



*Please For:  
No computer changes*

TEXACO REFINING AND MARKETING INC.  
100 CUTTING BOULEVARD  
RICHMOND CA 94804

February 14, 1989

*CSZ*


Mr. Greg Zentner  
California Regional Water  
Quality Control Board  
San Francisco Bay Region  
1111 Jackson Street, Room 6040  
Oakland, CA 94607

Dear Mr. Zentner:

Enclosed is a copy of our biannual status report dated February 1, 1989 for our former Texaco service station located at 3940 Castro Valley Boulevard, Castro Valley, California. This report covers the period from June 7, 1988 through December 13, 1988.

Please call me at (415) 236-1770 if you have any questions.

Yours very truly,

  
R.R. ZIELINSKI  
Field Environmental  
Supervisor

RRZ:cz

Enclosure

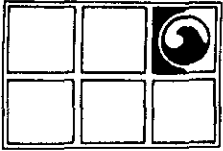
cc: Mr. Craig Mayfield  
Alameda County Flood Control  
and Water Conservation District  
Water Resources Management  
Zone 7  
5997 Parkside Drive  
Pleasanton, CA 94566

RR

*SGH 2/28/89*

**BIANNUAL STATUS REPORT  
FORMER TEXACO SERVICE STATION  
3940 CASTRO VALLEY BOULEVARD  
CASTRO VALLEY, CALIFORNIA  
FEBRUARY 1, 1989**

**GROUNDWATER TECHNOLOGY, INC.  
CONCORD, CALIFORNIA**



**GROUNDWATER  
TECHNOLOGY, INC.**

4080-D Pike Lane, Concord, CA 94520

(415) 671-2387

**BIANNUAL STATUS REPORT  
FORMER TEXACO SERVICE STATION  
3940 CASTRO VALLEY BOULEVARD  
CASTRO VALLEY, CALIFORNIA  
FEBRUARY 1, 1989**

**Prepared for:**

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**BIANNUAL STATUS REPORT  
FORMER TEXACO SERVICE STATION  
3940 CASTRO VALLEY BOULEVARD  
CASTRO VALLEY, CALIFORNIA  
FEBRUARY 1, 1989**

**INTRODUCTION**

This report presents the results of the most recent biannual monitoring and sampling for the former Texaco service station site located at 3940 Castro Valley Boulevard, Castro Valley, California. The report covers the period from June 7, through December 13, 1988.

**WORK PERFORMED**

Monitoring and sampling of the site groundwater monitoring wells (MW) was conducted on December 13, 1988. The previous monitoring and sampling round was performed on June 7, 1988.

**GROUNDWATER MONITORING AND GROUNDWATER GRADIENT**

The depth to groundwater (DTW) was measured in each of the three available monitoring wells (MW-1, MW-2, MW-3) on December 13, 1988. These DTW measurements indicated that the water table was approximately 21- to 24-feet below grade. Well TX remained dry during this period and was not available for sampling. The water table elevations in December 1988 reflected a rise of approximately 0.2 foot since June 1988. The groundwater gradient



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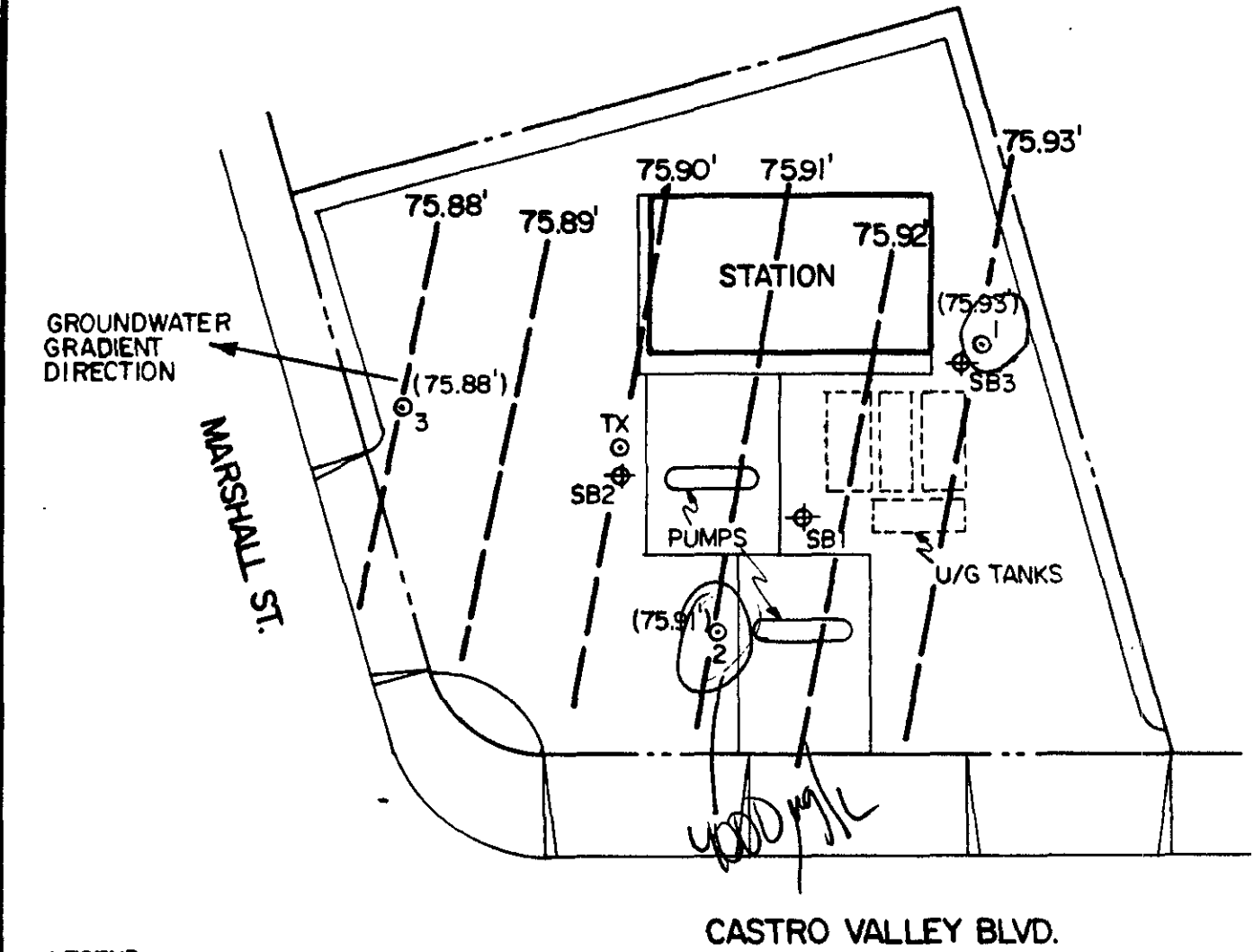
direction, as determined from the December 13, 1988 monitoring data, was to the northwest (Figure 1) at a gradient of 0.001 foot/foot (ft/ft). The previous monitoring data from June 7, 1988, indicated a gradient of 0.001 ft/ft in a northern direction, while the December 30, 1987 monitoring data indicated a north-northwest groundwater flow across the site at a gradient of approximately 0.047 ft/ft.

#### GROUNDWATER SAMPLING AND ANALYSES

Groundwater samples were collected from MW-1, MW-2 and MW-3 on December 13, 1988, for laboratory analysis. Prior to sampling, each well was purged a minimum of four well volumes with an acrylic bailer. Rinsate blanks containing a sample of a distilled-water rinsate from the cleaned surface sampler were collected prior to each sampling as part of a Quality Assurance/Quality Control (QA/QC) program. The groundwater samples were placed in 40-milliliter glass vials with Teflon<sup>R</sup> septum caps, then labeled and transported on ice to a state-certified laboratory. The groundwater samples were accompanied by a Chain-of-Custody Manifest at all times. All groundwater samples, plus a randomly chosen rinsate blank (MW-3B), were analyzed using modified U.S. Environmental Protection Agency (EPA) Methods 5030/8020/8015 for total petroleum hydrocarbons (TPH)-as-gasoline with benzene, toluene, ethylbenzene, and xylenes (BTEX) distinctions (Appendix B).

The highest concentrations of dissolved hydrocarbons were found in the groundwater sample collected from MW-2, where 4,000 parts per billion (ppb) of TPH-as-gasoline and 890 ppb of BTEX were detected. The groundwater sample from MW-1 contained 370 ppb of TPH-as-gasoline and 30 ppb of BTEX. No hydrocarbons were





**LEGEND**

- ⊙ MONITORING WELL
- ⊕ SOIL BORING
- ( ) GROUNDWATER ELEVATION
- - - GROUNDWATER CONTOUR

Figure 1. Groundwater Gradient Map-12/13/88



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detected at Practical Quantitation Levels (PQL) in MW-3. Figure 2 depicts the distribution of TPH-as-gasoline concentrations across the site.

A comparison of the June 1988 groundwater sample analyses with the December 1988 results shows that concentrations of TPH-as-gasoline slightly increased in MW-1 from 290 ppb to 370 ppb between June and December 1988 and increased in well MW-2 from 1,200 ppb to 4,000 ppb. As shown in Table 1, dissolved hydrocarbons in MW-3 have always been below PQL.

TABLE 1  
DISSOLVED TOTAL PETROLEUM HYDROCARBONS  
December 1987 - December 1988  
parts per billion (ppb)

DATE SAMPLED	MW-1	MW-2	MW-3
12/30/87	2,100	2,400	<PQL
06/07/88	290	1,200	<PQL
12/13/88	370	4,000	<PQL

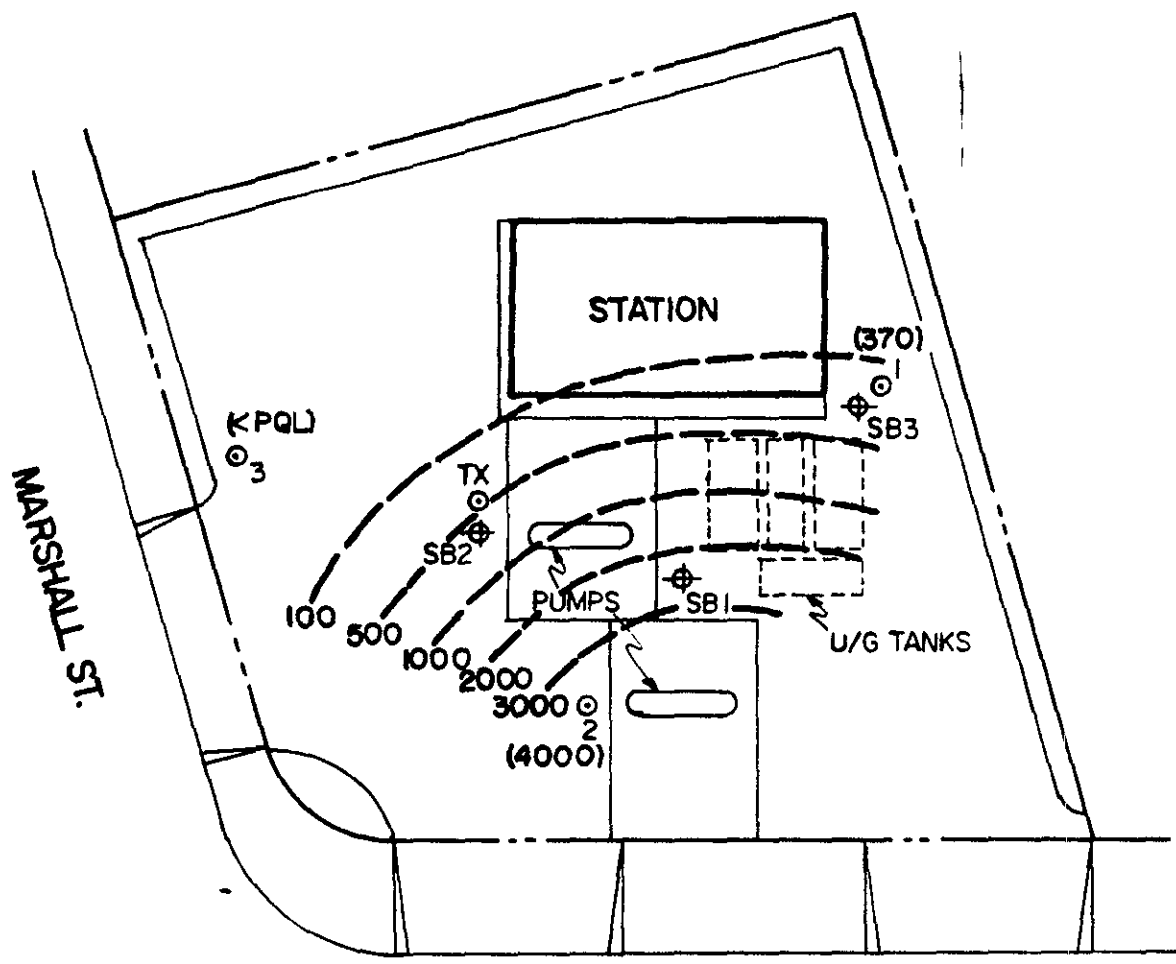
MW = Monitoring Well  
<PQL = Less Than Practical Quantitation Levels

SUMMARY

The December 13, 1988 groundwater monitoring data indicate that the direction of groundwater flow across the site remains generally toward the north-northwest at a very shallow gradient (less than 0.001 ft/ft). Groundwater elevations rose slightly,







**LEGEND**

- ⊙ MONITORING WELL
- ◆ SOIL BORING
- ( ) TPH-AS-GASOLINE CONCENTRATION (PPB)
- TPH CONTOUR
- <PQL LESS THAN PRACTICAL QUANTITATION LEVEL

CASTRO VALLEY BLVD.

Figure 2 - Dissolved Total Petroleum Hydrocarbon Concentration (ppb)

12/13/88



0 FEET 30



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compared with those monitored in June 1988. Concentrations of dissolved hydrocarbons increased slightly since June 1988. Dissolved hydrocarbons remain undetected at PQL in downgradient well MW-3.



**APPENDIX A**  
**GROUNDWATER MONITORING DATA**



**GROUNDWATER  
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PROJECT: TEXACO/CASTRO VALLEY  
 JOB NUMBER: 203 150 4080  
 DATE: DECEMBER 1987 - DECEMBER 1988

DATE	ELEV. (ft.)	MW-1	MW-2	MW-3
		99.10	99.60	96.80
12/30/87	DTW	21.82	22.30	22.60
	DTP	-	-	-
	PT	0	0	0
06/07/88	DTW	23.35	23.83	21.09
	DTP	-	-	-
	PT	0	0	0
12/13/88	DTW	23.17	23.69	20.92
	DTP	-	-	-
	PT	0	0	0

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MW = Monitoring Well  
 ELEV. = Relative Elevation of Wellhead  
 DTW = Depth to Water (ft)  
 DTP = Depth to Product (ft)  
 PT = Product thickness (ft)



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**APPENDIX B**  
**ANALYTICAL RESULTS**



**GROUNDWATER  
TECHNOLOGY, INC.**



12/27/88MT

Page 1 of 1

WORK ORD#: 8812178  
CLIENT: Jan Prasil  
Groundwater Technology, Inc.  
4080 Pike Lane  
Concord, CA 94520

Western Region  
4080-C Pike Lane, Concord, CA 94520  
(415) 685-7852  
(800) 544-3422 from inside California  
(800) 423-7143 from outside California

PROJECT#: 203-199-4080-10  
LOCATION: 3940 Castro Valley Blvd.  
Castro Valley, CA  
SAMPLED: 12/13/88 BY: S. Kranyak  
RECEIVED: 12/14/88 BY: K. Biava  
ANALYZED: 12/20/88 BY: R. Condit  
MATRIX: Water  
UNITS: ug/L (ppb)

TEST RESULTS

PARAMETER	SAMPLE #	01A	02A	03A	04A
	I.D.	MW-1	MW-2	MW-3	MW-3B
Benzene		30	640	<PQL	<PQL
Toluene		<PQL	23	<PQL	<PQL
Ethylbenzene		<PQL	120	<PQL	<PQL
Xylenes		<PQL	110	<PQL	<PQL
Total BTEX		30	890	<PQL	<PQL
Total Petroleum Hydrocarbons as Gasoline		370	4000	<PQL	<PQL

PQL = Less than Practical Quantitation Levels per EPA Federal Register, November 13, 1985, page 46906.  
Results rounded to two significant figures.

METHOD:  
Modified EPA Method 5030/8020/8015

EMMA P. POPEK, Director

