



Texaco Refining  
and Marketing Inc.

108 Cutting Boulevard  
Richmond, CA 94804

October 3, 1996

**ENV - STUDIES, SURVEYS, & REPORTS**  
**Former Texaco/Current Exxon Service Station**  
**20499 Hesperian Boulevard, Hayward, CA**  
**Quarterly Monitoring Report**

Mr. Richard Hiett  
CRWQCB - San Francisco Bay Region  
2101 Webster St., Suite 500  
Oakland, CA 94612

Dear Mr. Hiett:

Enclosed is the 3rd Quarter, 1996 Groundwater Monitoring and Sampling Report for the subject site.

If you have any questions or comments regarding this site, please call me at (510) 236-9139.

Best Regards,  
Texaco Refining Marketing, Inc.

Karen E. Petryna, P.E.  
Project Manager  
Environment Health & Safety

KEP:eg

P:\GWMP\QMR\BLAINES\20499H\LETTTER

96 OCT -4 PM 4:11  
ENVIRONMENTAL  
PROTECTION

Enclosure

CC: Ms. Madhulla Logan  
Alameda County  
Hazardous Materials  
1131 Harbor Bay Pky  
Alameda, CA 94502-6577

Mr. Hugh Murphy  
City of Hayward Hazardous Materials Office  
25151 Clawiter Road  
Hayward, CA 94545

Mr. Michael Faber  
Exxon Company, U. S. A.  
2300 Clayton Rd., Suite 1250  
Concord, CA 94524-2032

Mr. Richard Hiett  
CRWQCB - San Francisco Bay Region  
2101 Webster St., Suite 500  
Oakland, CA 94612

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

PR: 

**Groundwater Monitoring and Sampling  
Third Quarter, 1996  
at the  
Former Texaco Station  
20499 Hesperian Boulevard  
Hayward, CA**



# BLAINE TECH SERVICES INC.

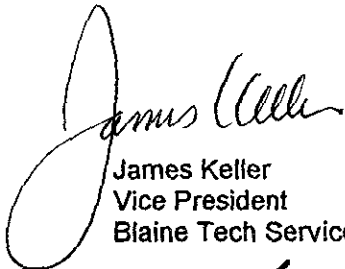
985 TIMOTHY DRIVE  
SAN JOSE, CA 95133  
(408) 995-5535  
FAX (408) 293-8773

September 27, 1996

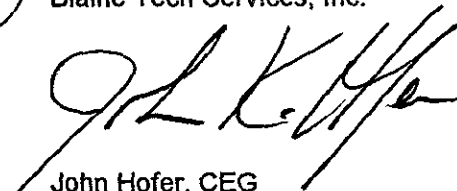
**Groundwater Monitoring and Sampling  
Third Quarter, 1996  
at the  
Former Texaco/ Former Exxon Service Station  
20499 Hesperian Boulevard  
Hayward, CA**

This report presents the results of groundwater monitoring and sampling conducted by Blaine Tech Services, Inc. on August 23, 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 northwest (see Plate 2, Groundwater Gradient Map). 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.

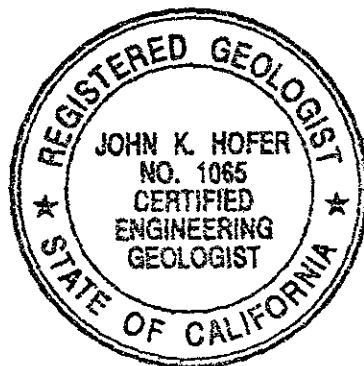
The certified analytical report, chain-of-custody, field data sheets, bill of lading, quarterly summary report and uniform hazardous waste manifest are in the Appendix, along with Texaco Environmental Services' Standard Operating Procedures.



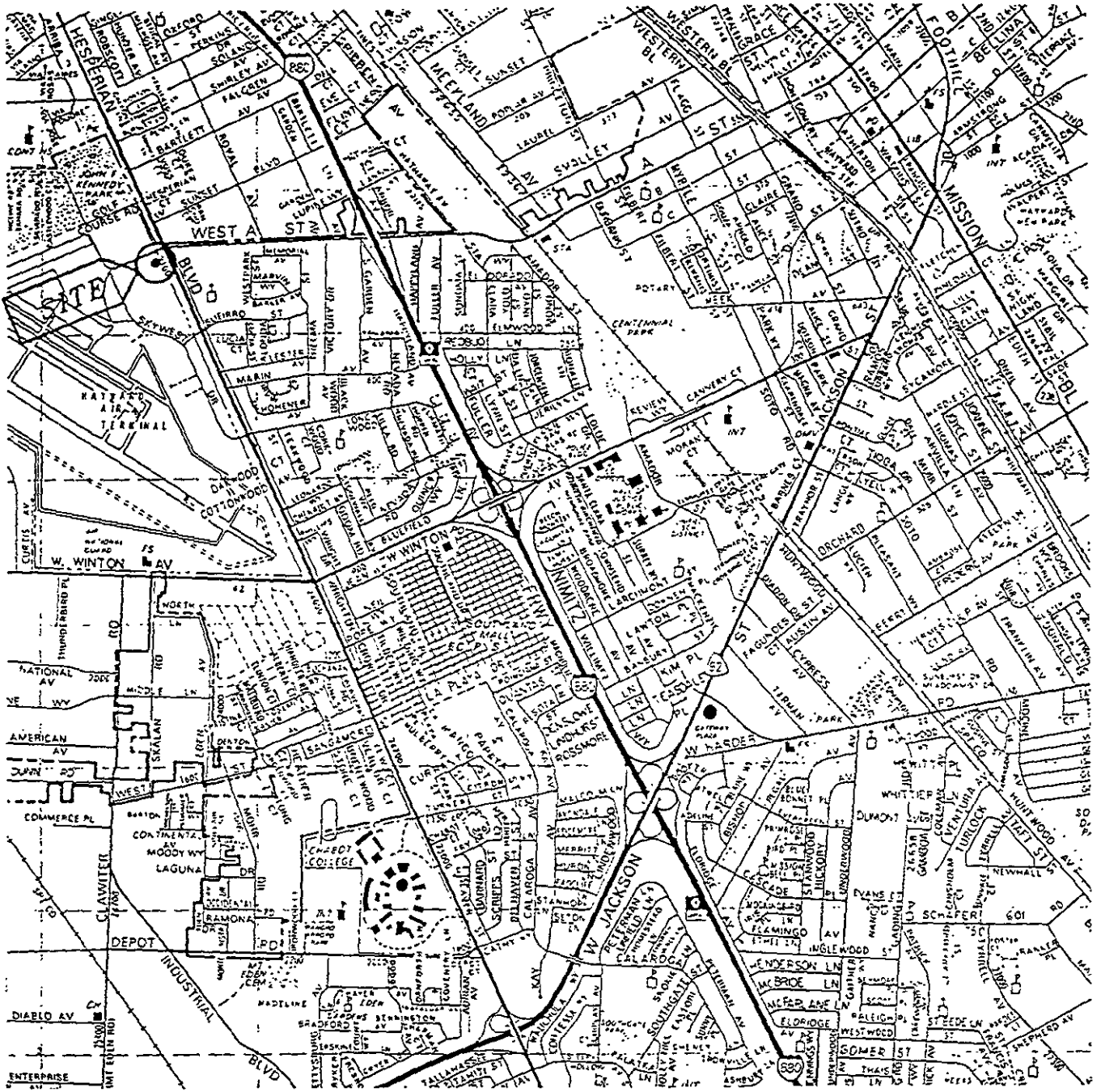
James Keller  
Vice President  
Blaine Tech Services, Inc.



John Hofer, CEG  
Engineering Geologist, EG-1065  
Geoconsultants, Inc.

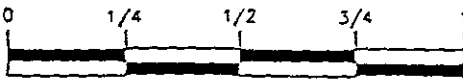


JPK:mc



**SOURCE:**

1993 THE THOMAS GUIDE  
ALAMEDA COUNTY, PAGE 58 (A2)



MILE

1" = 2200'



**TEXACO**

REFINING AND MARKETING, INC.  
TEXACO ENVIRONMENTAL SERVICES

PLATE 1

SITE VICINITY MAP

FORMER TEXACO SERVICE STATION

20499 HESPERIAN BLVD. / WEST "A" ST.,  
HAYWARD, CALIFORNIA

MW-4G  
25.35

MW-4H  
25.73

25.5

26.0

26.5

MW-4F  
25.85

0.006

MW-4E  
26.87

MW-4B  
26.64

26.5

MW-4I  
25.76

MW-4C  
NM

MW-4D  
26.40

MW-4J  
26.80

MW-4A  
25.99

26.0

WEST 'A' STREET

MW-4K  
26.55

26.5

HESPERIAN BLVD.

**EXPLANATION**

● MW-4K

MONITORING WELL LOCATION  
AND WELL NUMBER

---

STORM DRAIN LINE

26.55

GROUND-WATER ELEVATION IN FEET  
ABOVE MEAN SEA LEVEL

NM

NOT MEASURED

— 26.0

GROUND-WATER ELEVATION CONTOUR  
IN FEET ABOVE MEAN SEA LEVEL

0.006 →

APPROXIMATE DIRECTION OF GROUND-WATER  
FLOW. GRADIENT INDICATED IN FEET / FEET



FEET

TITLE : GROUND-WATER ELEVATION CONTOUR MAP -  
AUGUST 23, 1996

LOCATION : FORMER TEXACO / FORMER EXXON SERVICE STATION  
20499 HESPERIAN BLVD. / WEST 'A' STREET, HAYWARD, CALIFORNIA

SOURCE : TEXACO REFINING AND MARKETING ENVIRONMENTAL SERVICES



**GEOCONSULTANTS,**  
SAN JOSE, CALIFORNIA  
Project No. G758-11

DRAWING NO. TEXACO/HW-HE-AS/W

MW-4G  
NS

MW-4H  
NS

MW-4E  
47000/480

MW-4F  
NS

MW-4B  
17000/56

MW-4I  
3500/70

MW-4C  
NS

MW-4D  
270<0.5

MW-4A  
16000/<3

HESPERIAN BLVD.

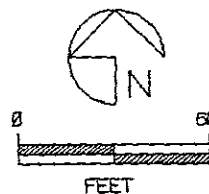
MW-4J  
NS

WEST 'A' STREET

MW-4K  
4600/0.62

**EXPLANATION**

- ⊙ MW-4K GROUNDWATER MONITORING WELL LOCATION AND WELL NUMBER
- STORM DRAIN LINE
- 4600/0.62 TPH AS GASOLINE / BENZENE CONCENTRATIONS (ug / L)
- NS NOT SAMPLED



TITLE : TPH AS GASOLINE AND BENZENE CONCENTRATIONS MAP -  
AUGUST 23, 1996

LOCATION : FORMER TEXACO / FORMER EXXON SERVICE STATION  
20499 HESPERIAN BLVD. / WEST 'A' STREET, HAYWARD, CALIFORNIA

SOURCE : TEXACO; REFINING AND MARKETING ENVIRONMENTAL SERVICES



**GEOCONSULTANTS, INC.**  
SAN JOSE, CALIFORNIA  
Project No. G758-11

DRAWING NO. TEXACO/HA-HE-AS/G823

Table 1  
Groundwater Elevation Data  
20499 Hesperian Boulevard, Hayward, CA

Well	Date	Top of Casing Elevation	Depth to Water	Elevation of Groundwater	Floating Product Thickness
MW-4A	10/12/88	35.72			
	01/26/93		10.20	25.26	None
	02/25/93		9.55	26.27	None
	03/04/93		9.50	26.32	None
	04/30/93		10.09	25.73	None
	05/27/93		10.46	25.36	None
	06/23/93		10.90	24.92	None
	07/26/93	Inaccessible - Debris Covering Well			
	08/19/93	Inaccessible - Debris Covering Well			
	09/14/93	Inaccessible - Debris Covering Well			
	10/19/93			Not Monitored	
	03/29/94		10.57	25.15	None
Resurveyed	08/03/94	35.73			
	08/17/94		11.64	24.09	None
	11/16/94		11.51	24.22	None
	02/16/95		9.06	26.67	None
	05/16/95		8.64	27.09	None
	08/10/95		9.80	25.93	None
	11/15/95		10.98	24.75	None
	02/14/96		8.26	27.47	None
	05/13/96		8.53	27.20	None
	08/23/96		9.74	25.99	None
MW-4B	11/16/94	36.62	12.35	24.27	None
	02/19/95		9.75	26.87	None
	05/16/95	Not Accessible - Covered With Soil			
	08/10/95		10.45	26.17	None
	11/15/95		11.77	24.85	None
	02/14/96		8.55	28.07	None
	05/13/96		9.08	27.54	None
	08/23/96		9.98	26.64	None



Table 1  
Groundwater Elevation Data  
20499 Hesperian Boulevard, Hayward, CA

Well	Date	Top of Casing Elevation	Depth to Water	Elevation of Groundwater	Floating Product Thickness	
MW-4C	10/12/88	36.88				
	01/26/93	Not Accessible - Covered With Soil				
	02/25/93			Not Monitored		
	03/04/93			Not Monitored		
	04/30/93		11.07	25.81	None	
	05/27/93		11.38	25.50	None	
	06/23/93	Not Accessible - Lid Stuck				
	07/26/93		12.08	24.80	None	
	08/19/93		12.49	24.39	None	
	09/14/93		12.95	23.93	None	
	10/19/93			Not Monitored		
		03/29/94	Not Accessible - Covered With Soil			
	Resurveyed	08/03/94	36.88			
		08/17/94	Not Accessible - Covered With Soil			
	11/16/94	Not Accessible - Covered With Soil				
	02/16/95	Not Accessible - Covered With Soil				
	05/16/95	Not Accessible - Covered With Soil				
	08/10/95	Not Accessible - Covered With Soil				
	11/15/95		12.15	24.73	None	
	02/14/96			Not Monitored		
	05/13/96			Not Monitored		
	08/23/96			Not Monitored		
MW-4D	10/12/88	37.50				
	01/26/93		11.03	26.47	None	
	02/25/93		10.75	26.75	None	
	03/04/93		10.80	26.70	None	
	04/30/93		11.30	26.20	None	
	05/27/93		11.67	25.83	None	
	06/23/93		11.95	25.55	None	
	07/26/93		12.39	25.11	None	
	08/19/93		12.80	24.70	None	
	09/14/93		13.15	24.35	None	
	10/19/93			Not Monitored		
		03/29/94		12.00	25.50	None
	Resurveyed	08/03/94	37.50			
		08/17/94		13.23	24.27	None
	11/16/94		12.98	24.52	None	
	02/16/95		10.44	27.06	None	
	05/16/95		11.08	26.42	None	
	08/10/95		11.25	26.25	None	
	11/15/95		12.43	25.07	None	
	02/14/96		9.53	27.97	None	
	05/13/96		9.98	27.52	None	
	08/23/96		11.10	26.40	None	

Table 1  
Groundwater Elevation Data  
20499 Hesperian Boulevard, Hayward, CA

Well	Date	Top of Casing Elevation	Depth to Water	Elevation of Groundwater	Floating Product Thickness	
MW-4E	10/12/88	36.60				
	01/26/93		10.38	26.22	None	
	02/25/93		10.13	26.27	None	
	03/04/93		10.17	26.43	Sheen	
	04/30/93		10.65	25.95	None	
	05/27/93		11.00	25.60	None	
	06/23/93		9.32	27.28	None	
	07/26/93		11.78	24.82	None	
	08/19/93		12.19	24.41	None	
	09/14/93		12.43	24.17	Sheen	
	10/19/93			Not Monitored		
	03/29/94		11.34	25.26	None	
Resurveyed	08/03/94	37.39				
	08/17/94		12.58	24.81	None	
	11/16/94			Not Accessible		
	02/16/95			Not Accessible		
	05/16/95		9.44	27.95	None	
	08/10/95			Not Accessible		
	11/15/95			Not Accessible		
	02/14/96		8.87	28.52	None	
	05/13/96		9.33	28.06	None	
	08/23/96		10.52	26.87	None	
MW-4F	08/31/89	35.47				
	01/26/93		8.40	27.07	0.16	
	02/25/93		9.14	26.33	0.04	
	03/04/93		9.19	26.27	0.02	
	04/30/93		9.68	25.80	0.01	
	05/27/93		10.12	25.38	0.04	
	06/23/93		10.60	24.98	0.14	
	07/26/93		10.96	24.59	0.10	
	08/19/93		11.37	24.18	0.10	
	09/14/93		11.57	23.88	0.09	
	10/19/93		11.85	23.64	0.03	
	03/29/94		10.40	25.07	None	
	Resurveyed	08/03/94	35.48			
		08/17/94		11.65	23.85	0.02
		11/16/94		11.41	24.09	0.03
		02/16/95		8.83	26.67	0.03
		05/16/95		8.50	26.98	None
	08/10/95		9.82	25.74	0.10	
	11/15/95		10.92	24.59	0.04	
	02/14/96			Not Monitored		
	05/13/96			Not Monitored		
	08/23/96		9.66	25.85	0.04	

Table 1  
Groundwater Elevation Data  
20499 Hesperian Boulevard, Hayward, CA

Well	Date	Top of Casing Elevation	Depth to Water	Elevation of Groundwater	Floating Product Thickness
MW-4G	08/31/89	35.18			
	01/26/93		9.43	25.75	0.02
	02/25/93		9.21	25.97	Sheen
	03/04/93		9.27	25.91	Sheen
	04/30/93		9.72	25.46	Sheen
	05/27/93		10.13	25.05	Sheen
	06/23/93		10.60	24.61	0.04
	07/26/93		11.01	24.20	0.04
	08/19/93		11.42	23.79	0.04
	09/14/93		11.72	23.52	0.07
	10/19/93		11.87	23.32	0.01
	03/29/94		10.60	24.63	0.06
Resurveyed	08/03/94	35.19			
	08/17/94		11.90	23.49	0.25
	11/16/94		11.50	23.76	0.09
	02/16/95		8.95	26.34	0.12
	05/16/95		8.68	26.51	None
	08/10/95		9.80	25.55	0.20
	11/15/95		10.94	24.31	0.07
	02/14/96		9.47	25.75	0.04
	05/13/96		8.64	26.58	0.04
	08/23/96		9.90	25.35	0.08
MW-4H	08/31/89	36.01			
	01/26/93		10.05	25.96	0.03
	02/25/93		9.92	26.09	Sheen
	03/04/93		9.85	26.16	Sheen
	04/30/93		10.38	25.71	0.10
	05/27/93		10.74	25.29	0.02
	06/23/93		11.25	24.89	0.16
	07/26/93		11.57	24.56	0.15
	08/19/93		11.98	24.15	0.15
	09/14/93		12.36	23.76	0.14
	10/19/93		12.56	23.53	0.10
	03/29/94		11.03	25.22	0.30
Resurveyed	08/03/94	36.04			
	08/17/94		12.35	23.75	0.08
	11/16/94		12.28	23.78	0.03
	02/16/95		9.73	26.65	0.43
	05/16/95		9.37	26.85	0.23
	08/10/95		10.20	26.24	0.50
	11/15/95		11.67	24.62	0.31
	02/14/96		8.63	27.59	0.22
	05/13/96		9.13	26.93	0.03
	08/23/96		10.35	25.73	0.05

Table 1  
Groundwater Elevation Data  
20499 Hesperian Boulevard, Hayward, CA

Well	Date	Top of Casing Elevation	Depth to Water	Elevation of Groundwater	Floating Product Thickness
MW-4I	12/06/89	34.28			
	01/26/93		8.35	25.93	None
	02/25/93		8.10	26.18	None
	03/04/93		10.07	24.21	None
	04/30/93		8.65	25.63	None
	05/27/93		8.87	25.41	None
	06/23/93		9.30	24.98	None
	07/26/93		9.74	24.54	None
	08/19/93		10.15	24.13	None
	09/14/93		10.05	23.78	None
	10/19/93		10.61	23.67	None
	03/29/94		9.33	24.95	None
Resurveyed	08/03/94	34.27			
	08/17/94		10.62	23.65	None
	11/16/94		10.31	23.96	None
	02/16/95		7.83	26.44	None
	05/16/95		7.52	26.75	None
	08/10/95		8.50	25.77	None
	11/15/95		9.49	24.78	None
	02/14/96		6.88	27.39	None
	05/13/96		7.28	26.99	None
	08/23/96		8.51	25.76	None
MW-4J	03/23/90	36.74			
	01/26/93		10.00	26.74	Sheen
	02/25/93		9.74	27.00	Sheen
	03/04/93		9.70	27.04	Sheen
	04/30/93		10.20	26.56	0.02
	05/27/93		10.55	26.20	0.01
	06/23/93	Not Accessible - Auto Parked on Well			
	07/26/93		11.41	25.36	0.04
	08/19/93		11.82	24.94	0.02
	09/14/93		12.20	24.56	0.02
	10/19/93	Not Accessible - Auto Parked on Well			
	03/29/94		10.94	25.82	0.02
Resurveyed	08/03/94	36.74			
	08/17/94		12.23	24.53	0.03
	11/16/94		12.04	24.80	0.13
	02/16/95		9.43	27.38	0.09
	05/16/95		8.95	27.81	0.02
	08/10/95		10.12	26.75	0.16
	11/15/95		11.38	25.54	0.22
	02/14/96		8.36	28.56	0.22
	05/13/96		8.73	28.03	0.03
	08/23/96		10.00	26.80	0.07

Table 1  
Groundwater Elevation Data  
20499 Hesperian Boulevard, Hayward, CA

Well	Date	Top of Casing Elevation	Depth to Water	Elevation of Groundwater	Floating Product Thickness
MW-4K	03/23/90	36.37			
	01/26/93		9.80	26.57	None
	02/25/93		9.50	26.87	None
	03/04/93		9.62	26.75	None
	04/30/93		10.28	26.09	None
	05/27/93		10.42	25.95	None
	06/23/93		10.82	25.55	None
	07/26/93		11.16	25.21	None
	08/19/93		11.57	24.80	None
	09/14/93		11.82	24.55	None
	10/19/93		12.10	24.27	None
	03/29/94		9.33	24.95	None
Resurveyed	08/03/94	36.34			
	08/17/94		12.02	24.32	None
	11/16/94		11.73	24.61	None
	02/16/95		9.27	27.07	None
	05/16/95		8.84	27.50	None
	08/10/95		9.80	26.54	None
	11/15/95		11.30	25.04	None
	02/14/96		8.25	28.09	None
	05/13/96		8.63	27.71	None
	08/23/96		9.79	26.55	None
Depth to water measured in feet below top of casing.					
Elevations are based on City of Hayward Datum (Mean Sea Level)					
Elevation is corrected for product thickness when floating product appears on groundwater.					
----	Not Available				

Table 2  
Groundwater Analytical Data  
20499 Hesperian Boulevard, Hayward, CA

Well	Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Methyl-tert butylether
MW-4A	03/04/93	2,700	2.4	<0.5	92	6.4	NA
	09/14/93	6,800	55	<0.5	140	41	NA
	03/29/94	5,600	41	<0.5	49	15	NA
	08/17/94	2,000	52	6.4	120	12	NA
	11/16/94	9,400	<5	36	75	91	NA
	02/16/95	9,000	61	16	65	18	NA
	05/16/95	9,800	51	9.5	53	10	NA
	08/10/95	7,200	<3	<3	40	11	66
	11/15/95	9,200	73	20	40	42	<200
	02/14/96	5,900	<0.5	<0.5	25	9	NA
	05/13/96	7,200	<3	4	29	23	NA
	08/23/96	16,000	<3	26	28	28	NA
	MW-4B	03/04/93	6,300	27	1.1	85	240
09/14/93		Not Sampled					
03/29/94		Not Sampled					
08/17/94		Not Sampled					
11/16/94		40,000	3,300	5,100	1,200	6,300	NA
02/16/95		130,000	13,000	14,000	2,500	12,000	NA
05/16/95		Not Sampled					
08/10/95		90,000	7,200	8,600	3,200	3,400	15,000
11/15/95		74,000	7,000	7,600	3,500	17,000	<2000
02/14/96		7,300	190	<3	550	25	NA
05/13/96	8,300	160	3.9	540	26	NA	
08/23/96	17,000	56	39	210	78	NA	
MW-4C	03/04/93	Not Sampled					
	09/14/93	12,000	20	220	72	51	NA
	03/29/94	130,000	280	48	940	1,300	NA
	08/17/94 - 08/10/95	Not Sampled					
	11/15/95	3,200	38	28	120	300	6,800
	02/14/1996 - 08/23/96	Not Sampled					
MW-4D	03/04/93	280	2.9	<0.5	<0.5	4.4	NA
	09/14/93	380	0.71	8.6	46	4.2	NA
	03/29/94	200	0.9	<0.5	<0.5	<0.5	NA
	08/17/94	540	<0.5	<0.5	2	5.3	NA
	11/16/94	500	<0.5	<0.5	1.3	1.9	NA
	02/16/95	280	<0.5	<0.5	<0.5	<0.5	NA
	05/16/95	360	5.0	7.1	4.7	8.1	NA
	08/10/95	390	<0.5	<0.5	<0.5	2.3	<10
	11/15/95	200	<0.5	<0.5	1.7	2.3	<10
	02/14/96	200	<0.5	<0.5	1.2	2.1	NA
	05/13/96	300	<0.5	0.98	1.5	3.1	NA
08/23/96	270	<0.5	<0.5	<0.5	3.3	NA	

Table 2  
Groundwater Analytical Data  
20499 Hesperian Boulevard, Hayward, CA

Well	Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Methyl-tert butylether
MW-4E	03/04/93	Not Sampled					
	09/14/93	Not Sampled					
	03/29/94	71,000	3,600	10,000	1,800	9,200	NA
	08/17/94	28,000	4,600	2,300	850	4,000	NA
	11/16/94	Not Sampled					
	02/16/95	Not Sampled					
	05/16/95	130,000	13,000	16,000	4,000	20,000	NA
	08/10/95	Not Sampled					
	11/15/95	Not Sampled					
	02/14/96	64,000	2,500	2,900	2,900	12,000	NA
	05/13/96	51,000	1,200	1,500	2,800	11,000	NA
	08/23/96	47,000	480	860	2,400	8,700	NA
	MW-4F	09/24/92 - 02/16/95	Not Sampled				
05/16/95		320,000	17,000	12,000	4,600	26,000	NA
08/10/1995 - 08/23/96		Not Sampled					
MW-4G	09/24/92 - 02/16/95	Not Sampled					
	05/16/95	260,000	45,000	22,000	4,900	24,000	NA
	08/10/1995 - 08/23/96	Not Sampled					
MW-4H	09/24/92 - 08/23/96	Not Sampled					
MW-4I	03/04/93	630	0.9	<0.5	4.1	4.3	NA
	09/14/93	720	4.5	7.3	4.6	3.9	NA
	03/29/94	1,500	16	<0.5	4.5	<0.5	NA
	08/17/94	1,000	19	19	4.7	13	NA
	11/16/94	1,900	5.7	7.4	5.7	7.1	NA
	02/16/95	3,000	3.1	5.0	7.8	6.5	NA
	05/16/95	3,700	19	<2.5	7.2	8.8	NA
	08/10/95	<3000	<30	<30	<30	<30	4,400
	11/15/95	780	<5	<5	<5	<5	1,400
	02/14/96	1,800	<0.5	<0.5	2.8	5.4	NA
	05/13/96	1,500	<3	6.6	6	14	NA
	08/23/96	3,500	70	270	38	310	NA
	MW-4J	09/24/92 - 08/23/96	Not Sampled				

Table 2  
Groundwater Analytical Data  
20499 Hesperian Boulevard, Hayward, CA

Well	Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Methyl-tert butylether
MW-4K	03/04/93	1,500	3.1	<0.5	8.3	16	NA
	09/14/93	270	0.89	<0.5	1.5	3.2	NA
	03/29/94	14,000	30	11	140	250	NA
	08/17/94	2,800	2.2	<0.5	2.8	7.6	NA
	11/16/94	1,500	1.3	0.6	1.5	4.7	NA
	02/16/95	2,900	3.2	23	8.5	9.6	NA
	05/16/95	5,100	1.8	6.1	5.3	17	NA
	08/10/95	840	3.2	<1	3.3	6.4	<20
	11/15/95	460	0.86	<0.5	1.6	3.2	12
	02/14/96	920	0.96	<0.5	0.59	1.3	NA
	05/13/96	490	0.71	<0.5	1	1.7	NA
	08/23/96	4,600	0.62	<0.5	9.8	12	NA
Results in parts per billion							
TPHg	Total petroleum hydrocarbons analyzed as gasoline.						
<	Less than the detection limit for the specified method of analysis.						
NA	Not Analyzed						



## APPENDIX

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

LOG NO: G96-08-576

Received: 23 AUG 96

Mailed: SEP 4 1996

Ms. Caron French  
 Blaine Tech Services  
 985 Timothy Drive  
 San Jose, California 95133

Purchase Order: 94-1446346+4370

Requisition: 624880148  
 Project: FKEP1011L

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*MW4A	08/23/96	08/29/96		5	16000	<3	26	28	28	C6-C12
2*MW4B	08/23/96	08/28/96		25	17000	56	39	210	78	C6-C12
3*MW4D	08/23/96	08/28/96		1	270	<0.5	<0.5	<0.5	3.3	C6-C12
4*MW4I	08/23/96	08/28/96		5	3500	70	270	38	310	C6-C12
5*MW4K	08/23/96	08/28/96		1	4600	0.62	<0.5	9.8	12	C6-C12
6*MW4E	08/23/96	08/28/96		100	47000	480	860	2400	8700	C6-C12

Karen Petryna  
 20499 Hesperian Blvd., Hayward  
 Alameda County



# ANALYTICAL REPORT

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

LOG NO: G96-08-576

Received: 23 AUG 96

Ms. Caron French  
 Blaine Tech Services  
 985 Timothy Drive  
 San Jose, California 95133

Purchase Order: 94-1446346+4370

Requisition: 624880148  
 Project: FKEP1011L

## REPORT OF ANALYTICAL RESULTS

Page 2

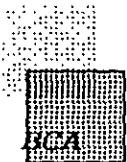
### AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH/BTEX (CADHS/8020)		TPH-g ug/L	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylenes Isomers ug/L	Carbon Range
		Date Analyzed Date	Dilution Factor Times						
RDL			1	50	0.5	0.5	0.5	0.5	
7*EB	08/23/96	08/29/96	1	<50	<0.5	<0.5	<0.5	<0.5	C6-C12

*Greta Galoustian*  
 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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AQUEOUS SAMPLES

	METHOD BLANK			LAB CONTROL						MATRIX QC							
	UNITS	RESULT	RDL FLG	LCS %REC FLG	LCSD %REC FLG	LCL	UCL	RPD	RPD UCL	RPD FLG	MS %REC FLG	MSD %REC FLG	LCL	UCL	RPD	RPD UCL	RPD FLG
Batch: GAS*964132 Method: 8015M.TX - Modified 8015																	
Benzene	ug/L	0	0.5 -	144 -	- -	76	155	-	-	-	133 -	138 -	70	153	4	25	-
Toluene	ug/L	0	0.5 -	93 -	- -	72	121	-	-	-	90 -	89 -	69	119	1	25	-
Ethylbenzene	ug/L	0	0.5 -	90 -	- -	72	115	-	-	-	85 -	86 -	68	116	1	25	-
Total Xylene Isomers	ug/L	0	0.5 -	87 -	- -	68	115	-	-	-	83 -	83 -	61	118	1	25	-
TPH (Gasoline Range)	ug/L	0	50 -	102 -	- -	85	120	-	-	-	102 -	98 -	78	124	4	25	-
[a,a,a-Trifluorotoluene]	Percent	115	- -	124 Q	- -	85	118	-	-	-	116 -	122 Q	85	118	-	-	-
Batch: GAS*965113 Method: 8015M.TX - Modified 8015																	
Benzene	ug/L	0	0.5 -	105 -	- -	76	155	-	-	-	86 -	86 -	70	153	0	25	-
Toluene	ug/L	0	0.5 -	102 -	- -	72	121	-	-	-	89 -	89 -	69	119	0	25	-
Ethylbenzene	ug/L	0	0.5 -	102 -	- -	72	115	-	-	-	88 -	89 -	68	116	1	25	-
Total Xylene Isomers	ug/L	0	0.5 -	105 -	- -	68	115	-	-	-	92 -	93 -	61	118	1	25	-
TPH (Gasoline Range)	ug/L	0	50 -	106 -	- -	85	120	-	-	-	113 -	108 -	78	124	4	25	-
[a,a,a-Trifluorotoluene]	Percent	90	- -	109 -	- -	85	118	-	-	-	99 -	97 -	85	118	-	-	-

PLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE..... ANALYZED	METHOD.....	EQUIP.	BATCH..	ID.NO
8576*1	MW4A	GAS.BTX.TESNC	08.29.96	8015M.TX	536-35	964132	8171
8576*2	MW4B	GAS.BTX.TESNC	08.28.96	8015M.TX	536-23	965113	8171
8576*3	MW4D	GAS.BTX.TESNC	08.28.96	8015M.TX	536-23	965113	8171
8576*4	MW4I	GAS.BTX.TESNC	08.28.96	8015M.TX	536-23	965113	8171
8576*5	MW4K	GAS.BTX.TESNC	08.28.96	8015M.TX	536-23	965113	8171
8576*6	MW4E	GAS.BTX.TESNC	08.28.96	8015M.TX	536-23	965113	8171
8576*7	EB	GAS.BTX.TESNC	08.29.96	8015M.TX	536-35	964132	8171

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

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

ROGATE RECOVERIES :  
ANALYTICAL : GLEN LAB : 13:15:51 03 SEP 1996 - P. 1 :  
=====

ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
76*1						
.TXa,a,a-Trifluorotoluene	Re964132	08/29/96	331	250	132	
76*2						
I.TXa,a,a-Trifluorotoluene	Re965113	08/28/96	1160	1250	93	
76*3						
I.TXa,a,a-Trifluorotoluene	Re965113	08/28/96	45.1	50.0	90	
576*4						
4.TXa,a,a-Trifluorotoluene	Re965113	08/28/96	242	250	97	
576*5						
4.TXa,a,a-Trifluorotoluene	Re965113	08/28/96	53.9	50.0	108	
576*6						
M.TXa,a,a-Trifluorotoluene	Re965113	08/28/96	4700	5000	94	
576*7						
M.TXa,a,a-Trifluorotoluene	Re964132	08/29/96	56.1	50.0	112	

PROGATE RECOVERIES :

ANALYTICAL : GLEN LAB : 13:15:58 03 SEP 1996 - P. 1 :

OD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
3555*2*R1							
5M	a,a,a-Trifluorotoluene	Re964132	08/29/96	55.5	50.0	111	
3555*2*S1							
5M	a,a,a-Trifluorotoluene	Re964132	08/29/96	57.8	50.0	116	
3555*2*S2							
5M	a,a,a-Trifluorotoluene	Re964132	08/29/96	60.8	50.0	122	
3555*2*T							
5M	a,a,a-Trifluorotoluene	Re964132	08/29/96	50.0	50.0	100	
8574*2*R1							
5M.TXa	a,a,a-Trifluorotoluene	Re965113	08/28/96	47.2	50.0	94	
8574*2*S1							
5M.TXa	a,a,a-Trifluorotoluene	Re965113	08/28/96	49.3	50.0	99	
8574*2*S2							
5M.TXa	a,a,a-Trifluorotoluene	Re965113	08/28/96	48.7	50.0	97	
8574*2*T							
5M.TXa	a,a,a-Trifluorotoluene	Re965113	08/28/96	50.0	50.0	100	
81868*1*MB							
5M.TXa	a,a,a-Trifluorotoluene	Re965113	08/28/96	45.1	50.0	90	
3002*1*MB							
5M	a,a,a-Trifluorotoluene	Re964132	08/29/96	57.5	50.0	115	
33415*1*LC							
5M.TXa	a,a,a-Trifluorotoluene	Re965113	08/28/96	54.3	50.0	109	
33415*1*LT							
5M.TXa	a,a,a-Trifluorotoluene	Re965113	08/28/96	50.0	50.0	100	
3002*1*LC							
5M	a,a,a-Trifluorotoluene	Re964132	08/29/96	61.9	50.0	124	
3002*1*LT							
4	a,a,a-Trifluorotoluene	Re964132	08/29/96	50.0	50.0	100	

Chain of Custody

Texaco Environmental Services

108 Cutting Boulevard  
 Richmond, California 94804  
 Phone: (510) 230-3541  
 FAX: (510) 237-7021

Forward Results to **BLAINE TECH, ATTN. Caron French**  
 Texaco Project Corordinator Karen Petryna

Site Name: Texaco Loc# 624880148

Site Address: 20499 Hesperian Blvd. Hayward, CA

Contractor Project Number: 960823-01

Contractor Name: Blaine Tech Services, Inc.

Address: 985 Timothy Drive San Jose, CA 95133

Project Contact: Jim Keller

Phone/FAX: /

Laboratory: B C Analytical

Turn Around Time: 10 Days / 7/17

Samplers (PRINT NAME): RANDY VALENTINE

Sampler Signature: [Signature]

Date Samples Collected: 8-23-96

ANALYSIS

Sample Number	Lab Sample Number	Date/Time Collected	No. of Containers	Type of Containers	Sample Matrix	Preservative	TPH gas/STEX	TPH Diesel	O&G/TRPH (418.1)	TPH Ex. (C8-C36+)	VOCs 8240/824	P. Halocarbons 8010/60	P. Aromatics 8020/602	Organic Lead	Comments
MW4A		8-23/1040	3	VOA	W	HCl	X	-1							
MW4B		/1040	3				X	-2							
MW4D		/1945	3				X	-3							
MW4F		/1015	3				X	-4							
MW4K		/1000	3				X	-5							
MW4E		/1100	3				X	-6							
EB		1/950	3				X	-7							

Relinquished by: [Signature] Date: 8/23/96 Time: 3:00

Received by: [Signature] Date: 8-23-96 Time: 3:00

Relinquished by: [Signature] Date: 8-23-96 Time: 4:45

Received by: [Signature] Date: 8/23/96 Time: 4:45

Relinquished by: [Signature] Date: 8/26/96 Time: 5:15

Received by: [Signature] Date: 8/27/96 Time: 0800

Method of Shipment:

Lab Comments:



## Well Gauging Data

Project Name: TEXACO 624880148  
 Project Number: 960823-A)

Date: 8-23-96  
 Recorded By: RJ

Well ID	TOC Elev.	DTB (ft. TOC)	Well Dia. (in.)	DTP (ft.)	DTW (ft.)	PT (ft.)	Comments
MW 4A		19.53	2		9.74		
MW 4B		19.54	2		9.98		
MW 4D		19.59	4		11.10		
MW 4G		—	4	9.82	9.90	0.08	
MW 4H		—	4	10.30	10.35	0.05	
MW 4I		18.43	4		8.51		
MW 4J		—	2	9.93	10.00	0.07	
MW 4K		19.48	2		9.79		
MW 4E		19.41	4		10.52		
MW 4F		—	4	9.62	9.66	0.04	

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 #: 960823-A1	Texaco ID#: 624880148
Sampler: W	Date: 8/23/96
Well I.D.: MW-4A	Well Diameter: (2) 3 4 6 8
Total Well Depth: 19.53	Depth to Water: 9.74
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: _____
---	--

1.7	x	3	=	5.1	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
1024	70.2	7.0	810	7200	2.0	ODOR/SHEEN
1028	69.4	7.1	800	7200	4.0	
1032	70.0	7.1	800	7200	5.5	

Did well dewater? Yes <input checked="" type="radio"/> No <input type="radio"/>	Gallons actually evacuated: 5.5
Sampling Time: 1040	Sampling Date: 8-23-96
Sample I.D.: MW4A	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 #: 960823-A1	Texaco ID#: 624880148
Sampler: RV	Date: 8/23/96
Well I.D.: MW-4B	Well Diameter: ② 3 4 6 8 _____
Total Well Depth: 19.54	Depth to Water: 9.98
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: _____
---	--

1.6	x	3	=	41.8	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
10:37	70.4	6.6	980	> 200	1.5	Shreen + color
10:38	71.2	6.7	950	> 200	3.0	
10:39	69.4	6.8	930	> 200	5.0	

Did well dewater? Yes <input type="radio"/> No <input checked="" type="radio"/>	Gallons actually evacuated: 5.0
Sampling Time: 10:40	Sampling Date: 8/23/96
Sample I.D.: MW-4B	Laboratory: BC Analytical
Analyzed for: <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Tph-G BTEX</span> Tph-D	Other:
Equipment Blank I.D.:	Analyzed for same as primary sample

## TEXACO WELL MONITORING DATA SHEET

Project #: <u>960823-A1</u>	Texaco ID#: <u>624880148</u>
Sampler: <u>2</u>	Date: <u>8-23-96</u>
Well I.D.: <u>MW-4D</u>	Well Diameter: 2 3 <u>4</u> 6 8 <u>    </u>
Total Well Depth: <u>19.59</u>	Depth to Water: <u>11.10</u>
Depth to Free Product: <u>    </u>	Thickness of Free Product: <u>    </u>
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: <u>    </u>	Sampling Method: S.S. Bailer Teflon Bailer Extraction Port Other: <u>    </u>
---	--

<u>5.6</u>	x	<u>?</u>	=	<u>11.8</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
<u>9:40</u>	<u>70.4</u>	<u>7.1</u>	<u>1000</u>	<u>10</u>	<u>5.5</u>	
<u>9:41</u>	<u>69.8</u>	<u>7.0</u>	<u>900</u>	<del>10</del> <u>20</u>	<u>11.5</u>	
<u>9:42</u>	<u>69.8</u>	<u>7.0</u>	<u>840</u>	<del>31.8</del>	<u>17</u>	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>17</u>
Sampling Time: <u>945</u>	Sampling Date: <u>8/23/96</u>
Sample I.D.: <u>MW-4D</u>	Laboratory: <u>BC Analytical</u>
Analyzed for: Tph-G BTEX Tph-D Other: <u>    </u>	
Equipment Blank I.D.: <u>ED @ 950</u>	Analyzed for same as primary sample



## TEXACO WELL MONITORING DATA SHEET

Project #: 960823-A1	Texaco ID#: 624880148
Sampler: 2V	Date: 8-23-96
Well I.D.: MW 4F	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>          </u>	Depth to Water: 9.66
Depth to Free Product: 9.62	Thickness of Free Product: 0.04
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: _____
--	--

_____	X	_____	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
		F.P. IN WELL				
		BAILED 30ML				
		EMPTIED SKIMMER				

Did well dewater?    Yes      No      Gallons actually evacuated: \_\_\_\_\_

Sampling Time: _____	Sampling Date: _____
Sample I.D.: _____	Laboratory: BC Analytical
Analyzed for: Tph-G BTEX Tph-D Other: _____	
Equipment Blank I.Q.: _____	Analyzed for same as primary sample

## TEXACO WELL MONITORING DATA SHEET

Project #: <u>960823-A1</u>	Texaco ID#: <u>624880418</u>
Sampler: <u>PV</u>	Date: <u>8-23-96</u>
Well I.D.: <u>MW4G</u>	Well Diameter: 2 3 <u>(4)</u> 6 8 <u>   </u>
Total Well Depth: <u>   </u>	Depth to Water: <u>9.90</u>
Depth to Free Product: <u>9.82</u>	Thickness of Free Product: <u>0.08</u>
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: _____
--	--

_____	X	_____	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor

Did well dewater?	Yes	No	Gallons actually evacuated: _____
Sampling Time:	Sampling Date: _____		
Sample I.D.:	Laboratory: <u>BC Analytical</u>		
Analyzed for:	<u>Tph-G</u>	<u>BTEX</u>	<u>Tph-D</u> Other: _____
Equipment Blank I.D.:	Analyzed for same as primary sample		

## TEXACO WELL MONITORING DATA SHEET

Project #: 960823-A1	Texaco ID#: 624880148
Sampler: 2V	Date: 8-23-96
Well I.D.: MW4H	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: _____	Depth to Water: 10.35
Depth to Free Product: 10.30	Thickness of Free Product: 0.05
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: _____
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_____	X	_____	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor

Did well dewater? Yes    No	Gallons actually evacuated: _____
Sampling Time: _____	Sampling Date: _____
Sample I.D.: _____	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 #: <u>960823-A1</u>	Texaco ID#: <u>624880148</u>
Sampler: <u>RV</u>	Date: <u>8/23/96</u>
Well I.D.: <u>MW-4I</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth: <u>18.43</u>	Depth to Water: <u>8.51</u>
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 Bailer      Teflon Bailer  
Middleburg      Extraction Port  
Electric Submersible      Other: \_\_\_\_\_  
Extraction Pump  
Other: \_\_\_\_\_

<u>6.5</u>	x	<u>3</u>	=	<u>19.5</u> Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
<u>10:08</u>	<u>71.0</u>	<u>6.7</u>	<u>1000</u>	<u>7200</u>	<u>6.5</u>	
<u>10:09</u>	<u>71.2</u>	<u>6.5</u>	<u>950</u>	<u>7200</u>	<u>13.0</u>	
<u>10:10</u>	<u>71.2</u>	<u>6.4</u>	<u>920</u>	<u>7200</u>	<u>19.5</u>	

Did well dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Gallons actually evacuated: <u>19.5</u>
Sampling Time: <del>10:10</del> <u>10:15</u>	Sampling Date: <u>8/23/96</u>
Sample I.D.: <u>MW-4I</u>	Laboratory: <u>BC Analytical</u>
Analyzed for: <u>Tph-G BTEX</u> Tph-D	Other: _____
Equipment Blank I.D.:	Analyzed for same as primary sample

## TEXACO WELL MONITORING DATA SHEET

Project #: 960823-A1	Texaco ID#: 624880148
Sampler: RV	Date: 8-23-96
Well I.D.: MW 4J	Well Diameter: ② 3 4 6 8 ____
Total Well Depth: _____	Depth to Water: 10.00
Depth to Free Product: 9.93	Thickness of Free Product: 0.07
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: _____
---	--

_____	X	_____	=	_____ Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor

Did well dewater? Yes      No      Gallons actually evacuated: \_\_\_\_\_

Sampling Time: \_\_\_\_\_ Sampling Date: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_ 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 #: <u>960823-A1</u>	Texaco ID#: <u>624880148</u>
Sampler: <u>RU</u>	Date: <u>8/23/96</u>
Well I.D.: <u>MW-4K</u>	Well Diameter: <u>(2)</u> 3 4 6 8 _____
Total Well Depth: <u>19.18</u>	Depth to Water: <u>9.79</u>
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: _____
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<u>1.6</u>	x	<u>3</u>	=	<u>4.8</u>	Gals.
1 Case Volume (Gals.)		Specified Volumes		Calculated Volume	

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Color/Odor
9:55	76.0	6.8	1000	7200 <del>1000</del>	1.5	sheen
9:57	69.4	6.7	1000	7200	3.0	
9:59	69.6	6.8	1000	7200	5.0	

Did well dewater? Yes <u>(No)</u>	Gallons actually evacuated: <u>5.0</u>
Sampling Time: <u>10:00</u>	Sampling Date: <u>8-23-96</u>
Sample I.D.: <u>MW-4K</u>	Laboratory: <u>BC Analytical</u>
Analyzed for: <u>(Tph-G BTEX)</u> Tph-D Other:	
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 destination 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 #: 624880148  
 Address: 20499 HESPERIAN BLVD.  
 City, State, ZIP: HAYWARD, CA

Well I.D.	Gals.	Well I.D.	Gals.
<u>Purgewater 1</u>	<u>71</u>	<u>1</u>	
<u>1</u>		<u>1</u>	
<u>1</u>		<u>1</u>	
<u>1</u>		<u>1</u>	
<u>1</u>		<u>1</u>	
<u>1</u>		<u>1</u>	
<u>1</u>		<u>1</u>	
<u>1</u>		<u>1</u>	
<u>1</u>		<u>1</u>	
<u>1</u>		<u>1</u>	

Total gals. 571 added rinse water 5  
 Total Gals. 76  
 Recovered

Job #: 960823-A1  
 Date: 8-23-96  
 Time: 1109  
 Signature: Kathy Valant

REC'D AT: BTS  
 Date: 8-22-96  
 Time: 1400  
 Signature: Kathy Valant

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. Manifest Document No.				2. Page 1 of 1		Information in the shaded areas is not required by Federal law.							
3. Generator's Name and Mailing Address TRAFACCO & VIRI CONSULTING SERVICES 108 CUTTING WOODLEY RD RICHMOND, CA 94804						A. State Manifest Document Number <span style="font-size: 24pt; font-weight: bold;">95986916</span>									
4. Generator's Phone (510) 236-8541						B. State Generator's ID H 1 H 0 3 5 0 2 0 6 9 3									
5. Transporter 1 Company Name SERVICE STATION SYSTEMS, INC				6. US EPA ID Number CA 2 0 0 0 4 3 5 0 9 8		C. State Transporter's ID N/A									
7. Transporter 2 Company Name <del>Service Station Systems, Inc.</del>						D. Transporter's Phone (408) 991-2445									
8. US EPA ID Number <del>CA 2 0 0 0 4 3 5 0 9 8</del>						E. State Transporter's ID N/A									
9. Designated Facility Name and Site Address GIBSON & OVERTON, INC. 1000 N. 17th STREET OAKLAND, CA 94612						F. Transporter's Phone (510) 432-5445									
10. US EPA ID Number CA 1 1 2 0 4 0 9 0 1 4						G. State Facility's ID N/A									
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers		13. Total Quantity		14. Unit Wt/Vol		L. Waste Number			
a. WASTE MATERIALS FROM WELLS (MAGNOLIA), O, 011091, 011						No. Type		Quantity		Wt/Vol		State EPA/Other			
						0 11 0 1		009.5				343			
b.												State EPA/Other			
c.												State EPA/Other			
d.												State EPA/Other			
J. Additional Descriptions for Materials Listed Above (11a) WASTE PRODUCT FROM WELLS PROFILES 13048, ERG# 27						K. Handling Codes for Wastes Listed Above									
						a.		b.							
						c.		d.							
15. Special Handling Instructions and Additional Information NEAR APPROPRIATE PROPER COLLECTIONS DEPARTMENT 24 HOUR EMERGENCY PHONE# (4 3) 9 1 2 4 4 5 WASTE DISPOSAL BY MARINE DRAINIO S.F. 40420114						SITE LOCATION: 20449 HOPKINS OAKLAND, CA									
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.															
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.															
Printed/Typed Name [Signature]						Signature [Signature]						Month Day Year 6 11 11			
17. Transporter 1 Acknowledgement of Receipt of Materials						Printed/Typed Name [Signature]						Signature [Signature]		Month Day Year 0 9 1 0 3 1 6	
18. Transporter 2 Acknowledgement of Receipt of Materials						Printed/Typed Name						Signature		Month Day Year	
19. Discrepancy Indication Space															
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.															
Printed/Typed Name						Signature						Month Day Year			

DO NOT WRITE BELOW THIS LINE.

**Texaco Environmental Services**  
**Standard Operating Procedures**  
**for Groundwater Monitoring and Sampling**

The following are routine procedures to be followed by personnel obtaining field information concerning petroleum product thickness and samples of groundwater during the monitoring and sampling of Texaco sites. These procedures are designed to assure that:

- Information and samples are properly collected.
- Samples are identified, preserved and transported in a manner such that they are representative of field conditions.
- Monitoring and sampling results are reproducible.

#### **Water Level Measurements**

Water level measurements are needed to document groundwater flow directions and calculate gradient. By gauging the level of water in a groundwater monitoring well and comparing the compiled data, calculations can be made that determine the direction the groundwater at the monitored well is flowing and the groundwater gradient between successive monitoring wells.

- An interface probe or electronic probe is generally used to gauge the level of water in a monitoring well. When using either probe, it is slowly lowered into the well until the oscillating alarm indicating water is heard. Raise the interface probe above the water level and lower it back into the water at least three times to verify that the true depth to water is measured. The depth to water should always be measured from the same spot on the top of the well casing. The designated "Top of Casing" mark should be at the North side of the casing. Without moving the probe, read the numbers on the tape to determine the distance to water from the top of the well casing. A chalked, steel add-tape may also be used to gauge the level of water in a monitoring well. When using the steel tape, it is slowly lowered into the well until the chalked portion of the tape encounters water. Read the numbers on the tape to determine the distance from the predetermined top of the well casing. Raise the tape to the surface grade, re-chalk and lower it back into the water at least two times to verify that the true depth to water is measured. Record the depth to water on the Well Gauging Form and Groundwater Sampling Form.

#### **Petroleum Product Thickness Measurements.**

If free phase petroleum hydrocarbons (product) are observed floating on the groundwater surface during the water level measurement, the thickness of the product will be measured in each appropriate well. Groundwater samples will not be collected for chemical analysis from wells containing product (even a sheen) unless specifically requested by the Project Coordinator. If the Project Coordinator requests that wells containing product be sampled, only those wells with product thickness of less than 0.01 foot will be sampled. Arrangements to bail, store, and dispose of product must be made separately. When product is stored, according to Texaco policy, it will be double-contained and disposed of within 90 days of generation.

Product thicknesses will be measured using interface probes, and/or acrylic (clear plastic) bailers. The procedures for obtaining level and thickness measurements using each instrument are:

- The level of the top of the product will be measured with an interface probe. When product is suspected but not measurable with the interface probe, a visual evaluation can be made using clear bailers. A bailer will be lowered into the water/product surface so that the top of the bailer is NOT submerged; the bailer is then removed from the well and the thickness of the product visually measured and documented on the Well Gauging Form.
- When the interface probe contacts liquid, the visual/audible alarm on the reel will be activated. An oscillating alarm indicates water, a continuous alarm indicates hydrocarbon\*. To determine the exact thickness of a hydrocarbon layer, the probe should be slowly lowered to the air/hydrocarbon interface until the alarm is activated. With the probe at the exact point where the alarm comes on, read the numbers on the tape to determine the distance from the top of casing elevation mark. Next, lower the probe through the hydrocarbon layer and well into the water. An oscillating alarm will be obtained. The probe should then be raised slowly to the hydrocarbon/water interface until the point where the alarm changes from oscillating to continuous. The thickness of the hydrocarbon layer is determined by subtracting the first reading from the second reading. Record the calculated value on the Well Gauging Form and Groundwater Sampling Form.

\* The process described here is equipment specific. Follow the procedures applicable for your monitoring equipment.

### Groundwater Sampling

Groundwater samples will be collected from selected groundwater monitoring wells to provide data which will be statistically representative of local groundwater conditions at the site. Groundwater samples will be collected as follows:

- All measuring and sampling equipment will be decontaminated prior to sample collection from each well and documented on the Groundwater Sampling Form.
- Prior to sampling activity, the water level in the well will be measured and the minimum purge volume of each well will be calculated using the purge volume calculation portion of the Groundwater Sampling Form. A minimum of three casing volumes will be purged prior to sample collection. The actual total volume purged will be recorded on Groundwater Sampling Form.
- Prior to sampling, a submersible pump, centrifugal pump, peristaltic pump, or a Teflon or stainless steel bailer will be used to purge a minimum of three casing volumes from each well. Purge volumes will be estimated using a flow meter or a stopwatch and a bucket to estimate flow rate, from which a time to purge the required volume will be calculated. The pump will be lowered to a depth of two to three feet from bottom of the well. When bailers are used for purging, the bailer should be gently lowered into the water and allowed to fill, then removed. Purged water may be placed into 5-gallon buckets to determine the volume of groundwater removed. Care should be taken to not agitate the water which could release volatile organics.

- Whenever possible, groundwater parameters pH, temperature (in degrees Celsius [C]), specific conductance (in micromhos per centimeters squared [umhos]), and turbidity (in National Turbidity Units [NTU]) will be monitored and recorded on the Groundwater Sampling Form.
- If a well is purged dry before three casing volumes have been removed, the sample will be taken after the well has recovered to at least 80 percent of the static water level prior to purging or after 4 hours when sufficient water volume is available to meet analytical requirements, whichever comes first. Reasonable efforts will be made to avoid dewatering wells by using low-yield pumps as necessary.
- Water samples will be collected with a stainless steel or Teflon bailer. To reduce potential cross contamination, sampling should take place in order from least to most contaminated wells. Bailer strings should be replaced between each well to avoid cross contamination from a bailer string which has absorbed contamination.
- Sample containers will be filled directly from the bailer.
- Use only sample containers prepared and provided by an analytical laboratory. Preservatives are required for some types of samples. Sample containers containing preservatives should be supplied by an analytical laboratory.
- For volatile organics analysis, each sample vial will be filled with sample water so that water stands above the lip of the vial. The cap should then be quickly placed on the vial and tightened securely. The vial should then be checked to ensure that no air bubbles are present prior to labeling the sample.
- Take site blank samples (trip and rinsate) using distilled water or laboratory supplied water from a known uncontaminated source. One trip blank and one rinsate blank sample for each site will be analyzed for each site sampling event.
- Once collected and labeled, all samples will be stored in a cooler maintained at 4 degrees Celsius using frozen water ice.

### Sample Custody Procedures

Sample custody procedures will be followed through sample collection, transfer, analysis and ultimate disposal. The purpose of these procedures is to assure that the integrity of samples is maintained during their collection and transfer. Sample quantities, types and locations will be determined before the actual field work begins. As few people as possible will handle samples. The field sampler is personally responsible for the care and custody of the collected samples until they are properly transferred.

Each sample will be labeled and sealed properly immediately after collection. Sample identification documents will be carefully prepared so that identification and chain-of-custody records can be maintained and sample disposition can be controlled. Forms will be filled out with waterproof ink. The following are sample identification documents that will be utilized during the field operations.



- Sample Identification Label
- Chain-of Custody

Each separate sample will be identified using a label obtained from the laboratory. The sampler will complete all information, using a black waterproof pen, as follows:

The Site ID This is the name assigned to the particular sampling station.

The Sample Source. This will be the name of the well location.

The Analysis Required. This will be indicated for each sample using proper EPA reference number indicating analytical method.

The Date Taken. This will be the date the sample was collected, using the format MM-DD-YY.  
Example: 06-15-91

Noting the Time. The time the sample was collected will be given in military time.  
Example: 1430

The Method of Preservation. Preservation methods will be provided, specifying the type of preservation. For non-acidified samples, "ice" will be indicated.

The Sampler's Name. This will be printed in the "Sampled By" section. The sampler's signature will be written in the "Signed" section.

There is the potential that samples and analyses could be of an evidentiary nature. Therefore, the possession of samples must be traceable from the time samples are collected in the field until the analysis is completed and the data are entered as evidence. The tracing of the samples through the laboratory is accomplished by "chain-of-custody" procedures. Chain-of-Custody Forms will be completed for each set of samples. The sampler will sign the first "Relinquished By" line at the bottom of the chain of custody record, and will indicate the date and time of the custody transfer. Samples will not leave custody of the field technician until relinquished to another party. Custody is defined by the following criteria.

In the Actual Physical Possession. When field personnel have sample in possession, they have "custody".

In View. The samples are in the field personnel's view, after being in their physical possession.

Special Areas. Sample is kept in a locked area after being in physical possession.

Designated Area. Sample is in a designated, locked-storage area.

Transfer of samples to an analytical laboratory will be done by use of a common carrier or personal delivery. Carrier personnel will personally secure samples and sample containers in such a way that no containers can be opened in transit. The person to whom custody is being transferred will sign on the first "Received By" line of the chain-of-custody record, indicating that custody is being accepted by the carrier for all the samples

listed on the sheet. For subsequent transfers of custody, the succeeding relinquish and receipt lines will be used.

### **Equipment Decontamination**

All equipment that comes in contact with potentially contaminated soil or water will be decontaminated prior to and after each use (for example, after each sampling event). All purging and sampling equipment will be decontaminated with an Alconox wash and rinsed with deionized water. Decontamination water generated will be added to the purge water.

**QUARTERLY SUMMARY REPORT**  
Former Texaco/Former Exxon Service Station  
20499 Hesperian, Hayward, California  
Alameda County  
Second Quarter, 1996

**SITE HISTORY**

The former Texaco Service Station No. 624880148 is located approximately 4.5 miles west of the San Francisco Bay in the southern East Bay Plain area of the Santa Clara Valley groundwater basin.

The groundwater reservoir of the East Bay Plain area is underlying unconsolidated sediments, primarily tidal marshland deposits and alluvium. The Hayward fault lies approximately 2 miles east of the site. The regional and local groundwater flow direction is to the west, towards San Francisco Bay.

The site is located in Hayward, California, on the northwest corner of the intersection of Hesperian Boulevard and West A Street. The area surrounding the site is comprised of commercial, light industrial, and residential neighborhoods. A Unocal station is located across West A Street, south of the site. A former Shell station is located diagonally across the intersection, southeast of the site.

A privately owned service station (Alliance station, formerly Beacon Services Station) is immediately east of the site, across Hesperian Boulevard. And an ARCO services station is across Hesperian Boulevard, northeast the site. The Hayward Airport is immediately west and southwest of the site.

A leak of approximately 100 gallons of Fire Chief Red was reported from the Texaco Services Station in 1982. In 1988 Texaco performed an initial site investigation. Nine soil borings were drilled and five groundwater monitoring wells (MW-4A through MW-4E) were installed at the site.

A summary of well construction details are provided as Table 1. TPH-G and BTEX were identified in soil samples collected from one soil boring at maximum concentration of 76 mg/kg and 1.6 mg/kg (total BTEX). Soil samples were not collected from Wells MW-4A through MW-4C. Laboratory results did not identify TPH-G or BTEX in the soil samples collected from Wells MW-4D and MW-4E. Groundwater samples collected during 1988 were not analyzed for TPH-G but did indicate total BTEX concentrations as high as 828 µg/L beneath the site.

Monitoring wells MW-4F, MW-4G, MW-4H, and MW-4I were installed to the west and north of the site in 1989. Monitoring well MW-4J was installed across Hesperian Boulevard, immediately downgradient of the former Alliance services station and well MW-4K was installed across West A Street, immediately downgradient of the Unocal station, in 1990. Floating product was identified in wells MW-4G and MW-4H in March 1990. Since then, free product has been consistently identified in wells MW-4F, MW-4G, MW-4H, and MW-4J.

Texaco resurveyed their groundwater monitoring wells in August 1994. At the same time, Texaco also had the wells installed at the other four service stations surveyed to the same datum. Texaco

has since arranged to have the quarterly groundwater monitoring events, at the five service stations, conducted at the same time.

### **WORK PERFORMED DURING THIS QUARTER**

Depth-to-water measurements and groundwater samples were collected by Blaine Tech Services Inc. on May 13, 1996. Samples were submitted to BC Analytical for analysis of total petroleum hydrocarbons as gasoline and benzene, toluene, ethylbenzene, and xylene isomers following EPA Methods 8015 Modified and 8020, respectively. Details regarding the second quarter 1996 groundwater sampling are provided in the Quarterly Monitoring Report.

Free product skimmers were installed in wells MW-4F, MW4G and MW-4J (a skimmer was installed in MW-4H on March 29, 1996). The skimmers are currently emptied once a quarter at the time of the quarterly sampling event.

### **CHARACTERIZATION STATUS**

The extent of petroleum hydrocarbons in soil has been fully delineated. The groundwater plume is approximately 50-percent delineated with additional work necessary to the southwest, west, and northwest of the site. Texaco has suggested working with representatives from Unocal, Shell, Thrifty, and Alliance to develop a work plan for delineating the downgradient extent of the hydrocarbon plume. No positive response from the other Responsible Parties has been registered to date.

### **REMEDIATION STATUS**

There is no engineered remediation system in operation at the site currently. However, skimmers have been installed in four wells, and, to date, approximately 10 cubic yards of soil and 6,000 gallons of groundwater have been removed from the site as part of the investigation and quarterly groundwater monitoring activities associated with the characterization of this site.

### **WORK TO BE PERFORMED NEXT QUARTER**

Upon approval from the property owner to store product in double contained drums at the site, the free product skimmers will be checked and emptied weekly for one month and on an appropriate monitoring schedule thereafter.

Depth-to-water measurements and groundwater samples will be collected during the third quarter 1996 by Blaine Tech Services Inc. Wells identified as containing floating product will be purged, however, these wells will not be sampled. Samples will be submitted to BC Analytical for analysis of total petroleum hydrocarbons as gasoline and benzene, toluene, ethylbenzene, and xylene isomers following EPA Methods 8015 Modified and 8020, respectively.

## SITE CONTACTS

Texaco Refining and Marketing, Inc.	Ms. Karen Petryna, P.E. Program Manager (510) 236-9139	Unocal	Ms. Tina Berry (510) 227-2321
Station Owner	Mr. Martin Weinberg (714) 544-4297	Exxon, U.S.A.	Mr. Mike Faber (510) 246-8754
(Attorney) Friedrichsen	Darsha Davidoff  (408) 995-5600	Thrifty Oil	Mr. Raymond  (310) 923-9876 x376
Hayward Fire Department	Mr. Hugh Murphy (510) 293-8695	Alliance	Mr. Mahesh Khatri (510) 877-7715
Alameda County	Ms. Madhulla Logan (510) 567-6764	Shell Oil	Mr. R. Jeff Granberry (510) 675-6168