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SOS

**SECOND QUARTER 1992
GROUNDWATER MONITORING REPORT**

FOR

**FORMER TEXACO SERVICE STATION
3940 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA**

Sept 1992

**Project No. F3091.32
September 1992**

RESNA
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September 24, 1992
Project No. F3091.32

Texaco Environmental Services
108 Cutting Boulevard
Richmond, CA 94804

Attention: Mr. Ron Zielinski

Subject: Second Quarter 1992 Groundwater Monitoring
Former Texaco Service Station
3940 Castro Valley Boulevard, Castro Valley, California

Dear Mr. Zielinski:

This quarterly monitoring report summarizes the groundwater sampling and analyses performed during June 1992 for the subject site in Castro Valley, Alameda County, California (Figure 1). Current groundwater monitoring and sampling analytical data acquired during this investigation are included.

Site Description and Background

The site is located on the northeast corner of Castro Valley Boulevard and Marshall Street in Castro Valley, California. It is situated near the crest of a hill on the north side of Interstate 580 in an area of commercial and multi-unit residential development. Formerly a Texaco Service Station, the site is currently a Speedee Oil Change and Tune-up Facility.

Underground fuel storage tanks were removed from the site in June 1984, and one groundwater monitoring well was installed in the tank excavation area by Groundwater Technology, Inc. (GTI). Three additional wells were installed at the site by GTI in 1987 with the intent of defining the areal extent of dissolved hydrocarbon constituents in the groundwater. Two monitoring wells, TX and MW-2, were destroyed in 1989 as part of the construction of the current business. Groundwater monitoring wells MW-4 and MW-5 were installed in 1990, and quarterly monitoring and sampling at the site was conducted by GTI. Details regarding the history of the site may be found in a workplan developed for the site by GTI dated April 9, 1991.

RESNA began quarterly groundwater monitoring at the site in October 1991. In January 1992, three additional groundwater monitoring wells were installed by RESNA (RESNA, March 1992). Two of the new wells, designated MW-6 and MW-7 are located off-site, and MW-8 is located on-site.

Groundwater Sampling

RESNA collected groundwater samples from the seven groundwater monitoring wells associated with the site (Figure 2) in accordance with RESNA's groundwater sampling protocol (Appendix A) on June 30, 1992. Groundwater monitoring data is summarized on Table 1. Groundwater sampling parameters were recorded on sampling log sheets and are presented in Appendix A with RESNA's groundwater sampling protocol. The groundwater purged from the wells and the equipment rinse water were placed in drums approved by the Department of Transportation. The water was left on-site pending transport to a licensed facility.

Laboratory Analyses

The groundwater samples were transported to RESNA Environmental Laboratory (RESNA), located in Fremont, California. RESNA, state-certified laboratory No. 1211, analyzed the samples for the presence of total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethyl benzene, and total xylenes (BTEX). Testing methods used were EPA 8015 and 8020, respectively.

Summary of Laboratory Results

The results of the groundwater analyses are summarized in Table 2. The analytical reports and chain-of-custody documents are attached in Appendix B. TPHg was detected in MW-1 and MW-4 at concentrations of 67 ppb and 76 ppb, respectively. Benzene was detected in MW-1 and MW-4 at concentrations of 1.3 and 2.4 parts per billion (ppb), respectively. Ethyl benzene was reported in MW-4 at 3.3 ppb. Petroleum hydrocarbons were not detected in wells MW-3, MW-5, MW-6, MW-7, and MW-8. TPHg and benzene concentrations detected quarterly are shown on Figure 5.

Groundwater Gradient

RESNA's interpretation of the gradient is based on the groundwater elevation contour map generated from measurements obtained during this quarter shown on Figure 3. The apparent groundwater gradient and flow direction underlying the site is approximately 0.0004 to the southwest.

References

RESNA Industries Inc., February 1992, Fourth Quarter 1991, Groundwater Monitoring Report for Former Texaco Service Station, 3940 Castro Valley Boulevard, Castro Valley, California.

RESNA Industries Inc., March 1992, Soil and Groundwater Investigation, Former Texaco Service Station, 3940 Castro Valley Boulevard, Castro Valley, California.

RESNA Industries Inc., May 1992, First Quarter 1992, Groundwater Monitoring Report for Former Texaco Service Station, 3940 Castro Valley Boulevard, Castro Valley, California.

Groundwater Technology, Inc., April 9, 1991, Work Plan for Additional Subsurface Investigation, Former Texaco Service Station, 3940 Castro Valley Boulevard, Castro Valley, California.

Reporting Requirements

A copy of this report should be forwarded by Texaco to the following agencies:

Alameda County Health Care Services Agency
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, California 94621
Attention: Mr. Scott Seery

California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Room 500
Oakland, California 94612
Attention: Mr. Richard Hiatt

Disclaimer

This report has been prepared solely for the use of Texaco and any reliance on this report by third parties shall be at such party's sole risk.

Limitations

The discussion presented in this report are based on the following:

1. Observations by field personnel.
2. The results of laboratory analyses performed by a state-certified laboratory.
3. Our understanding of the regulations of the State of California and Alameda County.

It is possible that variations in the soil or groundwater conditions could exist beyond the points explored in this investigation. Also, changes in the groundwater conditions could occur at some time in the future due to variations in rainfall, temperature, regional water usage, or other factors.

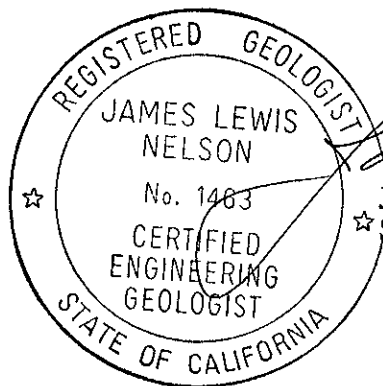
The service performed by RESNA has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the environmental profession currently practicing under similar conditions in the Castro Valley area. Please note that contamination of soil and groundwater must be reported to the appropriate agencies in a timely manner. No other warranty, expressed or implied, is made.

RESNA includes in this report chemical analytical data from a state-certified laboratory. The analytical results are performed according to procedures suggested by the U.S. EPA and State of California.

Sincerely,
RESNA Industries Inc.

Nissa L. Nack
Nissa L. Nack
Staff Geologist

NLN/JLN/sw
Enclosures



James L. Nelson
James L. Nelson C.E.G. 1463
Senior Program Geologist

TABLE 1
 GROUNDWATER MONITORING DATA

Well Number	Sampling Date	Top of Casing Elevation (ft.)	Depth to Water (ft.)	Groundwater Elevation (ft.)	Change in Groundwater Elevation	Well Depth (ft.)	Observations	
TX	11/19/87	—	Dry	—	—	20.90	installed to 25 feet Destroyed prior to con- tion of new building.	
	12/20/87		Dry			—		
	12/30/87		Dry			—		
	06/07/88		Dry			21.51		
	12/13/88		Dry			—		
	08/29/92							
MW-1	12/30/87	192.46		170.54				
	06/07/88			169.11				
	12/13/88			169.29				
	08/29/89			168.76				
	02/27/90			169.21				
	04/21/90			168.81				
	06/11/90			168.72				
	07/18/90			168.56				
	08/22/90			168.39				
	09/27/90			168.25				
	10/10/90			168.21				
	11/15/90			168.01				
	12/11/90			168.92				
	01/09/91			167.78				
	01/23/91			167.85				
	02/22/91			167.88				
	03/20/91			168.51				
	04/11/91			169.05				
	05/14/91			168.94				
	06/10/91			168.85				
	07/16/91			23.89		168.57		
	08/09/91			23.96		168.50		
	09/11/91			24.16		168.30		
12/11/91		24.68		167.78	—	39.30	Cloudy	
resurvey	02/28/92	192.45	23.72	168.73	0.95	—	—	
	03/30/92		23.25	169.20	0.47	39.24	Cloudy	
	06/30/92		23.44	169.01	-0.19	39.25	Cloudy	
MW-2	12/20/87	—	22.30		—	—	—	
	06/07/88		23.83					
	12/13/88		23.69					
	08/29/89						Destroyed prior to construction of new new building	
MW-3	12/30/87	190.48	—	167.88	—	—		
	06/07/88			169.58				
	12/13/88			169.56				
	08/29/89			169.00				
	02/27/90			168.90				
	04/12/90			168.78				
	06/11/90			168.69				
	07/18/90			168.52				
	08/22/90			168.38				
	09/27/90			168.24				
	10/10/90			168.20				
	11/15/90			167.98				
	12/11/90		165.94					

TABLE 1
 GROUNDWATER MONITORING DATA

Well Number	Sampling Date	Top of Casing Elevation (ft.)	Depth to Water (ft.)	Groundwater Elevation (ft.)	Change in Groundwater Elevation	Well Depth (ft.)	Observations	
MW-3 (Con't)	01/09/91			167.77				
	01/23/91			167.83				
	02/22/91			167.80				
	03/20/91			168.52				
	04/11/91			169.34				
	05/14/91			168.94				
	06/10/91			168.84				
	07/16/91		21.93	168.55				
	08/09/91		21.99	168.49				
	09/11/91		22.22	168.26				
	12/11/91		22.67	167.81		34.41	Cloudy	
	resurvey	02/28/92	190.50	21.76	168.74	0.93	--	--
		03/30/92		21.32	169.18	0.44	34.45	Cloudy
06/30/92			21.49	169.01	-0.17	34.43	Cloudy	
MW-4	04/12/90	191.63	--	168.79	--	--		
	06/11/90			169.81				
	07/18/90			168.54				
	08/22/90			168.39				
	09/27/90			168.25				
	10/10/90			167.20				
	11/15/90			167.99				
	12/11/90			167.94				
	01/09/91			167.79				
	01/23/91			167.84				
	02/22/91			167.86				
	03/20/91			168.52				
	04/11/91			169.03				
	05/14/91			168.95				
	06/10/91			168.84				
	07/16/91		23.06	168.57				
	08/09/91		23.14	168.49				
	09/11/91		23.36	168.27				
	10/11/91		23.75	167.88		42.20	Clear to cloudy	
	11/12/91		23.87	167.76	-0.12	42.50	Clear to cloudy	
12/11/91		23.80	167.83	0.07	42.20	Cloudy		
resurvey	01/28/92	191.64	23.79	167.85	0.02	42.25	Cloudy	
	02/28/92		22.90	168.74	0.89	41.22	Cloudy/clear	
	03/30/92		22.46	169.18	0.44	42.15	Cloudy/clear	
	06/30/92		22.64	169.00	-0.18	42.10	Cloudy	
MW-5	04/12/90	191.55		168.81				
	06/11/90			168.72				
	07/18/90			168.54				
	08/22/90			168.40				
	09/27/90			168.26				
	10/10/90			169.22				
	11/15/90			168.01				
	12/11/90			167.96				
	01/09/91			167.80				
	01/23/91			167.86				
	02/22/91			167.89				
	03/20/91			168.54				
	04/11/91			169.05				

TABLE 1
 GROUNDWATER MONITORING DATA

Well Number	Sampling Date	Top of Casing Elevation (ft.)	Depth to Water (ft.)	Groundwater Elevation (ft.)	Change in Groundwater Elevation	Well Depth (ft.)	Observations
MW-5	05/14/91			168.98			
Con't	06/10/91			168.87			
	07/16/91		22.95	168.60			
	08/09/91		23.01	168.54			
	09/11/91		23.26	168.29			
	12/11/91		23.70	167.85		41.05	Cloudy to clear
resurvey	02/28/92	191.56	22.80	168.76	0.91	—	—
	03/30/92		22.35	169.21	0.45	40.87	Cloudy
	06/30/92		22.54	169.02	-0.19	41.55	Silty
MW-6	01/28/92	187.30	19.55	167.75	—	37.30	Cloudy
	02/28/92		18.62	168.68	0.93	37.30	Cloudy to clear
	03/30/92		18.20	169.10	0.42	37.41	Cloudy to clear
	06/30/92		18.38	168.92	-0.18	37.23	Clear
MW-7	01/28/92	189.34	21.53	167.81	—	37.40	Cloudy
	02/28/92		20.61	168.73	0.92	37.34	Cloudy
	03/30/92		20.17	169.17	0.44	37.32	Cloudy
	06/30/92		20.37	168.97	-0.20	37.22	Clear
MW-8	01/28/92	193.62	25.77	167.85	—	39.77	Cloudy
	02/28/92		24.89	168.73	0.88	38.96	Cloudy
	03/30/92		24.42	169.20	0.47	39.10	Cloudy
	06/30/92		24.61	169.01	-0.19	39.04	Clear/cloudy

ft. Feet
 gal. Gallons
 Temp. Temperature
 °C Degrees Celcius
 Cond. Conductivity
 µmhos/cm Micromhos per centimeter

NOTE: Information obtained prior to October 1991 provided by Groundwater Technology, Inc.

TABLE 2
 SUMMARY OF GROUNDWATER ANALYSES DATA

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

TABLE 2 — continued

SUMMARY OF GROUNDWATER ANALYSES DATA

Well Number	Date Sampled	Benzene (ppb)	Toluene (ppb)	Ethyl Benzene (ppb)	Total Xylenes (ppb)	TPHg (ppb)
MW-3 (Con't)	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	<0.3	<0.3	<0.3	<0.6	<10
	09/11/91	<0.3	<0.3	<0.3	<0.6	<10
	10/11/91	---	---	---	---	---
	11/12/91	---	---	---	---	---
	12/11/91	<0.5	<0.5	<0.5	<0.5	<50
	01/28/92	---	---	---	---	---
	02/28/92	---	---	---	---	---
	03/31/92	<0.5	<0.5	<0.5	1.0	<50
	06/30/92	<0.5	<0.5	<0.5	<0.5	<50
MW-4	04/16/90	97	1	11	120	1,500
	06/11/90	18	<MDL	<MDL	0.7	110
	08/22/90	4	<MDL	<MDL	1	50
	09/12/90	6	<MDL	0.5	1	49
	10/10/90	4	<MDL	<MDL	<MDL	77
	11/15/90	2	<MDL	0.4	<MDL	49
	12/11/90	6	<MDL	1	<MDL	79
	01/09/91	6	<MDL	3	<MDL	120
	02/22/91	1	<MDL	<MDL	<MDL	120
	05/14/91	29	<0.3	9	1	370
	09/11/91	0.8	<0.3	1	<0.6	22
	10/11/91	1.0	<0.5	1.5	<0.5	<50
	11/12/91	1.6	<0.5	1.3	<0.5	<50
	12/11/91	0.8	<0.5	0.9	<0.5	<50
	01/28/92	26	0.8	28	2.0	1,200
	02/28/92	68	5.3	68	240	9,400
03/31/92	<0.5	<0.5	3.2	1.1	360	
06/30/92	2.4	<0.5	3.3	<0.5	76	
MW-5	04/16/91	<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

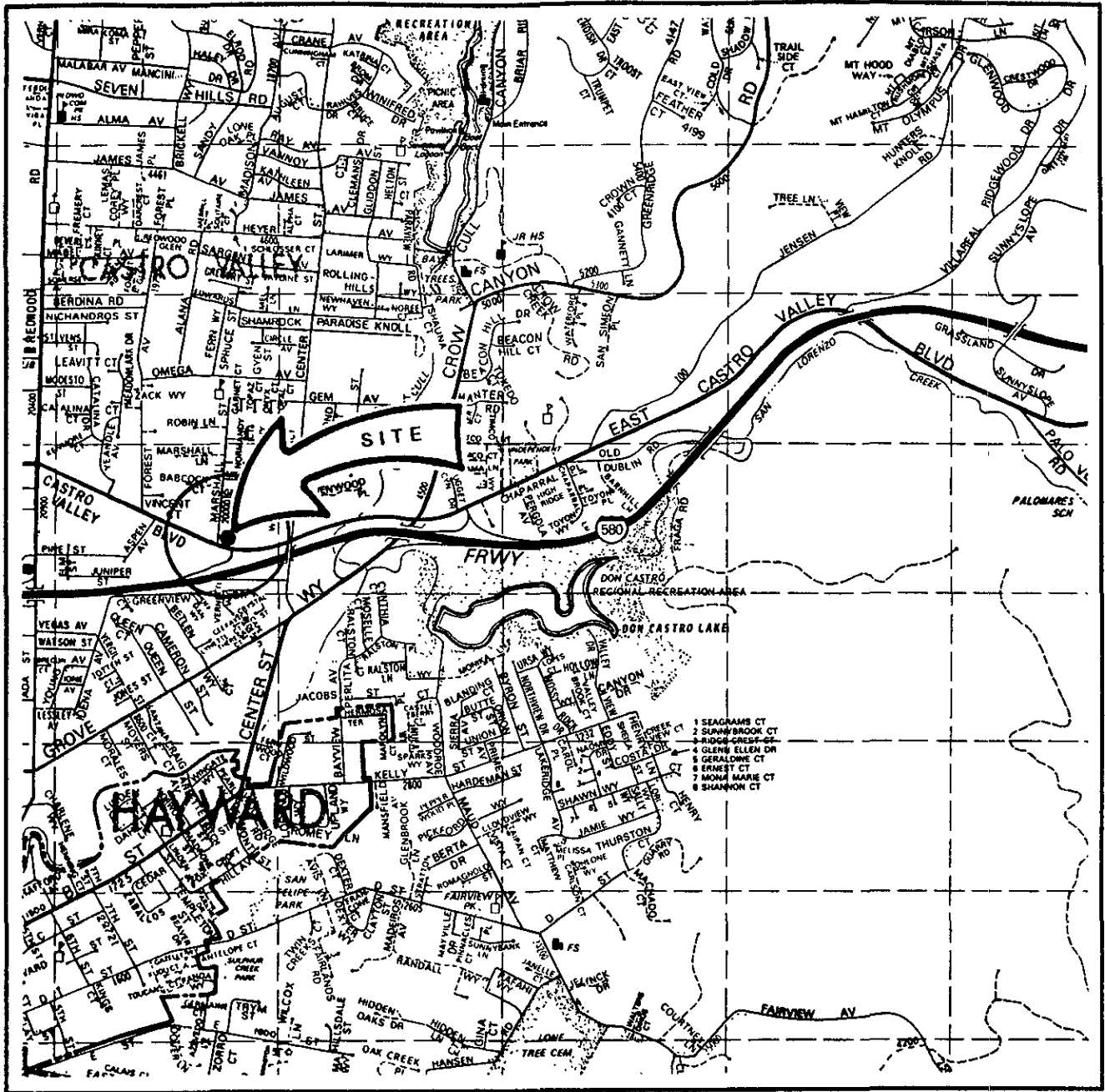
TABLE 2 — continued

SUMMARY OF GROUNDWATER ANALYSES DATA

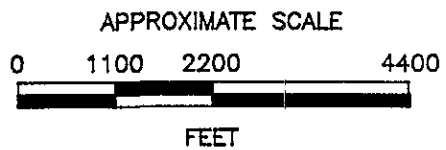
Well Number	Date Sampled	Benzene (ppb)	Toluene (ppb)	Ethyl Benzene (ppb)	Total Xylenes (ppb)	TPHg (ppb)
MW-5 (Con't)	05/14/91	<0.3	<0.3	<0.3	<0.6	<10
	09/11/91	<0.3	<0.3	<0.3	<0.6	<10
	10/11/91	---	---	---	---	---
	11/12/91	---	---	---	---	---
	12/11/91	<0.5	<0.5	<0.5	<0.5	<50
	01/28/92	---	---	---	---	---
	02/28/92	---	---	---	---	---
	03/31/92	<0.5	<0.5	<0.5	1.2	<50
	06/30/92	<0.5	<0.5	<0.5	<0.5	<50
MW-6	01/28/92	<0.5	<0.5	<0.5	<0.5	<50
	02/28/92	<0.5	1.3	<0.5	5.1	280
	03/31/92	<0.5	<0.5	<0.5	<0.5	<50
	06/30/92	<0.5	<0.5	<0.5	<0.5	<50
MW-7	01/28/92	<0.5	<0.5	<0.5	<0.5	<50
	02/28/92	<0.5	0.6	<0.5	1.8	<50
	03/31/92	<0.5	<0.5	<0.5	<0.5	<50
	06/30/92	<0.5	<0.5	<0.5	<0.5	<50
MW-8	01/28/92	<0.5	<0.5	<0.5	<0.5	<50
	02/28/92	<0.5	<0.5	<0.5	0.9	69
	03/31/92	<0.5	<0.5	<0.5	4.3	62
	06/30/92	<0.5	<0.5	<0.5	<0.5	<50

MDL Method detection limit
 PQL Practical quantitation level
 TPHg Total petroleum hydrocarbons as gasoline
 <0.5 Not detected at or above the indicated method detection limit
 ppb Parts per billion
 --- Not sampled

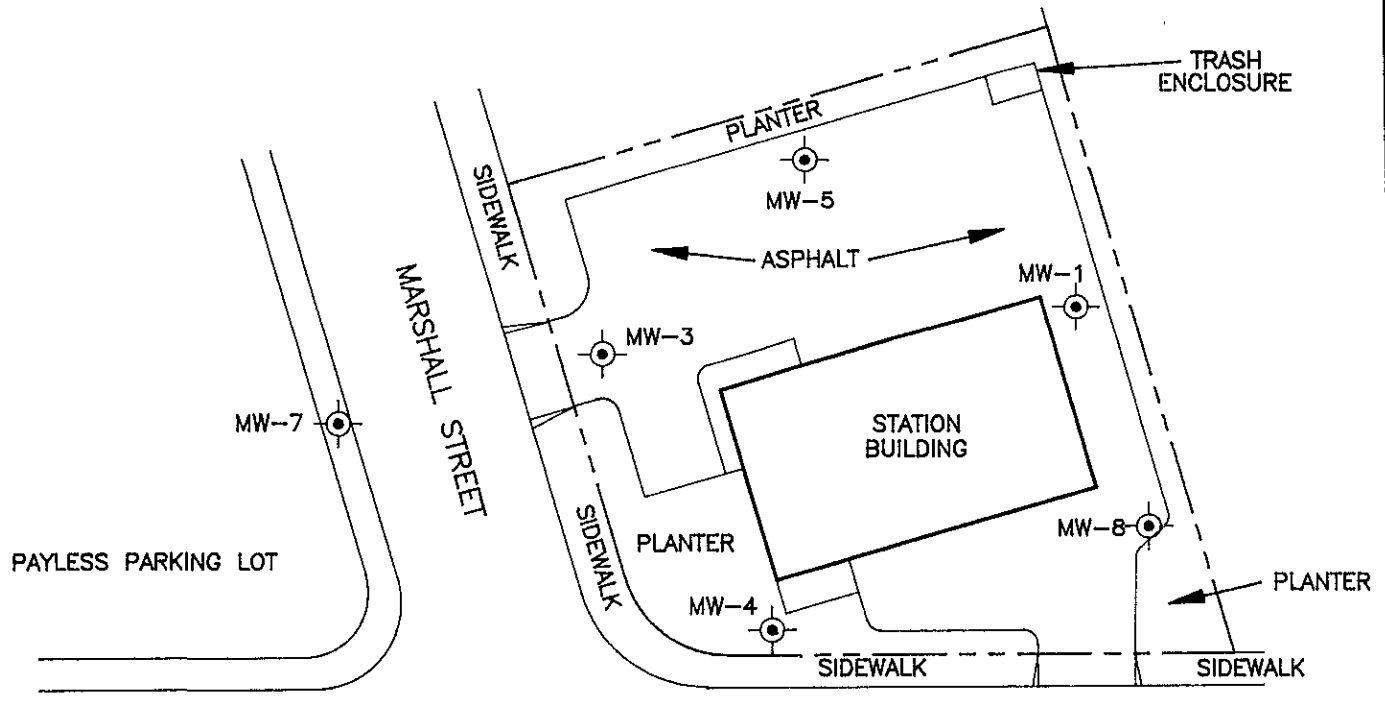
NOTE: Data obtained prior to October 1991 provided by Groundwater Technology, Inc.



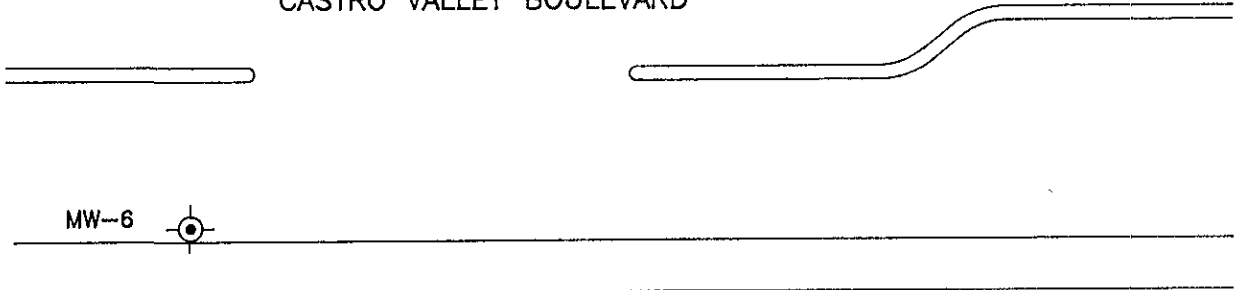
SOURCE: THOMAS BROTHER'S GUIDE
 ALAMEDA COUNTY, CALIFORNIA
 1991
 PHOTOREVISED 1981






RESNA	SITE LOCATION MAP	PLATE 1
	FORMER TEXACO SERVICE STATION 3940 CASTRO VALLEY BOULEVARD	
	CASTRO VALLEY, CALIFORNIA	
PROJECT NO. F3091.32		

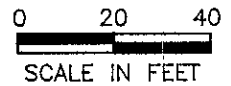


CASTRO VALLEY BOULEVARD



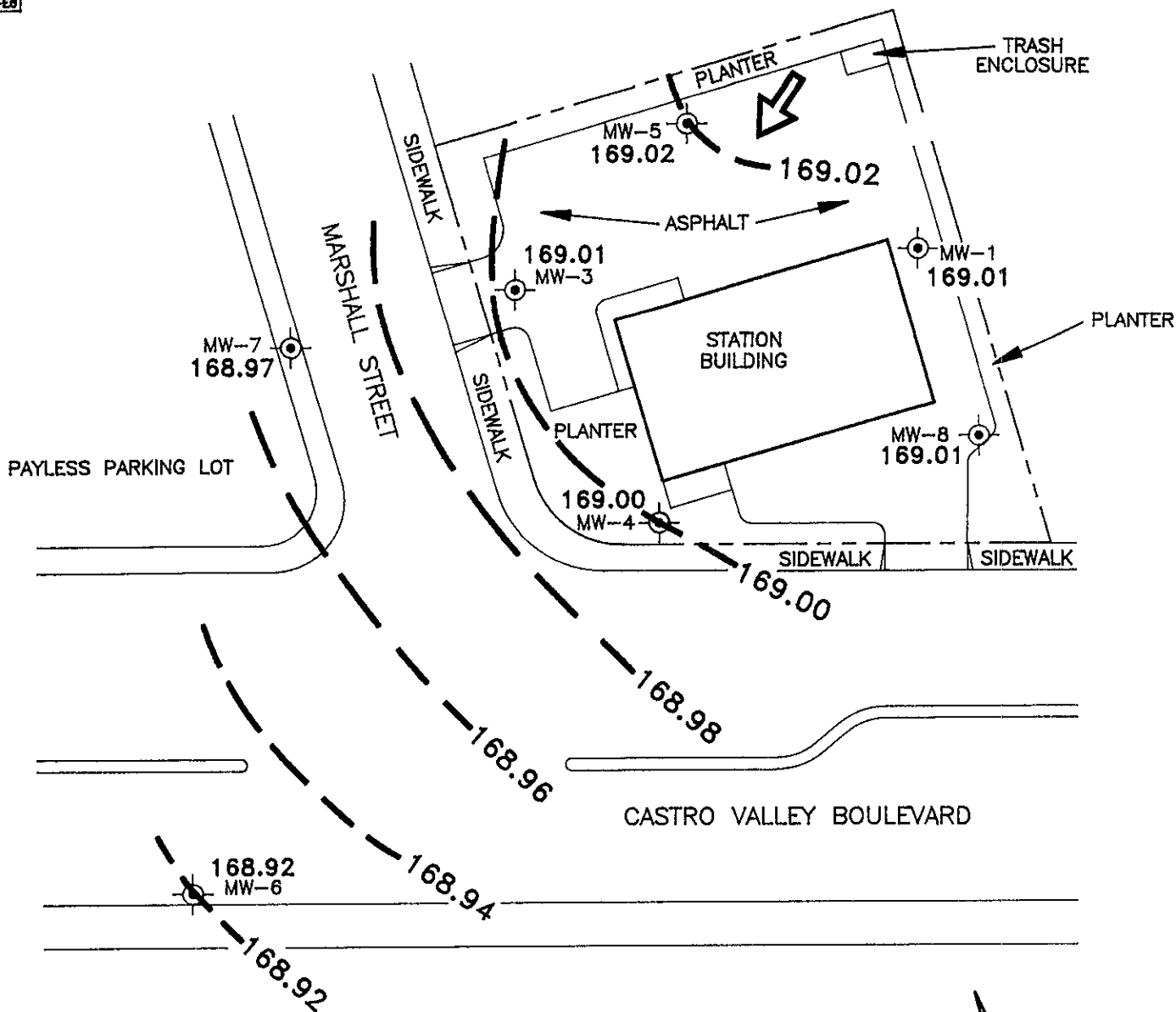
LEGEND

- MW-8  GROUNDWATER MONITORING WELL
-  SITE BOUNDARY
-  BUILDING

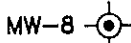
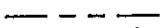


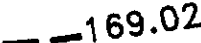



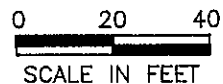
BASE MAP: SURVEYED BY RON ARCHER
CIVIL ENGINEER, INC.

RESNA	SITE PLAN	PLATE 2
	FORMER TEXACO SERVICE STATION	
	3940 CASTRO VALLEY BOULEVARD	
PROJECT NO. F3091.32	CASTRO VALLEY, CALIFORNIA	



LEGEND

-  MW-8 **GROUNDWATER MONITORING WELL**
-  **SITE BOUNDARY**
-  **BUILDING**
-  **GROUNDWATER ELEVATION (FEET)**
-  **GROUNDWATER ELEVATION CONTOUR LINE**
CONTOUR INTERVAL: 0.02
-  **APPROXIMATE DIRECTION OF GROUNDWATER FLOW**



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

NOTE: CONTOURS ARE BASED ON INTERPRETATION
OF AVAILABLE DATA, AND ARE NOT
INTENDED TO IMPLY CERTAINTY.

RESNA

GROUNDWATER ELEVATION MAP (6/30/92)

PLATE

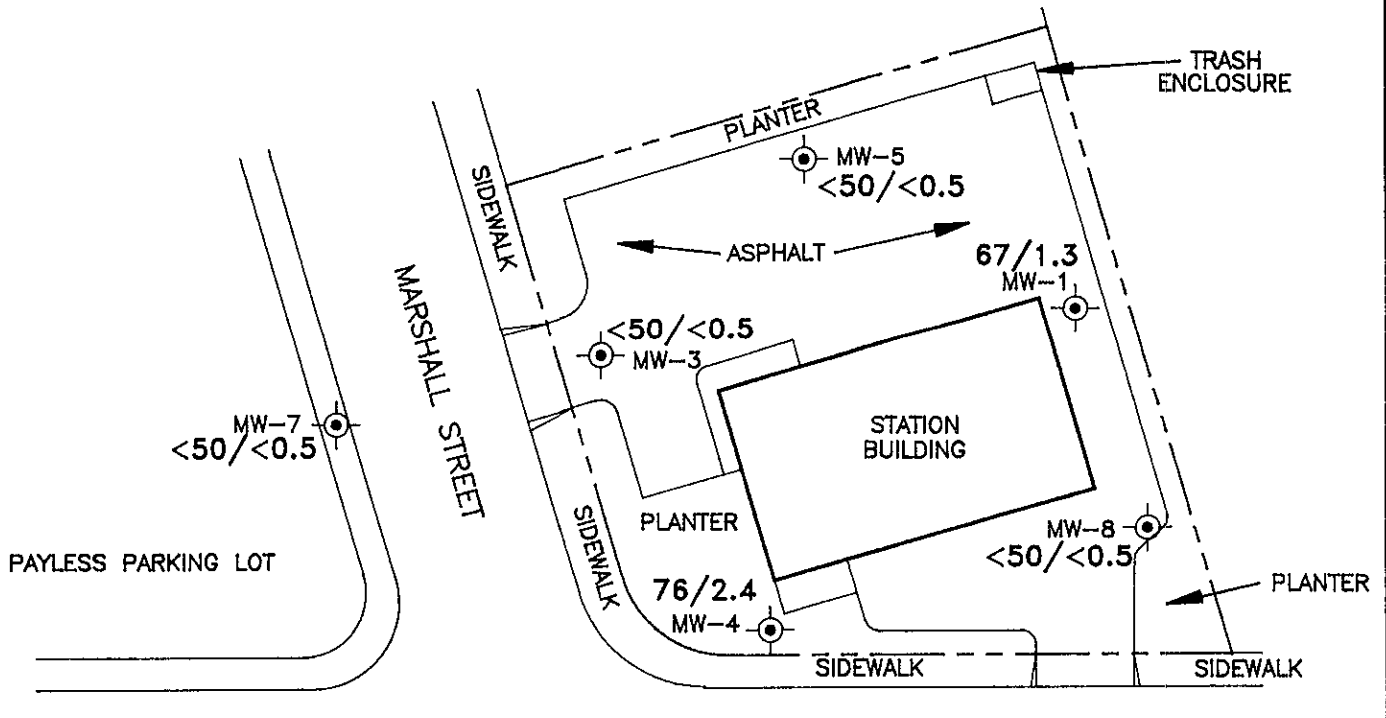
FORMER TEXACO SERVICE STATION

3940 CASTRO VALLEY BOULEVARD

CASTRO VALLEY, CALIFORNIA

3




PROJECT NO. F3091.32



CASTRO VALLEY BOULEVARD

<50/<0.5
MW-6

LEGEND

- MW-8  GROUNDWATER MONITORING WELL
-  SITE BOUNDARY
-  BUILDING
- 76/2.4 TPHg/BENZENE CONCENTRATION IN GROUNDWATER IN PARTS PER BILLION
- <0.5 NOT DETECTED AT OR ABOVE LABORATORY DETECTION LIMITS



0 20 40
SCALE IN FEET

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

RESNA

**TPHg/BENZENE CONCENTRATIONS
IN GROUNDWATER (6/30/92)**

FORMER TEXACO SERVICE STATION

3940 CASTRO VALLEY BOULEVARD

CASTRO VALLEY, CALIFORNIA

PLATE

4

PROJECT NO. F3091.32

APPENDIX A

**GROUNDWATER SAMPLING PROTOCOL
AND
SAMPLING LOGS**

GROUNDWATER SAMPLING PROTOCOL

The static water level in each well that contained groundwater was measured with a Solinst® water-level indicator; this instrument is accurate to the nearest 0.01 foot. The groundwater depths were subtracted from wellhead elevations in order to calculate the differences in groundwater elevations. The wellhead elevations were measured on January 28, 1992 by Ron Archer, Civil Engineer, Inc., a licensed land surveyor of Pleasanton, California.

Groundwater samples collected for subjective evaluation were collected by gently lowering approximately half of the length of a clean Teflon® bailer past the air-water interface (if possible) and collecting a sample from near the surface of the water in the well. These samples were checked for measurable floating hydrocarbon product.

Before analytical 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 the wells 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 (well depth - 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 the approximate initial water level. Groundwater samples were then collected with an Environmental Protection Agency (EPA) approved Teflon® sampler which had been cleaned with Alconox® and deionized water. The water samples were carefully poured into 40-milliliter glass vials, which were filled so as to produce a positive meniscus. Each sample container 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.

Job Name: Texaco Castro Valley Date: 6/30/92
 Job No.: 3-30091-32 Sampled by: R Sutherland
 Phase: Q Laboratory: Resna
 Wells Secure: Yes No If no, then comment: _____
 Drums at Site: Full 7 Empty 1

Well No.	Depth to Water (ft)	Well Depth (ft)	Time (W/L)	Purge Volume (gal)	F ^o Temp. (°F)	Cond. (umho/cm)	pH	Observations
MW-1	23.44	39.25	10:20	10.4 21 31 42	69.4 68.6 67.8	2030 2010 1960	6.69 6.67 6.70	No odor No Sheen Clear/cloudy
MW-3	21.49	34.43	9:50	8.3 17 25 34	20.0 68.1 67.0	1940 1910 1960	6.68 6.69 6.73	No odor No Sheen cloudy
MW-4	22.64	42.10	10:30	12.8 26 39 52	69.7 69.2 68.7	1960 1960 2010	6.72 6.69 6.74	No odor No Sheen Clear/cloudy
MW-5	22.54	41.55	10:00	12.5 25 37 50	68.5 69.9 68.7	1870 1880 1790	6.69 6.71 6.73	No odor No Sheen silty/clear
MW-6	18.38	37.23	9:30	12.4 24 36 50	20.5 20.0 68.9	2420 2410 2310	6.65 6.70 6.67	No odor No Sheen Clear

Job Name: Texaco Castro Valley Date: 6-30-92
 Job No.: 3-30091-32 Sampled by: RSutherland
 Phase: Q Laboratory: Resna
 Wells Secure: Yes No If no, then comment: _____
 Drums at Site: Full 7 Empty 1

Well No.	Depth to Water (ft)	Well Depth (ft)	Time (W/L)	Purge Volume (gal)	F ^o Temp. (°C)	Cond. (umho/cm)	pH	Observations
MW-7	20.37	37.22	9:40	11.1 22 33 44	68.2 68.7 67.3	2100 2130 2050	6.67 6.65 6.81	No odor NoSheen Clear
MW-8	24.61	39.04	10:10	9.5 30 40	69.4 68.5 69.8	2140 2180 2020	6.67 6.71 6.80	No odor NoSheen clear/cloudy

APPENDIX B

**LABORATORY REPORTS
AND
CHAIN-OF-CUSTODY RECORD**

ANALYSIS REPORT

1020lab.frm

Attention:	Ms. Nissa Nack RESNA 42501 Albrae St. Fremont, CA 94538	Date Sampled:	06-30-92
Project:	AGS 19521-L, Project 3-30091-32 3940 Castro Valley, Castro Valley	Date Received:	07-01-92
		BTEX Analyzed:	07-13-92
		TPHg Analyzed:	07-13-92
		TPHd Analyzed:	NR
		Matrix:	Water

	Benzene <u>ppb</u>	Toluene <u>ppb</u>	Ethyl- benzene <u>ppb</u>	Total Xylenes <u>ppb</u>	TPHg <u>ppb</u>	TPHd <u>ppb</u>
Detection Limit:	0.5	0.5	0.5	0.5	50	50

SAMPLE
Laboratory Identification

BB-1 W1207004	ND	ND	ND	ND	ND	NR
MW-6 W1207005	ND	ND	ND	ND	ND	NR
MW-7 W1207006	ND	ND	ND	ND	ND	NR
MW-3 W1207007	ND	ND	ND	ND	ND	NR
MW-5 W1207008	ND	ND	ND	ND	ND	NR

ppb = parts per billion = $\mu\text{g/L}$ = micrograms per liter.
 ND = Not detected. Compound(s) may be present at concentrations below the detection limit.
 NR = Analysis not requested.

ANALYTICAL PROCEDURES

BTEX-- Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 8020/602, which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID) and a flame-ionization detector (FID) in series.
TPHg--Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are measured by extraction using EPA Method 5030, followed by analysis using modified EPA Method 8015, which utilizes a GC equipped with an FID.
TPHd--Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3550 for soils and EPA Method 3510 for water, followed by modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.

MTasum
Laboratory Representative

July 16, 1992
Date Reported

RESNA ENVIRONMENTAL LABORATORY IS CERTIFIED BY THE STATE OF CALIFORNIA
 DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
 (Certification No. 1211)

42501 Albrae Street • Fremont, CA 94538 • Phone: (510) 623-0775 • (800) 247-5223 • FAX: (510) 651-8754

ANALYSIS REPORT

1020lab.frm

Attention:	Ms. Nissa Nack RESNA 42501 Albrae St. Fremont, CA 94538	Date Sampled:	06-30-92
Project:	AGS 19521-L, Project 3-30091-32 3940 Castro Valley, Castro Valley	Date Received:	07-01-92
		BTEX Analyzed:	07-13-92
		TPHg Analyzed:	07-13-92
		TPHd Analyzed:	NR
		Matrix:	Water

	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPHg	TPHd
	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit:	0.5	0.5	0.5	0.5	50	50


SAMPLE
Laboratory Identification

MW-8 W1207009	ND	ND	ND	ND	ND	NR
MW-1 W1207010	1.3	ND	ND	ND	67	NR
MW-4 W1207011	2.4	ND	3.3	ND	76	NR

ppb = parts per billion = $\mu\text{g/L}$ = micrograms per liter.
 ND = Not detected. Compound(s) may be present at concentrations below the detection limit.
 NR = Analysis not requested.

ANALYTICAL PROCEDURES

BTEX-- Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 8020/602, which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID) and a flame-ionization detector (FID) in series.
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TPHd--Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3550 for soils and EPA Method 3510 for water, followed by modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.



 Laboratory Representative

July 16, 1992

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