



Texaco Refining  
and Marketing Inc

108 Cutting Boulevard  
Richmond CA 94804

23177-11312

April 26, 1993

ENV-STUDIES, SURVEYS & REPORTS  
3940 Castro Valley Blvd., Castro Valley, CA

Mr. Scott Seery  
Alameda County Department of Environmental Health  
80 Swan Way, Room 200  
Oakland, CA 94621

Dear Mr. Seery:

Enclosed is the Quarterly Groundwater Monitoring Letter Report, covering the fourth quarter 1992, for the former Texaco Service Station located at the above referenced site.

If you have any questions, I may be reached at (510) 236-3611.

Sincerely,  
Texaco Environmental Services

Karel Detterman, R.G.  
Project Coordinator

KLD:kld

C:\KLD\COVER1.WKB  
A:\COVER\COVER1.WKB  
C:\KLD\CC

Attachment

cc: HRPearson-RRZielinski

Mr. Richard Hiett  
Regional Water Quality Control Board  
2101 Webster Street, Suite 500  
Oakland, CA 94612

Mr. Dave Daffern  
Lakeshore Financial  
21060 Redwood Road  
Castro Valley, CA 94596

pr: *Q.B.*

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

LETTER REPORT  
QUARTERLY GROUNDWATER MONITORING  
Fourth Quarter 1992  
at  
Former Texaco Station  
3940 Castro Valley Boulevard  
Castro Valley, California

62091.01

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

April 20, 1993  
0301KDET  
62091.01

Ms. Karel Detterman  
Texaco Environmental Services  
108 Cutting Boulevard  
Richmond, California 94804

Subject: Results of Groundwater Monitoring and Sampling, Fourth Quarter 1992,  
Former Texaco Station located at 3940 Castro Valley Boulevard, Castro  
Valley, California.

Ms. Detterman:

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 3940 Castro Valley Boulevard in Castro Valley, California (Plate 1, Site Vicinity Map) for the fourth quarter 1992 (October through December 1992). On December 29, 1992, 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 7 monitoring wells (MW-1 and MW-3 through MW-8) present at this site. Wells MW-1 and MW-4 were not monitored or sampled for laboratory analyses due to flooding. RESNA's groundwater sampling protocol and well purge data sheets are included in Appendix A. Results of laboratory analyses with chain of custody documentation are included in Appendix B.

#### WORK PERFORMED

##### **GROUNDWATER MONITORING**

Groundwater elevations at the site have increased an average of about 0.3 feet from the elevations reported the previous quarter. The groundwater gradient map shows the

Fourth Quarter 1992 Quarterly Report  
Castro Valley Boulevard, Castro Valley, California

April 20, 1993  
62091.01

groundwater beneath the site to be flowing toward the south-southwest with a gradient of less than 0.002 (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 260 ppb (MW-3). Dissolved benzene concentrations ranged from less than 0.5 ppb to 6.2 ppb (MW-3). 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**

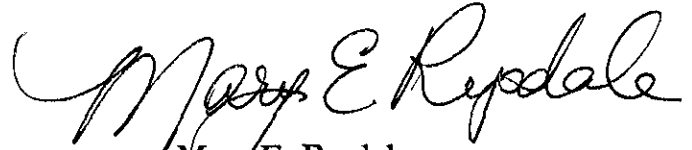
On April 6, 1993, approximately 450 gallons of purge water generated during purging and sampling of the monitoring wells was transported to Gibson Environmental in Redwood City, California for recycling.

Fourth Quarter 1992 Quarterly Report  
Castro Valley Boulevard, Castro Valley, California


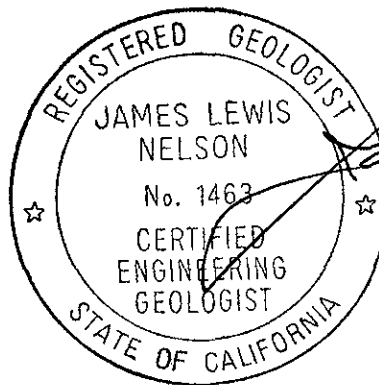
April 20, 1993  
62091.01

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

Sincerely,  
RESNA Industries Inc.



Mary E. Rysdale  
Geologic Technician

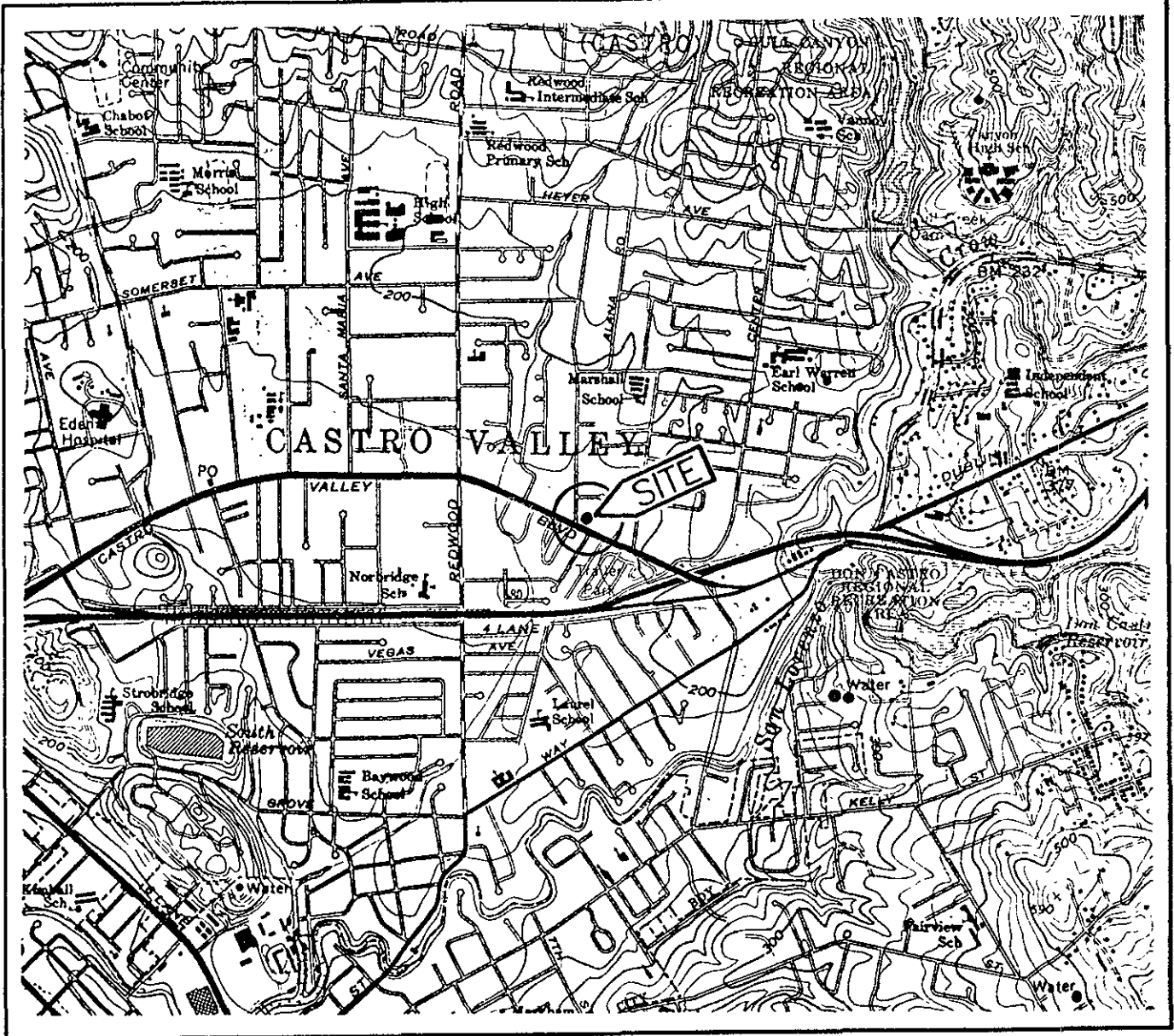


James L. Nelson  
Certified Engineering  
Geologist No. 1463

Enclosures: Plate 1: Site Vicinity Map  
Plate 2: Groundwater Gradient Map  
Plate 3: TPHg/Benzene Concentrations in Groundwater

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: U.S. Geological Survey  
 7.5-Minute Quadrangles  
 Hayward, California.  
 Photorevised 1980

**LEGEND**

○ = Site Location

Approximate Scale



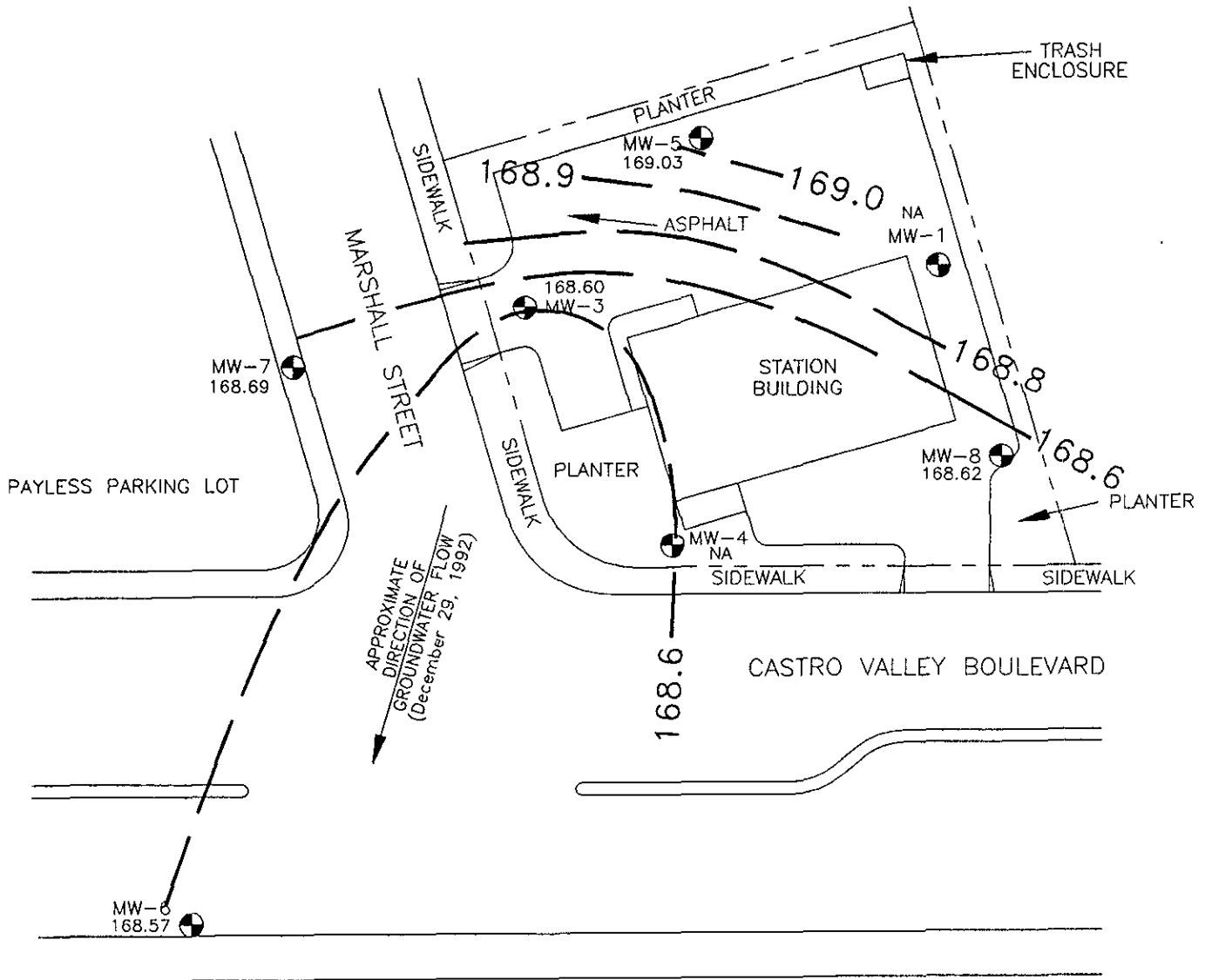
**RESNA**  
 Working to Restore Nature

PROJECT 62091.01

**SITE VICINITY MAP**  
 Former Texaco Station  
 3940 Castro Valley Boulevard  
 Castro Valley, California

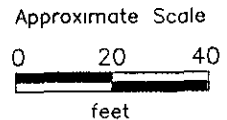
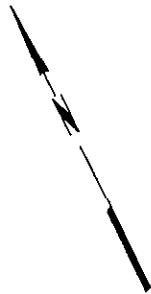
**PLATE**

**1**



EXPLANATION

- MW-8 = Monitoring Well
- 169.0 = Line of equal elevation of groundwater in feet above mean sea level (MSL)
- 169.03 = Elevation of groundwater in feet above MSL.
- NA = Not accessible



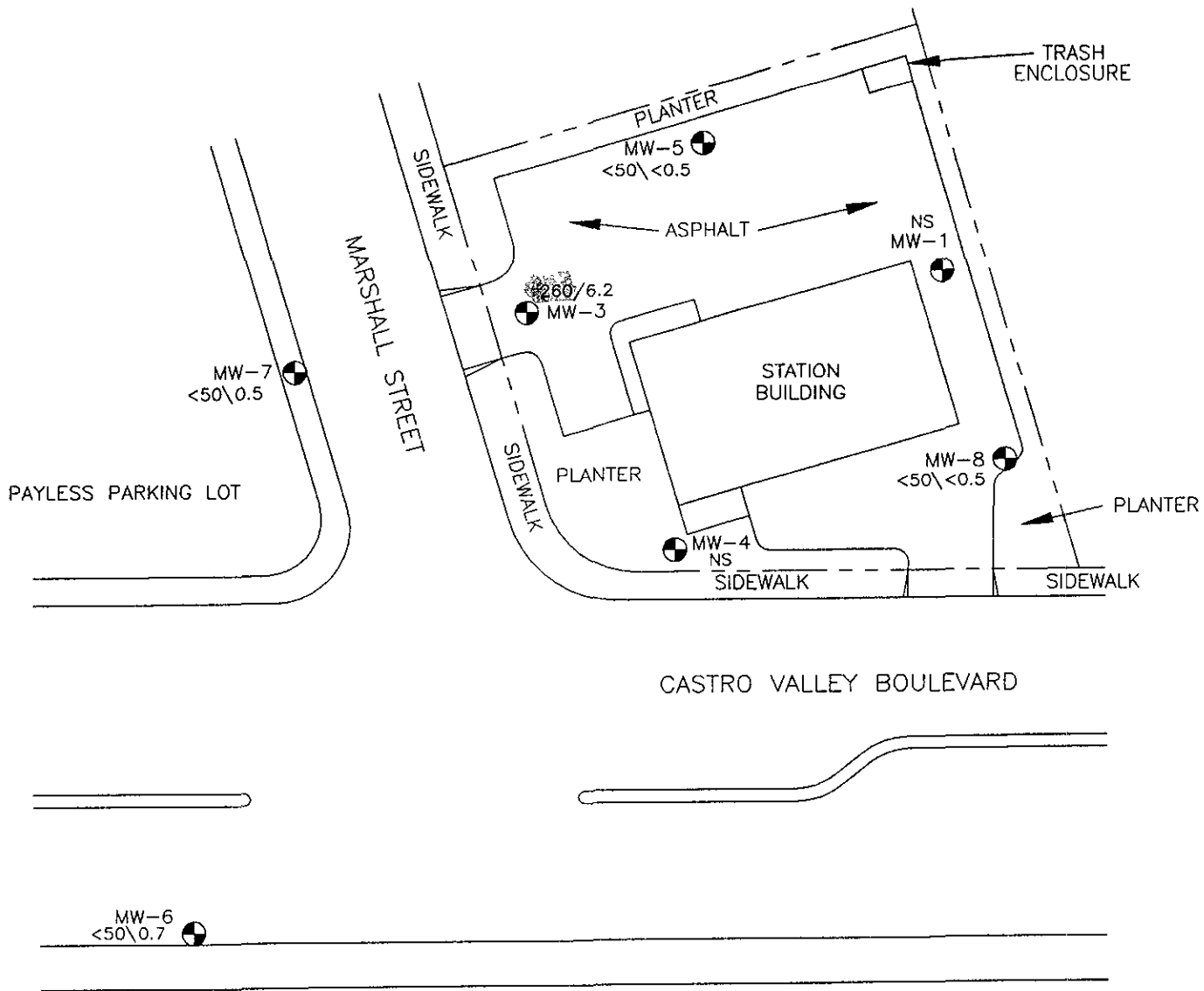
BASE MAP: SURVEYED BY RON ARCHER  
CIVIL ENGINEER, INC.

**RESNA**  
Working to Restore Nature

**GROUNDWATER GRADIENT MAP**  
Former Texaco Station  
3940 Castro Valley Boulevard  
Castro Valley, California

**PLATE**  
**2**

**PROJECT 62091.01**

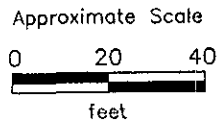


EXPLANATION

MW-8 = Monitoring Well

260/6.2 = Concentrations of TPHg\Benzene in groundwater in parts per billion (ppb) (December 29, 1992)

NS = Not sampled



BASE MAP: SURVEYED BY RON ARCHER  
CIVIL ENGINEER, INC.

**RESNA**  
Working to Restore Nature

**TPHg\BENZENE CONCENTRATIONS  
IN GROUNDWATER**  
Former Texaco Station  
3940 Castro Valley Boulevard  
Castro Valley, California

**PLATE  
3**

PROJECT 62091.01



Fourth Quarter 1992 Quarterly Report  
Castro Valley Boulevard, Castro Valley, California

April 20, 1993  
62091.01

TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Texaco Service Station  
3940 Castro Valley Boulevard  
Castro Valley, California  
(Page 1 of 4)

Well	Date	Elevation of Wellhead	Depth to Water	Elevation of Groundwater	Floating Product
<u>TX</u>					
	11/19/87	-	Dry	-	-
	12/20/87		Dry	-	-
	12/30/87		Dry	-	-
	06/07/88		Dry	-	-
	12/13/88		Dry	-	-
	08/29/92		Dry	-	-
<u>MW-1</u>					
	12/30/87	192.46	21.92	170.54	NR
	06/07/88		23.35	169.11	NR
	12/13/88		23.17	169.29	NR
	08/29/89		23.70	168.76	NR
	02/27/90		23.25	169.21	NR
	04/21/90		23.65	168.81	NR
	06/11/90		23.74	168.72	NR
	07/18/90		23.90	168.56	NR
	08/22/90		24.07	168.39	NR
	09/27/90		24.21	168.25	NR
	10/10/90		24.25	168.21	NR
	11/15/90		24.45	168.01	NR
	12/11/90		23.54	168.92	NR
	01/09/91		24.68	167.78	NR
	01/23/91		24.61	167.85	NR
	02/22/91		24.58	167.88	NR
	03/20/91		23.95	168.51	NR
	04/11/91		23.41	169.05	NR
	05/14/91		23.52	168.94	NR
	06/10/91		23.61	168.85	NR
	07/16/91		23.89	168.57	NR
	08/09/91		23.96	168.50	NR
	09/11/91		24.16	168.30	NR
	12/11/91		24.68	167.78	NR
	02/28/92	192.45	23.72	168.73	NR
	03/30/92		23.25	169.20	NR
	06/30/92		23.44	169.01	NR
	10/05/92		23.96	168.49	ND
	12/29/92		Flooded - Not Accessible		

See notes on page 4 of 4.

Fourth Quarter 1992 Quarterly Report  
Castro Valley Boulevard, Castro Valley, California

April 20, 1993  
62091.01

TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Texaco Service Station  
3940 Castro Valley Boulevard  
Castro Valley, California  
(Page 2 of 4)

Well	Date	Elevation of Wellhead	Depth to Water	Elevation of Groundwater	Floating Product
<u>MW-2</u>	12/20/87	—	22.30	—	—
	06/07/88		23.83	—	—
	12/13/88		23.69	—	—
	08/29/89		Well Destroyed		
<u>MW-3</u>	12/30/87	190.48	22.60	167.88	NR
	06/07/88		20.90	169.58	NR
	12/13/88		20.92	169.56	NR
	08/29/89		21.48	169.00	NR
	02/27/90		21.58	168.90	NR
	04/12/90		21.70	168.78	NR
	06/11/90		21.79	168.69	NR
	07/18/90		21.96	168.52	NR
	08/22/90		22.10	168.38	NR
	09/27/90		22.24	168.24	NR
	10/10/90		22.28	168.20	NR
	11/15/90		22.50	167.98	NR
	12/11/90		24.54	165.94	NR
	01/09/91		22.71	167.77	NR
	01/23/91		22.65	167.83	NR
	02/22/91		22.68	167.80	NR
	03/20/91		24.96	168.52	NR
	04/11/91		21.14	169.34	NR
	05/14/91		21.54	168.94	NR
	06/10/91		21.64	168.84	NR
	07/16/91		21.93	168.55	NR
	08/09/91		21.99	168.49	NR
	09/11/91		22.22	168.26	NR
12/11/91		22.67	167.81	NR	
02/28/92	190.50	21.76	168.74	NR	
03/30/92		21.49	169.18	NR	
06/30/92		21.49	169.01	NR	
10/05/92		22.15	168.35	ND	
12/29/92		21.90	168.60	ND	
<u>MW-4</u>	04/12/90	191.63	22.84	168.79	NR
	06/11/90		21.82	169.81	NR
	07/18/90		23.09	168.54	NR
	08/22/90		23.24	168.39	NR

See notes on page 4 of 4.

Fourth Quarter 1992 Quarterly Report  
Castro Valley Boulevard, Castro Valley, California

April 20, 1993  
62091.01

TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Texaco Service Station  
3940 Castro Valley Boulevard  
Castro Valley, California  
(Page 3 of 4)

Well	Date	Elevation of Wellhead	Depth to Water	Elevation of Groundwater	Floating Product
<u>MW-4 (cont.)</u>					
	09/27/90		23.38	168.25	NR
	10/10/90		24.43	167.20	NR
	11/15/90		21.64	167.99	NR
	12/11/90		23.69	167.94	NR
	01/09/91		23.84	167.79	NR
	01/23/91		23.79	167.84	NR
	02/22/91		23.77	167.86	NR
	03/20/91		23.11	168.52	NR
	04/11/91		22.60	169.03	NR
	05/14/91		22.68	168.95	NR
	06/10/91		22.79	168.84	NR
	07/16/91		23.06	168.57	NR
	08/09/91		23.14	168.49	NR
	09/11/91		23.36	168.27	NR
	10/11/91		23.75	167.88	NR
	11/12/91		23.87	167.76	NR
	12/11/91		23.80	167.83	NR
	01/28/92	191.64	23.79	167.85	NR
	02/28/92		22.90	168.74	NR
	03/30/92		22.46	169.18	NR
	06/30/92		22.64	169.00	NR
	10/05/92		23.90	167.74	ND
	12/29/92		Flooded - Not Accessible		
<u>MW-5</u>					
	04/12/90	191.55	22.74	168.81	NR
	06/11/90		22.83	168.72	NR
	07/18/90		23.01	168.54	NR
	08/22/90		23.15	168.40	NR
	09/27/90		23.29	168.26	NR
	10/10/90		22.33	169.22	NR
	11/15/90		23.54	168.01	NR
	12/11/90		23.59	167.96	NR
	01/09/91		23.75	167.80	NR
	01/23/91		23.69	167.86	NR
	02/22/91		23.66	167.89	NR
	03/20/91		23.01	168.54	NR
	04/11/91		22.50	169.05	NR
	05/14/91		22.57	168.98	NR

See notes on page 4 of 4.

Fourth Quarter 1992 Quarterly Report  
Castro Valley Boulevard, Castro Valley, California

April 20, 1993  
62091.01

TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Texaco Service Station  
3940 Castro Valley Boulevard  
Castro Valley, California  
(Page 4 of 4)

Well	Date	Elevation of Wellhead	Depth to Water	Elevation of Groundwater	Floating Product
<u>MW-5 Cont'd</u>					
	06/10/91		22.68	168.87	NR
	07/16/91		22.95	168.60	NR
	08/09/91		23.01	168.54	NR
	09/11/91		23.26	168.29	NR
	12/11/91		23.70	167.85	NR
	02/28/92	191.56	22.80	168.76	NR
	03/30/92		22.35	168.21	NR
	06/30/92		22.54	169.02	NR
	10/05/92		23.05	168.51	ND
	12/29/92		22.53	169.03	ND
<u>MW-6</u>					
	01/28/92	187.30	19.55	167.75	NR
	02/28/92		18.62	168.68	NR
	03/30/92		18.20	168.10	NR
	06/30/92		18.38	168.92	NR
	10/05/92		19.02	168.28	ND
	12/29/92		18.73	168.57	ND
<u>MW-7</u>					
	01/28/92	189.34	21.53	167.81	NR
	02/28/92		20.61	168.73	NR
	03/30/92		20.17	169.17	NR
	06/30/92		20.37	168.97	NR
	10/05/92		21.00	168.34	ND
	12/29/92		20.65	168.69	ND
<u>MW-8</u>					
	01/28/92	193.62	25.77	167.85	NR
	02/28/92		24.89	168.73	NR
	03/30/92		24.42	169.20	NR
	06/30/92		24.61	169.01	NR
	10/05/92		25.20	168.42	ND
	12/29/92		25.00	168.62	ND

Measurements in feet

Datum Mean Sea Level (MSL)

Depth to water measured in feet below top of casing.

NR : No Record  
ND : None Detected  
-- : Not Applicable

RESNA presumes all wells are in the same hydrostratigraphic unit.

Fourth Quarter 1992 Quarterly Report  
 Castro Valley Boulevard, Castro Valley, California

April 20, 1993  
 62091.01

TABLE 2  
 CUMULATIVE RESULTS OF LABORATORY ANALYSES  
 OF GROUNDWATER SAMPLES  
 Former Texaco Service Station  
 3940 Castro Valley Boulevard  
 Castro Valley, California  
 (Page 1 of 4)

Well	Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes
<u>TX</u>	12/30/87	--	--	--	--	--
	06/07/88	--	--	--	--	--
	12/13/88	--	--	--	--	--
	08/29/89		Well Abandoned			
<u>MW-1</u>	12/30/87	2,100	15	12	3	190
	06/07/88	290	12	<PQL	<PQL	17
	12/13/88	370	3	<PQL	<PQL	<PQL
	08/29/89	160	6	<PQL	<PQL	<PQL
	03/07/90	<PQL	<PQL	<PQL	<PQL	<PQL
	04/16/90	NA	NA	NA	NA	NA
	06/11/90	39	14	1	1	2
	08/22/90	130	0.3	<MDL	<MDL	<MDL
	09/12/90	92	7	<MDL	2	3
	10/10/90	40	2	<MDL	0.6	1
	11/15/90	18	0.8	<MDL	<MDL	<MDL
	12/11/90	<MDL	<MDL	<MDL	<MDL	<MDL
	01/09/91	33	0.7	<MDL	<MDL	<MDL
	02/22/91	<MDL	<MDL	<MDL	<MDL	<MDL
	05/14/91	17	1	<0.3	0.4	0.8
	09/11/91	<10	<0.3	<0.3	<0.3	<0.6
	10/11/91	NA	NA	NA	NA	NA
	11/12/91	NA	NA	NA	NA	NA
	12/11/91	<50	<0.5	<0.5	<0.5	<0.5
	01/28/92	NA	NA	NA	NA	NA
	02/28/92	NA	NA	NA	NA	NA
	03/31/92	280	<0.5	<0.5	<0.5	1.3
	06/30/92	67	1.3	<0.5	<0.5	<0.5
	10/05/92	<50	<0.5	<0.5	<0.5	<0.5
	12/29/92	NA	NA	NA	NA	NA
<u>MW-2</u>	12/30/87	2,400	220	16	3	150
	06/07/88	1,200	220	<PQL	32	46
	12/13/88	4,000	640	23	120	110
	08/29/89		Well Abandoned			

See notes on page 4 of 4.

Fourth Quarter 1992 Quarterly Report  
 Castro Valley Boulevard, Castro Valley, California

TABLE 2  
 CUMULATIVE RESULTS OF LABORATORY ANALYSES  
 OF GROUNDWATER SAMPLES  
 Former Texaco Service Station  
 3940 Castro Valley Boulevard  
 Castro Valley, California  
 (Page 2 of 4)

Well	Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes
<u>MW-3</u>						
	12/30/87	<MDL	<MDL	<MDL	<MDL	<MDL
	06/07/88	<PQL	<PQL	<PQL	<PQL	<PQL
	12/13/88	<PQL	<PQL	<PQL	<PQL	<PQL
	08/29/89	<PQL	<PQL	<PQL	<PQL	<PQL
	03/07/90	<PQL	<PQL	<PQL	<PQL	<PQL
	04/16/90	NA	NA	NA	NA	NA
	06/11/90	<MDL	<MDL	<MDL	<MDL	<MDL
	08/22/90	<MDL	<MDL	<MDL	<MDL	<MDL
	09/12/90	<MDL	<MDL	<MDL	<MDL	<MDL
	10/10/90	<MDL	<MDL	<MDL	<MDL	<MDL
	11/15/90	<MDL	<MDL	<MDL	<MDL	<MDL
	12/11/90	<MDL	<MDL	<MDL	<MDL	<MDL
	01/09/91	<MDL	<MDL	<MDL	<MDL	<MDL
	02/22/91	<MDL	<MDL	<MDL	<MDL	<MDL
	05/14/91	<10	<0.3	<0.3	<0.3	<0.6
	09/11/91	<10	<0.3	<0.3	<0.3	<0.6
	10/11/91	NA	NA	NA	NA	NA
	11/12/90	NA	NA	NA	NA	NA
	12/11/90	<50	<0.5	<0.5	<0.5	<0.5
	01/28/92	NA	NA	NA	NA	NA
	02/02/92	NA	NA	NA	NA	NA
	03/31/92	<50	<0.5	<0.5	<0.5	1.0
	06/30/92	<50	<0.5	<0.5	<0.5	<0.5
	10/05/92	<50	<0.5	<0.5	<0.5	<0.5
	12/29/92	260	6.2	<0.5	<0.5	<0.5
<u>MW-4</u>						
	04/16/90	1,500	97	1	11	120
	06/11/90	110	18	<MDL	<MDL	0.7
	08/22/90	50	4	<MDL	<MDL	1
	09/12/90	49	6	<MDL	<MDL	1
	10/10/90	77	4	<MDL	<MDL	<MDL
	11/15/90	49	2	<MDL	0.4	<MDL
	12/11/90	79	6	<MDL	1	<MDL
	01/19/91	120	6	<MDL	3	<MDL
	02/22/91	120	1	<MDL	<MDL	<MDL
	05/14/91	370	29	<0.3	9	1
	09/11/91	22	0.8	<0.3	1	<0.6
	10/11/91	<50	1.0	<0.5	1.5	<0.5

See notes on page 4 of 4.

Fourth Quarter 1992 Quarterly Report  
Castro Valley Boulevard, Castro Valley, California

April 20, 1993  
62091.01

TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES  
OF GROUNDWATER SAMPLES  
Former Texaco Service Station  
3940 Castro Valley Boulevard  
Castro Valley, California  
(Page 3 of 4)

Well	Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes
<u>MW-4 (cont.)</u>						
	11/12/91	<50	1.6	<0.5	1.3	<0.5
	12/11/91	<50	0.8	<0.5	0.9	<0.5
	01/28/92	1,200	26	0.8	28	240
	02/28/92	9,400	68	5.3	68	240
	03/31/92	360	<0.5	<0.5	3.2	1.1
	06/30/92	76	2.4	<0.5	3.3	<0.5
	10/05/92	<50	1.5	<0.5	<0.5	<0.5
	12/29/92	NA	NA	NA	NA	NA
<u>MW-5</u>						
	04/16/90	<MDL	<MDL	<MDL	<MDL	<MDL
	06/11/90	<MDL	<MDL	<MDL	<MDL	<MDL
	08/22/90	<MDL	<MDL	<MDL	<MDL	<MDL
	09/12/90	<MDL	<MDL	<MDL	<MDL	<MDL
	10/10/90	<MDL	<MDL	<MDL	<MDL	<MDL
	11/15/90	<MDL	<MDL	<MDL	<MDL	<MDL
	12/11/90	<MDL	<MDL	<MDL	<MDL	<MDL
	01/09/91	<MDL	<MDL	<MDL	<MDL	<MDL
	02/22/91	<MDL	<MDL	<MDL	<MDL	<MDL
	05/14/91	<10	<0.3	<0.3	<0.3	<0.6
	09/11/91	<10	<0.3	<0.3	<0.3	<0.6
	10/11/91	NA	NA	NA	NA	NA
	11/12/91	NA	NA	NA	NA	NA
	12/11/91	<50	<0.5	<0.5	<0.5	<0.5
	01/28/92	NA	NA	NA	NA	NA
	02/28/92	NA	NA	NA	NA	NA
	03/31/92	<50	<0.5	<0.5	<0.5	1.2
	06/30/90	<50	<0.5	<0.5	<0.5	<0.5
	10/05/92	<50	<0.5	<0.5	<0.5	<0.5
	12/29/92	<50	<0.5	<0.5	<0.5	<0.5
<u>MW-6</u>						
	01/28/92	<50	<0.5	<0.5	<0.5	<0.5
	02/28/92	280	<0.5	0.3	<0.5	5.1
	03/31/92	<50	<0.5	<0.5	<0.5	<0.5
	06/30/92	<50	<0.5	<0.5	<0.5	<0.5
	10/05/92	<50	<0.5	<0.5	<0.5	<0.5
	12/29/92	<50	0.7	0.5	0.7	3.3

See notes on page 4 of 4.

Fourth Quarter 1992 Quarterly Report  
Castro Valley Boulevard, Castro Valley, California

April 20, 1993  
62091.01

TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES  
OF GROUNDWATER SAMPLES  
Former Texaco Service Station  
3940 Castro Valley Boulevard  
Castro Valley, California  
(Page 4 of 4)

Well	Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes
<u>MW-7</u>						
	01/28/92	<50	<0.5	<0.5	<0.5	<0.5
	02/28/92	<50	<0.5	0.6	<0.5	1.8
	03/31/92	<50	<0.5	<0.5	<0.5	<0.5
	06/30/92	<50	<0.5	<0.5	<0.5	<0.5
	10/05/92	<50	<0.5	<0.5	<0.5	<0.5
	12/29/92	<50	0.5	<0.5	0.6	3.0
<u>MW-8</u>						
	01/28/92	<50	<0.5	<0.5	<0.5	<0.5
	02/28/92	69	<0.5	<0.5	<0.5	0.9
	03/31/92	62	<0.5	<0.5	<0.5	4.3
	06/30/92	<50	<0.5	<0.5	<0.5	<0.5
	10/05/92	<50	<0.5	<0.5	<0.5	<0.5
	12/29/92	<50	<0.5	<0.5	<0.5	<0.5
	MCLs:	-	1.0	-	680	1,750
	DWAL:	-	-	100	-	-

Results in parts per billion (ppb).

- NA : Not Analyzed
- PQL : Practical quantitative level
- MDL : Method detection limit
- TPHg : Total petroleum hydrocarbons as gasoline analyzed by EPA method 5030/602.
- BTEX : Analyzed by EPA method 5030/602.
- < : 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 Level, DHS (October 1990)



**APPENDIX A**

**GROUNDWATER SAMPLING PROTOCOL  
AND WELL PURGE DATA SHEETS**

### 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 bailer or a 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 washed with Alconox® and triple rinsed with distilled water prior to each use.

Before water samples were collected from the groundwater monitoring wells, the wells were purged until stabilization of the temperature, pH, and conductivity were 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 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 promptly transported in iced storage in a thermally-insulated ice chest, accompanied by a Chain of Custody Record, to a California-certified laboratory.

WELL PURGE DATA SHEET

Project Name: Texaco--Castro Valley

Job No. 62091.01

Date: December 29, 1992

Page 1 of 1

Well No. MW-3

Time Started 12:45

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)
12:45	Start purging MW-3			
12:45	0	55.2	7.05	940
12:49	8.2	58.6	6.80	1090
12:53	16.4	60.0	6.74	180
1:04	24.4	54.6	6.67	1100
1:08	32.8	58.4	6.67	1180
1:09	Stop purging MW-3			
Notes:				
<p style="text-align: center;">NM = Not Measured</p> <p style="text-align: right;">Well Diameter (inches) : 4</p> <p style="text-align: right;">Depth to Bottom (feet) : 34.24</p> <p style="text-align: right;">Depth to Water - initial (feet) : 21.90</p> <p style="text-align: right;">Depth to Water - final (feet) : 21.90</p> <p style="text-align: right;">% recovery : 100%</p> <p style="text-align: right;">Time Sampled : 2:00</p> <p style="text-align: right;">Gallons per Well Casing Volume : 8.14</p> <p style="text-align: right;">Gallons Purged : 3.30</p> <p style="text-align: right;">Well Casing Volume Purged : 4</p> <p style="text-align: right;">Approximate Pumping Rate (gpm) : 2</p>				

WELL PURGE DATA SHEET

Project Name: Texaco--Castro Valley

Job No. 62091.01

Date: December 29, 1992

Page 1 of 1

Well No. MW-5

Time Started 12:00

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)
12:00	Start purging MW-5			
12:00	0	57.2	7.67	1190
12:07	13	57.7	7.36	1250
12:14	26	59.3	7.11	1270
12:27	39	58.0	7.06	1250
12:34	52	59.7	6.96	1270
12:34	Stop purging MW-5			
Notes:				
	Well Diameter (inches)	:	4	
	Depth to Bottom (feet)	:	42.22	
	Depth to Water - initial (feet)	:	22.53	
	Depth to Water - final (feet)	:	22.53	
	% recovery	:	100%	
	Time Sampled	:	1:30	
	Gallons per Well Casing Volume	:	12.99	
	Gallons Purged	:	52.00	
	Well Casing Volume Purged	:	4	
	Approximate Pumping Rate (gpm)	:	2	

WELL PURGE DATA SHEET

Project Name: Texaco--Castro Valley

Job No. 62091.01

Date: December 29, 1992

Page 1 of 1

Well No. MW-6

Time Started 9:30

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)
9:30	Start purging MW-6			
9:30	0	56.0	6.74	1500
9:35	12.25	59.6	6.68	1600
9:40	24.50	58.0	6.95	1590
9:55	36.75	57.8	6.97	1590
10:00	49.00	61.6	6.73	1600
10:01	Stop purging MW-6			

Notes:

NM = Not Measured  
 Well Diameter (inches) : 4  
 Depth to Bottom (feet) : 37.30  
 Depth to Water - initial (feet) : 18.73  
 Depth to Water - final (feet) : 18.73  
 % recovery : 100%  
 Time Sampled : 11:00  
 Gallons per Well Casing Volume : 12.26  
 Gallons Purged : 49.0  
 Well Casing Volume Purged : 4  
 Approximate Pumping Rate (gpm) : 3

WELL PURGE DATA SHEET

Project Name: Texaco--Castro Valley

Job No. 62091.01

Date: December 29, 1992

Page 1 of 1

Well No. MW-7

Time Started 10:20

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)
10:20	Start purging MW-7			
10:20	0	58.7	6.88	1390
10:24	11	62.4	6.80	1420
10:28	22	62.7	6.81	1400
10:38	33	63.0	6.77	1420
10:42	44	63.1	6.76	1410
10:43	Stop purging MW-7			
Notes:				
	Well Diameter (inches) :	4		
	Depth to Bottom (feet) :	37.26		
	Depth to Water - initial (feet) :	20.65		
	Depth to Water - final (feet) :	20.65		
	% recovery :	100%		
	Time Sampled :	11:30		
	Gallons per Well Casing Volume :	10.96		
	Gallons Purged :	44.0		
	Well Casing Volume Purged :	4		
	Approximate Pumping Rate (gpm) :	3		

WELL PURGE DATA SHEET

Project Name: Texaco--Castro Valley

Job No. 62091.01

Date: December 29, 1992

Page 1 of 1

Well No. MW-8

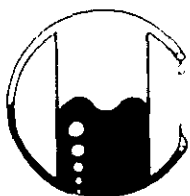
Time Started 1:30

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)
1:30	start purging MW-8			
1:30	0	56.0	7.37	1000
1:33	9.0	59.4	6.94	1410
1:36	18.0	60.4	6.84	1540
1:50	27.0	58.6	6.98	1520
1:53	36.0	60.8	6.82	1540
1:54	Stop purging MW-8			
Notes:				
	Well Diameter (inches) :	4		
	Depth to Bottom (feet) :	38.75		
	Depth to Water - initial (feet) :	25.00		
	Depth to Water - final (feet) :	25.00		
	% recovery :	100%		
	Time Sampled :	3:00		
	Gallons per Well Casing Volume :	8.75		
	Gallons Purged :	35.0		
	Well Casing Volume Purged :	4		
	Approximate Pumping Rate (gpm) :	3		

**APPENDIX B**

**LABORATORY ANALYSIS REPORTS AND  
CHAIN OF CUSTODY DOCUMENTATION**





# MOBILE CHEM LABS INC.

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

RECEIVED

JAN 22 1993

RESNA  
SAN JOSE

62091.01\1718\012382

RESNA Industries  
3315 Alamen Expressway, #34  
San Jose, CA 95118  
Attn: Phillip Mayberry  
Project Manager

Date Sampled: 12-29-92  
Date Received: 12-31-92  
Date Analyzed: 01-08-93

Sample Number

122572

Sample Description

Project # 62091.01  
Texaco - Castro Valley  
3940 Castro Valley Blvd.  
BB1 WATER

ANALYSIS

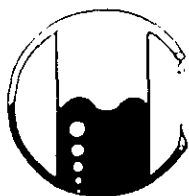
	<u>Detection Limit</u>	<u>Sample Results</u>
	ppb	ppb
Total Petroleum Hydrocarbons as Gasoline	50	<50
Benzene	0.5	<0.5
Toluene	0.5	<0.5
Xylenes	0.5	<0.5
Ethylbenzene	0.5	<0.5

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) = (µg/L)

MOBILE CHEM LABS

Ronald G. Evans  
Lab Director



# MOBILE CHEM LABS INC.

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

62091.01\1718\012382

RESNA Industries  
3315 Alamen Expressway, #34  
San Jose, CA 95118  
Attn: Phillip Mayberry  
Project Manager

Date Sampled: 12-29-92  
Date Received: 12-31-92  
Date Analyzed: 01-08-93

Sample Number  
-----  
122573

Sample Description  
-----  
Project # 62091.01  
Texaco - Castro Valley  
3940 Castro Valley Blvd.  
MW6 WATER

## ANALYSIS

-----

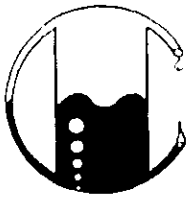
	Detection Limit ----- ppb	Sample Results ----- ppb
Total Petroleum Hydrocarbons as Gasoline	50	<50
Benzene	0.5	0.7
Toluene	0.5	0.5
Xylenes	0.5	3.3
Ethylbenzene	0.5	0.7

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) = (µg/L)

MOBILE CHEM LABS

Ronald G. Evans  
Lab Director



# MOBILE CHEM LABS INC.

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

62091.01\1718\012382

RESNA Industries  
3315 Alamen Expressway, #34  
San Jose, CA 95118  
Attn: Phillip Mayberry  
Project Manager

Date Sampled: 12-29-92  
Date Received: 12-31-92  
Date Analyzed: 01-08-93

Sample Number  
-----  
122574

Sample Description  
-----  
Project # 62091.01  
Texaco - Castro Valley  
3940 Castro Valley Blvd.  
MW7 WATER

## ANALYSIS

-----

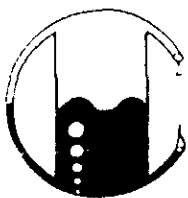
	Detection Limit ----- ppb	Sample Results ----- ppb
Total Petroleum Hydrocarbons as Gasoline	50	<50
Benzene	0.5	0.5
Toluene	0.5	<0.5
Xylenes	0.5	3.0
Ethylbenzene	0.5	0.6

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) = (µg/L)

MOBILE CHEM LABS

Ronald G. Evans  
Lab Director



# MOBILE CHEM LABS INC.

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

62091.01\1718\012382

RESNA Industries  
3315 Alamen Expressway, #34  
San Jose, CA 95118  
Attn: Phillip Mayberry  
Project Manager

Date Sampled: 12-29-92  
Date Received: 12-31-92  
Date Analyzed: 01-08-93

Sample Number  
-----  
122575

Sample Description  
-----  
Project # 62091.01  
Texaco - Castro Valley  
3940 Castro Valley Blvd.  
MW5 WATER

## ANALYSIS

-----

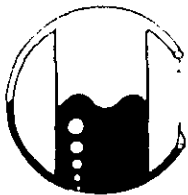
	Detection Limit ----- ppb	Sample Results ----- ppb
Total Petroleum Hydrocarbons as Gasoline	50	<50
Benzene	0.5	<0.5
Toluene	0.5	<0.5
Xylenes	0.5	<0.5
Ethylbenzene	0.5	<0.5

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) = ( $\mu\text{g/L}$ )

MOBILE CHEM LABS

Ronald G. Evans  
Lab Director



# MOBILE CHEM LABS INC.

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

62091.01\1718\012382

RESNA Industries  
3315 Alamen Expressway, #34  
San Jose, CA 95118  
Attn: Phillip Mayberry  
Project Manager

Date Sampled: 12-29-92  
Date Received: 12-31-92  
Date Analyzed: 01-08-93

Sample Number

122576

Sample Description

Project # 62091.01  
Texaco - Castro Valley  
3940 Castro Valley Blvd.  
MW3 WATER

ANALYSIS

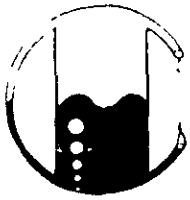
	<u>Detection Limit</u>	<u>Sample Results</u>
	ppb	ppb
Total Petroleum Hydrocarbons as Gasoline	50	260
Benzene	0.5	6.2
Toluene	0.5	<0.5
Xylenes	0.5	<0.5
Ethylbenzene	0.5	<0.5

QA/QC: Sample blank is none detected  
Duplicate Deviation is 4.0%

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 602 used for BTX distinction.  
(ppb) = (µg/L)

MOBILE CHEM LABS

Ronald G. Evans  
Lab Director



# MOBILE CHEM LABS INC.

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

62091.01\1718\012382

RESNA Industries  
3315 Alamen Expressway, #34  
San Jose, CA 95118  
Attn: Phillip Mayberry  
Project Manager

Date Sampled: 12-29-92  
Date Received: 12-31-92  
Date Analyzed: 01-08-93

Sample Number  
-----  
122577

Sample Description  
-----  
Project # 62091.01  
Texaco - Castro Valley  
3940 Castro Valley Blvd.  
MW8 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  
Spike Recovery is 100%

Note: Analysis was performed using EPA methods 5030 and TPH  
LUFT with method 602 used for BTX distinction.  
(ppb) = (µg/L)

MOBILE CHEM LABS

  
Ronald G. Evans  
Lab Director



# CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

PROJECT NO		PROJECT NAME / SITE						ANALYSIS REQUESTED										P O #	
6209101		Texas Castro Valley Blvd Castro Valley						<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">NO CONTAINERS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">SAMPLE TYPE</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX (602/8020)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPHg (8015)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPHg (8015)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TOC 418 1/5520</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">601/8012</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">624/8240</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">625/8270</div> </div>											
SAMPLERS (SIGN)																			
Robin A. Adair		Robin A. Adair																	
SAMPLE IDENTIFICATION		DATE	TIME	COMP	GRAB	PRES USED	ICED											REMARKS	
BP1		12-29-92	10:55			HCL	Y	2											
MW6		↓	11:00					2											
MW7		↓	11:30					2											
MW5		↓	1:30					2											
MW3		↓	2:00					2											
MW8		↓	3:00					2											

RELINQUISHED BY <i>Robin A. Adair</i>	DATE 12-30-92	TIME 7:30 AM	RECEIVED BY <i>Sheryl Jants</i>	LABORATORY Mobile Chem Labs	PLEASE SEND RESULTS TO Phil Mayberry Resna, San Jose
RELINQUISHED BY	DATE	TIME	RECEIVED BY		
RELINQUISHED BY	DATE	TIME	RECEIVED BY	REQUESTED TURNAROUND TIME NORMAL	
RELINQUISHED BY <i>Sheryl Jants</i>	DATE 12/31/92	TIME 11:30 A	RECEIVED BY LABORATORY DAVE LEVINE	RECEIPT CONDITION	PROJECT MANAGER