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April 14, 1994

**Chevron U.S.A. Products Company**  
2410 Camino Ramon  
San Ramon, CA 94583  
P.O. Box 5004  
San Ramon, CA 94583-0804

**Marketing Department**  
Phone 510 842 9500

Ms. Jennifer Eberle  
Alameda County Health Care Services  
Department of Environmental Health  
80 Swan Way, Room 200  
Oakland, CA 94621

**Re: Chevron Service Station #9-0121  
3026 Lakeshore Avenue, Oakland, CA**

Dear Ms. Eberle:

Enclosed is the Groundwater Monitoring and Sampling Report dated January 28, 1994, prepared by our consultant Groundwater Technology Inc. for the above referenced site. As indicated in the report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline, total petroleum hydrocarbons as diesel, and BTEX. Benzene was detected in monitor wells MW-1, MW-3, MW-4, and MW-7 at concentrations of 1900, 250, 230, and 2 ppb, respectively. Depth to ground water was measured at approximately 4.4 feet to 8.8 feet below grade and the direction of flow is to the west-southwest.

Separate-phase hydrocarbons were observed in monitor well MW-2 at a measured thickness of 0.02 feet.

Chevron will continue to monitor and sample all wells at this site and report findings on a quarterly basis. As we discussed previously, this additional information should assist in your review of the Remediation Feasibility Study dated October 4, 1993, prepared for this site by our consultant Pacific Environmental Group, Inc.

If you have any questions or comments, please do not hesitate to contact me at (510) 842-8134.

Sincerely,  
CHEVRON U.S.A. PRODUCTS COMPANY

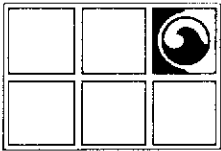
Mark A. Miller  
Site Assessment and Remediation Engineer

additional?  
you have FP... can't  
do APC

Enclosure

cc: Mr. Rich Hiatt, RWQCB - Bay Area  
Mr. Steve Krcik, Pacific Environmental Group  
Mr. S.A. Willer

File: 9-0121 QM6



# GROUNDWATER TECHNOLOGY, INC.

4057 Port Chicago Highway, Concord, CA 94520 (415) 671-2387

FAX: (415) 685-9148

January 28, 1994

Project No. 020104097

Mr. Mark Miller  
Chevron U.S.A. Products Company  
2410 Camino Ramon  
San Ramon, CA 94583-0804

SUBJECT: *Groundwater Monitoring and Sampling Report*  
Chevron Service Station No. 9-0121  
3026 Lakeshore Avenue, Oakland, California

Dear Mr Miller:

Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on December 20, 1993. Seven of eight monitoring wells at this site were gauged to measure depth to groundwater (DTW) and to check for separate-phase hydrocarbons. A vehicle blocked the access to monitoring well MW-5. A separate-phase hydrocarbon sheen was detected in monitoring well MW-2. A potentiometric surface map (Figure 1) and a summary of groundwater monitoring data (Table 1) are presented in Attachments 1 and 2, respectively. After the DTW was measured, each monitoring well was purged and sampled except monitoring wells MW-2 and MW-5. The groundwater samples were analyzed for benzene, toluene, ethylbenzene, and xylenes and for total petroleum hydrocarbons-as-gasoline. Additional samples were collected from monitoring wells MW-1, MW-3, MW-4, MW-6, MW-7, and MW-8 for total petroleum hydrocarbons-as-diesel (TPH-D). Field data sheets are presented in Attachment 3. Results of the chemical analyses are summarized in Table 1. The laboratory reports and chain-of-custody records are included in Attachment 4. Monitoring-well purge water was removed by Groundwater Technology and transported to the Chevron Terminal in Richmond, California, for recycling.

Groundwater Technology is pleased to assist Chevron on this project. If you have any questions or comments, please contact our Concord office at (510) 671-2387.

Sincerely,  
**Groundwater Technology, Inc.**  
Written/Submitted by

Attachment 1 Figures  
Attachment 2 Tables  
Attachment 3 Field Data Sheets  
Attachment 4 Laboratory Report

Tim Watchers  
Project Manager

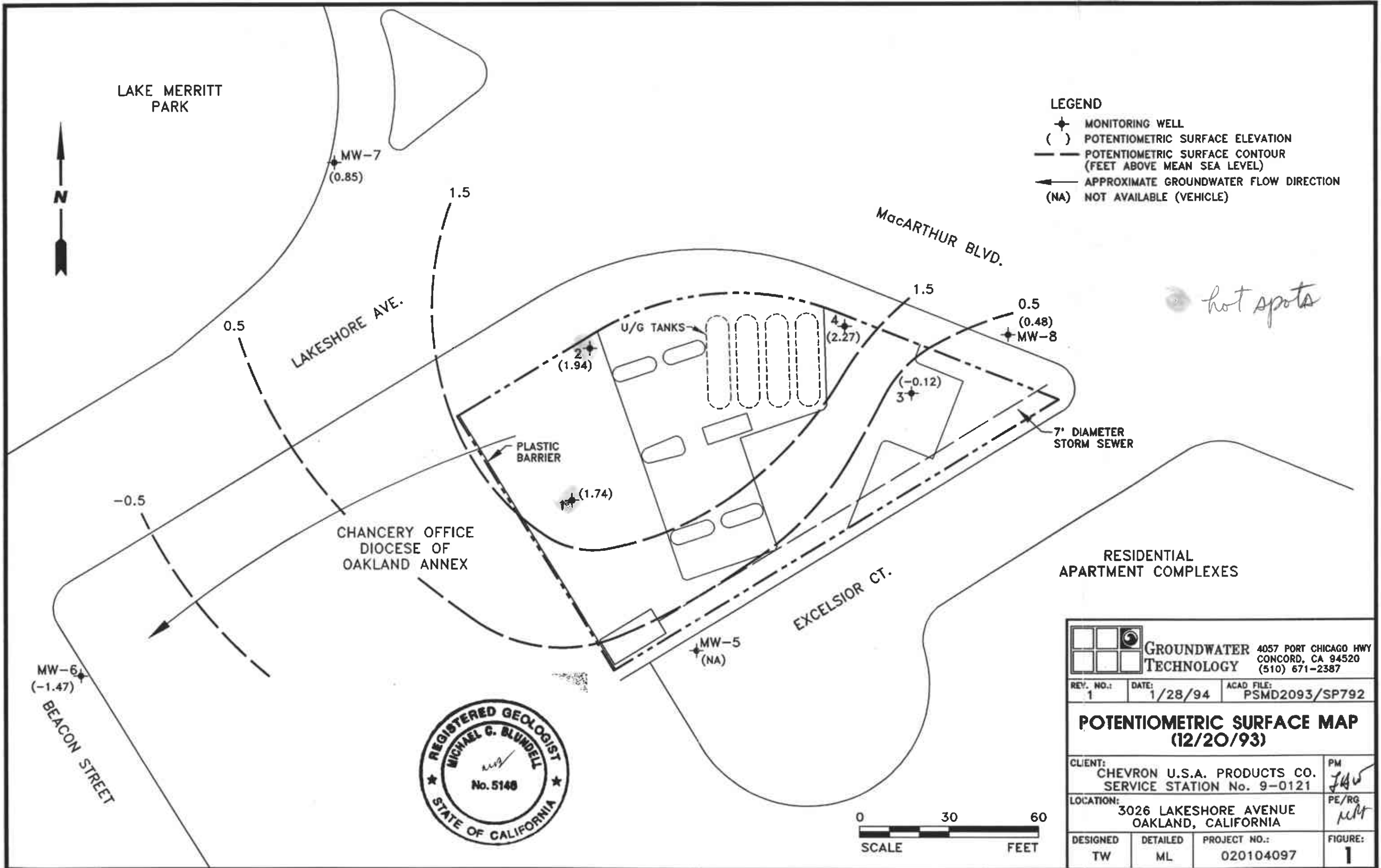
For:  
Wendell W. Lattz  
Vice President, General Manager  
West Region

PR IVA

4097R014.010

**ATTACHMENT 1**

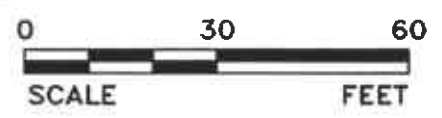
**Figures**



**LEGEND**

- ◆ MONITORING WELL
- ( ) POTENTIOMETRIC SURFACE ELEVATION
- - - POTENTIOMETRIC SURFACE CONTOUR (FEET ABOVE MEAN SEA LEVEL)
- ← APPROXIMATE GROUNDWATER FLOW DIRECTION
- (NA) NOT AVAILABLE (VEHICLE)

		4057 PORT CHICAGO HWY CONCORD, CA 94520 (510) 671-2387	
REV. NO.:	DATE:	ACAD FILE:	
1	1/28/94	PSMD2093/SP792	
<b>POTENTIOMETRIC SURFACE MAP</b> <b>(12/20/93)</b>			
CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-0121			PM <i>JAW</i>
LOCATION: 3026 LAKESHORE AVENUE OAKLAND, CALIFORNIA			PE/RG <i>MLT</i>
DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
TW	ML	020104097	1



**ATTACHMENT 2**

**Table**

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-0121**  
**3026 Lakeshore Avenue, Oakland, California**

Well ID Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylene	TPH-D	TDS	DTW (ft)	SPT (ft)	WTE (ft)	
MW-1 6.82	08/20/91	5,100	1,700	21	220	34	260	---	5.20	0.00	1.62	
	09/30/91 10/28/91	Separate-phase hydrocarbons present							---	5.67	Sheen	1.15
									---	5.30	0.03	1.50
	6.89	01/08/92	5,400	770	13	95	31	---	---	5.15	Sheen	1.67
		01/13/92	---	---	---	---	---	*4,400	---	---	---	---
		06/23/92	7,700	1,500	40	230	100	*2,000	---	5.41	0.00	1.48
		08/24/92	---	---	---	---	---	---	---	5.77	0.00	1.12
		09/21/92	3,500	1,700	28	190	78	<50	---	5.89	0.00	1.00
		10/26/92	---	---	---	---	---	---	---	5.94	0.00	.95
		12/23/92	60,000	7,100	240	2,000	1,300	*5,500	---	4.71	0.00	2.18
		01/08/93	---	---	---	---	---	---	---	---	---	---
		03/25/93	***530	1,100	41	67	79	<10	---	4.72	0.00	2.17
		06/11/93	****7,000	1,900	33	120	69	---	840	5.07	0.00	5.37
	09/29/93	6,600	1,600	28	43	74	<10	---	5.76	0.00	1.13	
	12/20/93	<del>6,300</del>	<del>1,900</del>	36	82	65	<10	---	5.15	0.00	1.74	
MW-2 6.27	08/20/91	9,300	3,700	55	530	75	600	---	4.35	0.00	1.92	
	09/30/91	3,500	2,600	47	440	68	---	---	4.99	0.00	1.28	
	10/28/91	4,600	1,800	29	290	53	---	---	4.91	0.00	1.36	
	01/08/92	14,000	4,300	70	<25	130	---	---	4.64	Sheen	1.63	
	01/13/92	---	---	---	---	---	*38,000	---	---	---	---	
	06/23/92	---	---	---	---	---	---	---	4.64	0.02	1.63	
	08/24/92 09/21/92	Separate-phase hydrocarbons present							---	4.94	0.02	1.34
									---	5.08	0.01	1.20
	10/26/92	---	---	---	---	---	---	---	5.93	0.00	.34	
	12/23/92	21,000	5,400	59	1,300	160	160,000	---	---	---	---	
	01/08/93	---	---	---	---	---	---	---	3.70	0.00	2.57	
	03/25/93	---	---	---	---	---	---	---	3.38	Sheen	2.89	
	06/11/93	5,900	1,100	23	240	51	---	2,300	4.18	0.00	2.09	
	09/29/93	---	---	---	---	---	---	---	6.20	0.00	0.07	
	12/20/93	---	---	---	---	---	---	---	4.35	0.02	1.94	

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-0121**  
**3026 Lakeshore Avenue, Oakland, California**

Well ID Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylene	TPH-D	TDS	DTW (ft)	SPT (ft)	WTE (ft)
MW-3 8.71	08/20/91	3,100	200	13	15	12	200	---	8.45	0.00	0.26
	09/30/91	1,000	150	8.3	13	6.7	---	---	8.74	0.00	-0.03
	10/28/91	1,200	120	6.7	11	7.5	---	---	8.76	0.00	-0.05
	01/08/92	410	120	0.9	4.1	3.4	---	---	8.77	0.00	-0.06
	01/13/92	---	---	---	---	---	*220	---	---	---	---
	06/23/92	630	43	0.8	8.2	3.4	<50	---	8.68	0.00	0.03
	08/24/92	---	---	---	---	---	---	---	8.85	0.00	-0.14
	09/21/92	1,800	730	1.4	66	39	<50	---	8.94	0.00	-0.23
	10/26/92	---	---	---	---	---	---	---	9.07	0.00	-0.36
	12/23/92	840	270	3.4	15	4.2	*850	---	---	---	---
	01/08/93	---	---	---	---	---	---	---	7.69	0.00	1.02
	03/25/93	760	270	4	10	5	<10	---	7.74	0.00	0.97
	06/11/93	200	32	1	5	2	---	5,600	8.52	0.00	0.19
	09/29/93	9,300	2,800	60	270	62	---	---	6.05	0.00	2.66
	12/20/93	***460	250	4	8	4	<10	---	8.83	0.00	-0.12
MW-4 7.37	08/20/91	1,800	870	4	3	9	160	---	5.05	0.00	1.32
	09/30/91	670	830	5.5	2.7	12	---	---	5.67	0.00	1.70
	10/28/91	2,800	990	5.8	4.8	19	---	---	5.81	0.00	1.56
	01/08/92	2,900	1,200	10	7	18	---	---	5.34	0.00	2.03
	01/13/92	---	---	---	---	---	*1,000	---	---	---	---
	06/23/92	1,600	380	6.5	3	12	<50	---	5.37	0.00	2.00
	08/24/92	---	---	---	---	---	---	---	5.75	0.00	1.62
	09/21/92	1,200	480	5.6	3.7	11	<50	---	5.95	0.00	1.42
	10/26/92	---	---	---	---	---	---	---	5.96	0.00	1.41
	12/23/92	1,500	700	3.6	3.2	11	*1,800	---	---	---	---
	01/08/93	---	---	---	---	---	---	---	4.64	0.00	2.73
	03/25/93	***520	160	3	1	4	<10	---	4.42	0.00	2.95
	06/11/93	****1,200	430	5	6	11	---	2,600	5.12	0.00	2.25
	09/29/93	1,300	210	8	2	14	---	---	5.80	0.00	1.57
	12/20/93	***570	220	5	4	8	---	---	5.10	0.00	2.27

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-0121**  
**3026 Lakeshore Avenue, Oakland, California**

Well ID Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylene	TPH-D	TDS	DTW (ft)	SPT (ft)	WTE (ft)
MW-5 14.14	06/23/92	<50	<0.5	<0.5	<0.5	<0.5	<50	---	12.24	0.00	1.90
	08/24/92	---	---	---	---	---	---	---	12.29	0.00	1.85
	09/21/92	<50	<0.5	<0.5	<0.5	<0.5	*60	---	12.46	0.00	1.68
	10/26/92	---	---	---	---	---	---	---	12.52	0.00	1.62
	12/23/92	---	---	---	---	---	---	---	11.12	0.00	3.02
	01/08/93	---	---	---	---	---	---	---	---	---	---
	03/25/93	<50	<0.5	<0.5	<0.5	0.9	<10	---	9.74	0.00	4.40
	06/11/93	<50	<0.5	<0.5	<0.5	<0.5	---	770	10.44	0.00	3.70
	09/29/93	<50	<0.5	0.6	<0.5	0.6	<10	---	11.92	0.00	2.22
	12/20/93	---	---	---	---	---	---	---	---	---	---
MW-6 4.46	06/23/92	<50	4.3	<0.5	0.8	0.9	120	---	5.14	0.00	-0.68
	08/24/92	---	---	---	---	---	---	---	4.95	0.00	-0.49
	09/21/92	<250	<2.5	<2.5	<2.5	<2.5	<50	---	4.90	0.00	-0.44
	10/26/92	---	---	---	---	---	---	---	5.52	0.00	-1.06
	12/23/92	<50	<0.5	<0.5	<0.5	<0.5	81	---	5.40	0.00	-0.94
	01/08/93	---	---	---	---	---	---	---	---	---	---
	03/25/93	<50	<0.5	<0.5	<0.5	0.7	<10	---	6.10	0.00	-1.64
	06/11/93	<50	<0.5	<0.5	<0.5	<0.5	---	15,000	6.56	0.00	-2.10
	09/29/93	<50	<0.5	<0.5	<0.5	<0.5	<10	---	5.17	0.00	-0.71
	12/20/93	<50	<0.5	<0.5	<0.5	0.6	<10	---	5.93	0.00	-1.47
MW-7 5.26	06/23/92	<50	4.7	<0.5	<0.5	<0.5	<50	---	4.38	0.00	0.88
	08/24/92	---	---	---	---	---	---	---	5.55	0.00	-0.29
	09/21/92	<50	<0.5	<0.5	<0.5	<0.5	<50	---	5.65	0.00	-0.39
	10/26/92	---	---	---	---	---	---	---	5.51	0.00	-0.25
	12/23/92	<50	2.9	<0.5	<0.5	<0.5	60	---	3.95	0.00	1.31
	01/08/93	---	---	---	---	---	---	---	---	---	---
	03/25/93	<50	<0.5	<0.5	<0.5	<0.5	<10	---	2.50	0.00	2.76
	06/11/93	<50	0.6	<0.5	<0.5	<0.5	---	2,200	3.46	0.00	1.80
	09/29/93	<50	2	1	1	7	<10	---	5.52	0.00	-0.26
	12/20/93	<50	2	<0.5	<0.5	<0.5	<10	---	4.41	0.00	0.85



**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-0121**  
**3026 Lakeshore Avenue, Oakland, California**

Well ID Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylene	TPH-D	TDS	DTW (ft)	SPT (ft)	WTE (ft)
MW-8 8.94	06/23/92	<50	<0.5	<0.5	<0.5	<0.5	<50	---	24.14	0.00	-15.20
	08/24/92	---	---	---	---	---	---	---	8.60	0.00	0.34
	09/21/92	**94	<0.5	<0.5	<0.5	<0.5	<50	---	8.39	0.00	0.55
	10/26/92	---	---	---	---	---	---	---	9.12	0.00	-0.18
	12/23/92	<50	0.7	5.0	0.7	2.9	79	---	8.11	0.00	0.83
	01/08/93	---	---	---	---	---	---	---	---	---	---
	03/25/93	---	---	---	---	---	---	---	---	---	---
	06/11/93	<50	<0.5	<0.5	<0.5	<0.5	---	3,500	8.39	0.00	0.55
	09/29/93	<50	<0.5	<0.5	<0.5	<0.5	<10	---	8.25	0.00	0.69
	12/20/93	<50	<0.5	0.6	<0.5	1	<10	---	8.46	0.00	0.48
TB-LB	08/24/92	---	---	---	---	---	---	---	---	---	---
	09/21/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	10/26/92	---	---	---	---	---	---	---	---	---	---
	12/23/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	01/08/93	---	---	---	---	---	---	---	---	---	---
	03/25/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	06/11/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	09/29/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
12/20/93	<50	<0.5	<0.5	<0.5	---	---	---	---	---	---	
RB	12/20/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---

TPH-G = Total petroleum hydrocarbons-as-gasolines  
TDS = Total dissolved solids  
SPT = Separate-phase hydrocarbon thickness  
TB-LB = Trip blank/Lab blank  
-- = Not applicable, not analyzed, not measured

TPH-D = Total petroleum hydrocarbons-as-diesel fuel  
DTW = Depth to groundwater  
WTE = Water-table elevation  
RB = Rinsate blank

\* = Diesel fuel range concentration reported. The laboratory reported that the majority of peaks were observed in the gasoline range of the chromatogram, or that the pattern observed in the chromatogram was not typical of diesel fuel.  
\*\* = Gasoline range concentration reported. A nonstandard gasoline pattern was observed in the chromatogram.  
\*\*\* = Miscellaneous peak not included in gasoline total.  
\*\*\*\* = Uncategorized compound is not included in gasoline hydrocarbon total.

**ATTACHMENT 3**

**Field Data Sheets**

Project Name: Chevron Lakeshore

Date: 12-20-93

Site Address: 3026 Lakeshore, Oakland

Page 1 of \_\_\_\_\_

Project Number: 020204084.0610

Project Manager: Tim Watchers

Well ID: MW-8

DTW Measurements:

Well Diameter: 2

Initial: \_\_\_\_\_ Calc Well Volume: \_\_\_\_\_ gal

Recharge: \_\_\_\_\_ Well Volume: X3 8 gal

Purge Method \_\_\_\_\_ Pump Depth \_\_\_\_\_ ft.  
 Peristaltic \_\_\_\_\_ Hand Bailed \_\_\_\_\_  
 Gear Drive \_\_\_\_\_ Air Lift \_\_\_\_\_  
 Submersible X Other \_\_\_\_\_

Instruments Used  
 YSI: X \_\_\_\_\_ Other: \_\_\_\_\_  
 Hydac: \_\_\_\_\_  
 Omega: \_\_\_\_\_

Time	Temp C F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
8:25	10.4	9.09	6.44	2		cloudy
8:26	16.5	3.28	6.78	4		
8:27	16.6	2.97	6.79	6		
8:28	17.3	3.05	7.00	8		
8:29	17.5	3.08	6.93	10		DRY AT 10 GAL

Project Name: Chevron Lakeshore

Date: 12-10-93

Site Address: 3026 Lakeshore, Oakland

Page 2 of \_\_\_\_\_

Project Number: 020204084.0610

Project Manager: Tim Watchers

Well ID: MW-7

DTW Measurements:

Well Diameter: 2

Initial: \_\_\_\_\_ Calc Well Volume: \_\_\_\_\_ gal

Recharge: \_\_\_\_\_ Well Volume: x3 8 gal

Purge Method \_\_\_\_\_ Pump Depth \_\_\_\_\_ ft.  
 Peristaltic \_\_\_\_\_ Hand Bailed \_\_\_\_\_  
 Gear Drive \_\_\_\_\_ Air Lift \_\_\_\_\_  
 Submersible ✓ Other \_\_\_\_\_

Instruments Used  
 YSI: X \_\_\_\_\_ Other: \_\_\_\_\_  
 Hydac: \_\_\_\_\_  
 Omega: \_\_\_\_\_

Time	Temp	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
	<u>X</u> C F					
8:45	14.7	14.72	6.95	2		cloudy ↓ ✓
8:46	18.9	3.30	6.82	4		
8:47	19.9	3.63	6.78	6		
8:48	19.3	3.80	6.78	8		
8:49	18.5	3.81	6.79	10		











Project Name: Chevron Lakeshore

Date: 17-20-93

Site Address: 3026 Lakeshore, Oakland

Page 7 of \_\_\_\_\_

Project Number: 020204084.0610

Project Manager: Tim Watchers

Well ID: MW-1

DTW Measurements:

Well Diameter: 4

Initial: \_\_\_\_\_

Calc Well Volume: \_\_\_\_\_ gal

Recharge: \_\_\_\_\_

Well Volume: 83-29 gal

Purge Method \_\_\_\_\_ Pump Depth \_\_\_\_\_ ft.  
 Peristaltic \_\_\_\_\_ Hand Bailed \_\_\_\_\_  
 Gear Drive \_\_\_\_\_ Air Lift \_\_\_\_\_  
 Submersible \_\_\_\_\_ Other \_\_\_\_\_

Instruments Used  
 YSI: 0 Other: \_\_\_\_\_  
 Hydac: \_\_\_\_\_  
 Omega: \_\_\_\_\_

Time	Temp C F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
10:00	17.9	21.7	6.82	5		cloudy
10:02	17.1	03.0	7.11	10		↓
10:04	18.8	0.71#	6.78	15		
10:06	19.7	1.64	6.75	20		
10:08	19.6	1.62	6.72	25		
10:10	19.5	1.61	6.70	30		



**ATTACHMENT 4**  
**Laboratory Reports**



**Northwest Region**

4080-C Pike Lane  
Concord, CA 94520  
(510) 685-7852  
(800) 544-3422 *from inside California*  
(800) 423-7143 *from outside California*  
(510) 825-0720 (FAX)

Client Number: 020204097  
Consultant Project Number: 020204097  
Facility Number: 9-0121  
Project ID: 3026 Lakeshore  
Oakland  
Work Order Number: C3-12-0422

January 6, 1994

Tim Watchers  
Groundwater Technology, Inc.  
4057 Port Chicago Hwy.  
Concord, CA 94520

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 12/21/93.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria, unless otherwise stated in the footnotes.

GTEL is certified by the California State Department of Health Services, Laboratory certification number E1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

If you have any questions concerning this analysis or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,  
GTEL Environmental Laboratories, Inc.

A handwritten signature in black ink, appearing to read 'Rashmi Shah', is written over a white background.

Rashmi Shah  
Laboratory Director

Client Number: 020204097  
 Consultant Project Number: 020204097  
 Facility Number: 9-0121  
 Project ID: 3026 Lakeshore  
 Oakland  
 Work Order Number: C3-12-0422

**Table 1**  
**ANALYTICAL RESULTS**  
 TPH as Diesel in Water  
 Method: Modified EPA 8015a

GTEL Sample Number		03	05	07	09
Client Identification		MW8	MW7	MW6	MW3
Date Sampled		12/20/93	12/20/93	12/20/93	12/20/93
Date Extracted		12/29/93	12/29/93	12/29/93	12/29/93
Date Analyzed		01/04/94	01/04/94	01/04/94	01/04/94
Analyte	Detection Limit, ug/L	Concentration, ug/L			
TPH as diesel	10	<10	<10	<10	<10
Detection Limit Multiplier		1	1	1	1
OTP surrogate, % recovery		80.8	91.2	60.8	117

GTEL Sample Number		11	13	GCI 122993	
Client Identification		MW4	MW1	METHOD BLANK	
Date Sampled		12/20/93	12/20/93	--	
Date Extracted		12/29/93	12/29/93	12/29/93	
Date Analyzed		01/04/94	01/04/94	01/03/94	
Analyte	Detection Limit, ug/L	Concentration, ug/L			
TPH as diesel	10	3900 ✓	<10	<10	
Detection Limit Multiplier		1	1	1	
OTP surrogate, % recovery		101	92.4	96.0	

a. O-Terphenyl surrogate recovery acceptability limits are 50-150%. Test Methods for Evaluating Solid Waste, SW-846, 3rd edition, Rev. O, U.S. EPA, November, 1986.

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**Table 1**

**ANALYTICAL RESULTS**

**Volatile Organics in Water**

**EPA Methods 5030, 8020, and Modified 8015a**

GTEL Sample Number		01	02	03	05
Client Identification		TB-LB	RBMW8	MW8	MW7
Date Sampled		12/20/93	12/20/93	12/20/93	12/20/93
Date Analyzed		12/30/93	12/30/93	12/31/93	01/01/94
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5	<0.5	2 ✓
Toluene	0.5	<0.5	<0.5	0.6	<0.5
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5
Xylene, total	0.5	<0.5	<0.5	1	<0.5
TPH as Gasoline	50	<50	<50	<50	<50
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		94.0	109	80.5	89.5

a. 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 Board LUFT Manual procedures. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.

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 Oakland  
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**Table 1 (continued)**

**ANALYTICAL RESULTS**

**Volatile Organics in Water**

EPA Methods 5030, 8020, and Modified 8015<sup>a</sup>

GTEL Sample Number		07	09 <sup>b</sup>	11 <sup>b</sup>	13 <sup>b</sup>
Client Identification		MW6	MW3	MW4	MW1
Date Sampled		12/20/93	12/20/93	12/20/93	12/20/93
Date Analyzed		01/01/94	01/03/94	01/03/94	12/31/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	250 ✓	230 ✓	1900 ✓
Toluene	0.5	<0.5	4	5	36
Ethylbenzene	0.5	<0.5	8	4	82
Xylene, total	0.5	0.6	4	8	65
TPH as Gasoline	50	<50	460 ✓	570 ✓	6300 ✓
Detection Limit Multiplier		1	1	1	25
BFB surrogate, % recovery		86.2	116	126	98.4

- a. 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 Board LUFT Manual procedures. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.
- b. Uncategorized compound is not included in the gasoline hydrocarbon concentration.

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 Oakland  
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**Table 1 (continued)**

**ANALYTICAL RESULTS**

**Volatile Organics in Water**

EPA Methods 5030, 8020, and Modified 8015<sup>a</sup>

GTEL Sample Number		M123193			
Client Identification		METHOD BLANK			
Date Sampled		--			
Date Analyzed		12/30/93			
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5			
Toluene	0.5	<0.5			
Ethylbenzene	0.5	<0.5			
Xylene, total	0.5	<0.5			
TPH as Gasoline	50	<50			
Detection Limit Multiplier		1			
BFB surrogate, % recovery		90.9			

a. 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 Board LUFT Manual procedures. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.



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### QC Matrix Spike and Duplicate Spike Results

Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
<b>Modified EPA 8020:</b>							
Benzene	C3120467-03	20	ug/L	85.0	84.5	0.6	55 - 129
Toluene	C3120467-03	20	ug/L	103	103	0	72 - 149
Ethylbenzene	C3120467-03	20	ug/L	104	104	0	75 - 138
Xylene, total	C3120467-03	60	ug/L	107	106	0.9	74 - 147
<b>GC-FID:</b>							
Diesel	DI H <sub>2</sub> O	1500	ug/L	87.6	89.3	1.92	63 - 127

Fax copy of Lab Report and COC to Chevron Contact:  Yes  No

Chain-of-Custody-Record

Chevron U.S.A. Inc.  
P.O. BOX 5004  
San Ramon, CA 94583  
FAX (415)842-9591

Chevron Facility Number 9-0121  
Facility Address 3026 Lakeshore Oakland  
Consultant Project Number 020204097.0610  
Consultant Name Groundwater Technology, Inc.  
Address 4057 Port Chicago Hwy, Concord, CA. 94520  
Project Contact (Name) Tim Watchers  
(Phone) 510-671-2387 (Fax Number)

Chevron Contact (Name) MARIL MILLER  
(Phone) 842-8134  
Laboratory Name GTEL Concord  
Laboratory Release Number 876-6900  
Samples Collected by (Name) John Weber  
Collection Date 12-2-93  
Signature [Signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water C = Charcoal	A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed											NOTE: Do NOT BILL TB-LB SAMPLES  3 <sup>0</sup>  Remarks		
									BTEX + TPH GAS (8020 + 8015)	Oil and Grease (5520)	Purgeable Hydrocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)	8270 (HCLD)	Hold					
TB-LB	01	2	W		G		Ice	YES	X													IF A SINGLE
RBMWB	02	6				9:40			X													PEAKS HOW UP
<del>RBWB</del>	03	6				9:40			X													ON THE CHROMOGRAM
RBMW7	04	1				9:30																WENT TO ANALYSE
<del>RBWB</del>	05	6				9:30			X													FOR 8240
RBMWB	06	1				9:20																CONTACT
<del>RBWB</del>	07	6				9:20			X													TIM WATCHERS
RBMW3	08	1				10:15																BEFORE RECEIVING
<del>RBWB</del>	09	6				10:0			X													
RBMW4	10	1				11:00																
<del>RBWB</del>	11	6				11:00			X													
RBMW1	12	1				11:15																
<del>RBWB</del>	13	6				11:15			X													

C3120422

Relinquished By (Signature) <u>[Signature]</u>	Organization GTI	Date/Time 12/20/93	Received By (Signature) <u>[Signature]</u>	Organization GTI	Date/Time 12/20/93	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days As Contracted
Relinquished By (Signature) <u>[Signature]</u>	Organization GTI	Date/Time 10 12/21/93	Received By (Signature) <u>[Signature]</u>	Organization GTEL	Date/Time 10 12/21/93	
Relinquished By (Signature) <u>[Signature]</u>	Organization GTEL	Date/Time 15:00 12/21/93	Received For Laboratory By (Signature) <u>[Signature]</u>		Date/Time 12/21/93 15:00	

