Texaco Refining
and Marketing Inc

ENVIRONMENTAL
PROTECTION

96 JUN 24 PM 3:17

June 21, 1996

6/28/96 GW collected & analyzed
MW 1, 3, 5 ?
wells 6, 7 destroyed.

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 ~~April~~ 30, ~~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 west-northwest (see Plate 2, Groundwater Gradient Map) at .003 ft. per ft. The gradient map has been reviewed by a registered professional. 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, Mr. Tom Hargett at (818) 505-2733.

Best Regards,

Rebecca Digerness
Environmental Assistant

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

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

Enclosure

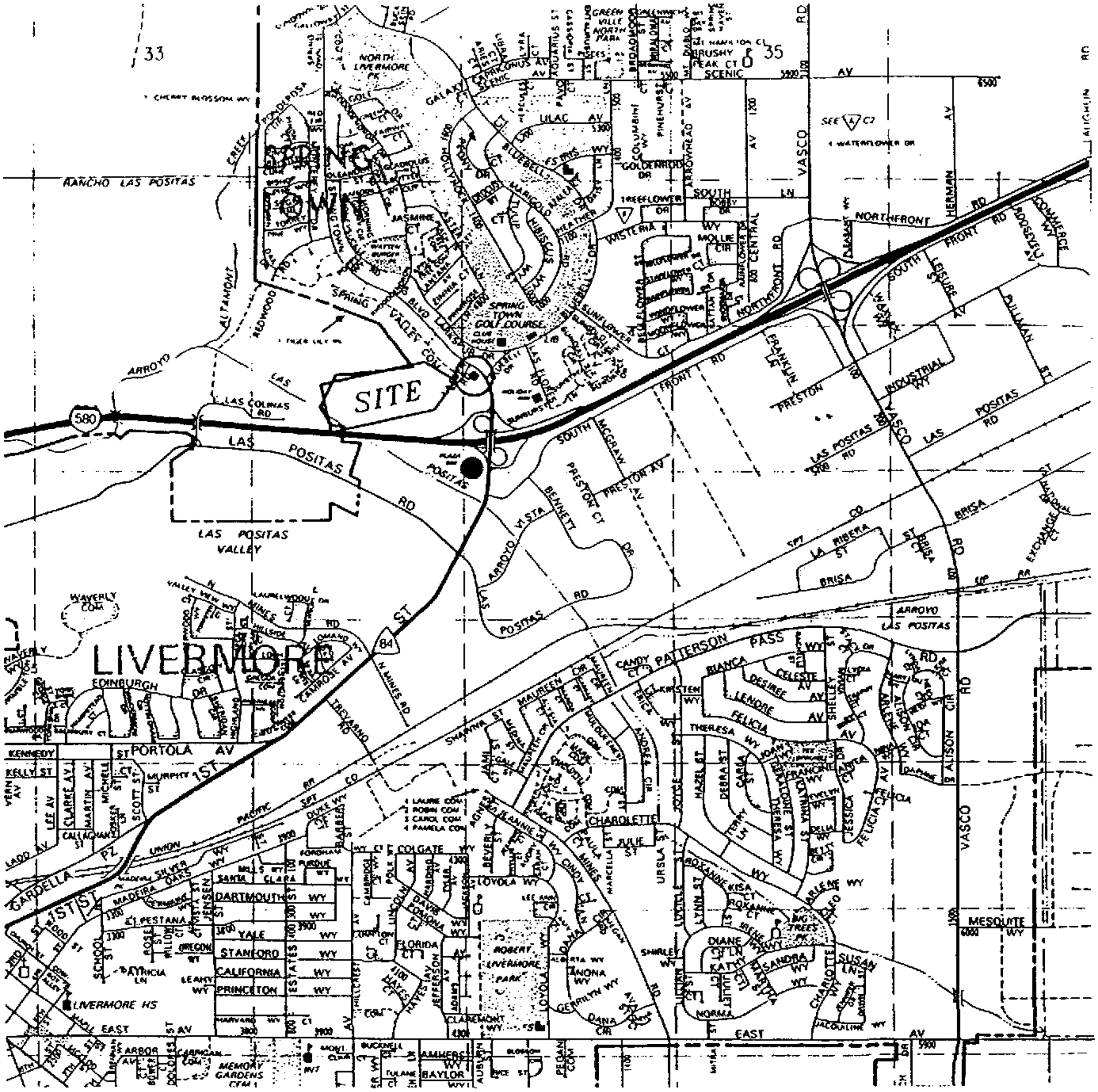
cc: Mr. Timothy Ross
Kaprealian Engineering, Inc.
2401 Stanwell Dr., Suite 400
Concord, CA 94520

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

RRZielinski (w/o enclosures) TWHargett-RAOFile-UCPFile (w/enclosures)

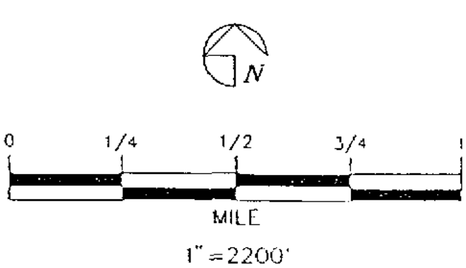
pr: EG

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



SOURCE:

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



TEXACO

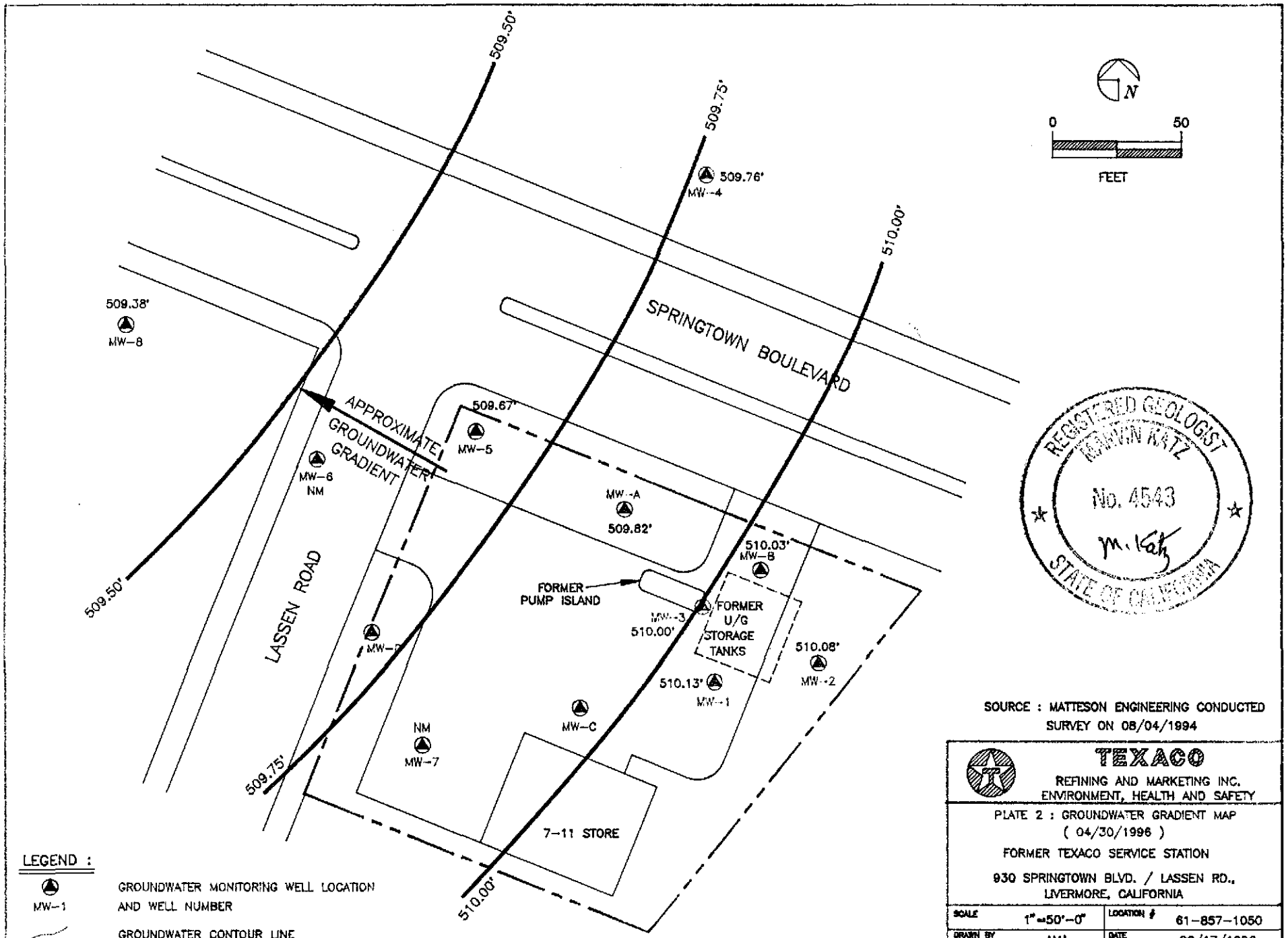
REFINING AND MARKETING, INC.
TEXACO ENVIRONMENTAL SERVICES

PLATE 1

SITE VICINITY MAP

FORMER TEXACO SERVICE STATION

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



REGISTERED GEOLOGIST
DAWN RATZ
No. 4543
STATE OF CALIFORNIA

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

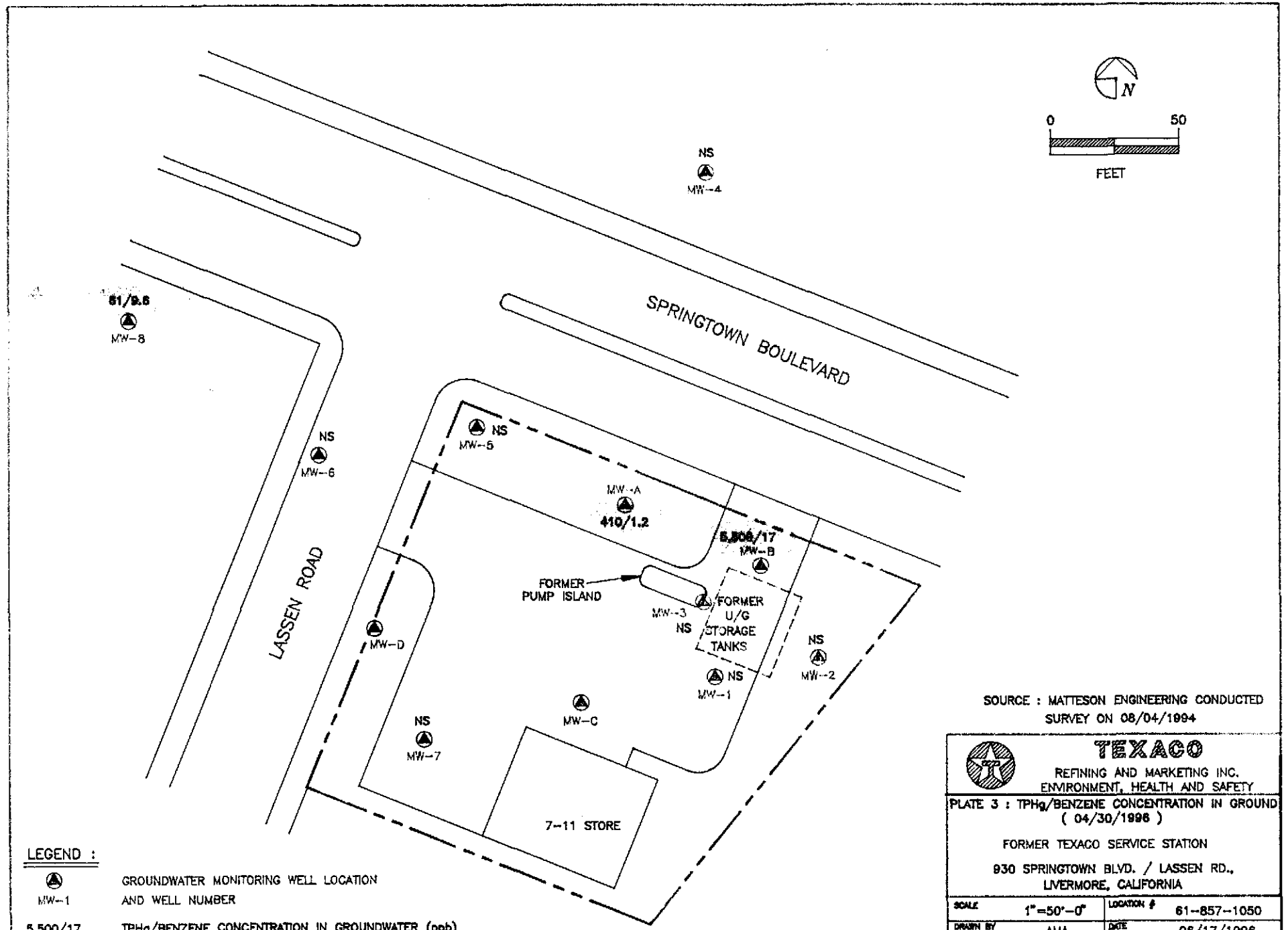
LEGEND :

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

TEXACO
REFINING AND MARKETING INC.
ENVIRONMENT, HEALTH AND SAFETY

PLATE 2 : GROUNDWATER GRADIENT MAP
(04/30/1996)
FORMER TEXACO SERVICE STATION
930 SPRINGTOWN BLVD. / LASSEN RD.,
LIVERMORE, CALIFORNIA

SCALE	1"=50'-0"	LOCATION #	61-857-1050
DRAWN BY	AMA	DATE	06/17/1996
CHECKED BY	RD	DATE	6/21/96
DRAWING NO.	(LIVERMORE) ST-LA-LI.DWG		



LEGEND :

MW-1	GROUNDWATER MONITORING WELL LOCATION AND WELL NUMBER
5,500/17	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 (04/30/1996)

FORMER TEXACO SERVICE STATION

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

SCALE	1"=50'-0"	LOCATION #	61-857-1050
DRAWN BY	AMA	DATE	06/17/1996
CHECKED BY	RD	DATE	6/21/96
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	—
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	—

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	---
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	---

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	---
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	---

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	---
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		---

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		

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

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)
MW-1						
	1/2/92	16	6	ND	ND	ND
	4/2/92	ND	ND	ND	ND	ND
	7/21/92	<50	3.2	<0.5	<0.5	<0.5
	10/9/92	<50	8.5	<0.5	<0.5	<0.5
	1/11/93	<50	<0.5	<0.5	<0.5	<0.5
	5/5/93	<50	<0.5	<0.5	<0.5	<0.5
	8/9/93	<50	<0.5	<0.5	<0.5	<0.5
	10/14/93	440	16	2.9	2.9	11
	5/31/94	<50	<0.5	<0.5	<0.5	<0.5
	8/31/94	<50	<0.5	<0.5	<0.5	<0.5
	11/2/94	<50	<0.5	<0.5	<0.5	<0.5
	2/20/95	<50	<0.5	<0.5	<0.5	<0.5
4X	5/9/95	450	22	25	23	100
	8/21/95	58	<0.5	1.5	1.8	4.5
	10/20/95	<50	<0.5	<0.5	<0.5	<0.5
	2/7/96	<50	<0.5	<0.5	<0.5	<0.5
	4/30/96	NS	NS	NS	NS	NS
MW-2						
	1/2/92	ND	ND	ND	ND	ND
	4/2/91	ND	ND	ND	ND	ND
	7/21/92	NS	NS	NS	NS	NS
	10/9/92	NS	NS	NS	NS	NS
	1/11/93	NS	NS	NS	NS	NS
	5/5/93	NS	NS	NS	NS	NS
	8/9/93	NS	NS	NS	NS	NS
	10/14/93	NS	NS	NS	NS	NS
2X	1/24/94	NS	NS	NS	NS	NS
	5/31/94	NS	NS	NS	NS	NS
	8/31/94	<50	<0.5	<0.5	<0.5	<0.5
	11/2/94	NS	NS	NS	NS	NS
	2/20/95	<50	<0.5	<0.5	<0.5	<0.5
	5/9/95	NS	NS	NS	NS	NS
	8/21/95	<50	<0.5	<0.5	<0.5	<0.5
	10/20/95	NS	NS	NS	NS	NS
	2/7/96	<50	<0.5	<0.5	<0.5	<0.5
	4/30/96	NS	NS	NS	NS	NS

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

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

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)
MW-7						
	1/2/92	NS	NS	NS	NS	NS
	4/2/92	ND	ND	ND	ND	ND
	7/21/92 - 4/30/96	NS	NS	NS	NS	NS
MW-8						
	1/2/92	12,000	32	980	200	760
	4/2/92	ND	ND	ND	ND	ND
	7/21/92	NS	NS	NS	NS	NS
	10/9/93	NS	NS	NS	NS	NS
	1/11/93	NS	NS	NS	NS	NS
	5/5/93	NS	NS	NS	NS	NS
	8/9/93	NS	NS	NS	NS	NS
	10/14/93	NS	NS	NS	NS	NS
	1/24/94	NS	NS	NS	NS	NS
	5/31/94	NS	NS	NS	NS	NS
	8/31/94	<50	<0.5	<0.5	<0.5	<0.5
	11/2/94	NS	NS	NS	NS	NS
	2/20/95	<50	<0.5	<0.5	<0.5	<0.5
	5/9/95	NS	NS	NS	NS	NS
	8/21/95	<50	<0.5	<0.5	0.67	0.62
	10/20/95	NS	NS	NS	NS	NS
	2/7/96	<50	7.0	<0.5	<0.5	<0.5
	4/30/96	61	9.6	<0.5	<0.5	<0.5
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						

B C Analytical

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

ANALYTICAL REPORT

LOG NO: G96-04-652

Received: 01 MAY 96

Mailed: MAY 8 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

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020) Date Analyzed Date	Dilution Factor Times	TPH-g ug/L	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylenes Isomers ug/L	Carbon Range
RDL			1	50	0.5	0.5	0.5	0.5	
1*MW A	04/30/96	05/02/96	1	410	1.2	0.67	1.2	1.5	C6-C12
2*MW B	04/30/96	05/02/96	10	5500	17	460	120	400	C6-C12
3*MW 8	04/30/96	05/02/96	1	61	9.6	<0.5	<0.5	<0.5	C6-C12

Karen Petryna
930 Springtown Blvd., Livermore
Alameda County

B C Analytical

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

ANALYTICAL REPORT

LOG NO: G96-04-652

Received: 01 MAY 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

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020) Date Analyzed Date	Dilution Factor Times	TPH-g ug/L	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylenes Isomers ug/L	Carbon Range .
RDL			1	50	0.5	0.5	0.5	0.5	
4*EB	04/30/96	05/02/96	1	<50	<0.5	<0.5	<0.5	<0.5	C6-C12

Greta Galoustian, Laboratory Director

The analytical results within this report relate only to the specific compounds and samples investigated and may not necessarily reflect other apparently similar material from the same or a similar location.

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ORDER PLACED FOR CLIENT: Texaco Environmental Services 9604652 :
BC ANALYTICAL : GLEN LAB : 10:10:10 08 MAY 1996 - P. 1 :

AMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
504652*1	MW A	GAS.BTX.TESNC	05.02.96	8015M.TX	536-23	96563	8171
504652*2	MW B	GAS.BTX.TESNC	05.02.96	8015M.TX	536-23	96563	8171
504652*3	MW 8	GAS.BTX.TESNC	05.02.96	8015M.TX	536-23	96563	8171
504652*4	EB	GAS.BTX.TESNC	05.02.96	8015M.TX	536-23	96563	8171

**

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

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

BC ANALYTICAL

ORDER QC REPORT FOR G9604652

TE REPORTED : 05/08/96

LABORATORY CONTROL STANDARDS
FOR BATCHES WHICH INCLUDE THIS ORDER

RAMETER		DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
BTEX/GRO (8020)	C605394*1						
Date Analyzed		05.02.96	96563	05/02/96	05/02/96	Date	N/A
Benzene		05.02.96	96563	16.1	15.2	ug/L	106
Toluene		05.02.96	96563	94.7	97.4	ug/L	97
Ethylbenzene		05.02.96	96563	19.8	20.4	ug/L	97
Total Xylene Isomers		05.02.96	96563	118	119	ug/L	99
TPH (Gasoline Range)		05.02.96	96563	1150	1100	ug/L	105
a,a,a-Trifluorotoluene	Rep.	05.02.96	96563	58.5	50.0	ug/L	117
a,a,a-Trifluorotoluene	Th.	05.02.96	96563	50.0	50.0	ug/L	100

BC ANALYTICAL

ORDER QC REPORT FOR G9604652

.TE REPORTED : 05/08/96

MATRIX QC ACCURACY (SPIKES)
BATCH QC REPORT

\RAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %	MSD %	TRUE RESULT	UNIT	
GRO	9605011*4							
Benzene		05.02.96	96563	NC	NC	127	ug/L	NC
Toluene		05.02.96	96563	94	90	156	ug/L	
Ethylbenzene		05.02.96	96563	100	96	29.1	ug/L	
Total Xylene Isomers		05.02.96	96563	98	95	160	ug/L	
TPH (Gasoline Range)		05.02.96	96563	106	105	1620	ug/L	
a,a,a-Trifluorotoluene Rep.		05.02.96	96563	114	109	50.0	ug/L	
a,a,a-Trifluorotoluene Th.		05.02.96	96563	100	100	50.0	ug/L	

BC ANALYTICAL

ORDER QC REPORT FOR G9604652

TE REPORTED : 05/08/96

MATRIX QC PRECISION (DUPLICATE SPIKES)
BATCH QC REPORT

RAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
BTEX/GRO (8020)	9605011*4						
Date Analyzed		05.02.96	96563	05/02/96	05/02/96	Date	N/A
Benzene		05.02.96	96563	127	124	ug/L	2
Toluene		05.02.96	96563	150	146	ug/L	3
Ethylbenzene		05.02.96	96563	29.1	28.3	ug/L	3
Total Xylene Isomers		05.02.96	96563	158	154	ug/L	3
TPH (Gasoline Range)		05.02.96	96563	1690	1680	ug/L	1
a,a,a-Trifluorotoluene Rep.		05.02.96	96563	57.1	54.5	ug/L	5
a,a,a-Trifluorotoluene Th.		05.02.96	96563	50.0	50.0	ug/L	0

BC ANALYTICAL

ORDER QC REPORT FOR G9604652

ATE REPORTED : 05/08/96

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)
FOR BATCHES WHICH INCLUDE THIS ORDER

ARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
. BTEX/GRO (8020) B605215*1						
Date Analyzed	05.02.96	96563	05/02/96	NA	Date	8015M
Benzene	05.02.96	96563	0	0.3	ug/L	8015M
Toluene	05.02.96	96563	0	0.3	ug/L	8015M
Ethylbenzene	05.02.96	96563	0	0.3	ug/L	8015M
Total Xylene Isomers	05.02.96	96563	0	0.6	ug/L	8015M
TPH (Gasoline Range)	05.02.96	96563	0	100	ug/L	8015M
a,a,a-Trifluorotoluene Rep.	05.02.96	96563	51.0	0.5	ug/L	8015M
a,a,a-Trifluorotoluene Th.	05.02.96	96563	50.0	NA	ug/L	8015M

SURROGATE RECOVERIES :
BC ANALYTICAL : GLEN LAB : 10:11:01 08 MAY 1996 - P. 1 :

ETHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
504652*1							
015M.TX	a,a,a-Trifluorotoluene	Re96563	05/02/96	55.6	50.0	111	
504652*2							
015M.TX	a,a,a-Trifluorotoluene	Re96563	05/02/96	564	500	113	
504652*3							
015M.TX	a,a,a-Trifluorotoluene	Re96563	05/02/96	50.1	50.0	100	
504652*4							
015M.TX	a,a,a-Trifluorotoluene	Re96563	05/02/96	51.8	50.0	104	

SURROGATE RECOVERIES :
BC ANALYTICAL : GLEN LAB : 10:11:09 08 MAY 1996 - P. 1 :

ETHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
605011*4*R1							
015M	a,a,a-Trifluorotoluene	Re96563	05/02/96	49.8	50.0	100	
605011*4*S1							
015M	a,a,a-Trifluorotoluene	Re96563	05/02/96	57.1	50.0	114	
605011*4*S2							
015M	a,a,a-Trifluorotoluene	Re96563	05/02/96	54.5	50.0	109	
605011*4*T							
015M	a,a,a-Trifluorotoluene	Re96563	05/02/96	50.0	50.0	100	
605215*1*MB							
015M	a,a,a-Trifluorotoluene	Re96563	05/02/96	51.0	50.0	102	
605394*1*LC							
015M	a,a,a-Trifluorotoluene	Re96563	05/02/96	58.5	50.0	117	
605394*1*LT							
015M	a,a,a-Trifluorotoluene	Re96563	05/02/96	50.0	50.0	100	

G9604652

Chain-of-Custody

Page 1 of 1

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 Corordinator: Karen Petryna

Site Name: Texaco Loc.# 618571050
Site Address: 930 Springtown Blvd. Livermore, CA
Contractor Project Number: 960430S2
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): [illegible]
Sampler Signature: [signature]
Date Samples Collected: 04/30/96

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			Comments
MWA		4/30 1246	3	VOA	W	HCL	X						—	1			
MWB		4/30 1307	3	VOA	W	HCL	X						—	2			
MW 8		4/30 1117	3	VOA	W	HCL	X						—	3			
EB		4/30 1121	3	VOA	W	HCL	X						—	4			

618571050
alameda
KEP
FKEP1012L

Cooler Temp: 6°C
Sample Condition: Good

Relinquished by: (Signature) [signature]	Date: 5-1-96	Time: 1:35	Received by: (Signature) Bill Lyons	Date: 5-1-96	Time: 1:35
Relinquished by: (Signature) Bill Lyons	Date: 5-1-96	Time: 2:20	Received by: (Signature) [signature]	Date: 5/1/96	Time: 2:30
Relinquished by: (Signature) [signature]	Date: 5/1/96	Time: 1700	Received by: (Signature)	Date:	Time:
Method of Shipment:			Lab Comments:		

Well Gauging Data

Project Name: ~~6184~~ 71050
Project Number: 96043052

Date: 04/30/96
Recorded By: SMART

Well ID	TOC Elev.	DTB (ft. TOC)	Well Dia. (in.)	DTP (ft.)	DTW (ft.)	PT (ft.)	Comments
MW A		16.52	2		10.28		S
MW B		21.48	2		8.02		S
MW-1		25.47	4		10.48		WSPA S
MW-2		22.60	4		8.21		G
MW-3		24.62	4		9.80		WSPA S
MW-4		25.0	4		9.03		WSPA S
MW-5		21.63	2		11.52		WSPA S
MW-6		23.95	4		14.65		S

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 #: 96043052	Texaco ID#: 6185710 50
Sampler: SHAWN	Date: 04/30/96
Well I.D.: MW-A	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 16.52	Depth to Water: 10.28
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 X; Teflon Bailer; Middleburg; Electric Submersible; Extraction Pump; Other: ___

Sampling Method: S.S. Bailer X; Teflon Bailer; Extraction Port; Other: ___

1.0 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 3.0 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
1236	69.6	7.6	1000	7200	1.	ODOR
1240	70.0	7.8	1000	7200	2.	
1242	70.1	7.6	1100	7200	3.	

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

Sampling Time: 1246 Sampling Date: 04/30/96

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

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

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

TEXACO WELL MONITORING DATA SHEET

Project #: 96043052	Texaco ID#: 6185710150
Sampler: SMAWL	Date: 04/30/96
Well I.D.: MWB	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 21.48	Depth to Water: 8.02
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 X
- Electric Submersible
- Extraction Pump
- Other: _____

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

2.28 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 6.84 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
1255	69.8	7.8	2000	7200	2.5	ODOR/BLACK
1257	69.0	7.8	2000	118.9	5.0	
1259	69.2	7.8	2000	109.8	7.0	

Did well dewater? Yes (No) Gallons actually evacuated: 7.0

Sampling Time: 1307 Sampling Date: 04/30/96

Sample I.D.: MWB Laboratory: BC Analytical

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

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

TEXACO WELL MONITORING DATA SHEET

Project #: 96043052	Texaco ID#: 6185705Q
Sampler: SHAWN	Date: 04/30/96
Well I.D.: MW-8	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 23.95	Depth to Water: 14.65
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: _____

6.13	x	3	=	18.41 Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
1108	72.6	6.6	2000	7200	6.5	
1110	71.8	7.0	2000	110.6	13.0	
1112	72.0	7.0	2000	98.3	19.0	

Did well dewater? Yes (No) Gallons actually evacuated: 19.0

Sampling Time: 1117 Sampling Date: 04/30/96

Sample I.D.: MW-8 Laboratory: BC Analytical

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

Equipment Blank I.D.: EB AT 1121 Analyzed for same as primary sample

WSPA PURGING STUDY

WATER SAMPLE FIELD DATA SHEET

SITE #: T121 | PURGED BY: SHAWN | WELL I.D.: MW1

CLIENT NAME: TEXACO | SAMPLED BY: SHAWN | SAMPLE I.D.: T121MW1

LOCATION: 930 SPRINGTOWN, LIVERMORE | QA SAMPLES: _____

DATE PURGED 04/30/91 | START (2400hr) 1145 | END (2400hr) 1151

DATE SAMPLED 04/30/91 | SAMPLE TIME (PRE) 1140 | SAMPLE TIME (POST) 1155

SAMPLING CONDITIONS | Weather CLR | Temperature 83.6 | Other _____

CASING DIAMETER:

	2"	3"	4"	4.5"	5"	6"	8"	Other
Casing Volume Per Foot	(0.17)	(0.38)	(0.67) ✓	(0.83)	(1.02)	(1.50)	(2.60)	( )

DEPTH TO BOTTOM (feet) = 25.47 | CASING VOLUME (gal) = 10

DEPTH TO WATER - PRE-PURGE (feet) = ~~10.48~~ 10.46 | CALCULATED PURGE (gal) = 30

DEPTH TO WATER - POST PURGE (feet) = 10.53 | ACTUAL PURGE (gal) = 30

pH METER CALIBRATION CHECK - pH 7.0 SOLUTION READS AS 7.0

IF THE pH METER IS RE-CALIBRATED, THE RE-CALIBRATED METER pH 7.0 SOLUTION READS AS 7.0

PURGING FIELD MEASUREMENTS

TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)	DISSOLVED OXYGEN ppm
Pre 1140	—	71.2	2000	7.6	CLR	29.5	
1147	10	71.0	2000	7.8	BRN	2200	
1149	20	70.8	2200	7.4	BRN	7200	
1151	30	70.4	2200	7.4	BRN	7200	

Post Purge Sample Parameters: 71.0 | 2200 | 7.2 | BRN | 7200

% RECHARGED WHEN SAMPLED (DTW-pre/DTW-post) 99%

SAMPLE VESSEL / PRESERVATIVE: VOA/HCL | LAB. ANALYSIS TPH(g), BTEX

PURGING EQUIPMENT

- ____ Bladder Pump
- ____ Centrifugal Pump
- X Submersible Pump
- ____ Peristaltic Pump
- ____ Bailer (Teflon)
- ____ Bailer (PCV)
- ____ Bailer (Stainless Steel)
- ____ Vacuum Truck

MONITORING EQUIPMENT

Water Level Meter Mfg. by: Wt12

pH Meter Mfg. by: MYRON L

pH Meter Model #: 01068220

D.O. Meter Mfg. by: _____

WELL HEAD CONDITION: GOOD

REMARKS: _____

SIGNATURE: _____

wsfds.wb1

WSPA PURGING STUDY

WATER SAMPLE FIELD DATA SHEET

SITE #: T121 PURGED BY: SHAWN WELL I.D.: MW-3

CLIENT NAME: TOSCO SAMPLED BY: SHAWN SAMPLE I.D.: T121

LOCATION: 930 SPRINGTOWN, LIVERMORE QA SAMPLES:

DATE PURGED 4/30/96 START (2400hr) 1210 END (2400hr) 1216

DATE SAMPLED 4/30/96 SAMPLE TIME (PRE) 1205 SAMPLE TIME (POST) 1220

SAMPLING CONDITIONS Weather CLR Temperature 90.1 Other

CASING DIAMETER: 2"___ 3"___ 4"✓ 4.5"___ 5"___ 6"___ 8"___ Other___

Casing Volume Per Foot (0.17) (0.38) (0.67) (0.83) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 24.62 CASING VOLUME (gal) = 10.0

DEPTH TO WATER - PRE-PURGE (feet) = 9.60 CALCULATED PURGE (gal) = 30.0

DEPTH TO WATER - POST PURGE (feet) = 22.55 ACTUAL PURGE (gal) = 30.0

pH METER CALIBRATION CHECK - pH 7.0 SOLUTION READS AS 7.0

IF THE pH METER IS RE-CALIBRATED, THE RE-CALIBRATED METER pH 7.0 SOLUTION READS AS 7.0

PURGING FIELD MEASUREMENTS

TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)	DISSOLVED OXYGEN ppm
Pre 1205	—	72.4	2000	7.2	CLR	12.2	
1212	10	72.0	2000	7.4	BRWN	>200	
1214	20	71.8	2000	7.4	BRWN	>200	
1216	30	71.8	2000	7.4	BRWN	>200	
Post Purge Sample Parameters		72.0	2000	7.2	BRWN	>200	

% RECHARGED WHEN SAMPLED (DTW-pre/DTW-post) 42%

SAMPLE VESSEL / PRESERVATIVE: VOA/HCL LAB. ANALYSIS TPH6, BTEX

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
X Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
___ Bailer (PCV)
___ Bailer (Stainless Steel)
___ Vacuum Truck

MONITORING EQUIPMENT

Water Level Meter Mfg. by: WL12
pH Meter Mfg. by: MYRON L
pH Meter Model #: ULTRA 10
D.O. Meter Mfg. by:

WELL HEAD CONDITION: GOOD

REMARKS: ODOR

SIGNATURE:

wsfds.wb1

WSPA PURGING STUDY

WATER SAMPLE FIELD DATA SHEET

SITE #: T12 | PURGED BY: SHAWN | WELL I.D.: MW-4

CLIENT NAME: TEXACO | SAMPLED BY: SHAWN | SAMPLE I.D.: T12 | MW4NP

LOCATION: 930 SPRINGTOWN BLVD | QA SAMPLES: ~~1030~~

DATE PURGED 04/30/96 | START (2400hr) 1031 | END (2400hr) ~~1044~~ 1038

DATE SAMPLED 04/30/96 | SAMPLE TIME (PRE) 1030 | SAMPLE TIME (POST) 1050

SAMPLING CONDITIONS | Weather CLR | Temperature 81.2 | Other

CASING DIAMETER: 2"___ 3"✓ 4"___ 4.5"___ 5"___ 6"___ 8"___ Other___

Casing Volume Per Foot (0.17) (0.38) (0.67) (0.83) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 25.0 | CASING VOLUME (gal) = 6.0

DEPTH TO WATER - PRE-PURGE (feet) = 9.03 | CALCULATED PURGE (gal) = 18.0

DEPTH TO WATER - POST PURGE (feet) = 10.0 | ACTUAL PURGE (gal) = 18.0

pH METER CALIBRATION CHECK - pH 7.0 SOLUTION READS AS 7.0

IF THE pH METER IS RE-CALIBRATED, THE RE-CALIBRATED METER pH 7.0 SOLUTION READS AS 7.0

PURGING FIELD MEASUREMENTS

TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)	DISSOLVED OXYGEN ppm
Pre 1030	—	73.2	1600	7.0	CLR	12.9	
1034	6	72.4	1500	7.0	CLR	8.1	
1036	12	72.8	1500	7.0	CLR	25.2	
1038	18	73.0	1600	7.0	CLR	12.9	
Post Purge Sample Parameters		72.6	1600	7.0	CLR	34.8	

% RECHARGED WHEN SAMPLED (DTW-pre/DTW-post) 90 %

SAMPLE VESSEL / PRESERVATIVE: VOA/HCL | LAB. ANALYSIS TPH, BTEX

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
X Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
___ Bailer (PCV)
___ Bailer (Stainless Steel)
___ Vacuum Truck

MONITORING EQUIPMENT

Water Level Meter Mfg. by: WL12
pH Meter Mfg. by: MYRON L
pH Meter Model #: 01C5220
D.O. Meter Mfg. by:

WELL HEAD CONDITION: ~~Rusty~~ GOOD

REMARKS:

SIGNATURE:

wsfds.wb1

WSPA PURGING STUDY

WATER SAMPLE FIELD DATA SHEET

SITE #: T121 | PURGED BY: SNOWD | WELL I.D.: MW5

CLIENT NAME: BP/CO | SAMPLED BY: SNOWD | SAMPLE I.D.: T121MW5

LOCATION: 930 SPRINGTOWN, LIVERMORE | QA SAMPLES: T121MW5 MPD

DATE PURGED 04/30/96 | START (2400hr) 1328 | END (2400hr) 1334

DATE SAMPLED 04/30/96 | SAMPLE TIME (PRE) 1320 | SAMPLE TIME (POST) 1340

SAMPLING CONDITIONS | Weather CLR | Temperature 81.0 | Other

CASING DIAMETER: 2" ✓ | 3"___ | 4"___ | 4.5"___ | 5"___ | 6"___ | 8"___ | Other___

Casing Volume Per Foot: (0.17) | (0.38) | (0.67) | (0.83) | (1.02) | (1.50) | (2.60) | ( )

DEPTH TO BOTTOM (feet) = 21.63 | CASING VOLUME (gal) = 1.71

DEPTH TO WATER - PRE-PURGE (feet) = 11.52 | CALCULATED PURGE (gal) = 5.15

DEPTH TO WATER - POST PURGE (feet) = 13.0 | ACTUAL PURGE (gal) = 5.25

pH METER CALIBRATION CHECK - pH 7.0 SOLUTION READS AS 7.0

IF THE pH METER IS RE-CALIBRATED, THE RE-CALIBRATED METER pH 7.0 SOLUTION READS AS 7.0

PURGING FIELD MEASUREMENTS

TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)	DISSOLVED OXYGEN ppm
Pre 1320	—	71.8	2000	7.4	CLR	8.4	
1330	1.75	72.0	2000	7.4	BLK	7200	
1332	3.5	72.0	2000	7.6	BLK	7200	
1334	5.25	72.0	2000	7.6	BLK	7200	
Post Purge Sample Parameters		71.8	2000	7.6	GREY	7200	

% RECHARGED WHEN SAMPLED (DTW-pre/DTW-post) 88/68 = 84%

SAMPLE VESSEL / PRESERVATIVE: VOA / HCL | LAB. ANALYSIS TPH6, BTEX

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
✓ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
___ Bailer (PCV)
___ Bailer (Stainless Steel)
___ Vacuum Truck

MONITORING EQUIPMENT

Water Level Meter Mfg. by: WL12
pH Meter Mfg. by: MYRON L
pH Meter Model #: 10S220
D.O. Meter Mfg. by:

WELL HEAD CONDITION: GOOD

REMARKS:

SIGNATURE:

wsfds.wb1

WSPA PURGING STUDY

METER CALIBRATION LOG

SITE #: T121

CLIENT NAME: TOSCO

LOCATION: 930 SPRINGTOWN LIVERMORE, CA.

CALIBRATED BY: SMW

DATE: 04/30/96

METER BRAND NAME: MYRON L

METER MODEL #: ~~ULTRA~~ 6108220

SITE INITIAL CALIBRATION

	Standard	Final Calibrated Values
pH	4.00	4.0
pH	7.00	7.0
pH	10.00	10.0
Conductivity	1000	1000
Conductivity	10000	10000
Dissolved Oxygen (if applicable)		

POST SAMPLING STANDARD MEASUREMENTS

	Standard	Measured Values
pH	4.00	4.0
pH	7.00	7.0
pH	10.00	10.0
Conductivity	1000	1000
Conductivity	10000	10000
Dissolved Oxygen (if applicable)		

REMARKS:

SIGNATURE:

phcal.wb1

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
City, State, ZIP: LIVERMORE CA

Well I.D.	Gals.	Well I.D.	Gals.
/		/	
/		/	
/		/	
PURGE WATER /	112.25	/	
/		/	
/		/	
/		/	
/		/	
/		/	
/		/	

Total gals. 112.25

added rinse water 10

Total Gals. Recovered 122.25

Job #: 9604
Date 4/196
Time
Signature: Tracy M. Hanson

REC'D AT: BTS
Date: 4/196
Time:
Signature: Tracy M. Hanson

P:\GW\MP\FORMS\TEX_BOL.WK4

FIRST-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.