ENVIRONMENTAL ASSESSMENT REPORT
FORMER TEXACO SERVICE STATION
3940 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA
JUNE 8, 1990

GROUNDWATER TECHNOLOGY, INC. CONCORD, CALIFORNIA



# ENVIRONMENTAL ASSESSMENT REPORT FORMER TEXACO SERVICE STATION 3940 CASTRO VALLEY BOULEVARD CASTRO VALLEY, CALIFORNIA JUNE 8, 1990

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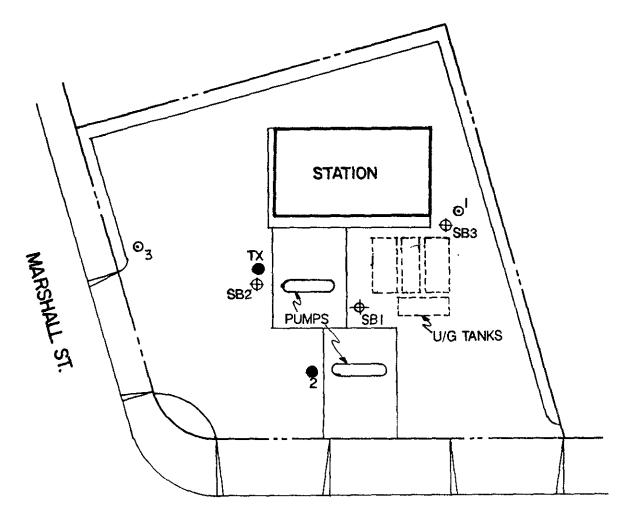
### INTRODUCTION

This environmental assessment report presents the findings and the results of the work performed at the former Texaco Service Station located at 3940 Castro Valley Boulevard, Castro Valley, California. The report covers the period from August 29, 1989, through April 1990. Included in this report are the results of the groundwater-monitoring and groundwater-sampling events that occurred on February 27, 1990, and April 12, 1990.

### BACKGROUND

The property on which the former Texaco Service Station was located has been cleared of all buildings, concrete pump islands, and associated debris by the present owner (Figure 1). During the construction phase, two groundwater-monitoring wells were destroyed, in accordance with regional guidelines, because these two groundwater-monitoring wells were located in the area of the new construction. The Alameda County Health Care Services Agency, directed by the Regional Water Quality Control Board, requested that an additional assessment be performed to fully evaluate the subsurface conditions of the property. The Alameda County Health Care Services (ACHCS), the lead agency, received a work plan on December 4, 1989. The work plan was approved on January 5, 1990.





CASTRO VALLEY BLVD.

### **LEGEND**

- O MONITORING WELL
- **⇔** SOIL BORING
- **♠ ABANDONED MONITORING WELL**

FIGURE 1 OLD SITE PLAN

TEXACO REFINING & MARKETING INC. CASTRO VALLEY, CALIFORNIA



### WORK PERFORMED

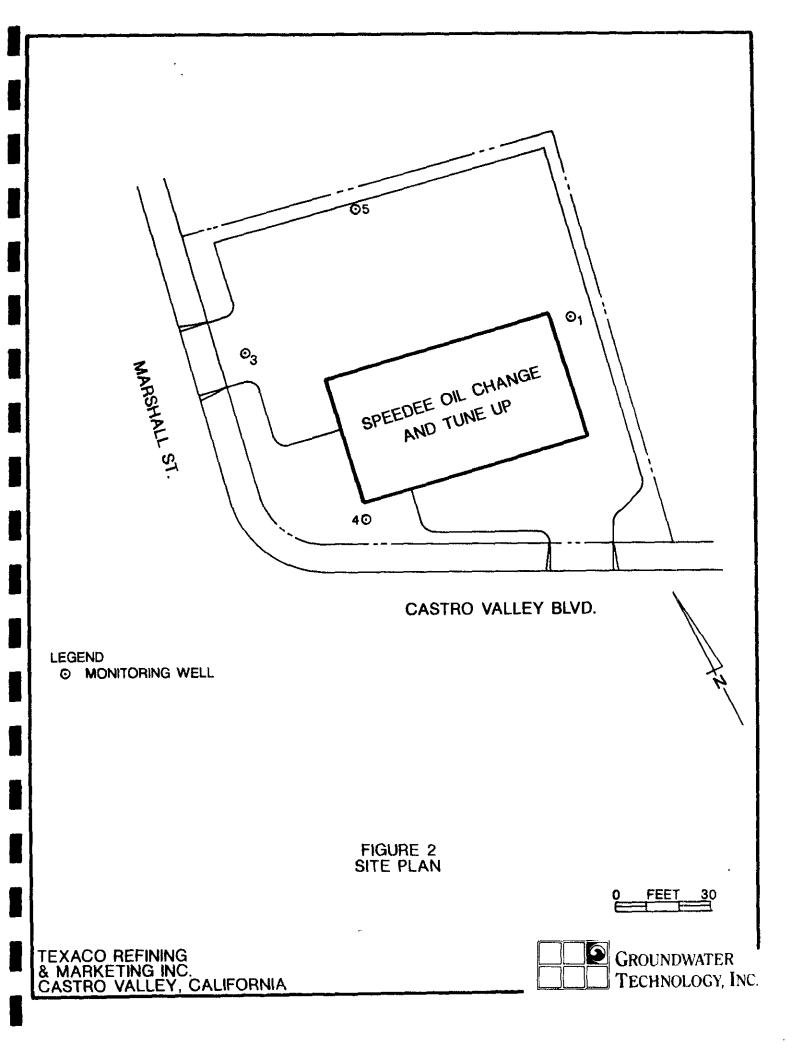
During this reporting period, four groundwater monitoring wells were monitored for depth-to-water (DTW) and groundwater samples were collected for laboratory analyses. Two additional groundwater-monitoring wells were installed at the site. During drilling, soil samples were collected. The new groundwater-monitoring wells were developed and purged of water for ground water sample collection. A new site plan was constructed and all of the locations of the groundwater-monitoring wells were surveyed for elevation and location to an Alameda County benchmark.

### SOIL BORINGS AND SOIL SAMPLING

Zone 7 of the Alameda County Flood Control and Water Conservation District issued a permit on February 6, 1990, for the construction of two groundwater-monitoring wells.

On April 3, 1990, two 4-inch groundwater-monitoring wells, MW-4 and MW-5, were installed on the site (Figure 2). A mobile truck-mounted drill rig with 10.5-inch, outside-diameter, hollow-stem augers system was used for the construction of the boreholes. Five-foot core barrels were used to continuously record the classification of the soil types encountered during the drilling for the construction of Monitoring well was sampled with a split-spoon sampler because the type of soil encountered would not allow the use of the continuous core sampler. Soil removed from the boreholes was placed into 55-gallon steel drums for later removal and disposal. Soil samples were collected at approximate intervals of every 5-feet. Soil samples were collected by driving a clean 2-inch by 6-inch-long brass tube into





the soil core after removal of the core barrel. The brass tube ends were then covered with aluminum foil, fitted with plastic caps and sealed with tape. A cloth label bearing the sample number, time, date, preparer's initials, and the type of analysis requested was placed on the soil sample. The soil sample was sealed inside a plastic bag and placed on ice in an insulated cooler for transportation to a State of California-certified laboratory. Soil samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and for total petroleum hydrocarbon (TPH)-as-gasoline. A Chain-of-Custody Manifest accompanied the samples at all times.

### MONITORING WELL INSTALLATION

The boring for monitoring well MW-5 was drilled to a depth of 45 feet. During the drilling of the borehole, groundwater was encountered at a depth of approximately 33 feet. The construction materials for the monitoring well consisted of 4-inch Schedule 40 polyvinyl chloride (PVC) well screen and casing.

Claude With an end Cap was attached to 28 feet of 4-inch blanks.

Pvc casing to bring the monitoring well to grade. Number 2 sand was placed into the annular space of the borehole to a depth of 26-feet below grade. A 2-foot seal of hydrated bentonite pellets was placed on top of the sand and a sanitary seal of 11-sack sand slurry cement was poured to ground surface for well completion.

The boring for monitoring well MW-4 was also drilled to a depth of 45 feet. Groundwater was encountered at approximately 30-feet. Groundwater dlameter, 1020-inch, magnined at approximately 1020-in

Notited PVC well screen and 25 feet of blank Schedule 40 PVC well. Number 2 sand was



placed into the annular space of the borehole to a depth of 23feet below grade. A 2-foot seal of hydrated bentonite pellets
was placed on top of the sand pack. An eleven sack sand slurry
cement with a 3-1/2-inch slump was used for a sanitary seal.
Both groundwater-monitoring wells were fitted with expansion-type
4-inch lockable compression plugs and were completed with
traffic-rated street boxes. Drill logs of the completed
groundwater-monitoring wells are presented in Appendix A.

### GROUNDWATER MONITORING

Groundwater monitoring was performed in groundwater-monitoring wells MW-1 and MW-3 on February 27, 1990.

Through MW-5 on April 12, 1990. The depth-to-water (DTW) in each well was measured from the top of the well casing using a water-level indicator graduated to 1/100 of a foot. A clean acrylic bailer was also used to inspect the water for odor, color, sheen, and turbidity. The groundwater monitoring was performed to determine the DTW, the thickness of separate-phase hydrocarbons, if any, the hydraulic gradient, and the local groundwater-flow direction.

### GROUNDWATER SAMPLING

Prior to sampling, the wells were purged of at least four well volumes of water or until they bailed dry. The purged wells were then allowed to recover to at least 80 percent of their initial water levels before sampling with a U.S. Environmental Protection Agency (EPA)-approved Teflon<sup>R</sup> sampler. For quality control, a rinsate blank of the final rinse water from the cleaned sampler was also collected prior to taking each well



sample. One trip blank, containing distilled water, accompanied the samples at all times. Groundwater samples were collected, placed in acidified 40-milliliter glass vials, and sealed with Teflon<sup>R</sup> septum caps so that no air was trapped inside. Each vial was immediately labeled and placed on ice in an insulated cooler for delivery to a State of California-certified laboratory in Concord, California. A Chain-of-Custody Manifest was prepared for and accompanied the samples at all times. The samples were analyzed for the presence of benzene, toluene, ethylbenzene, and xylenes (BTEX) and for total petroleum hydrocarbons (TPH)-as-gasoline using modified EPA Methods 5030/8020/8015. Randomly chosen rinsate blanks were also analyzed using these EPA Methods.

The two existing groundwater-monitoring wells were purged of water and sampled on February 27, 1990. The two newly installed groundwater-monitoring wells were purged of water and sampled on a April 12, 1990.

### SUBSURFACE CONDITIONS

### GEOLOGY

Castro Valley is situated in an intermountain valley of the Diablo Range. The sediments encountered during drilling are late Quaternary Period alluvium which has a maximum thickness of 1,100 feet. The materials encountered during the construction of the monitoring wells were silty clays, silty sands, fine sands, and minor inclusions of gravels. These sediments are characteristic of older alluvium of the Pleistocene Epoch of the Quaternary Period.



TECHNOLOGY, INC.

### HYDROGEOLOGY

The Castro Valley Groundwater Basin encompasses an area of approximately three and one-half square miles and is of minor importance as a source of groundwater. The Castro Valley water supply is primarily imported, although an emergency plan utilizing groundwater is under consideration. Depth to water in the on-site groundwater monitoring wells is approximately 20 feet. The depth to water encountered during drilling was approximately 30 to 33 feet below grade. Based on surface topography, the water beneath the site would be expected to flow towards the south.

### ANALYTICAL RESULTS

<u>Soil</u>. The laboratory analytical results for the soil samples collected on April 3, 1990, and analyzed for the presence of BTEX and TPH are summarized in Table 1.

TABLE 1
SOIL SAMPLE ANALYSIS SUMMARY
4/3/90

SAMPLE I.D.	DEPTH (ft.)	BENZENE	TOLUENE	ETHYL- BENZENE	XYLENE	TPH-AS- GASOLINE
MW-4B	10	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""></pql<></td></pql<>	<pql< td=""></pql<>
MW-4C	15	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""></pql<></td></pql<>	<pql< td=""></pql<>
MW-4D	20	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""></pql<></td></pql<>	<pql< td=""></pql<>
MW-4E	25	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td>40</td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td>40</td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td>40</td></pql<></td></pql<>	<pql< td=""><td>40</td></pql<>	40
MW-5B	10	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""></pql<></td></pql<>	<pql< td=""></pql<>
MW-5D	20	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""></pql<></td></pql<>	<pql< td=""></pql<>
MW-5F	30	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""></pql<></td></pql<>	<pql< td=""></pql<>

TPH = Total Petroleum Hydrocarbons-as-gasoline

Analytical results for soil samples from the boring for monitoring well MW-5 were below detection limits for BTEX and TPH-as-gasoline in all of the soil samples analyzed. Results for the samples from the boring for monitoring well MW-4 were below detection limits for BTEX in all of the soil samples analyzed; however, 40 parts per million (ppm) of TPH-as-gasoline were reported for soil sample MW-4E recovered at a depth of 25 feet. Additional soil tests for the presence of lead at 25 feet in MW-4 indicated concentrations below the detection method limits of 0.25 ppm. The laboratory analytical reports for the soil samples and the Chain-of-Custody Manifest are presented in Appendix B.

Groundwater. The two new groundwater-monitoring wells were monitored for depth to water prior to well development on April 10, 1990. The DTW was 22.59 feet and 22.79 feet in groundwater-monitoring wells MW-4 and MW-5, respectively. All groundwater-monitoring wells were monitored for depth to water on April 12, 1990, for the construction of a potentiometric surface map. The potentiometric surface map depicts the approximate interpreted hydraulic gradient and flow direction of the subsurface water. The gradient is extremely flat with an apparent flow direction toward the southwest (Figure 3). Appendix C presents historical groundwater-monitoring data from November 1987 through April 1990.

Table 2 presents the historical results of groundwater sample analyses from December 1987 through April 1990, including the groundwater sampling events of February 27 and April 12, 1990. The analytical results of samples from groundwater-monitoring wells MW-1, and MW-3 reported no detectable hydrocarbons



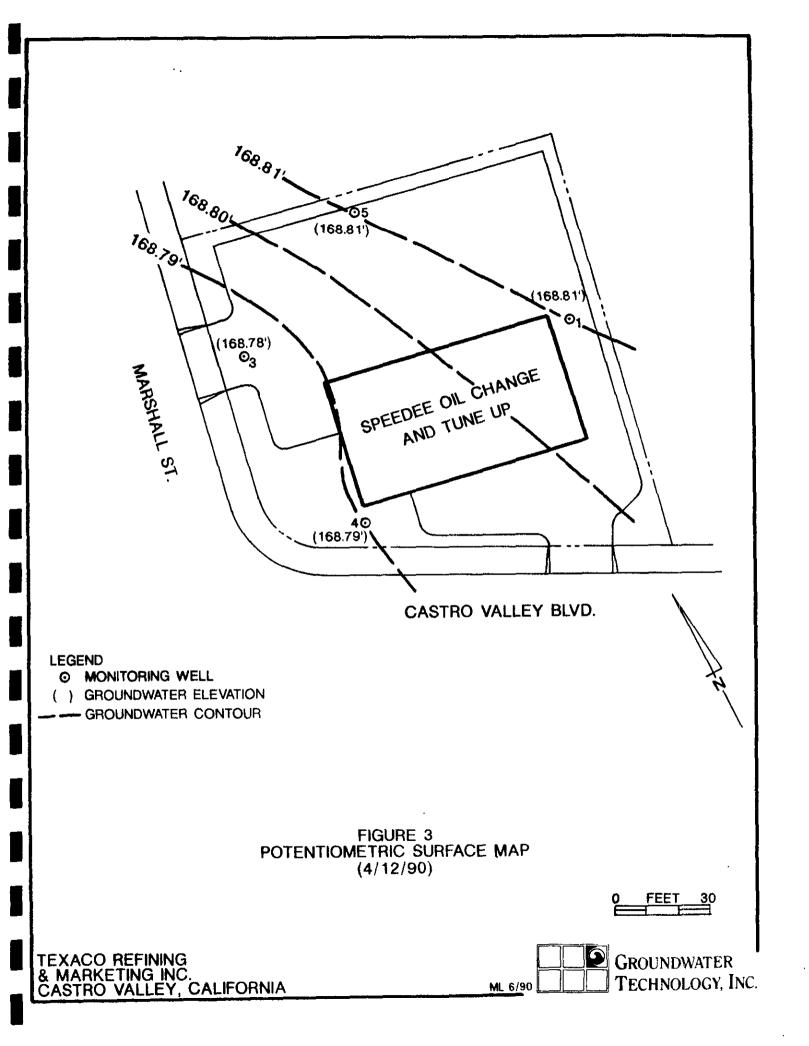


TABLE 2 HISTORICAL DISSOLVED GASOLINE HYDROCARBON CONCENTRATIONS (ppb) DECEMBER 1987 - APRIL 1990

DATE		MW-1	MW-2	MM-3	MW-4	MW-5	XT
12/30/87	BTEX TPH	220 2,100	389 2,400	<0.5 <1			DRY
06/07/88	BTEX TPH	54 290	266 1,200	<pql <pql< td=""><td></td><td></td><td>DRY</td></pql<></pql 			DRY
12/13/88	BTEX TPH	30 370	893 4,000	<pql <pql< td=""><td></td><td></td><td>DRY</td></pql<></pql 			DRY
08/29/89	BTEX TPH	6 160	ABANDONED	<pql <pql< td=""><td></td><td></td><td>ABANDONED</td></pql<></pql 			ABANDONED
08/29/89	BTEX TPH	<pql <pql< td=""><td></td><td><pql <pql< td=""><td></td><td></td><td></td></pql<></pql </td></pql<></pql 		<pql <pql< td=""><td></td><td></td><td></td></pql<></pql 			
02/27/90	BTEX TPH	<pql <pql< td=""><td></td><td><pql <pql< td=""><td> </td><td></td><td></td></pql<></pql </td></pql<></pql 		<pql <pql< td=""><td> </td><td></td><td></td></pql<></pql 			
04/12/90	BTEX TPH	_		-	229 1,500	<0.5 <1	

ppb = parts per billion
PQL = Practical Quantitation Levels

- = Not Sampled

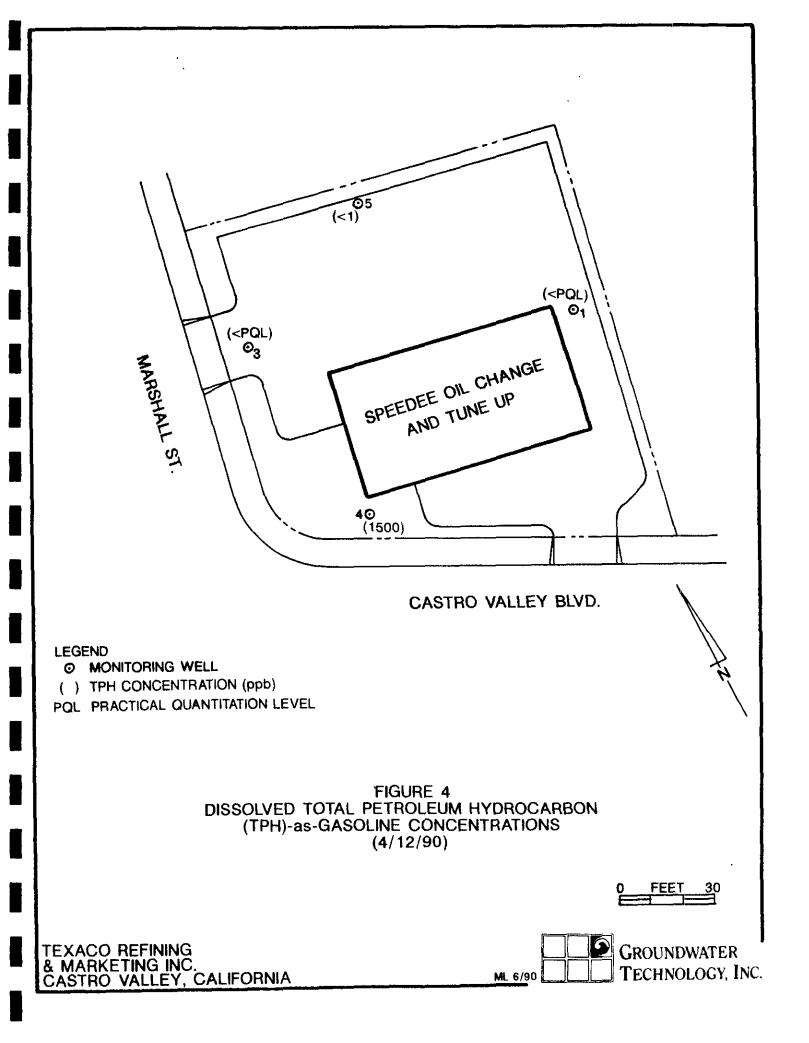


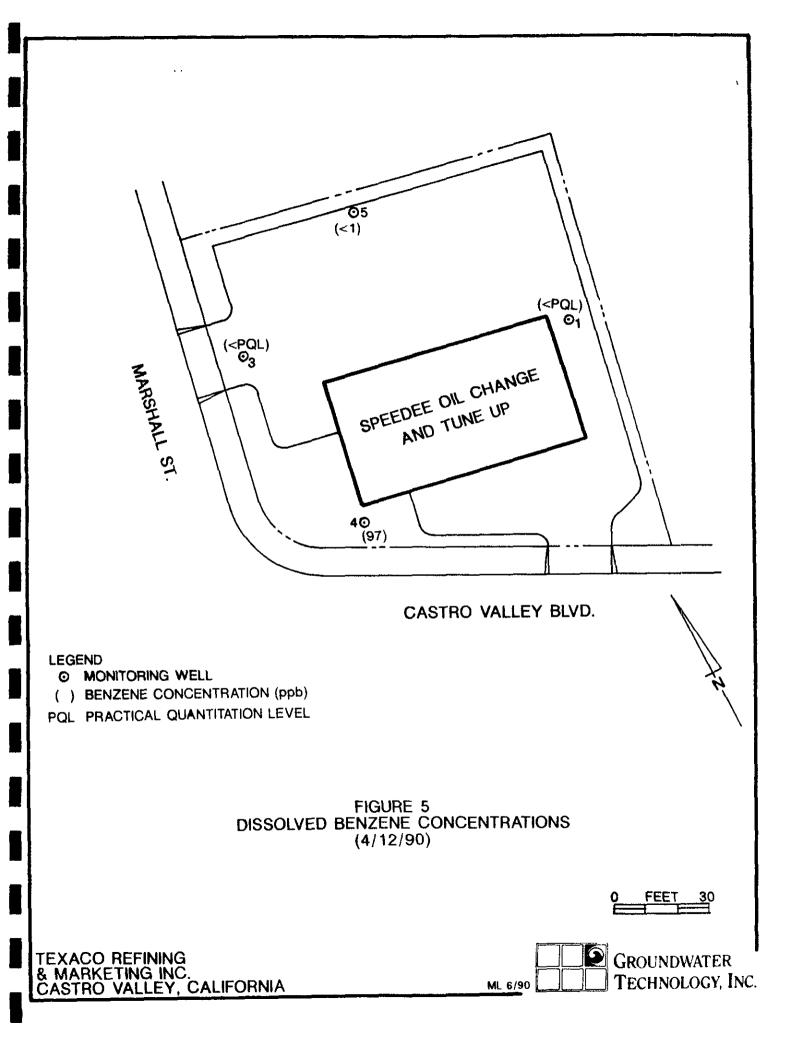
at Practical Quantitation Levels on February 27, 1990. The analysis of the sample from MW-5 similarly reported no detectable hydrocarbons at detection limits of 1 ppb and 0.5 ppb for TPH-asgasoline and BTEX constituents, respectively, on April 12, 1990. The April, 1990 results for groundwater-monitoring well MW-4 reported concentrations of 97 ppb benzene, 1 ppb toluene, 11 ppb ethylbenzene and 120 ppb xylenes for a total of 229 ppb BTEX. TPH-as-gasoline concentrations of 1,500 ppb were detected in the sample from groundwater-monitoring well MW-4. The laboratory analytical reports and the Chain-of-Custody Manifest reports are presented in Appendix D. Figures 4 and 5 illustrate that the April, 1990 dissolved total-petroleum-hydrocarbon and benzene concentrations were localized around groundwater-monitoring well MW-4.

#### SUMMARY

The former Texaco Service Station facilities on the site, including the building, and pump islands, have been destroyed and removed. During the demolition, two existing groundwater monitoring wells were abandoned. A new service building was constructed and two new groundwater-monitoring wells were constructed for replacement of the two abandoned groundwater-monitoring wells. Soil samples collected during the construction of the two new groundwater-monitoring wells indicated 40 ppm of TPH-asgasoline in a soil sample from 25 feet in the boring for groundwater-monitoring well MW-4. Analytical results for soil samples from the boring for groundwater-monitoring well MW-5 were below Practical Quantitation Levels for BTEX and TPH-as-gasoline. The results of the groundwater sample analyses reported 1,500 ppb of TPH-as-gasoline and 229 ppb of BTEX in the sample from MW-4.







Groundwater samples from the other monitoring wells contained no detectable hydrocarbons. The gradient of the groundwater is extremely flat with an apparent flow direction toward the southwest.



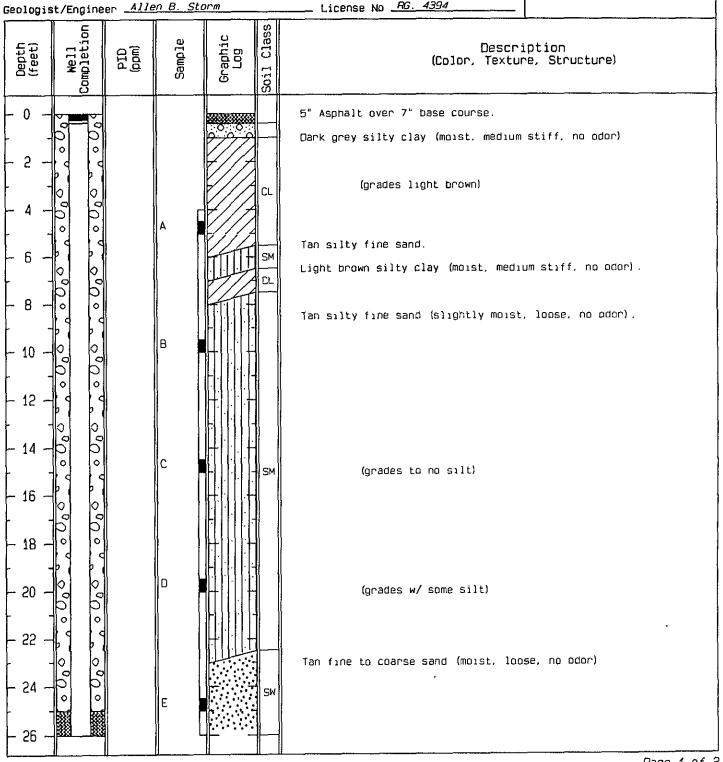
APPENDIX A DRILL LOGS



							ining and Marketing	Drilling Log
Locatio	<u>Castro</u>	<u>Valley</u>	Rd.	<del> </del>	. Pr	oject Number 🚅	03 150 4080	See Site Map
Date Dr	illed <u>4</u> /	<u> /03/90</u>	Tot	al Depth	of	Hole <u>45 ft.</u>	_ Diameter <u>10.5 in.</u>	—   See Site Map —   For Boring Location
Surface	Elevatio	n	Wat	er Level	Ini	tial <u>30 ft.</u>	_ 24-hour	— L
Screen:	Oia <u>4</u>	n.	Len	gth <u>20</u>	<u>ft.</u>	<u> </u>	_ Slot Size _0.020 1	NOTES:
Casing:	Dia _41	n	Len	gth <u>25</u>	ft.		Type PVC	-
Filter	Pack Mate	rial <u>Lo</u>	nestar k	ree Sana	<u>Pack</u>	·	(In I Inv. Stom Augen	······
Drillin	Company	Sierra	Pacific	<u> Urillin</u>	<i>9</i> Dr	illing Method _	Hollow Stem Auger	<b></b>
Oriller	<u>veraio</u>	<u>Harris</u> Alla	o P St	200	_ L.O	g by , <u>St<i>eve Kra</i></u> License N	DG 4394	<del>-</del>
Geologi		er -4116	11 D. SEL	<i>n</i>	77	License r	VU	<u> </u>
Depth (feet)	Well Completion	PIO (ppm)	Sample	Graphic Log	Soil Class		Des (Color, Tex	cription kture, Structure)
- 0 -	000					Brown silty	clay (moist, medium	stiff. no odor)
- 2 - - 4 -			8 A 21					
- 6 -			28			(gr	ades w/ fine sand)	
- 8 - - 10 -			10 B 10		CL			
- 12 -						(gr	ades w∕ some fine sa	nd)
- 14 -	00000		15 C 20			(gr	rades w/ minor fine s	and)
16 -	0000					Tan clean fi	ne sand (slightly mo	nst, loose, slight odor).
- 18 - -			5 5		SP			
- 20 -			D 20					
- 55 -						Brown silty	fine sandy clay (moı	st. medium stiff, adarl .
- 24 -			10 E 20 25		CL			
- 26 -		-		K///				

Project <u>Texaco/Castro Valley</u> Owner <u>Texaco Refining and Marketing</u> Drilling Log Location Castro Valley Ad Project Number 203 150 4080 Class Graphic Log Sample Sample Description (Color, Texture, Structure) Depth (feet) PID (ppm) Soil (grades more fine sand) 26 CL Tan fine sand (wet, loose, ? odor) **2B** ΝR SP Encountered water 4/03/90 (1630 hours). 30 (grades w/ gravels + silts) 32 Brown silty clayey fine sandy gravel (wet, medium dense, no odor) 34 56 36 38 40 F 60 40 42 44 ИR Bottom of boring. Installed monitor well 46 48 50 52 54 56 58

Project <u>Texaco/Castro Valley</u>	_ Owner <u>Texaco Refining and Marketing</u>	Drilling Log
Location <u>Castro Valley Rd.</u> Date Drilled <u>4/03/90</u> Total Depth	_ Project Number <u>203 150 4080</u> of Hole <u>45 ft.</u> Diameter <u>10.5 in</u>	See Site Map For Boring Location
Surface Elevation Water Level		
Screen: Dia 4 10 Length 17 Casing: Dia 4 10 Length 28	ft.         Slot Size         0.020 in.           ft.         Type         PVC	NOTES:
Filter Pack Material <u>Lonestar #22 Sand</u> Drilling Company <u>Sierra Pacific Drillin</u>		
Driller <i>Derald Harris</i>	Log by , <u>Steve Kranyak</u>	
Geologist/Engineer Allen B. Storm		
	<u>8</u>	



\_\_ Owner <u>Texaco Refining and Marketing</u> Drilling Log Project <u>Texaco/Castro Valley</u> Location <u>Castro Valley Rd.</u> Project Number 203 150 4080 Well Completion Class Graphic Log Sample Sample Depth (feet) Description (Color, Texture, Structure) PIO (mpg) Soil 26 (grades w/ silts, clays, + gravel) 28 (grades more dense) 30 -32 Encountered water 4/03/90 (0945 hours) 34 36 -38 (as above) 40 -42 44 NΑ Installed monitor well. Bottom of boring 46 48 50 52 54 56 58

# APPENDIX B SOIL ANALYTICAL RESULTS

Project Number: 203-199-4080 Work Order Number: D0-04-172 Location: 3480 Castro Valley Blvd. Date Sampled: 03-Apr-90

### Table 1a

## **ANALYTICAL RESULTS**

Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Soil EPA Methods 5030, 8020 and modified 8015<sup>a</sup>

a Results rounded to two significant figures. <PQL = less than practical quantitation levels, per EPA Federal Register, November 13, 1985, p. 46906.

GTEL Sample Number	01	02	03	04
Client Identification	MW5B	MW5D	MW5F	MW4B
Date Extracted	04/13/90	04/13/90	04/13/90	04/13/90
Date Analyzed	04/17/90	04/17/90	04/17/90	04/17/90
Analyte		Concentrat	ion, mg/Kg	
Benzene	< PQL	< PQL	< PQL	< PQL
Toluene	< PQL	< PQL	< PQL	< PQL
Ethylbenzene	< PQL	< PQL	< PQL	< PQL
Xylene, total	< PQL	< PQL	< PQL	< PQL
TPH as gasoline	< PQL	< PQL	< PQL	< PQL
Detection limit multiplier	1	11	1	1

GTEL Sample Number	05	06	07	
Client Identification	MW4C	MW4D	MW4E	
Date Extracted	04/13/90	04/13/90	04/13/90	
Date Analyzed	04/17/90	04/17/90	04/17/90	
Analyte		Concentration	n, mg/Kg	·
Benzene	< PQL	< PQL	< PQL	
Toluene	< PQL	< PQL	< PQL	
Ethylbenzene	< PQL	< PQL	< PQL	
Xylene, total	< PQL	< PQL	< PQL	
TPH as gasoline	< PQL	< PQL	40	
Detection limit multiplier	1	1	1	



Project Number: 203-199-4080
Worlt Order Number: D0-04-173
Location: 3480 Castro Valley Blvd.
Castro Valley, CA.
Date Sampled: 03-Apr-90

## Table 1a

## ANALYTICAL RESULTS

## Organic Lead in Soil

# California DHS Method (LUFT Manual)

GTEL Sample Number		01			ļ
Client Identification		MW4E			
Date Prepared		04/09/90			
Date Analyzed		04/09/90			<u></u>
Analyte	Detection Limit, mg/Kg		Concentra	tion, mg/Kg	<del></del>
Lead, organic	0.25	< 0.25			<u></u>
Detection Limit Multiplier		1	<u> </u>		<u> </u>



	<b>GTE</b>	4080- Conce				20	80	00-5	44-	342	2 (Ir	CA)						F-(						CO	RD	7	<u>'2</u>	<u>- (</u>	33	56		CUS.	ΓΟDY	RE	CORD	
	NVIRONMEN'	TAL 415-6										utsid	e CA)				•		-	AN.	AL	YS	IS	RE	QU	ES	T									
Project M	lanager.					F	hor	ne #	:						lo								7	T			Ţ		Τ		П					
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# APPENDIX C GROUNDWATER MONITORING DATA



APPENDIX C GROUNDWATER MONITORING DATA

WELL ELEV.a	TX	MW-1 192.46	MW-2	MW-3 190.48	MW-4 191.63	MW-5 191.55
11/19/87 DTW <sup>b</sup> 12/30/87 DTW 06/07/88 DTW 06/07/88 DTW 12/13/88 DTW 08/29/89 DTW 02/27/90 DTW 04/10/90 DTW 04/12/90 DTW	20.90 NM 21.51 *	NM <sup>C</sup> 21.92 23.35 23.17 23.70 23.25 23.66 23.65	NM 22.30 23.83 23.69 *	NM 22.60 20.90 20.92 27.48 21.58 NM 21.70	22.59 22.84	22.79



a - Surveyed to Alameda County datum on April 23, 1990
b - DTW = Depth to water
c - NM = Not measured

d - \* abandoned

# APPENDIX D GROUNDWATER ANALYTICAL RESULTS

Project Number: 203-199-4080
Work Order Number: D0-03-011
Location: 3940 Castro Valley Blvd.
Castro Valley, CA.
Date Sampled: 27-Feb-90

### Table 1a

### **ANALYTICAL RESULTS**

Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Water EPA Methods 5030, 8020 and modified 8015<sup>a</sup>

Results rounded to two significant figures. < PQL = Less than practical quantitation levels, per EPA Federal Register, November 13, 1985, p. 46906. a

GTEL Sample Number	01	02	03	·
Client Identification	MW-3B	MW-3	MW-1	
Date Analyzed	03/07/90	03/07/90	03/07/90	
Analyte		Concentra	ation, ug/L	
Benzene	<pql< td=""><td><pql< td=""><td><pql< td=""><td></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td></td></pql<></td></pql<>	<pql< td=""><td></td></pql<>	
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Xylene, total	<pql< td=""><td><pql< td=""><td><pql< td=""><td></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td></td></pql<></td></pql<>	<pql< td=""><td></td></pql<>	
TPH as gasoline	<pql< td=""><td><pql< td=""><td><pql< td=""><td></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td></td></pql<></td></pql<>	<pql< td=""><td></td></pql<>	
Detection limit multiplier	1	1	1	



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ENVIRON		685-7				800	)-42	<b>:3-7</b> 1	143 (C	Outside	CA)						A	NA	LY:	SIS	RE	Q٤	JES	ST							,	1.	$\prec$	
Project Manager  Tan Project Manager  Address:  GTI CONCOL  Project Number:  7.03.169 L  I attest that the proprocedures were of these samples.  Field Sour of Sample Sample	oper field samplised during the	ling	N	ad	Si x	rojet ampl	cati ct Na ler h	ame: lame lame setho	Could Hyde (Prin	Sam	tog CA	BTEX 602 D 8020 D with MTBE D	Gas,602/8015 🗆	TPH as D Gas D Diesel D Jet Fuel	(SIMDIS)	Total Oil & Grease: 413.1 □ 413.2 □ 503A □ Total Detrolation Hydrocathons: 418.1 □ 503E □	1 / _		EPA 608 □ 8080 □ PCBs only □	EPA 610 0 8310 0		Pesticic	VOA C Semi V(	EPA Priority Pollutant Metals   HSL	7421 🗆 239.2	ם פתוכ ם דונם	Corrosivity   Flashpoint   Reactivity	ON HALD		Received by:	Received by:	Received by Laboratory:	とうとのできること	
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Project Number: 203-199-4080 Work Order Number: D0-04-296 Location: 3940 Castro Valley Castro Valley, CA.

, Date Sampled: 12-Apr-90

### Table 1a

### **ANALYTICAL RESULTS**

Aromatic Volatile Organics and Total Petroleum Hydrocarbons as Gasoline in Water EPA Methods 5030, 8020 and modified 8015<sup>a</sup>

Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986; modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. a

GTEL Sample Number		01	02	03	
Client Identification		MW5B	MW5	MW4	
Date Analyzed		04/16/90	04/16/90	04/16/90	
Analyte	Detection Limit, ug/L		Concentra	ation, ug/L	
Benzene	0.5	<0.5	< 0.5	97	
Toluene	0.5	<0.5	< 0.5	1	
Ethylbenzene	0.5	<0.5	< 0.5	11	
Xylene, total	0.5	<0.5	< 0.5	120	
TPH as gasoline	1	<1	<1	1500	
Detection limit multiplier		1	1	1	



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