

# GROUNDWATER TECHNOLOGY, INC.

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

FAX: (415) 685-9148

April 4, 1994

Project No. 020105494

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

SUBJECT: *Groundwater Monitoring and Sampling Activities*  
Chevron Service Station No. 9-1723  
9757 San Leandro St., Oakland, California

Dear Mr. Kan:

Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on February 10, 1994. Three groundwater monitoring wells at this site were gauged to measure depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not detected in the monitoring wells. A potentiometric surface map and a summary of groundwater monitoring data are presented in Attachments 1 and 2, respectively. After the DTW was measured, the monitoring wells were purged and sampled. Field data sheets are presented in Attachment 3. The groundwater samples were analyzed for benzene, toluene, ethylbenzene, and xylenes, and for total petroleum hydrocarbons-as-gasoline. Results of the chemical analyses are summarized in Table 1. The laboratory report and chain-of-custody record are included in Attachment 4. Monitoring-well purge water was transported by Groundwater Technology 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

Tim Watchers

Project Manager

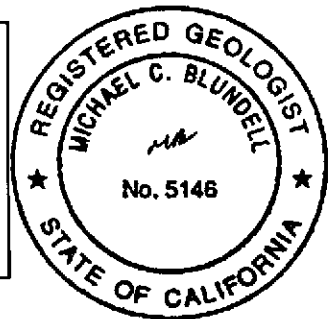
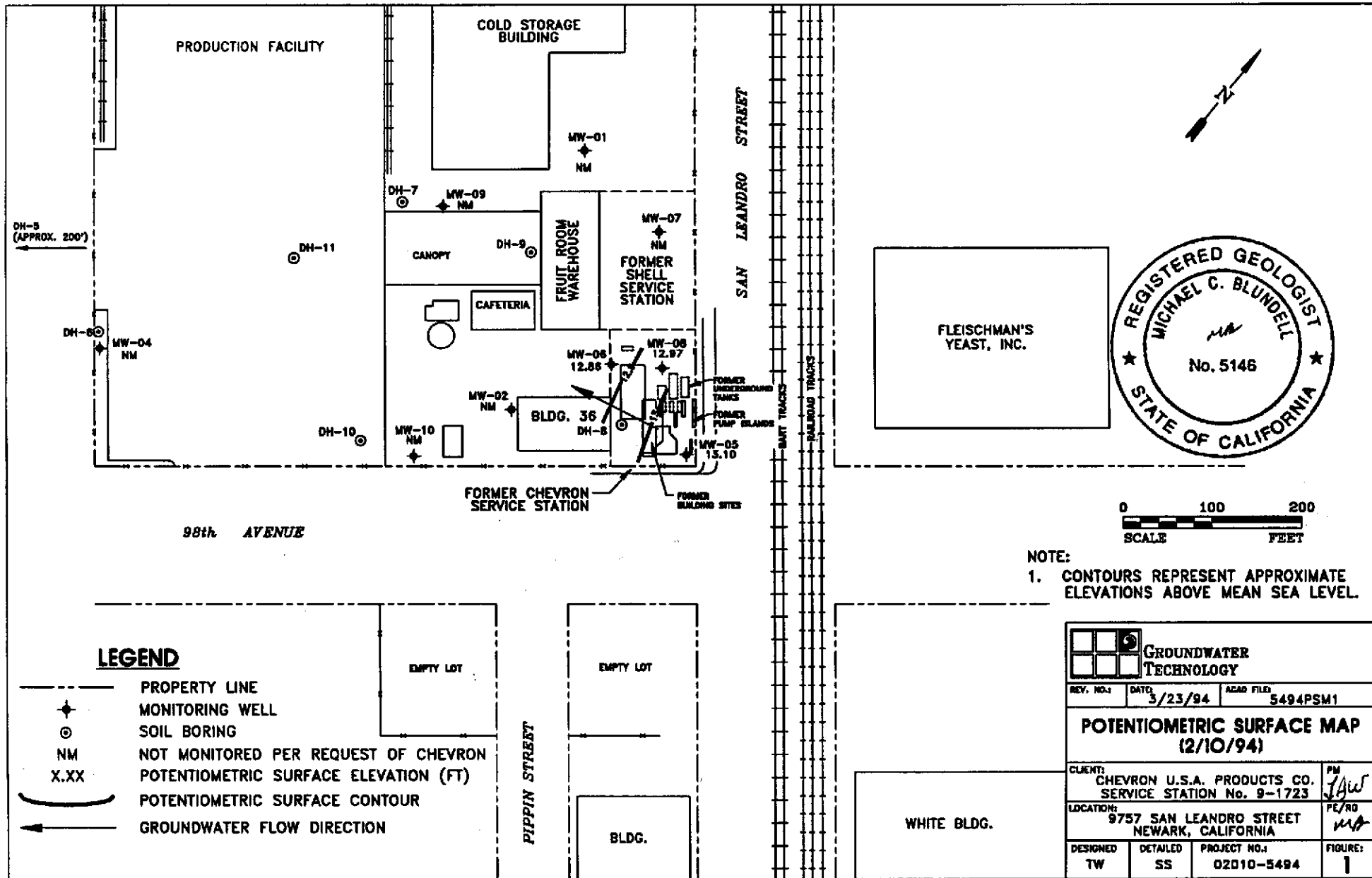
PR *KJ*

Attachment 1 Figure  
Attachment 2 Table  
Attachment 3 Field Data Sheets  
Attachment 4 Laboratory Report

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

**ATTACHMENT 1**

**Figure**



NOTE:  
1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.

**LEGEND**

- PROPERTY LINE
- MONITORING WELL
- SOIL BORING
- NM NOT MONITORED PER REQUEST OF CHEVRON
- X.XX POTENTIOMETRIC SURFACE ELEVATION (FT)
- POTENTIOMETRIC SURFACE CONTOUR
- GROUNDWATER FLOW DIRECTION

REV. NO.:	DATE:	ACAD FILE:	
	3/23/94	5494PSM1	
<b>POTENTIOMETRIC SURFACE MAP</b> (2/10/94)			
CLIENT:	CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-1723		PM <i>JAW</i>
LOCATION:	9757 SAN LEANDRO STREET NEWARK, CALIFORNIA		FE/RO <i>MA</i>
DESIGNED:	DETAILED:	PROJECT NO.:	FIGURE:
TW	SS	02010-5494	1

**ATTACHMENT 2**

**Table**

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
 Chevron Service Station No. 9-1723  
 9757 San Leandro St., Oakland, California

*efb*

Well ID/ Elev	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	Lead	DTW (ft)	SPT (ft)	WTE (ft)
MW-1 20.92	11/02/93 02/10/94	---	---	---	---	---	---	10.24 ---	0.00 ---	10.68 ---
MW-2 21.31	11/02/93 02/10/93	---	---	---	---	---	---	10.48 ---	0.00 ---	10.83 ---
MW-4 ---	11/02/93 02/10/93	---	---	---	---	---	---	10.23 ---	0.00 ---	---
MW-5 21.84	11/02/93 02/10/94	790 1,400	43 52	3.4 3	22 50	12 40	<400 ---	10.69 8.74	0.00 0.00	11.15 13.10
MW-6 21.71	11/02/93 02/10/94	300 500	19 10	1.8 0.9	2.5 2	5.0 4	<400 ---	10.78 8.85	0.00 0.00	10.93 12.86
MW-7 20.95	11/02/93 02/10/94	---	---	---	---	---	---	10.07 ---	0.00 ---	10.88 ---
MW-8 21.84	11/02/93 02/10/94	15,000 6,800	2,000 1,200	440 380	420 250	1,400 7,900	---	10.82 8.87	0.00 0.00	11.02 12.97
MW-9 20.55	11/02/93 02/10/94	---	---	---	---	---	---	10.02 ---	0.00 ---	10.53 ---
MW-10 21.25	11/02/93 02/10/94	---	---	---	---	---	---	10.32 ---	0.00 ---	10.93 ---

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-1723**  
**9757 San Leandro St., Oakland, California**

Well ID/ Elev	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	Lead	DTW (ft)	SPT (ft)	WTE (ft)
Rinsate	02/10/94	<50	<0.5	0.5	<0.5	<0.5		---	---	---
TBLB	02/10/94	<50	<0.5	<0.5	<0.5	<0.5		---	---	---

TPH-G = Total petroleum hydrocarbons-as-gasoline  
DTW = Depth to water  
SPT = Separate-phase hydrocarbon thickness  
WTE = Water-table elevation  
Concentrations are in parts per billion.

**ATTACHMENT 3**

**Field Data Sheets**

Project Name: Chevron - San Leandro

Date: 2.10.94

Site Address: 9757 San Leandro St., Oakland

Page 1 of       

Project Number: 020105494.0610

Project Manager: Tim Watchers

Well ID: MW5

DTW Measurements:

Well Diameter: 2"

Initial: /

Calc Well Volume: 1.45 gal

Recharge: /

Well Volume: 3 4.3 gal

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

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

Time	Temp	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
	<input checked="" type="checkbox"/> C _____ F					
10:30	9.9	.997	7.22	0		Clear
10:31	10.0	.968	7.21	2		"
10:32	10.1	.970	7.21	3		"
10:33	10.2	.971	7.21	4		"



Project Name: Chevron - San Leandro

Date: 2.10.94

Site Address: 9757 San Leandro St., Oakland

Page 2 of       

Project Number: 020105494.0610

Project Manager: Tim Watchers

Well ID: MW-6

DTW Measurements:

Well Diameter: 2"

Initial:       

Calc Well Volume: 18 gal

Recharge:       

Well Volume: 355 gal

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

Instruments Used  
 YSI:        Other:         
 Hydac:         
 Omega: X

Time	Temp	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
	<u>C</u> <u>F</u>					
10:50	13.8	1.06	7.19	0		Clear
10:51	13.8	1.06	7.19	2		u
10:52	13.9	1.06	7.19	4		u
10:53	13.9	1.05	7.18	5		u

Project Name: Chevron - San Leandro

Date: 2.10.94

Site Address: 9757 San Leandro St., Oakland

Page 3 of \_\_\_\_\_

Project Number: 020105494.0610

Project Manager: Tim Watchers

Well ID: MW-8

DTW Measurements:

Well Diameter: 211

Initial: /  
Recharge: /

Calc Well Volume: 1.61 gal  
Well Volume: 3 4.8 gal

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

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

Time	Temp <u>X</u> C ____ F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
10:56	14.9	1.01	7.19	0		clear
10:57	14.9	1.02	7.19	2		"
10:58	15.0	1.04	7.19	4		"
10:59	15.0	1.06	7.18	5		"

**ATTACHMENT 4**

**Laboratory Report**



4080 Pike Lane  
Concord, CA 94520  
(510) 685-7852  
(800) 544-3422 Inside CA  
(800) 423-7143 Outside CA  
(510) 825-0720 FAX

Client Number: 020105494  
Consultant Project Number: 020105494  
Facility Number: 9-1723  
Project ID: 9757 San Leandro St.  
Oakland  
Work Order Number: C4-02-0199

February 16, 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 02/11/94.

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.

Rashmi Shah  
Laboratory Director

Client Number: 020105494  
 Consultant Project Number: 020105494  
 Facility Number: 9-1723  
 Project ID: 9757 San Leandro St.  
 Oakland  
 Work Order Number: C4-02-0199

**Table 1**  
**ANALYTICAL RESULTS**  
 Aromatic Volatile Organics and  
 Total Petroleum Hydrocarbons as Gasoline in Water  
 EPA Methods 5030, 8020, and Modified 8015<sup>a</sup>

GTEL Sample Number		01	03	04	05
Client Identification		TB-LB	MW-5	RBMW6	MW-6
Date Sampled		02/10/94	02/10/94	02/10/94	02/10/94
Date Analyzed		02/11/94	02/12/94	02/15/94	02/15/94
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	52	<0.5	10
Toluene	0.5	<0.5	3	0.5	0.9
Ethylbenzene	0.5	<0.5	50	<0.5	2
Xylene, total	0.5	<0.5	40	<0.5	4
TPH as Gasoline	50	<50	1400	<50	200
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		80.9	100	102	89.1

- 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%.

Client Number: 020105494  
 Consultant Project Number: 020105494  
 Facility Number: 9-1723  
 Project ID: 9757 San Leandro St.  
 Oakland  
 Work Order Number: C4-02-0199

**Table 1 (continued)**

**ANALYTICAL RESULTS**

**Aromatic Volatile Organics and**

**Total Petroleum Hydrocarbons as Gasoline in Water**

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

GTEL Sample Number		07	Z021394		
Client Identification		MW8	METHOD BLANK		
Date Sampled		02/10/94	--		
Date Analyzed		02/15/94	02/13/94		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	1200	<0.5		
Toluene	0.5	380	<0.5		
Ethylbenzene	0.5	250	<0.5		
Xylene, total	0.5	7900	<0.5		
TPH as Gasoline	50	6500	<50		
Detection Limit Multiplier		10	1		
BFB surrogate, % recovery		106	81.9		

- 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%.

Client Number: 020105494  
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Oakland  
Work Order Number: C4-02-0199

### 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	C4020196-02	20.0	ug/L	91.5	93.0	1.4	57.3 - 138
Toluene	C4020196-02	20.0	ug/L	90.5	91.0	0.6	63.0 - 134
Ethylbenzene	C4020196-02	20.0	ug/L	95.5	96.0	0.5	59.3 - 137
Xylene, total	C4020196-02	60.0	ug/L	98.2	98.2	0	59.3 - 144

