24	509.36	---
MW-4						
	1/10/91	518.75				
	1/2/92			12.22	506.53	—
	4/2/92			11.03	507.72	---
	7/21/92			12.36	506.39	---
	10/9/92			12.40	506.35	---
	1/11/93			10.72	508.03	---
	5/5/93			10.21	508.54	---
	8/9/93			12.25	506.50	---
	10/14/93			12.58	506.17	---
	1/24/94			11.72	507.03	—
	5/31/94			11.29	507.46	—
	8/31/94	518.79	*	12.00	506.79	—
	11/2/94			11.96	506.83	---
	2/20/95			10.42	508.37	---
	5/9/95			11.22	507.57	—
	8/21/95			10.51	508.28	---
	10/20/95			10.86	507.93	---
	2/7/96			8.93	509.86	---
	4/30/96			9.03	509.76	---
	8/14/96			9.84	508.95	---

Table 1
Groundwater Elevation Data
930 Springtown Boulevard, Livermore, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)		Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)	Floating Product
MW-5						
	1/10/91	520.50				
	1/2/92			14.56	505.94	---
	4/2/92			13.58	506.92	---
	7/21/92			13.77	506.73	---
	10/9/92			14.09	506.41	---
	1/11/93			12.24	508.26	---
	5/5/93			11.90	508.60	---
	8/9/93			13.35	507.15	---
	10/14/93			13.89	506.61	---
	1/24/94			13.32	507.18	---
	5/31/94			12.75	507.75	---
	8/31/94	521.19	*	14.34	506.85	---
	11/2/94			14.22	506.97	---
	2/20/95			12.78	508.41	SD
	5/9/95			13.41	507.78	---
	8/21/95			12.32	508.87	---
	10/20/95			13.28	507.91	---
	2/7/96			11.31	509.88	---
	4/30/96			11.52	509.67	---
	8/14/96			12.03	509.16	---
MW-6						
	1/10/91	522.26				
	1/2/92			16.64	505.62	---
	4/2/91			15.61	506.65	---
	7/21/92			15.53	506.73	---
	10/9/92			15.69	506.57	---
	1/11/93			Not Monitored		
	5/5/93			Not Monitored		
	8/9/93			14.50	507.76	---
	10/14/93			Not Monitored		
	1/24/94			15.09	507.17	---
	5/31/94			14.64	507.62	---
	8/31/94	522.18	*	15.32	506.86	---
	11/2/94			15.32	506.86	---
	2/20/95			14.07	508.11	---
	5/9/95			14.30	507.88	---
	8/21/95			Well Inaccessible		
	10/20/95			14.31	507.87	---
	2/7/96			Not Monitored		
	4/30/96			Not Monitored		---
	8/14/96			Not Monitored		

Table 1
Groundwater Elevation Data
930 Springtown Boulevard, Livermore, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)		Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)	Floating Product
MW-7						
	1/10/91	522.17				
	1/2/92			11.17	511.00	—
	4/2/92			10.34	511.83	—
	7/21/92			9.02	513.15	—
	10/9/92			Not Monitored		
	1/11/93			Not Monitored		
	5/5/93			Not Monitored		
	8/9/93			Not Monitored		
	10/14/93			Not Monitored		
	1/24/94			Not Monitored		
	5/31/94			9.42	512.75	---
	8/31/94	522.19	*	6.84	515.35	—
	11/2/94			6.48	515.71	---
	2/20/95			7.71	514.48	---
	5/9/95			7.65	514.54	---
	8/21/95			7.83	514.36	---
	10/20/95			8.61	513.58	---
	2/7/96			Not Monitored		
	4/30/96			Not Monitored		
	8/14/96			Not Monitored		

Table 1
Groundwater Elevation Data
930 Springtown Boulevard, Livermore, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)		Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)	Floating Product
MW-8						
	1/10/91	524.04				
	1/2/92			18.42	505.62	—
	4/2/92			17.39	506.65	—
	7/21/92			14.02	510.02	—
	10/9/92			Not Monitored		
	1/11/93			Not Monitored		
	5/5/93			Not Monitored		
	8/9/93			Not Monitored		
	10/14/93			Not Monitored		
	1/24/94			Not Monitored		
	5/31/94			19.65	504.39	—
	8/31/94	524.03	*	17.40	506.63	—
	11/2/94			17.38	506.65	—
	2/20/95			15.99	508.04	—
	5/9/95			16.54	507.49	—
	8/21/95			15.77	508.26	—
	10/20/95			16.24	507.79	—
	2/7/96			14.42	509.61	—
	4/30/96			14.65	509.38	—
	8/14/96			15.08	508.95	—
*Wells resurveyed on 8/4/94						
MSL = Mean Sea Level						
TOC = Top of Casing						
--- = None Present						
SD = Sheen detected in purge water						

Table 2
Groundwater Analytical Data
930 Springtown Boulevard, Livermore, CA

Well Number	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MTBE (ppb)
MW-A							
	1/2/92	SP	SP	SP	SP	SP	NA
	4/2/92	27,000	1,200	570	1,700	2,300	NA
	7/21/92	57,000	1,500	1,800	2,700	7,100	NA
	10/9/92	56,000	2,900	2,600	4,600	12,000	NA
	1/11/93	NS	NS	NS	NS	NS	NA
	5/5/93	NS	NS	NS	NS	NS	NA
	8/9/93	NS	NS	NS	NS	NS	NA
	10/14/93	NS	NS	NS	NS	NS	NA
	1/24/94	1,400,000	6,900	2,100	15,000	38,000	NA
	5/31/94	48,000	1,200	900	1,900	4,200	NA
	8/31/94	24,000	140	120	830	1,500	NA
	11/2/94	15,000	230	360	1,100	1,800	NA
	2/20/95	12,000	290	330	570	1,300	NA
	5/9/95	1,200	6.1	5.9	12	15	NA
	8/21/95	9,600	85	140	250	860	160
	10/20/95	360	5.2	7.9	15	43	NA
	2/7/96	6,100	130	180	320	840	NA
	4/30/96	410	1.2	0.67	1.2	1.5	NA
	8/14/96	3,000	65	75	170	460	57
MW-B							
	1/2/92	SP	SP	SP	SP	SP	NA
	4/2/92	1,900	ND	39	24	35	NA
	7/21/92	16,000	180	1,600	270	1,100	NA
	10/9/92	38,000	490	8,300	1,400	5,100	NA
	1/11/93	NS	NS	NS	NS	NS	NA
	5/5/93	NS	NS	NS	NS	NS	NA
	8/9/93	NS	NS	NS	NS	NS	NA
	10/14/93	NS	NS	NS	NS	NS	NA
	1/24/94	23,000	110	1,700	600	1,900	NA
	5/31/94	13,000	780	310	370	1,400	NA
	8/31/94	35,000	160	2,800	1,000	4,500	NA
	11/2/94	2,500	170	3,200	1,100	4,700	NA
	2/20/95	10,000	46	1,400	330	1,200	NA
	5/9/95	4,100	9.1	47	26	30	NA
	8/21/95	4,000	9.6	110	120	270	98
	10/20/95	9,300	35	1,300	370	1,300	NA
	2/7/96	8,900	33	700	110	360	NA
	4/30/96	5,500	17	460	120	400	NA
	8/14/96	9,000	<5	260	120	320	<300

Table 2
Groundwater Analytical Data
930 Springtown Boulevard, Livermore, CA

Well Number	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MTBE (ppb)
MW-1							
	1/2/92	16	6	ND	ND	ND	NA
	4/2/92	ND	ND	ND	ND	ND	NA
	7/21/92	<50	3.2	<0.5	<0.5	<0.5	NA
	10/9/92	<50	8.5	<0.5	<0.5	<0.5	NA
	1/11/93	<50	<0.5	<0.5	<0.5	<0.5	NA
	5/5/93	<50	<0.5	<0.5	<0.5	<0.5	NA
	8/9/93	<50	<0.5	<0.5	<0.5	<0.5	NA
	10/14/93	440	16	2.9	2.9	11	NA
	5/31/94	<50	<0.5	<0.5	<0.5	<0.5	NA
	8/31/94	<50	<0.5	<0.5	<0.5	<0.5	NA
	11/2/94	<50	<0.5	<0.5	<0.5	<0.5	NA
	2/20/95	<50	<0.5	<0.5	<0.5	<0.5	NA
	5/9/95	450	22	25	23	100	NA
	8/21/95	58	<0.5	1.5	1.8	4.5	<10
	10/20/95	<50	<0.5	<0.5	<0.5	<0.5	NA
	2/7/96	<50	<0.5	<0.5	<0.5	<0.5	NA
	4/30/96	NS	NS	NS	NS	NS	NA
	8/14/96	<50	<0.5	<0.5	<0.5	<0.5	<30
MW-2							
	1/2/92	ND	ND	ND	ND	ND	NA
	4/2/91	ND	ND	ND	ND	ND	NA
	7/21/92	NS	NS	NS	NS	NS	NA
	10/9/92	NS	NS	NS	NS	NS	NA
	1/11/93	NS	NS	NS	NS	NS	NA
	5/5/93	NS	NS	NS	NS	NS	NA
	8/9/93	NS	NS	NS	NS	NS	NA
	10/14/93	NS	NS	NS	NS	NS	NA
	1/24/94	NS	NS	NS	NS	NS	NA
	5/31/94	NS	NS	NS	NS	NS	NA
	8/31/94	<50	<0.5	<0.5	<0.5	<0.5	NA
	11/2/94	NS	NS	NS	NS	NS	NA
	2/20/95	<50	<0.5	<0.5	<0.5	<0.5	NA
	5/9/95	NS	NS	NS	NS	NS	NA
	8/21/95	<50	<0.5	<0.5	<0.5	<0.5	<10
	10/20/95	NS	NS	NS	NS	NS	NA
	2/7/96	<50	<0.5	<0.5	<0.5	<0.5	NA
	4/30/96	NS	NS	NS	NS	NS	NA
	8/14/96	<50	<0.5	<0.5	<0.5	<0.5	<30

Table 2
Groundwater Analytical Data
930 Springtown Boulevard, Livermore, CA

Well Number	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MTBE (ppb)
MW-3							
	1/2/92	340	0.4	ND	ND	ND	NA
	4/2/92	160	5	ND	0.3	0.5	NA
	7/21/92	260	1.7	<0.5	<0.5	<0.5	NA
	10/9/92	88	<0.5	<0.5	<0.5	<0.5	NA
	1/11/93	130	<0.5	<0.5	<0.5	<0.5	NA
	5/5/93	340	1.8	<0.5	1.3	<0.5	NA
	8/9/93	610	18	<0.5	2.4	0.9	NA
	10/14/93	<50	<0.5	<0.5	<0.5	<0.5	NA
	1/24/94	320	3.5	<0.5	<0.5	<0.5	NA
	5/31/94	830	11	12	5.0	1.2	NA
	8/31/94	660	2	<0.5	1	<0.5	NA
	11/2/94	1,500	260	36	34	76	NA
	2/20/95	410	1.2	1.9	1.4	2.2	NA
	5/9/95	730	23	43	21	95	NA
	8/21/95	<50	<0.5	<0.5	<0.5	<0.5	<10
	10/20/95	<50	<0.5	<0.5	<0.5	<0.5	NA
	2/7/96	<50	<0.5	<0.5	<0.5	<0.5	NA
	4/30/96	NS	NS	NS	NS	NS	NA
	8/14/96	<50	<0.5	0.60	<0.5	<0.5	<30
MW-4							
	1/2/92	ND	ND	ND	ND	ND	NA
	4/2/92	ND	ND	ND	ND	ND	NA
	7/21/92	<50	<0.5	<0.5	<0.5	<0.5	NA
	10/9/92	<50	<0.5	<0.5	<0.5	<0.5	NA
	1/11/93	<50	<0.5	<0.5	<0.5	<0.5	NA
	5/5/93	<50	<0.5	<0.5	<0.5	<0.5	NA
	8/9/93	<50	<0.5	<0.5	<0.5	<0.5	NA
	10/14/93	<50	<0.5	<0.5	<0.5	<0.5	NA
	1/24/94	<50	<0.5	<0.5	<0.5	<0.5	NA
	5/31/94	NS	NS	NS	NS	NS	NA
	8/31/94	<50	<0.5	<0.5	<0.5	<0.5	NA
	11/2/94	NS	NS	NS	NS	NS	NA
	2/20/95	<50	<0.5	<0.5	<0.5	<0.5	NA
	5/9/95	NS	NS	NS	NS	NS	NA
	8/21/95	<50	<0.5	<0.5	<0.5	<0.5	<10
	10/20/95	<50	<0.5	<0.5	<0.5	<0.5	NA
	2/7/96	<50	<0.5	<0.5	<0.5	<0.5	NA
	4/30/96	NS	NS	NS	NS	NS	NA
	8/14/96	<50	<0.5	<0.5	<0.5	<0.5	<30

Table 2
Groundwater Analytical Data
930 Springtown Boulevard, Livermore, CA

Well Number	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MTBE (ppb)
MW-5							
	1/2/92	1,800	74	41	84	94	NA
	4/2/92	ND	ND	ND	ND	ND	NA
	7/21/92	1,000	69	16	40	31	NA
	10/9/92	3,400	890	51	110	110	NA
	1/11/93	15,000	460	110	900	370	NA
	5/5/93	4,500	160	19	280	110	NA
	8/9/93	2,300	180	19	130	80	NA
	10/14/93	2,200	160	27	90	64	NA
	1/24/94	2,600	69	11	65	25	NA
	5/31/94	3,100	130	64	140	120	NA
	8/31/94	600	20	2.9	14	7.1	NA
	11/2/94	2,300	68	18	52	54	NA
	2/20/95	12,000	130	<30	240	138	NA
	5/9/95	2,500	57	60	54	37	NA
	8/21/95	11,000	91	28	140	120	<100
	10/20/95	2,300	38	3.8	28	19	NA
	2/7/96	1,800	35	8.1	37	20	NA
	4/30/96	NS	NS	NS	NS	NS	NA
	8/14/96	3,500	130	22	170	47	71
MW-6							
	1/2/92	23	ND	0.3	0.6	3	NA
	4/2/92	ND	ND	ND	ND	ND	NA
	7/21/92	<50	<0.5	<0.5	<0.5	<0.5	NA
	10/9/92	<50	<0.5	<0.5	<0.5	<0.5	NA
	1/11/93	NS	NS	NS	NS	NS	NA
	5/5/93	NS	NS	NS	NS	NS	NA
	8/9/93	<50	<0.5	<0.5	<0.5	<0.5	NA
	10/14/93	NS	NS	NS	NS	NS	NA
	1/24/94	<50	<0.5	<0.5	<0.5	<0.5	NA
	5/31/94	NS	NS	NS	NS	NS	NA
	8/31/94	<50	<0.5	<0.5	<0.5	<0.5	NA
	11/2/94	NS	NS	NS	NS	NS	NA
	2/20/95	<50	<0.5	<0.5	<0.5	<0.5	NA
	5/9/95	NS	NS	NS	NS	NS	NA
	8/21/95	NS	NS	NS	NS	NS	NA
	10/20/95	NS	NS	NS	NS	NS	NA
	2/7/96	NS	NS	NS	NS	NS	NA
	4/30/96	NS	NS	NS	NS	NS	NA
	8/14/96	NS	NS	NS	NS	NS	NA

Table 2
Groundwater Analytical Data
930 Springtown Boulevard, Livermore, CA

Well Number	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MTBE (ppb)
MW-7							
	1/2/92	NS	NS	NS	NS	NS	NA
	4/2/92	ND	ND	ND	ND	ND	NA
	7/21/92 - 8/14/96	NS	NS	NS	NS	NS	NA
MW-8							
	1/2/92	12,000	32	980	200	760	NA
	4/2/92	ND	ND	ND	ND	ND	NA
	7/21/92	NS	NS	NS	NS	NS	NA
	10/9/93	NS	NS	NS	NS	NS	NA
	1/11/93	NS	NS	NS	NS	NS	NA
	5/5/93	NS	NS	NS	NS	NS	NA
	8/9/93	NS	NS	NS	NS	NS	NA
	10/14/93	NS	NS	NS	NS	NS	NA
	1/24/94	NS	NS	NS	NS	NS	NA
	5/31/94	NS	NS	NS	NS	NS	NA
	8/31/94	<50	<0.5	<0.5	<0.5	<0.5	NA
	11/2/94	NS	NS	NS	NS	NS	NA
	2/20/95	<50	<0.5	<0.5	<0.5	<0.5	NA
	5/9/95	NS	NS	NS	NS	NS	NA
	8/21/95	<50	<0.5	<0.5	0.67	0.62	<10
	10/20/95	NS	NS	NS	NS	NS	NA
	2/7/96	<50	7.0	<0.5	<0.5	<0.5	NA
	4/30/96	61	9.6	<0.5	<0.5	<0.5	NA
	8/14/96	<50	0.73	<0.5	<0.5	<0.5	<30

NS = Not Sampled
ND = None Detected
SP = Separate-phase petroleum hydrocarbons
TPHg = Total petroleum hydrocarbons as gasoline
< = Less than the detection limit for the specified method of analysis

ANALYTICAL REPOh.

B C Analytical

801 Western Avenue
Glendale, CA 91201
818/247-5737
Fax: 818/247-9797

LOG NO: G96-08-393

Received: 15 AUG 96
Mailed SEP 3 1996

Ms. Rebecca Digerness
Texaco Environmental Services
108 Cutting Boulevard
Richmond, CA 94804

Purchase Order: 94-1446346+4370

Requisition: 618571050
Project: FKEP1012L

REPORT OF ANALYTICAL RESULTS

LOG NO	08-393-1	08-393-2	08-393-3
DATE SAMPLED	14 AUG 96	14 AUG 96	14 AUG 96
SAMPLE DESCRIPTION	MW-A	MW-B	MW-1
AQUEOUS			
GRO (8015M.TX)			
Date Analyzed	08/20/96	08/20/96	08/20/96
Dilution Factor, Times	1	10	1
Benzene, ug/L	65	<5	<0.5
Toluene, ug/L	75	260	<0.5
Ethylbenzene, ug/L	170	120	<0.5
Methyl-tert-butylether, ug/L	57	<300	<30
Total Xylene Isomers, ug/L	460	320	<0.5
Carbon Range, .	C6-C12	C6-C12	C6-C12
TPH (Gasoline Range), ug/L	3000	9000	<50
Surrogates **			
a,a,a-Trifluorotoluene Rep., ug/L	51.7	566	55.9
a,a,a-Trifluorotoluene Th., ug/L	50.0	500	50.0

Karen Petryna
930 Springtown Blvd., Livermore
Alameda County

BCA

LOG NO: G96-08-393

Received: 15 AUG 96

Ms. Rebecca Digerness
Texaco Environmental Services
108 Cutting Boulevard
Richmond, CA 94804

Purchase Order: 94-1446346+4370

Requisition: 618571050
Project: FKEP1012L

REPORT OF ANALYTICAL RESULTS

LOG NO	08-393-4	08-393-5	08-393-6
DATE SAMPLED	14 AUG 96	14 AUG 96	14 AUG 96
SAMPLE DESCRIPTION	MW-2	MW-3	MW-4
AQUEOUS			
GRO (8015M.TX)			
Date Analyzed	08/20/96	08/21/96	08/20/96
Dilution Factor, Times	1	1	1
Benzene, ug/L	<0.5	<0.5	<0.5
Toluene, ug/L	<0.5	0.60	<0.5
Ethylbenzene, ug/L	<0.5	<0.5	<0.5
Methyl-tert-butylether, ug/L	<30	<30	<30
Total Xylene Isomers, ug/L	<0.5	<0.5	<0.5
Carbon Range, .	C6-C12	C6-C12	C6-C12
TPH (Gasoline Range), ug/L	<50	<50	<50
Surrogates **			
a,a,a-Trifluorotoluene Rep., ug/L	56.6	51.6	56.9
a,a,a-Trifluorotoluene Th., ug/L	50.0	50.0	50.0

LOG NO: G96-08-393

Received: 15 AUG 96

Ms. Rebecca Digerness
Texaco Environmental Services
108 Cutting Boulevard
Richmond, CA 94804

Purchase Order: 94-1446346+4370

Requisition: 618571050
Project: FKEP1012L

REPORT OF ANALYTICAL RESULTS

LOG NO	08-393-7	08-393-8
DATE SAMPLED	14 AUG 96	14 AUG 96
SAMPLE DESCRIPTION	MW-5	MW-8
AQUEOUS		
GRO (8015M.TX)		
Date Analyzed	08/21/96	08/21/96
Dilution Factor, Times	1	1
Benzene, ug/L	130	0.73
Toluene, ug/L	22	<0.5
Ethylbenzene, ug/L	170	<0.5
Methyl-tert-butylether, ug/L	71	<30
Total Xylene Isomers, ug/L	47	<0.5
Carbon Range, .	C6-C12	C6-C12
TPH (Gasoline Range), ug/L	3500	<50
Surrogates **		
a,a,a-Trifluorotoluene Rep., ug/L	45.0	50.6
a,a,a-Trifluorotoluene Th., ug/L	50.0	50.0

LOG NO: G96-08-393

Received: 15 AUG 96

Ms. Rebecca Digerness
Texaco Environmental Services
108 Cutting Boulevard
Richmond, CA 94804

Purchase Order: 94-1446346+4370

Requisition: 618571050
Project: FKEP1012L

REPORT OF ANALYTICAL RESULTS

LOG NO	08-393-9
DATE SAMPLED	14 AUG 96
SAMPLE DESCRIPTION	EB
AQUEOUS	
GRO (8015M.TX)	
Date Analyzed	08/21/96
Dilution Factor, Times	1
Benzene, ug/L	<0.5
Toluene, ug/L	<0.5
Ethylbenzene, ug/L	<0.5
Methyl-tert-butylether, ug/L	<30
Total Xylene Isomers, ug/L	<0.5
Carbon Range, .	C6-C12
TPH (Gasoline Range), ug/L	<50
Surrogates **	
a,a,a-Trifluorotoluene Rep., ug/L	51.3
a,a,a-Trifluorotoluene Th., ug/L	50.0

LOG NO: G96-08-393

Received: 15 AUG 96

Ms. Rebecca Digerness
Texaco Environmental Services
108 Cutting Boulevard
Richmond, CA 94804

Purchase Order: 94-1446346+4370

Requisition: 618571050
Project: FKEP1012L

REPORT OF ANALYTICAL RESULTS

Carol S McHale for
Greta Galoustian, Laboratory Director

BC ANALYTICAL, GLENDALE
QC REPORT FOR 9608393
DATE PRINTED: 27 AUG 1996

AQUEOUS SAMPLES		METHOD BLANK			LAB CONTROL								MATRIX QC								
					LCS		LCSD				RPD	RPD	MS		MSD				RPD	RPD	
	UNITS	RESULT	RDL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG	%REC	FLG	%REC	FLG	LCL	UCL	RPD	UCL	FLG
Batch: GAS*964122 Method: 8015M.TX - Modified 8015																						
Benzene	ug/L	0	0.5	-	145	-	-	-	76	155	-	-	-	159	Q	159	Q	70	153	0	25	-
Toluene	ug/L	0	0.5	-	96	-	-	-	72	121	-	-	-	95	-	97	-	69	119	2	25	-
Ethylbenzene	ug/L	0	0.5	-	94	-	-	-	72	115	-	-	-	93	-	93	-	68	116	1	25	-
Methyl-tert-butylether	ug/L	0	30	-	133	-	-	-	62	159	-	-	-	136	-	139	-	80	176	2	25	-
Total Xylene Isomers	ug/L	0	0.5	-	89	-	-	-	68	115	-	-	-	89	-	90	-	61	118	1	25	-
TPH (Gasoline Range)	ug/L	0	50	-	104	-	-	-	85	120	-	-	-	106	-	106	-	78	124	0	25	-
[a,a,a-Trifluorotoluene]	Percent	115	-	-	123	Q	-	-	85	118	-	-	-	126	Q	128	Q	85	118	-	-	-
Batch: GAS*964123 Method: 8015M.TX - Modified 8015																						
Benzene	ug/L	0	0.5	-	151	-	-	-	76	155	-	-	-	136	-	143	-	70	153	5	25	-
Toluene	ug/L	0	0.5	-	98	-	-	-	72	121	-	-	-	94	-	97	-	69	119	3	25	-
Ethylbenzene	ug/L	0	0.5	-	94	-	-	-	72	115	-	-	-	92	-	94	-	68	116	2	25	-
Methyl-tert-butylether	ug/L	0	30	-	94	-	-	-	62	159	-	-	-	128	-	133	-	80	176	4	25	-
Total Xylene Isomers	ug/L	0	0.5	-	91	-	-	-	68	115	-	-	-	87	-	90	-	61	118	3	25	-
TPH (Gasoline Range)	ug/L	0	50	-	105	-	-	-	85	120	-	-	-	96	-	95	-	78	124	2	25	-
[a,a,a-Trifluorotoluene]	Percent	117	-	-	131	Q	-	-	85	118	-	-	-	109	-	115	-	85	118	-	-	-
Batch: GAS*966124 Method: 8015M.TX - Modified 8015																						
Benzene	ug/L	0	0.5	-	101	-	-	-	76	155	-	-	-	124	-	125	-	70	153	1	25	-
Toluene	ug/L	0	0.5	-	91	-	-	-	72	121	-	-	-	91	-	93	-	69	119	1	25	-
Ethylbenzene	ug/L	0	0.5	-	92	-	-	-	72	115	-	-	-	94	-	94	-	68	116	1	25	-
Methyl-tert-butylether	ug/L	0	30	-	105	-	-	-	62	159	-	-	-	-	-	-	-	-	-	-	-	-
Total Xylene Isomers	ug/L	0	0.5	-	88	-	-	-	68	115	-	-	-	91	-	92	-	61	118	1	25	-
TPH (Gasoline Range)	ug/L	0	50	-	95	-	-	-	85	120	-	-	-	97	-	98	-	78	124	1	25	-
[a,a,a-Trifluorotoluene]	Percent	103	-	-	104	-	-	-	85	118	-	-	-	102	-	105	-	85	118	-	-	-

ORDER PLACED FOR CLIENT: Texaco Environmental Services 9608393 :
BC ANALYTICAL : GLEN LAB : 09:36:04 27 AUG 1996 - P. 1 :

AMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
608393*1	MW-A	GAS.MTBE.TESNC	08.20.96	8015M.TX	536-35	964122	6843
608393*2	MW-B	GAS.MTBE.TESNC	08.20.96	8015M.TX	536-35	964122	6843
608393*3	MW-1	GAS.MTBE.TESNC	08.20.96	8015M.TX	536-35	964122	6843
608393*4	MW-2	GAS.MTBE.TESNC	08.20.96	8015M.TX	536-35	964122	6843
608393*5	MW-3	GAS.MTBE.TESNC	08.21.96	8015M.TX	536-36	966124	6843
608393*6	MW-4	GAS.MTBE.TESNC	08.20.96	8015M.TX	536-35	964123	6843
608393*7	MW-5	GAS.MTBE.TESNC	08.21.96	8015M.TX	536-35	964123	6843
608393*8	MW-8	GAS.MTBE.TESNC	08.21.96	8015M.TX	536-36	966124	6843
608393*9	EB	GAS.MTBE.TESNC	08.21.96	8015M.TX	536-36	966124	6843

**

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SURROGATE RECOVERIES :
BC ANALYTICAL : GLEN LAB : 09:36:34 27 AUG 1996 - P. 1 :

ETHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
608393*1							
015M.TX	a,a,a-Trifluorotoluene	Re964122	08/20/96	51.7	50.0	103	
608393*2							
015M.TX	a,a,a-Trifluorotoluene	Re964122	08/20/96	566	500	113	
608393*3							
015M.TX	a,a,a-Trifluorotoluene	Re964122	08/20/96	55.9	50.0	112	
608393*4							
015M.TX	a,a,a-Trifluorotoluene	Re964122	08/20/96	56.6	50.0	113	
608393*5							
015M.TX	a,a,a-Trifluorotoluene	Re966124	08/21/96	51.6	50.0	103	
608393*6							
015M.TX	a,a,a-Trifluorotoluene	Re964123	08/20/96	56.9	50.0	114	
608393*7							
015M.TX	a,a,a-Trifluorotoluene	Re964123	08/21/96	45.0	50.0	90	
608393*8							
015M.TX	a,a,a-Trifluorotoluene	Re966124	08/21/96	50.6	50.0	101	
608393*9							
015M.TX	a,a,a-Trifluorotoluene	Re966124	08/21/96	51.3	50.0	103	

SURROGATE RECOVERIES :
BC ANALYTICAL : GLEN LAB : 09:36:42 27 AUG 1996 - P. 1 :

THOD ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
608363*5*R1						
015M.TXa,a,a-Trifluorotoluene	Re964122	08/20/96	57.1	50.0	114	
608363*5*S1						
015M.TXa,a,a-Trifluorotoluene	Re964122	08/20/96	62.8	50.0	126	
608363*5*S2						
015M.TXa,a,a-Trifluorotoluene	Re964122	08/20/96	63.9	50.0	128	
608363*5*T						
015M.TXa,a,a-Trifluorotoluene	Re964122	08/20/96	50.0	50.0	100	
608393*6*R1						
015M.TXa,a,a-Trifluorotoluene	Re964123	08/20/96	56.9	50.0	114	
608393*6*S1						
015M.TXa,a,a-Trifluorotoluene	Re964123	08/21/96	54.5	50.0	109	
608393*6*S2						
015M.TXa,a,a-Trifluorotoluene	Re964123	08/21/96	57.7	50.0	115	
608393*6*T						
015M.TXa,a,a-Trifluorotoluene	Re964123	08/21/96	50.0	50.0	100	
608394*2*R1						
015M.TXa,a,a-Trifluorotoluene	Re966124	08/20/96	49.8	50.0	100	
608394*2*S1						
015M.TXa,a,a-Trifluorotoluene	Re966124	08/20/96	51.2	50.0	102	
608394*2*S2						
015M.TXa,a,a-Trifluorotoluene	Re966124	08/21/96	52.7	50.0	105	
608394*2*T						
015M.TXa,a,a-Trifluorotoluene	Re966124	08/20/96	50.0	50.0	100	
6081194*1*MB						
015M a,a,a-Trifluorotoluene	Re964122	08/19/96	57.5	50.0	115	
6081231*1*MB						
015M.TXa,a,a-Trifluorotoluene	Re966124	08/20/96	51.3	50.0	103	

SURROGATE RECOVERIES :
BC ANALYTICAL : GLEN LAB : 09:36:43 27 AUG 1996 - P. 2 :

THOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
081253*1*MB							
)15M.TX	a,a,a-Trifluorotoluene	Re964123	08/20/96	58.3	50.0	117	
082146*1*LC							
)15M	a,a,a-Trifluorotoluene	Re964122	08/19/96	61.6	50.0	123	
082146*1*LT							
)15M	a,a,a-Trifluorotoluene	Re964122	08/19/96	50.0	50.0	100	
082214*1*LC							
)15M.TX	a,a,a-Trifluorotoluene	Re966124	08/20/96	52.2	50.0	104	
082214*1*LT							
)15M.TX	a,a,a-Trifluorotoluene	Re966124	08/20/96	50.0	50.0	100	
082257*1*LC							
)15M.TX	a,a,a-Trifluorotoluene	Re964123	08/20/96	65.7	50.0	131	
082257*1*LT							
)15M.TX	a,a,a-Trifluorotoluene	Re964123	08/20/96	50.0	50.0	100	

G96-08-393

Chain of Custody

Page ___ of ___

Texaco Environmental Services
108 Cutting Boulevard
Richmond, California 94804
Phone: (510) 236-3541
FAX: (510) 237-7821

Forward Results to the Attention of Rebecca Digerness

Texaco Project Coordinator: Karen Petryna

Site Name: Texaco Loc.# 618571050
Site Address: 930 Springtown Blvd. Livermore, CA
Contractor Project Number: 960804-D1
Contractor Name: Blaine Tech Services, Inc.
Address: 985 Timothy Dr., San Jose, CA 95133
Project Contact:
Phone/FAX: (408) 995-5535 / (408) 293-8773

Laboratory: B C Analytical
Turn Around Time: normal (10 day)
Samplers (PRINT NAME): Tim Greaf
Sampler Signature: Tim Greaf
Date Samples Collected: 8-14-96

Sample Number	Lab Sample Number	Date/Time Collected	No. of Containers	Type of Containers	Sample Matrix	Preservative	TPH gas/BTEX	TPH Diesel	O&G/TRPH (418.1)	TPH Ex. (C8-C36+)	VOCs 8240/624	P. Halocarbons 8010/60	P. Aromatics 8020/602	Organic Lead	MTBE		Comments
MW-A		8-14 / 1010	3		W	HCL	X								X	-	1
MW-B		8-14 / 1030	3				X								X	-	2
MW-1		8-14 / 940	3				X								X	-	3
MW-2		8-14 / 950	3				X								X	-	4
MW-3		8-14 / 920	3				X								X	-	5
MW-4		8-14 / 845	3				X								X	-	6
MW-5		8-14 / 1005	3				X								X	-	7
MW-8		8-14 / 905	3				X								X	-	8
EB		8-14 / 848	3		↓	↓	X								X		- 9

Relinquished by: (Signature) Tim Greaf	Date: 8-15-96	Time: 1505	Received by: (Signature) Bill Rogers	Date: 8-15-96	Time: 1605
Relinquished by: (Signature) Bill Rogers	Date: 8-15-96	Time: 6:25	Received by: (Signature) Vonna Walker	Date: 8/15/96	Time: 6:25
Relinquished by: (Signature) Vonna Walker	Date: 8/16/96	Time: 5:30	Received by: (Signature)	Date: 8/17/96	Time: 10:30
Method of Shipment:			Lab Comments:		

P:\GWMP\FORMS\TEX-COC.XLS

Well Gauging Data

Project Name: 6185 71050
Project Number: 960814-D1

Date: 8-14-96
Recorded By: MIKE D

Well ID	TOC Elev.	DTB (ft. TOC)	Well Dia. (in.)	DTP (ft.)	DTW (ft.)	PT (ft.)	Comments
MW-A		[redacted]16.44	2		10.82		
MW-B		21.32	2		8.66		
MW-1		25.58	4		11.18		
MW-2		22.52	4		8.88		
MW-3		24.49	4		10.24		
MW-4		24.82	3		9.84		
MW-5		21.35	2		12.03		
MW-8		24.10	4		15.08		

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 #: 960814-D1	Texaco ID#: 6185710 50
Sampler: MD	Date: 8-14-96
Well I.D.: MW-A	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 16.44	Depth to Water: 10.82
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	radius² * 0.164

Purge Method:
- S.S. Bailer
- Teflon Bailer X
- Middleburg
- Electric Submersible
- Extraction Pump
- Other: _____

Sampling Method:
- S.S. Bailer
- Teflon Bailer X
- Extraction Port
- Other: _____

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
958	67.4	7.0	800	>200	1	
1001	66.4	7.1	800	>200	2	
1003	66.2	7.0	800	>200	3	

Did well dewater? Yes (No) Gallons actually evacuated: 3.0

Sampling Time: 1010 Sampling Date: 8-14-96

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

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 #: 960814-D1	Texaco ID#: 6185710050
Sampler: MD	Date: 8-14-96
Well I.D.: MW-B	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 27.32	Depth to Water: 8.66
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	radius² * 0.164

Purge Method:
- S.S. Bailer
- Teflon Bailer X
- Middleburg
- Electric Submersible
- Extraction Pump

Other: ___

Sampling Method:
- S.S. Bailer
- Teflon Bailer X
- Extraction Port

Other: ___

2.0 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 6.0 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
1020	69.4	7.4	1600	172.2	2	ODOR/SHEEN
1023	64.2	7.4	1600	62.3	4	
1026	69.0	7.4	1600	56.4	6	

Did well dewater? Yes (No)

Gallons actually evacuated: 6.0

Sampling Time: 1030

Sampling Date: 8-14-96

Sample I.D.: MW-B

Laboratory: BC Analytical

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 #: 960814-01	Texaco ID#: 6185 71050
Sampler: MD / TG	Date: 8-14-96
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 25.54	Depth to Water: 21.18
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^2 * 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: ____

9.3 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 28.0 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
930	72.0	7.0	1800	>200	9	
931	70.4	7.0	2100	>200	18	
933	69.6	6.9	2100	>200	28.0	

Did well dewater? Yes (No) Gallons actually evacuated: 28.0

Sampling Time: 9:40 Sampling Date: 8-14-96

Sample I.D.: MW-1 Laboratory: BC Analytical

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 #: 960814 - D1	Texaco ID#: 6185710 50
Sampler: MD / TG	Date: 8-14-96
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 22.52	Depth to Water: 8.88
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	radius² * 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	x	3	=	27 Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
945	71.0	7.2	2200	7200	9	
946	67.8	7.1	1900	7200	18	
947	67.0	7.0	1700	7200	27	

Did well dewater? Yes (No)	Gallons actually evacuated: 27
Sampling Time: 950	Sampling Date: 8-14-96
Sample I.D.: MW-2	Laboratory: BC Analytical
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 #: 960814 - 101	Texaco ID#: 6185710 50
Sampler: CD	Date: 8-14-96
Well I.D.: mw-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 24.49	Depth to Water: 10.24
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^2 * 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: _____

1 Case Volume (Gals.)		Specified Volumes		Calculated Volume
9.3	X	3	=	27.8 Gals.

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
912	70.4	7.2	1800	100	9	
914	70.4	7.0	1800	124	19	
915	71.2	6.8	1800	128	28	

Did well dewater? Yes (No) Gallons actually evacuated: 28.0

Sampling Time: 920 Sampling Date: 8-14-96

Sample I.D.: mw-3 Laboratory: BC Analytical

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 #: 960814 - 01	Texaco ID#: 6185710 50
Sampler: MD / TG	Date: 8 - 14 - 96
Well I.D.: MW-4	Well Diameter: (2) (3) 4 6 8 ____
Total Well Depth: 24.82	Depth to Water: 9.84
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	radius² * 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: _____

~~3~~ 5.6 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = ~~3~~ 17 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
837	72.6	6.8	1200	>200	~~2~~ 5.5	
838	69.0	7.0	1200	>200	~~3~~ 11.25	
840	68.6	7.0	1200	>200	~~3~~ 17	

Did well dewater? Yes (No)	Gallons actually evacuated: 17.0
Sampling Time: 845	Sampling Date: 8 - 14 - 96
Sample I.D.: MW - 4	Laboratory: BC Analytical
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 #: 960814-D1	Texaco ID#: 6185721050
Sampler: CD & TM	Date: 8-14-96
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 21.35	Depth to Water: 12.03
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	radius² * 0.164

Purge Method:
- S.S. Bailer
- Teflon Bailer X
- Middleburg
- Electric Submersible
- Extraction Pump
- Other: _____

Sampling Method:
- S.S. Bailer
- Teflon Bailer X
- Extraction Port
- Other: _____

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

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
955	68.0	7.1	1000	>200	1.5	ODOR
958	68.2	7.0	1200	>200	3.0	
1000	67.8	7.0	1200	>200	4.5	

Did well dewater? Yes (No)

Gallons actually evacuated: 4.5

Sampling Time: 1005

Sampling Date: 8-14

Sample I.D.: MW-5

Laboratory: BC Analytical

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

Equipment Blank I.D.:

Analyzed for same as primary sample

SOURCE RECORD

BILL OF LADING

FOR NON-HAZARDOUS PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT TEXACO FACILITIES IN THE STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGE-WATER WHICH HAS BEEN RECOVERED FROM GROUND-WATER WELLS IS COLLECTED BY THE CONTRACTOR, MADE UP INTO LOADS OF APPROPRIATE SIZE AND HAULED TO THE DESTINATION DESIGNATED BY TEXACO ENVIRONMENTAL SERVICES (TES).

Contractor: Blaine Tech Services, Inc.
Address: 985 Timothy Drive
City, State, ZIP: San Jose, CA 95133
Phone: (408) 995-5535

is authorized by Texaco Environmental Services to recover, collect, apportion into loads, and haul the NON-HAZARDOUS WELL PURGEWATER that is drawn from wells at the Texaco facility listed below and to deliver that purgewater to an appropriate destination designated by TEXACO ENVIRONMENTAL SERVICES in either Redwood City, California or in Richmond, California. Transport routing of the Non-Hazardous Well Purgewater may be directed from one Texaco facility to the designated desitnation point; from one Texaco facility to the designated destination point via another Texaco facility; from a Texaco facility via the contractor's facility, or any combination thereof. The Non-Hazardous Well Purgewater is and remains the property of Texaco Environmental Services (TES).

This SOURCE RECORD BILL OF LADING was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the Texaco facility described below:

TEXACO #: 6185710 50
Address: 930 Springtown Blvd.
City, State, ZIP: Livermore, CA

Well I.D.	Gals.	Well I.D.	Gals.
MW-A	1		1
MW-B	1		1
MW-1	1		1
	1		1
MW-5	1		1
MW-8	1		1
	1		1
	1		1
	1		1
	1		1

Total gals. 129

added rinse water 10

Total Gals. Recovered 139

Job #: 960814-77
Date 8-14-96
Time 1030
Signature:

REC'D AT: TS
Date: 8-14-96
Time: 1245
Signature:

SECOND-QUARTER PROGRESS REPORT
930 SPRINGTOWN
LIVERMORE, CALIFORNIA

HISTORY OF INVESTIGATIVE AND REMEDIAL ACTIONS

The site, formerly a Texaco service station, is currently occupied by a Seven-Eleven convenience store. Subsurface investigation was initiated in September, 1984 with the installation of two groundwater monitoring wells (MW-A and MW-B). The underground storage tanks were removed in June, 1985. Investigation continued in 1985, 1986, and 1989 to define extent of plume. Monitoring wells MW-1 through MW-3 were installed in June, 1985; MW-4 was installed in September, 1985; and MW-5 and MW-6 were installed in November, 1986. One soil boring and two additional monitoring wells (MW-7 and MW-8) were drilled in December, 1989 to fully define the extent of subsurface hydrocarbons.

Soil vapor extraction was the method selected to remediate hydrocarbon-impacted soils at the site. Vadose-zone hydrocarbons were removed and destroyed using a 100 cfm catalytic oxidizer. The unit was in operation from November 1994 to October 1995. When influent hydrocarbon concentrations indicated the soil was effectively remediated, the system was shut down and removed from the site.

WORK PERFORMED DURING THIS QUARTER

Groundwater monitoring was conducted during the quarter. Results are presented in a separate groundwater monitoring report.

PROPOSED INVESTIGATIONS OR REMEDIATION PLANS

Based on analysis of influent hydrocarbons during soil vapor extraction, soil remediation at the site is judged to be complete. Groundwater will continue to be monitored on a quarterly basis to insure that the dissolved-phase plume is not migrating downgradient, and that biodegradation of hydrocarbons is occurring. It is not anticipated at this time that any further active remediation will be necessary.