

Texace Religions and Caractes; inc 10 Alterates (Aby Picza Universal Chy (Na uniced

May 12, 1993

ENV - SERVICE STATIONS
Quarterly Status Report
2225 Telegraph Avenue
Oakland, California

Mr. Tom Peacock
Alameda County Environmental
Health Department
80 Swan Way, Room 200
Oakland, CA 94621

Dear Tom:

Enclosed is a copy of our Quarterly Groundwater Monitoring Letter Report dated April 22, 1993, for the currently operating Exxon service station located at 2225 Telegraph Avenue in Oakland, California.

Please call me at (818) 505-2476 if you have any questions or wish to discuss the report further.

Very truly yours,

Nobles

Environmental Protection Coordinator

RR:rr

w:\rr\2225tell.reg

Enclosure

cc: Mr. Rich Hiett, CRWQCB

Ms. D.A. Harris, Exxon

RRZielinski

PR:

Theatment System in

So operation 6W
So operation 6W
Spending - no vapour

extraction going on

VBob Robbes To EBRUD

or report goes to EBRUD

will send that report
haddedly listmond

office.



Texaco Refining and Marketing Inc.

10 Universal City Plaza Universal City CA 91808 Control of the second

May 11, 1993

ENV - SERVICE STATIONS

Quarterly Status Report 2225 Telegraph Avenue Oakland, California

Mr. Tom Peacock
Alameda County Environmental
Health Department
80 Swan Way, Room 200
Oakland, CA 94621

Dear Tom:

Enclosed is a copy of our Quarterly Groundwater Monitoring Letter Report dated April 20, 1993, for the currently operating Exxon service station located at 2225 Telegraph Avenue in Oakland, California.

Please call me at (818) 505-2476 if you have any questions or wish to discuss the report further.

Very truly yours,

Bob Robles

n roble

Environmental Protection Coordinator

RR:rr

w:\rr\2225tel1.reg

Enclosure

cc: Mr. Rich Hiett, CRWQCB

Ms. D.A. Harris, Exxon

RRZielinski

PR: DEC



3315 Almaden Expressway, Suite 34 San Jose, CA 95118

Phone: (408) 264-7723 FAX: (408) 264-2435

LETTER REPORT QUARTERLY GROUNDWATER MONITORING First Quarter 1993

at
Former Texaco Station
2225 Telegraph Avenue
Oakland, California

62073.01

4/93



3315 Almaden Expressway, Suite 34 San Jose, CA 95118 Phone: (408) 264-7723 FAX: (408) 264-2435

> April 22, 1993 0415RROB 62073.01

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

Subject:

Results of the Groundwater Monitoring and Sampling for the First Quarter 1993 at the Texaco Service Station located at 2225 Telegraph Avenue in

Oakland, California.

Mr. Robles:

At the request of Texaco Environmental Services (TES), RESNA Industries Inc. (RESNA) has prepared this letter which summarizes the results of quarterly groundwater monitoring at the former Texaco Service Station located at 2225 Telegraph Avenue in Oakland, California (Plate 1, Site Vicinity Map) for the first quarter 1993 (January through March 1993). On February 11, 1993, quarterly groundwater monitoring and sampling was conducted to evaluate groundwater elevations, gradient and flow direction, the presence and thickness of any petroleum hydrocarbon sheen or floating product, and the distribution of dissolved hydrocarbons in the six monitoring wells (MW-6B, MW-6E, MW-6F, MW-6G, MW-6H, and MW-6I) sampled at this site. As requested by TES, wells RW-1 and RW-2 were not monitored or sampled this quarter. In addition to the monitoring on February 11, 1993, monthly depth-to-water (DTW) measurements were collected on January 28, and March 9, 1993. RESNA's groundwater sampling protocol and well purge data sheets are included in Appendix A. Laboratory analyses with chain of custody documentation are included in Appendix B.

why?



April 22, 1993 62073.01

WORK PERFORMED

GROUNDWATER MONITORING

Based on the February 11, 1993, depth to water levels, groundwater elevations, at the site have increased average of 1.4 feet from the elevation reported in the previous quarter on November 5, 1992. Groundwater elevations in one well, MW-6H, decreased 0.17 foot from the previous quarter's. The groundwater gradient map shows the groundwater beneath the site to be flowing toward the southeast with a hydraulic gradient of approximately 0.03 (Plate 2, Groundwater Gradient Map). Historical and recent monitoring data are summarized in Table 1, Cumulative Groundwater Monitoring Data.

GROUNDWATER SAMPLING

Groundwater samples were submitted to Mobile Chem Laboratories (California Hazardous Materials Testing Laboratory Certification No. 1223) in Martinez, California under Chain of Custody protocol. The samples were analyzed for the gasoline constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total petroleum hydrocarbons as gasoline (TPHg) using modified Environmental Protection Agency (EPA) Methods 5030/602. The Chain of Custody Record and Laboratory Analysis reports are included in Appendix B.

GROUNDWATER ANALYTICAL RESULTS

Concentrations of TPHg in groundwater samples ranged from less than 50 parts per billion (ppb) to 2,500 ppb (MW-6H). Dissolved benzene concentrations ranged from less than 0.5 ppb to 410 ppb (MW-6H). TPHg and benzene concentrations are shown on Plate 3, TPHg/Benzene Concentrations in Groundwater. Neither floating product nor hydrocarbon sheen was observed in the wells. Historical and recent analytical data are summarized in Table 2, Cumulative Results of Laboratory Analyses of Groundwater Samples. Copies of the laboratory analyses reports and the chain of custody manifest for the groundwater samples are included in Appendix B.

PURGE WATER RECYCLING

On February 12, 1993 approximately 110 gallons of purge water generated during purging and sampling of the monitoring wells were transported to Gibson Environmental in Redwood City, California for recycling.



April 22, 1993 62073.01

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

Sincerely,

RESNA Industries Inc.

JAMES LEWIS NELSON

No. 1463

CERTIFIFD ENGINEERLING GEOLOGIST OF CALIFORNIA James L Nelson

Zbigniew L. Ignatowicz

Certified Engineering

Geologist 1463

Staff Geologist

Enclosures:

Plate 1:

Site Vicinity Map

ជ

Plate 2:

Groundwater Gradient Map (2-11-1993)

Plate 3:

TPHg/Benzene Concentrations in Groundwater (2-11-1993)

Table 1:

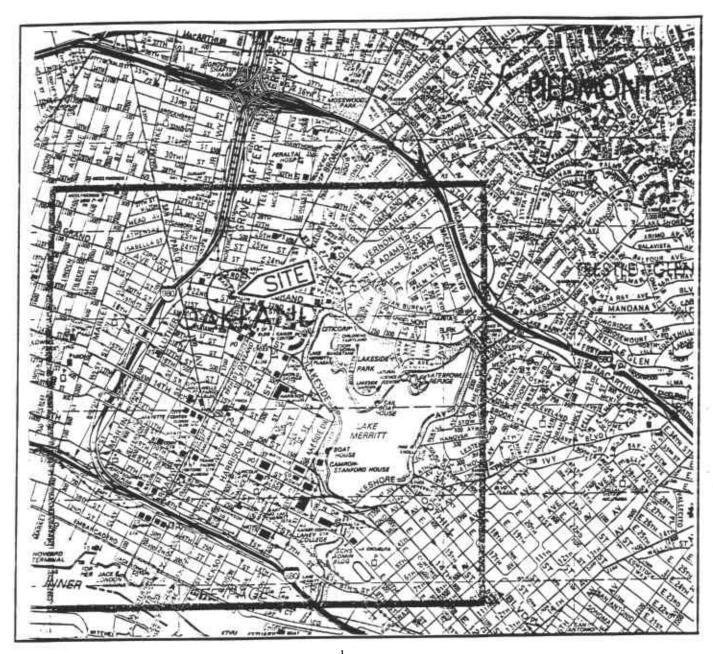
Cumulative Groundwater Monitoring Data

Table 2:

Cumulative Results of Laboratory Analyses of Groundwater

Samples

Appendix A, Groundwater Sampling Protocol and Well Purge Data Sheets Appendix B, Laboratory Analysis Reports and Chain of Custody Documentation



Base: The Thomas Guide Alameda County Oakland, California. 1991

LEGEND

Site Location

Approximate Scale

2200 1100 0 2200 4400

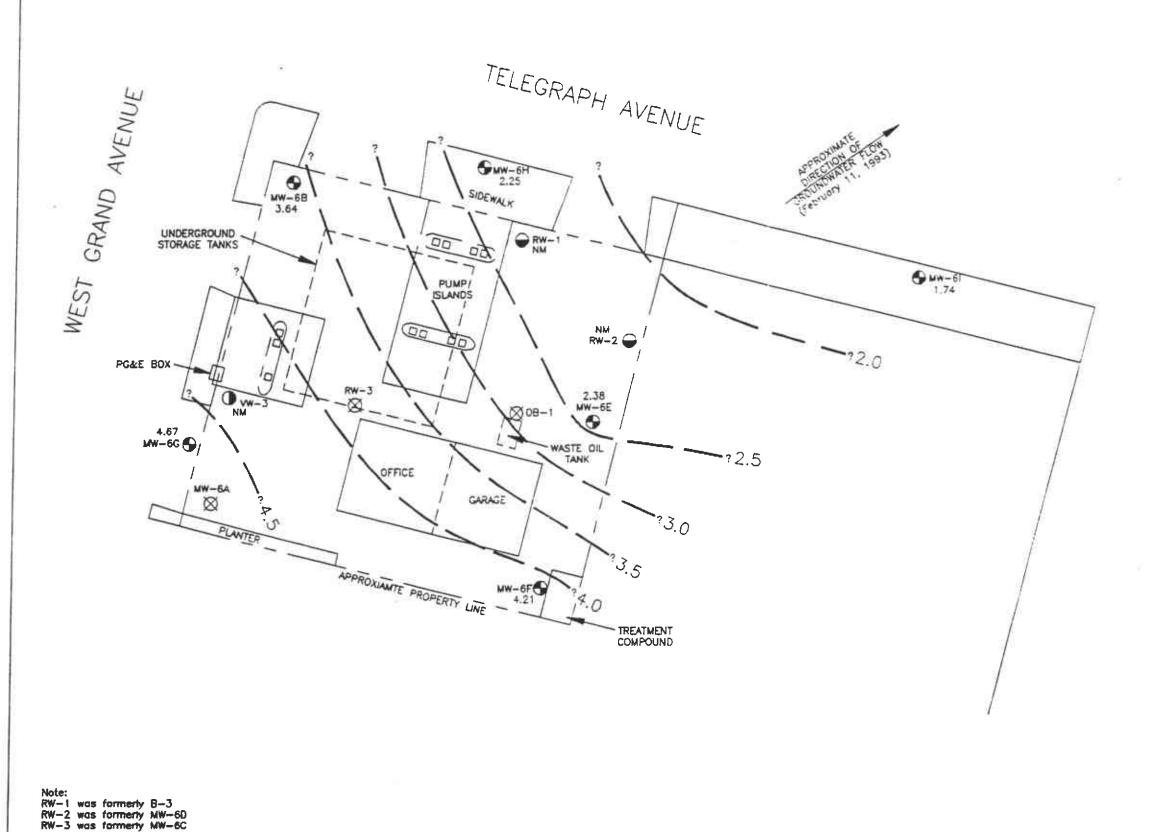
feet

Working to Restore Mature

PROJECT 62073.01

SITE VICINITY MAP Former Texaco Station 2225 Telegraph Avenue Oakland, California PLATE

1



EXPLANATION

MW-61 = Groundwater monitoring well (Harding Lawson, 1988)

RW-2 = Groundwater recovery/vapor extraction well (Harding Lawson, 1988 and 1990)

VW-3 = Vapor extraction well (Harding Lawson, 1988)

4.5 — = Line of equal elevation of groundwater in feet above mean sea level (MSL)

4.67 = Elevation of groundwater in feet above MSL, (February 11, 1993)

NM = Not Monitored

Approximate Scale
0 30

feet

Source: Modified from site plan provided by Harding Lawson Associates, dated July 29, 1992.

Working to Restore Nature

GROUNDWATER GRADIENT MAP
Former Texaco Station
2225 Telegraph Avenue
Oakland, California

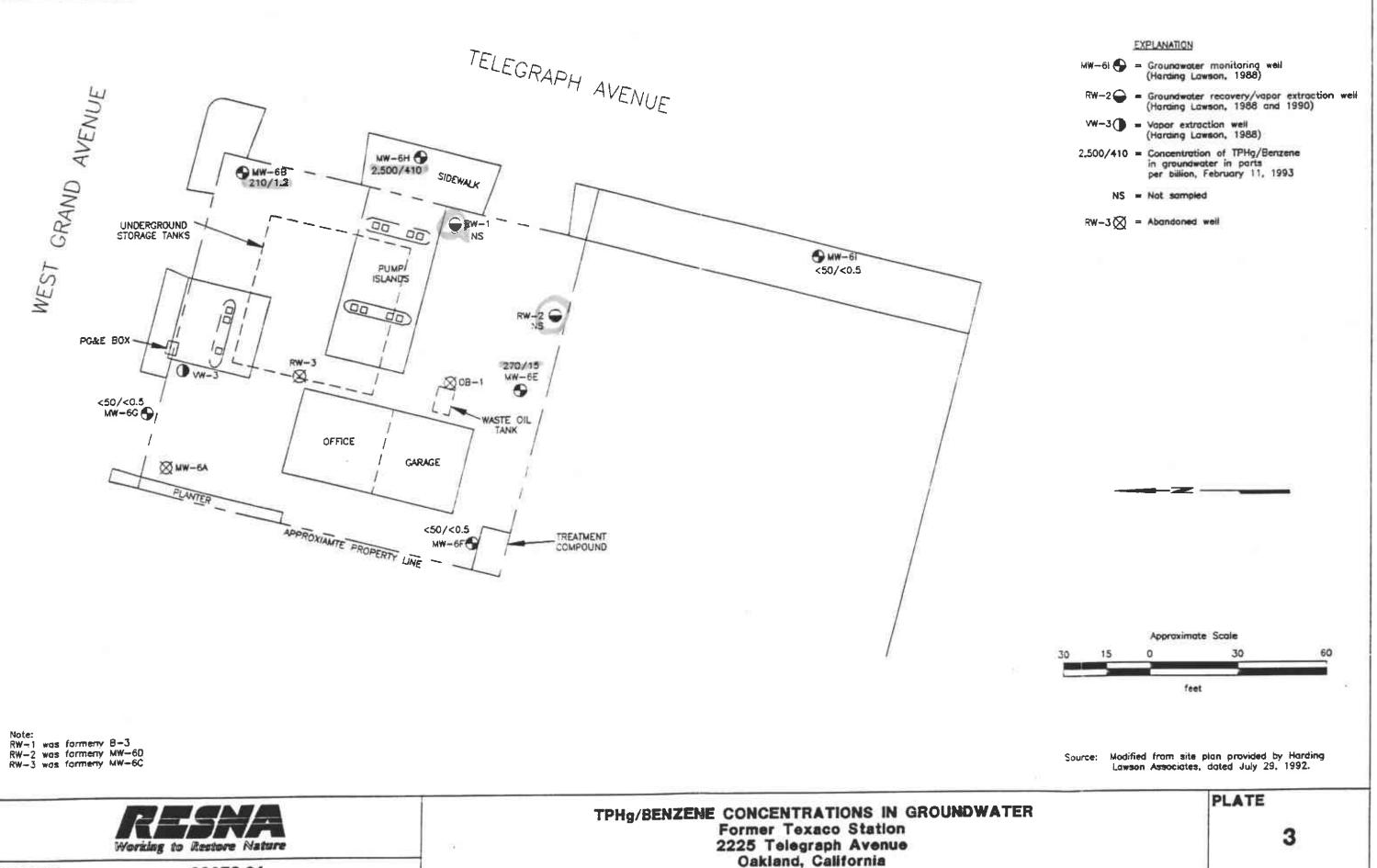
PLATE

2

60

PROJECT

62073.01



PROJECT

62073.01



April 22, 1993 62073.01

TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Texaco Service Station 2225 Telegraph Avenue Oakland, California (Page 1 of 7)

Well	Date	Wellhead Elevation	Depth to Water	Groundwater Elevation*	Floating Product
					
MW-6A					
HLA	12/15/88	98.99*	13.77	85.22	NA
	10/03/89		13.40	85.59	NA
	05/11/90		12.87	86.12	NA
	10/16/90		13.27	85.72	NA
	12/06/90		13.28	85.71	NA
	01/14/91		Not	Monitored	
	02/08/91		12.49	86.50	NA
	04/02/91		Not	Monitored	
	05/07/91		11.94	87.05	NA
	05/31/91		Not	Accessible	
	06/26/91		12.87	86.12	NA
	08/05/91		13.44	85.55	NA
	08/14/91		13.47	85.52	NA
	09/11/91		13.48	85.51	NA
	10/16/91		13.64	85.35	NA
	12/30/91	•		Abandoned	
MW-6B	40 /45 /00	00 018	13.01	85.80	NA
HLA	12/15/88	98.81*	12.94	85.87	NA
	10/03/89		12.53	86.28	NA
	04/30/90		12.73	86.08	NA
	10/16/90			86.07	NA
	12/06/90		12.74	86.24	NA NA
	01/14/91		12.57	86.65	NA NA
	02/08/91		12.16	87.31	NA.
	04/02/91		11.50		NA.
	05/07/91		12.02	86.79	NA NA
	05/31/91		12.40	86.41	
	06/26/91		12.69	86.12	NA NA
	08/05/91		12.95	85.86	
	08/14/91		12.93	85.88	NA NA
	09/11/91		13.01	85.80	NA NA
	10/16/ 91		13.09	85.7 <u>2</u>	NA NA
	12/30/91		12.62	86.19	NA NA
	02/25/92		11.81	87.00	NA.
	03/25/92		11.58	87.23	NA NA
	06/16/92	15.34**	12.54	2.80	NA
RESNA	09/08/92		12.87	2.47	None
	11/05/92		12.70	2.64	None
	12/14/92		12.19	3.15	None



April 22, 1993 62073.01

TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Texaco Service Station 2225 Telegraph Avenue Oakland, California (Page 2 of 7)

Well	Date	Wellhead Elevation	Depth to Water	Groundwater Elevation*	Floating Product
	·				
MW-6B (Con				- 0.5	None
	01/28/93		11.39	3.95	None None
	02/11/93		11.70	3.64	None None
	03/09/93		11.70	3.64	None
RW-3 (forme:	rly MW-6C)				
HLA	12/15/88	99.89*	14.41	85.48	NA NA
	10/03/89		14.10	85.79	NA
	04/30/90		13.81	86.68	NA
	10/16/90	98.97*	13.29	85.68	NA
	01/14/91		14.50	84.47	NA
	02/08/91		12.54	86.43	NA
	04/02/91		11.39	87.58	NA
	05/07/91		12.47	86.50	NA
	05/31/91		16.31	82.66	NA
	06/26/91		15.50	83.47	NA
	08/05/91		13.69	85.28	NA.
	08/13/91		13.67	85.30	NA
	09/11/91		13.77	85.20	NA
	10/16/91		16.66	82.31	NA
	11/05/91		Well .	Abandoned	
RW-2 (forme	rly MW-6D)				
HLA	12/15/88	98.78*	13.53	85.25	NA
11121	10/03/89		13.44	85.34	NA.
	04/30/90		13.19	85_59	NA
	10/16/90	98.11*	12.77	85.34	NA
	01/14/91		Not	Monitored	
	02/08/91		13.11	85.00	NA
	04/02/91		11.70	86.41	NA
	05/07/91		14.09	84.02	NA
	05/31/91		16.01	82.10	NA.
	06/26/91		14.60	83.51	NA
	08/05/91		14.00	84.11	NA
	08/13/91		21.30	76.81	NA
	09/11/91		19.97	78.14	NA
	10/16/91		15.19	82.92	NA
	12/30/91		13.19	84.92	NA
	02/25/92		16.27	81.84	NA
	ندر وسد پندن			Monitored	
	03/25/92		Not	Monnorca	



See notes on page 7 of 7.

TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Texaco Service Station 2225 Telegraph Avenue Oakland, California (Page 3 of 7)

<u>Well</u>	Date	Wellhead Elevation	Depth to Water	Groundwater Elevation*	Floating Product
RW-2 (cont'd)			N/-A	Monitored	
RESNA	09/08/92			Monitored	
	11/05/92			Monitored	
	12/14/92			Monitored	
	01/28/93			Monitored Manitored	
	02/11/93			Monitored Monitored	
	03/09/93		Not	Monitored	
<u>MW-6E</u>					
HLA	12/15/88	98.99*	13.84	85.15	NA
	10/03/89		13.70	85.29	NA
	04/30/90		13.43	85 <i>.</i> 56	NA
	10/16/90		13.77	85.22	NA
	12/06/90		13.95	85.04	NA
	01/14/91		13.95	85.04	NA
	02/08/91		13.20	85.79	NA
	04/02/91		12.28	86.71	NA
	05/07/91		13.48	85.51	NA
	05/31/91	•	14.09	84.90	NA
	06/26/91		12.54	86.45	NA
	08/05/91		14 .3 9	84.60	NA
	08/14/91		14.18	84.81	NA
	09/11/91		14.73	84.26	NA
	10/16/91		14.40	84.59	NA
	12/30/91		13.39	85.60	NA
	02/25/92		13.16	85.83	NA
	03/25/92		12.15	86.84	NA
	06/16/92	15.23**	13.54	1.69	NA
RESNA	09/08/92		14.78	0.45	None
KLOIVA	11/05/92		Not	Monitored	
	12/14/92		Not	Monitored	
	01/28/93		11.62	3.61	None
	02/11/93		12.85	2.38	None
	03/09/93		12.83	2.40	None
1 TT (T					
MW-6F	17/15/00	99.91*	14.73	85.18	NA
HLA	12/15/88	77.71	14.48	85.43	NA.
	10/03/89		14.14	85.77	NA
	04/30/90		14.77	85.14	NA.
	10/16/90		14.81	85.10	NA
	12/06/90		17.01	W120	



April 22, 1993 62073.01

TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Texaco Service Station 2225 Telegraph Avenue Oakland, California (Page 4 of 7)

Well	Date	Wellhead Elevation	Depth to Water	Groundwater Elevation*	Floating Product
	· - · -				
MW-6F (cont'd				05.40	37.4
	01/14/91		14.73	85.18	NA NA
	02/08/91		13.73	86.18	NA NA
	04/02/91		12.38	87.53	
	05/07/91		13.67	86.24	NA
	05/31/91		14.43	85.48	NA NA
	06/26/91		14.81	85.10	NA NA
	08/05/91		14.96	84.95	NA NA
	08/14/91		14.87	85.04	NA NA
	09/11/91		15.11	84.80	NA NA
	10/16/91		15.16	84.75	NA.
	12/30/91		13.78	86.13	NA.
	02/25/92		12.68	87.23	NA
	03/25/92		11.93	87.98	NA
	06/16/92	16.46**	14.34	2.12	NA
RESNA	09/08/92		14.75	1.71	None
	11/05/92		14.35	2.11	None
	12/14/92		12.90	3.56	None
	01/28/93		11.60	4.86	None
	02/11/93		12.25	4.21	None
	03/09/93		12.50	3.96	None
MW-6G					
HLA	12/15/88	99.16*	12.39	86.77	NA
	10/03/89		12.22	86.94	NA
	04/30/90		11.73	87.43	NA
	10/16/90		12.28	86.88	NA:
	12/06/90		12.27	86.89	NA
	01/14/91		12.14	87.02	NA
	02/08/91		11.44	87.72	NA.
	04/02/91		10.03	89.13	NA
	05/07/91		11.00	88.16	NA.
	05/31/91		11.75	87.41	NA
	06/26/91		12.91	86.25	NA
	08/05/91		12.43	86.73	NA
	08/14/91		12.43	86.73	NA
	09/11/91		12.48	86.68	NA
	10/16/91		12.64	86.52	NA
	12/30/91		11.80	87. 3 6	NA .
	02/25/92		10.32	88.84	NA
	03/25/92		9.93	89.23	NA



April 22, 1993 62073.01

TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Texaco Service Station 2225 Telegraph Avenue Oakland, California (Page 5 of 7)

Well	Date	Wellhead Elevation	Depth to Water	Groundwater Elevation*	Floating Product
> 574 (C (1)	۵۱				
MW-6G (cont'	06/16/92	14.71**	11.88	2.83	NA
DISCRIA	09/08/92	14.71	12.20	2.51	None
RESNA	11/05/92		12.02	2.69	None
	12/14/92		10.95	3.76	None
	01/28/93		9.56	5.15	None
	02/11/93		10.04	4.67	None
	03/09/93		10.10	4.61	None
м₩- 6Н					
HLA	12/15/88	97.93*	12.39	85.54	NA NA
	10/03/89		12.36	85.57	NA NA
	04/30/90		12.10	85.83	NA NA
	10/16/90		12.18	85.75	NA
	12/06/90		12.29	85.64	NA
	01/14/91		12.22	85.71	NA
	02/08/91		11.93	86.00	NA
	04/02/91		11.59	86.34	NA NA
	05/07/91		12.24	85.69	NA NA
	05/31/91		12.22	85.71	NA NA
	06/26/91		14.34	83.59	NA
	08/05/91		12.62	85.31	NA
	08/14/91		12.43	85.50	NA
	09/11/91		12.83	85.10	NA NA
	10/16/91		12.71	85.22	NA.
	12/30/91		1 2.16	85.77	NA NA
	02/25/92		12.17	85.76	NA
	03/25/92		11.65	86.28	NA.
	06/16/92	14.47**	12.12	2.35	NA
RESNA	09/08/92		12.30	2.17	None
	11/05/92		12.05	2.42	None
	12/14/92		11.65	2.82	None
	01/28/93	•	11 <i>5</i> 7	2.90	None
	02/11/93		12.22	2.25	None
	03/09/93		12.02	2.45	None
<u>MW-6I</u>			40.00	04.70	NA
HLA	12/15/88	97.60*	12.82	84.78 84.77	NA NA
	10/03/89		12.83	84.77	NA NA
	04/30/90		12.66	84.94	NA NA
	10/16/90		12.71	84.89	140



April 22, 1993 62073.01

TABLE 1 CUMULATIVE GROUNDWATER MONITORING DATA

Texaco Service Station 2225 Telegraph Avenue Oakland, California (Page 6 of 7)

<u>Well</u>	Date	Wellhead Elevation	Depth to Water	Groundwater Elevation*	Floating Product
MIN CI (annuld	`				
MW-6I (cont'd	12/06/90		12.75	84.85	NA
	01/14/91		12.55	85.05	NA
	02/08/91		12.32	85.28	NA.
	04/02/91		12.22	85.38	NA
	05/07/91		12.61	84.99	NA
	05/31/91		12.82	84.78	NA
	06/26/91		12.93	84.67	NA
	08/05/91		13.01	84.59	NA
			12.98	84.62	NA.
	08/14/91		13.11	84.49	NA
	09/11/91		13.04	84.56	NA.
	10/16/91		12.72	84.88	NA.
	12/30/91		12.45	85.15	NA
	02/25/92		12.12	85.48	NA NA
	03/25/92	14 14**	12.75	1.39	NA.
DEGLIA	06/16/92	14.14**	12.73	1.30	None
RESNA	09/08/92		12.75	1.39	None
	11/05/92		12.40	1.74	None
	12/14/92		12.20	1.94	None
	01/28/93		12.40	1.74	None
	02/11/93			1.69	None
	03/09/93		12.45	1.09	None
RW-1 HLA					
HLA	10/16/90	97.89*	12.24	85.65	NA
	01/14/91		12.80	85.09	NA
	02/08/91		12.53	85.36	NA
	04/02/91		NA	NA	NA
	05/07/91	•	NA	NA.	NA
	05/31/91		12.86	85.03	NA
	08/05/91		13.19	84.70	NA.
	08/13/91		14.05	83.84	NA
	09/11/91		15.96	81.93	NA
	10/16/91		16.00	81.89	NA
	12/30/91		12.65	85.24	NA
	02/25/92		14.40	83.49	NA
	03/25/92		NA	NA	NA
	06/16/92	14.42**	12.37	2.05	NA.
RESNA	09/08/92		Monitored		
	11/05/92	Not ?	Monitored		
	12/14/92		Monitored		



April 22, 1993 62073.01

TABLE 1

CUMULATIVE GROUNDWATER MONITORING DATA

Texaco Service Station 2225 Telegraph Avenue Oakland, California (Page 7 of 7)

Well	Date	Wellhead Elevation	Depth to Water	Groundwater Elevation*	Floating Product
RW-1 (cont	'd)				
	01/18/93		fonitored		
	02/11/93		fonitored		
	03/09/93	Not N	fonitored .		
easurements in fe	et.	<u></u>			· · · · · · · · · · · · · · · · · · ·
*	: Based on a	ssigned benchmark with	ı elevation arbitraı	rily set at 100 feet.	
**	: Elevation :	elative to mean sea leve	el (MSL).	-	
NA	; Not Availa				
HLA	: Measurem	ents by Harding Lawson	Associates		
RESNA	; Measurem	ents by RESNA Industr	ies Inc.		
ESNA presumes a	ill wells are in the same	: hydrostratigraphic uni	L.		



See notes on page 4 of 4.

April 22, 1993 62073.01

TABLE 2 CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES

Texaco Service Station 2225 Telegraph Avenue Oakland, California (Page 1 of 4)

Well	Date	TPHg	Benzene	Toluene	Ethyl- benzenc	Total Xylenes	Total Oil and Grease
.,		<u>-</u> .	·-·				
MW-6A	07/04/00	NZA	NTN.	NT)	ND	ND	NA
HLA	06/24/88	NA NA	ND	ND ND	ND	ND	NA.
	10/20/88	NA.	1.0 2.0	ND	ND ND	ND	NA NA
	09/07/89	ND		6.2	< 0.25	13	NA .
	05/11/90	< 500	150 700	64	67	74	NA NA
	05/07/91	2,700		<0.5	<0.5	<0.5	NA
	08/14/91	ND	3.6	Well Damage		~0.D	TVA
	12/31/91			_			
	03/25/92			Well Damage Well Abandon			
	05/02/92			Well Adangor	ieu		
MW-6B						***	374
HLA	06/24/88	NA.	ND	ND	ND	5.0	NA
	10/20/88	NA.	4.0	ND	ND	ND	NA.
	09/07/89	2,700	70	3.0	ND	160	NA
	04/30/90	168	45	8.0	60	22	NA.
	05/07/91	3,300	240	6.0	20	660	NA
	08/14/91	980	9.1	42	310	150	NA
	12/31/91	1,200	46	<5.0	85	220	ND
	03/25/92	190	3 1	8.6	84	8.6	NA ·
	06/16/92	1,700	44	1.7	7.2	230	NA
RESNA	09/08/92	2,900	35	8.3	110	330	NA
	11/05/92	1,400	29	< 0.5	75	190	NA
	02/11/93	210	1.2	<0.5	2.8	4.3	NA
RW-3 (form	erly MW-6C)						
HLA	06/24/88	NA	7,400	7.0	170	2,300	NA
ייייי	10/20/88	NA.	9,500	65	170	850	NA
	09/07/89	18,000	7,900	430	350	1,100	NA
	04/30/90	30,000	6,100	1,500	1,000	2,700	NA
	05/07/91	5,800	4,200	640	220	670	NA
	08/14/91	3,800	2,300	300	49	360	NA
	11/05/91	5,000	2,000	Well Abandor			
	oz/11/60)	NIA	220	27	< 20	< 10	NA
HLA	07/11/88	NA.		74	22	110	NA NA
	10/20/88	NA 2 200	710 600	74 26	58	31	NA NA
	09/07/89	2,200	600	26 150	310	280	NA NA
	04/30/90	3,600	800		150	780	NA NA
	05/07/91	11,000	3,200	480	טכד	700	141



April 22, 1993 62073.01

TABLE 2 CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES

Texaco Service Station 2225 Telegraph Avenue Oakland, California (Page 2 of 4)

Well	Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Total Oil and Grease	
DW 2 (4)								
RW-2 (cont'd	08/14/91	NA	NA	NA	NA	NA	NA	
	12/31/91	NA	NA	NA	NA	NA	NA	
	03/25/92	NA	NA	NA	NA	NA	NA	
	06/16/92	28,000	2,900	1,000	120	2,700	NA	
RESNA	09/08/92	20,000	2,	Not Sampled				
KLSIVA.	11/05/92			Not Sampled				
	02/11/93				Not Sample	d		
	0 2 , 12, 72				-			
MW-6E							NIA	
HLA	10/20/88	NA	1.0	ND	ND	3.0	NA NA	
	09/07/89	220	3.0	ND	ND	ND	NA NA	
	04/30/90	250	57	< 5.0	<5.0	53	NA NA	
	05/07/91	160	32	1.0	2.2	1.4	NA NA	
	08/14/91	ND	0.9	< 0.5	<0.5	< 0.5	NA ND	
	12/31/91	90	3.1	< 0.5	<0.5	<0.5	ND	
	03/25/92	830	41	1.0	3.8	16	NA NA	
	06/16/92	3,400	300	23	68	510	NA NA	
RESNA	09/08/92	480	27	< 0.5	3.6	21	NA	
	11/05/92			Not Sampled			374	
	02/11/93	270	15	< 0.5	<0.5	8.7	NA	
MW-6F								
HLA	10/25/88	ND	ND	ND	2.0	NA.	NA	
11121	09/07/89	ND	ND	ND	ND	ND	NA	
	04/30/90	ND	ND	ND	ND	ND	NA	
	05/07/91	ND	ND	< 0.5	< 0.5	< 0.5	NA	
	08/14/91	ND	ND	< 0.5	< 0.5	< 0.5	NA	
	12/31/91	ND	ND	< 0.5	<0.5	< 0.5	ND	
	03/25/92	ND	ND	< 0.5	< 0.5	< 0.5	NA	
	06/16/92	ND	ND	< 0.5	< 0.5	< 0.5	NA	
RESNA	09/08/92	<50	<0.5	< 0.5	< 0.5	< 0.5	NA	
1425141	11/05/92	<50	< 0.5	< 0.5	< 0.5	< 0.5	NA	
	02/11/93	<50	< 0.5	< 0.5	< 0.5	<0.5	NA	
MW-6G								
HLA	12/07/88	ND	ND	ND	ND	NA	NA	
IIIA	09/07/89	ND	ND	ND	ND	ND	NA	
	04/30/90	ND	ND	ND	ND	ND	NA	
	05/07/91	ND	ND	<0.5	<0.5	< 0.5	NA	



April 22, 1993 62073.01

TABLE 2 CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES

Texaco Service Station 2225 Telegraph Avenue Oakland, California (Page 3 of 4)

Well	Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Total Oil and Grease
				1010010			
. 611 (6 (
<u>MW-6G</u> (co	08/14/91	ND	ND	< 0.5	< 0.5	< 0.5	NA
	, ,	ND	ND	< 0.5	<0.5	< 0.5	ND
	12/31/91 03/25/92	ND	ND	<0.5	<0.5	< 0.5	NA
		ND	ND	< 0.5	<0.5	<0.5	NA
D 1205 T 4	06/16/92	<50	<0.5	<0.5	<0.5	< 0.5	NA
RESNA	09/08/92	<50	<0.5	<0.5	<0.5	< 0.5	NA
	11/05/92	<50	<0.5	<0.5	<0.5	<0.5	NA
	02/11/93	<30	405	~0. 2	10.5		•
MW-6H				***	110	220	NA.
HLA	12/07/88	NA	1,200	320	110	<15	NA NA
	09/07/89	660	480	<10	16		NA NA
	04/30/90	630	700	39	31	50	NA NA
	05/07/91	570	95	14	15	21	NA NA
	08/14/91	540	52	9.9	11	18	ND ND
	12/31/91	790	52	28	22	42	
	03/25/92	920	170	52	25	54	NA NA
	06/16/92	460	31	11	6.8	16	NA
RESNA	09/08/92	7 80	69	23	17	18	NA
	11/05/92	3,400	500	260	85	160	NA
	02/11/93	2,500	410	170	28	130	NA
MW-6I							
HLA	12/07/88	ND	ND	ND	ND	NA	NA
*****	09/07/89	ND	ND	ND	ND	ND	NA
	04/30/90	ND	ND	ND	ND	ND	NA
	05/07/91	ND	ND	< 0.5	< 0.5	< 0.5	NA
	08/14/91	ND	ND	< 0.5	< 0.5	< 0.5	NA
	12/31/91	ND	ND	< 0.5	<0.5	< 0.5	ND
	03/25/92	ND	ND	< 0.5	< 0.5	<0.5	NA
	06/16/92	ND	ND	< 0.5	< 0.5	<0.5	NA
RESNA	09/08/92	<50	<0.5	< 0.5	< 0.5	< 0.5	NA
MICONA	11/05/92	<50	<0.5	<0.5	< 0.5	< 0.5	NA
	02/11/93	< 5 0	<0.5	<0.5	<0.5	< 0.5	NA



April 22, 1993 62073.01

TABLE 2 CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES

Texaco Service Station 2225 Telegraph Avenue Oakland, California (Page 4 of 4)

Well	Date	ТРНg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Total Oil and Grease
RW-1 HLA RESNA	06/16/92 09/08/92 11/05/92	6,200	620	1,400 Not Sampled Not Sampled	240	1,400	NA .
ACI o	02/11/93		1.0	_	Not Sampled 680	1,750	_
MCLs DWAL		_		100		_	-

Results in parts per billion (ppb).

TPHg : Total petroleum hydrocarbons analyzed as gasoline.

: Less than the detection limit for the specified method of analysis.

MCLs : Adopted Maximum Contaminant Levels in Drinking Water, DHS (October 1990)

DWAL : Recommended Drinking Water Action Levels, DHS (October 1990)

NA : Not Analyzed

ND : Not detectable at or above method detection limit.

- : Not Applicable

HLA : Sampled by Harding Lawson Associates RESNA : Sampled by RESNA Industries Inc.

APPENDIX A GROUNDWATER SAMPLING PROTOCOL

WELL PURGE DATA SHEETS



April 22, 1993 62073.01

GROUNDWATER SAMPLING PROTOCOL

The static water level and floating product level, if present, in each well that contained water was measured with an ORS Interphase Probe Model No. 1068018 or Solonist Water Level Indicator; these instruments are accurate to the nearest 0.01 foot. These groundwater depths were subtracted from wellhead elevations, including corrections for product thickness, when necessary, for gradient evaluation by multiplying product thickness (PT) by a correction factor 0.8 and subtracting from the DTW (Adjusted DTW = DTW - [PT x 0.8]).

Water samples collected for subjective evaluation were collected by gently lowering approximately half the length of a new disposable or Teflon® bailer past the air-water interface (if possible) and collecting a sample from near the surface of the water in the well. The samples were checked for measurable floating hydrocarbon product. All Teflon® bailers are triple rinsed with Alconox® and triple rinsed with distilled water prior to use.

Before water samples were collected from the groundwater monitoring wells, the wells were purged until stabilization of the temperature, Ph, and conductivity was obtained. Approximately four well casing volumes were purged before those characteristics stabilized. The quantity of water purged from each well was calculated as follows:

1 well casing volume = $\pi r^2 h(7.48)$ where:

r = radius of the well casing in feet.

h = column of water in the well in feet

(depth to bottom - depth to water).

7.48 = conversion constant from cubic feet to gallons

Gallons of water purged/gallons in 1 well casing volume = well casing volumes removed.

After purging, each well was allowed to recharge to at least 80% of the initial water level. Water samples were collected with a new disposable or Teflon® bailer, and carefully poured into 40-milliliter (ml) glass vials, which were filled so as to produce a positive meniscus. Each vial was preserved with hydrochloric acid, sealed with a cap containing a Teflon® septum, and subsequently examined for air bubbles to avoid headspace which would allow volatilization to occur. The samples were transported in iced storage in a thermally insulated ice chest, accompanied by a Chain of Custody form, to a California-certified laboratory.



Project Name: Texaco - Oakland

Job No. 62073.01

Date: February 11, 1993

Page $\underline{1}$ of $\underline{1}$

Well No. MW-6B

Time Started 1:45

TIME (hr)	GALLONS (cum.)	TEMP. (F)	Ph	CONDUCT. (micromho)
1:45	Start purg	ing MW-6B		
1:45	0	59.5	7.11	1270
1:47	1.1	60.5	7.08	1310
1:49	2.2	61.2	7.06	1350
1:56	3.3	60.0	7.01	1350
1:58	4.4	60.2	7.00	1360
1:59	Stop purg	ing MW-6B		
Notes:	Depth t Gallon	Depth to Be o Water - in: o Water - fix s per Well Ca Ga: Gell Casing Ve	ter (inches) : ottom (feet) : itial (feet) : hal (feet) : % recovery Fime Sampled asing Volume llons Purged olume Purged g Rate (gpm)	18.00 11.70 11.70 100.0% 2:30 1.07 4.4



Project Name: Texaco - Oakland Job No. 62073.01

Date: <u>February 11, 1993</u> Page <u>1</u> of <u>1</u>

Well No. MW-6E Time Started 11:45

TIME (hr)	GALLONS (cum.)	TEMP. (F)	Нq	CONDUCT. (micromho)
11:45	Start purg	ing MW-6E		
11:45	0	59.7	7.14	1010
11:49	4.5	59.7	7.09	1050
11:52	9.0	60.2	7.06	1050
12:01	13.5	59.9	7.07	1060
12:05	18.0	59.8	7.04	1060
12:06	Stop purg	ing MW-6E		
Notes: Well Diameter (inches): 4" Depth to Bottom (feet): 19.50 Depth to Water - initial (feet): 12.85 Depth to Water - final (feet): 12.85 % recovery: 100.0% Time Sampled: 1:35 Gallons per Well Casing Volume: 4.39 Gallons Purged: 18.0 Well Casing Volume Purged: 4.0 Approximate Pumping Rate (gpm): 1.0				



Project Name: Texaco - Oakland

Job No. 62073.01

Date: February 11, 1993

Page $\underline{1}$ of $\underline{1}$

Well No. MW-6F

Time Started 9:00

TIME (hr)	GALLONS (cum.)	TEMP.	Ph	CONDUCT. (micromho)
9:00	Start purg	ing MW-6F		
9:00	0	57.2	7.65	600
9:05	5.0	58.0	7.67	620
9:10	10.0	59.1	7.66	640
9:20	15.0	58.3	7.55	620
9:25	20.0	58.6	7.56	640
9:26	Stop purg	ing MW-6F		
Notes: Well Diameter (inches): 4" Depth to Bottom (feet): 19.58 Depth to Water - initial (feet): 12.25 Depth to Water - final (feet): 12.25 % recovery: 100.0% Time Sampled: 10:30 Gallons per Well Casing Volume: 4.84 Gallons Purged: 20.0 Well Casing Volume Purged: 4.0 Approximate Pumping Rate (gpm): 1.0				



Project Name: Texaco - Oakland

Job No. 62073.01

Date: February 11, 1993

Page <u>1</u> of <u>1</u>

Well No. MW-6G

Time Started 9:45

TIME (hr)	GALLONS (cum.)	TEMP. (F)	Ph	CONDUCT. (micromho)
9:45	Start purg	ing MW-6G		
9:45	0	67.9	7.39	780
9:51	6.4	67.8	7.33	1010
9:57	12.8	67.9	7.28	1330
10:08	19.2	67.9	7.25	1320
10:14	25.6	67.8	7.24	1350
11:20	Stop purg	ging MW-6G		
Notes: Well Diameter (inches): 4" Depth to Bottom (feet): 19.60 Depth to Water - initial (feet): 10.04 Depth to Water - final (feet): 10.04 % recovery: 100% Time Sampled: 11:25 Gallons per Well Casing Volume: 6.31 Gallons Purged: 25.6 Well Casing Volume Purged: 4.0 Approximate Pumping Rate (gpm): 1.0				



Project Name: Texaco - Oakland

Job No. 62073.01

Date: February 11, 1993

Page <u>1</u> of <u>1</u>

Well No. MW-6H

Time Started 1:00

TIME (hr)	GALLONS (CUM.)	TEMP.	рн	CONDUCT. (micromho)
1:00	Start purg	ing MW-6H		
1:00	0	60.9	7.08	1170
1:05	5	61.9	7.05	1160
1:10	10	62.8	7.04	1180
1:20	15	61.3	7.04	1140
1:25	20	62.1	7.04	1140
1:26	Stop purg	ing MW-6H		
Notes: Well Diameter (inches): 4" Depth to Bottom (feet): 19.65 Depth to Water - initial (feet): 12.22 Depth to Water - final (feet): 12.22 Recovery: 100.0% Time Sampled: 2:15 Gallons per Well Casing Volume: 4.9 Gallons Purged: 20 Well Casing Volume Purged: 4.0 Approximate Pumping Rate (gpm): 1.0				



Project Name: Texaco - Oakland

Job No. 62073.01

Date: February 11, 1993

Page <u>1</u> of <u>1</u>

Well No. MW-61

Time Started 10:45

TIME (hr)	GALLONS (cum.)	TEMP. (F)	рн	CONDUCT. (micromho)
10:45	Start purg	ing MW-6I		
10:45	0	60.7	7.49	470
10:50	4.6	61.3	7.36	720
10:55	9.2	61.8	7.34	770
11:05	13.8	61.1	7.34	640
11:10	18.4	61.6	7.31	670
11:11	Stop purg	ing MW-6I		
Notes:	Depth t Gallon	Depth to Be o Water - in: o Water - fir s per Well Ca Ga: ell Casing Ve	ter (inches) : ottom (feet) : itial (feet) : nal (feet) : % recovery : rime Sampled : asing Volume : llons Purged : olume Purged : g Rate (gpm) :	19.40 12.40 12.40 100.0% 12:25 4.62 18.4 3.9

APPENDIX B

LABORATORY ANALYSIS REPORTS AND CHAIN OF CUSTODY DOCUMENTATION



5011 Blum Road, Suite 1 • Martinez, CA 94553 Phone (510 372-3700 • Fax (510) 372-6955 MAR L 1893

FESAN TANGO PE

62073.01\1718\012462

RESNA Industries

3315 Alamden Expressway, #34

San Jose, CA 95118

Attn: Phillip Mayberry

Project Manager

Date Sampled: 02-11-93

Date Received: 02-16-93

Date Analyzed: 02-23-93

Sample Number

023234

Sample Description

Project # 62073.01 Texaco - Oakland

2225 Telegraph

BB1 WATER

ANALYSIS

	Detection Limit	Sample Results ppb
	ppb	
Total Petroleum Hydrocarbons as Gasoline	50	<50
Benzene	0.5	<0.5
Toluene	0.5	<0.5
Xylenes	0.5	<0.5
Ethylbenzene	0.5	<0.5

QA/QC: Sample blank is none detected

Note:

Analysis was performed using EPA methods 5030 and TPH

LUFT with method 602 used for BTX distinction.

 $(ppb) = (\mu g/L)$

MOBILE CHEM LABS



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

62073.01\1718\012462

RESNA Industries

3315 Alamden Expressway, #34

San Jose, CA 95118 Attn: Phillip Mayberry

Project Manager

Date Sampled: 02-11-93

Date Received: 02-16-93 Date Analyzed: 02-23-93

Sample Number

023235

Sample Description

Project # 62073.01 Texaco - Oakland 2225 Telegraph

F WATER

ANALYSIS

	Detection Limit ppb	Sample Results ppb
Total Petroleum Hydrocarbons as Gasoline	50	<50
Benzene	0.5	<0.5
Toluene	0.5	<0.5
Xylenes	0.5	<0.5
Ethylbenzene	0.5	<0.5

QA/QC: Sample blank is none detected

Note:

Analysis was performed using EPA methods 5030 and TPH

LUFT with method 602 used for BTX distinction.

 $(ppb) = (\mu g/L)$

MOBILE CHEM LABS



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

62073.01\1718\012462

RESNA Industries

3315 Alamden Expressway, #34

San Jose, CA 95118 Attn: Phillip Mayberry

Project Manager

Date Sampled: 02-11-93 Date Received: 02-16-93

Date Analyzed: 02-23-93

Sample Number

023236

Sample Description

Project # 62073.01 Texaco - Oakland 2225 Telegraph

6G WATER

ANALYSIS

	Detection Limit ppb	Sample Results ppb
Total Petroleum Hydrocarbons as Gasoline	50	<50
Benzene	0.5	<0.5
Toluene	0.5	<0.5
Xylenes	0.5	<0.5
Ethylbenzene	0.5	<0.5

QA/QC: Sample blank is none detected

Note:

Analysis was performed using EPA methods 5030 and TPH

LUFT with method 602 used for BTX distinction.

 $(ppb) = (\mu g/L)$

MOBILE CHEM LABS



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

62073.01\1718\012462

RESNA Industries

3315 Alamden Expressway, #34

San Jose, CA 95118 Attn: Phillip Mayberry

Project Manager

Date Sampled: 02-11-93 Date Received: 02-16-93

Date Analyzed: 02-23-93

Sample Number

023237

Sample Description

Project # 62073.01 Texaco - Oakland 2225 Telegraph

6I WATER

ANALYSIS

	Detection Limit ppb	Sample Results ppb
Total Petroleum Hydrocarbons as Gasoline	50	<50
Benzene	0.5	<0.5
Toluene	0.5	<0.5
Xylenes	0.5	<0.5
Ethylbenzene	0.5	<0.5

QA/QC: Sample blank is none detected

Note:

Analysis was performed using EPA methods 5030 and TPH

LUFT with method 602 used for BTX distinction.

 $(ppb) = (\mu g/L)$

MOBILE CHEM LABS



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

62073.01\1718\012462

RESNA Industries

3315 Alamden Expressway, #34

San Jose, CA 95118 Attn: Phillip Mayberry

Project Manager

Date Sampled: 02-11-93

Date Received: 02-16-93

Date Analyzed: 02-23-93

Sample Number

023238

Sample Description

Project # 62073.01 Texaco - Oakland 2225 Telegraph

E WATER

ANALYSIS

	Detection Limit	Sample Results
	ppb	ppb
Total Petroleum Hydrocarbons as Gasoline	50	270
Benzene	0.5	15
Toluene	0.5	<0.5
Xylenes	0.5	8.7
Ethylbenzene	0.5	<0.5

QA/QC: Sample blank is none detected

Spike Recovery is 70%

Duplicate Deviation is 3.4%

Note:

Analysis was performed using EPA methods 5030 and TPH

LUFT with method 602 used for BTX distinction.

 $(ppb) = (\mu g/L)$

MOBILE CHEM LABS



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

62073.01\1718\012462

RESNA Industries

3315 Alamden Expressway, #34

San Jose, CA 95118 Attn: Phillip Mayberry

Project Manager

Date Sampled: 02-11-93

Date Received: 02-16-93

Date Analyzed: 02-23-93

Sample Number

023239

Sample Description

Project # 62073.01 Texaco - Oakland

2225 Telegraph

H WATER

ANALYSIS

	Detection Limit ppb	Sample Results ppb
Total Petroleum Hydrocarbons as Gasoline	50	2,500
Benzene	0.5	410
Toluene	0.5	170
Xylenes	0.5	130
Ethylbenzene	0.5	28

QA/QC: Sample blank is none detected

Note:

Analysis was performed using EPA methods 5030 and TPH

LUFT with method 602 used for BTX distinction.

 $(ppb) = (\mu g/L)$

MOBILE CHEM LABS

Ronald G. Evans Lab Director

Ind Shune



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

62073.01\1718\012462

RESNA Industries

3315 Alamden Expressway, #34

San Jose, CA 95118 Attn: Phillip Mayberry

Project Manager

Date Sampled: 02-11-93 Date Received: 02-16-93 Date Analyzed: 02-23-93

Sample Number

023240

Sample Description Project # 62073.01 Texaco - Oakland

2225 Telegraph 6B WATER

ANALYSIS

	Detection Limit	Sample Results
	ppb	ppb
Total Petroleum Hydrocarbons as Gasoline	50	210
Benzene	0.5	1.2
Toluene	0.5	<0.5
Xylenes	0.5	4.3
Ethylbenzene	0.5	2.8

QA/QC: Sample blank is none detected

Note:

Analysis was performed using EPA methods 5030 and TPH

LUFT with method 602 used for BTX distinction.

 $(ppb) = (\mu g/L)$

MOBILE CHEM LABS



CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

PROJECT NO. PROJECT NAME/SITE													10	IALYS	SIS RI	QUE	STED	P.O #					
62073.0(Texaco 2225 Te	legraph	Ave-	Ö	ak	bad c	A.	ERS				/	/,	//	/ /	/ /	//		//	//			
SAMPLERS (SIGN) Polan a- adai (PRINT) Polan A-Adair							CONTAINE	TYPE			(5) \(\frac{1}{2}\)			/,	//	//	//		//	/			
SAMPLE IDENTIFICATION		DATE	TIME	COMP	GRAB	PRES. USED		NO. CO	SAMPLE		(0208/20) 12 (08) 0.141	(5/08/04/2)	(Se' 8' 8' 8' 8' 8' 8' 8' 8' 8' 8' 8' 8' 8'		\$ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		//	//		<u> </u>	REMARI	ARKS	
BB1		2-11-93	10:25	0	0	HCL	Y	2	Ĭ	X	X												
										, ,						_		-					
6F			10:30	ļ			-	2	0	X	X -	-		-		1		-	┼				
66			12:25	-	<u> </u>	 	H	2	#	K	\lozenge		-	-		-		+	 -				
6 <u>E</u>			1:35	 	<u> </u>			2		X	X												
614			2:15					2	\prod	X	X		-	-		_	 -	_		ļ			
613		\ \\	2:30		_	<u> </u>	1	2		X	X	-		1			+		-				
		<u> </u>					-	 		-	-		-	+			+	+	+				
		 	<u></u>	-	1	<u> </u>	-	1	 	 -													
																		_ _	_	ļ		· · · · · · · · · · · · · · · · · · ·	
			ļ	_	ļ		 	-	ļ	 	-		-	 				+	+-	-			
		<u> </u>	 	-	-	<u> </u>	╁	-	-	+-	╂╌╂╌	_ -	+	+			_	-	+				
RELINQUISHED BY:	DATI 2/12	TE TIME RECEIVED BY: 2/93 7:30AU						Mobile Chiem Labs										PLEASE SEND RESULTS TO: Phil Mayberry Resma. San-Tese					
RELINQUISHED BY		DATE TIME RECEIVED B															Kesna. San-Tese						
RELINQUISHED BY	L 110	ME	RECEIVED BY					R	NOIZMAL														
reinourneinty	1 111 3 /	MI 2 4/	RI CI	IVE	BYTAB	ЭΗΑ1 _(2\-2\-2\-2\-2\-2\-2\-2\-2\-2\-2\-2\-2\-2	ORY S.£	0	HECHIPT CONDITION DUTCE NO head APPL								PROJECT MANAGER						