



**Chevron**

December 31, 1993

**Chevron U.S.A. Products Company**  
2410 Camino Ramon  
San Ramon, CA 94583

**Marketing Department**  
Phone 510 842 9500

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

**Re: Former Chevron Service Station #9-1153  
3126 Fernside Boulevard, Alameda, CA**

Dear Ms. Shin:

Enclosed is the quarterly Groundwater Monitoring and Sampling Activities report dated November 22, 1993, prepared by our consultant Groundwater Technology, Inc. for the above referenced site. As indicated in the report, groundwater samples collected were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and BTEX. Benzene was detected in monitor wells C-1, MW-3, MW-5, and MW-6 at concentrations of 12000, 12, 190, and 150 ppb, respectively. Depth to ground water was measured at approximately 3.8 feet to 4.5 feet below grade and the direction of flow is to the east.

The ground water extraction system at this site has removed and treated approximately 84,000 gallons of hydrocarbon impacted ground water to date. The system is currently operating on a consistent basis.

Groundwater Technology has completed the installation of the permanent down gradient well and the temporary up gradient well. We will forward the results of the investigation to your office shortly.

Chevron will continue to monitor and sample wells at this site and report findings on a quarterly basis. If you have any questions or comments, please do not hesitate to contact me at (510) 842-8134.

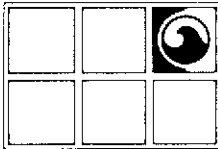
Sincerely,  
CHEVRON U.S.A. PRODUCTS COMPANY

  
Mark A. Miller  
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Eddy So, RWQCB - Bay Area  
Mr. Mike Cooke - Weiss Associates  
Ms. B.C. Owen  
File (9-1153 QM5)

Mr. Larry Bolten  
State Farm Insurance  
2509 Santa Clara Avenue  
Alameda, CA 94501



# GROUNDWATER TECHNOLOGY, INC.

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

FAX: (415) 685-9148

November 22, 1993

Project No. 020204100

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


SUBJECT: *Groundwater Monitoring and Sampling Activities*  
Chevron Service Station No. 9-1153  
3126 Fenside Boulevard, Alameda, California


Dear Mr. Miller:

Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on October 19, 1993. Five groundwater monitoring wells at the 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 (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. The groundwater samples collected 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 3. 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

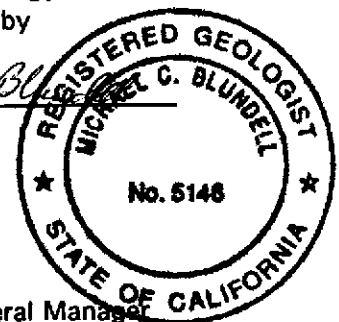
  
\_\_\_\_\_  
Tim Watchers  
Project Geologist

PR 

Attachment 1 Figure  
Attachment 2 Table  
Attachment 3 Laboratory Report

Groundwater Technology, Inc.  
Reviewed/Approved by

  
\_\_\_\_\_  
Michael C. Blundell  
Registered Geologist  
No. 5146

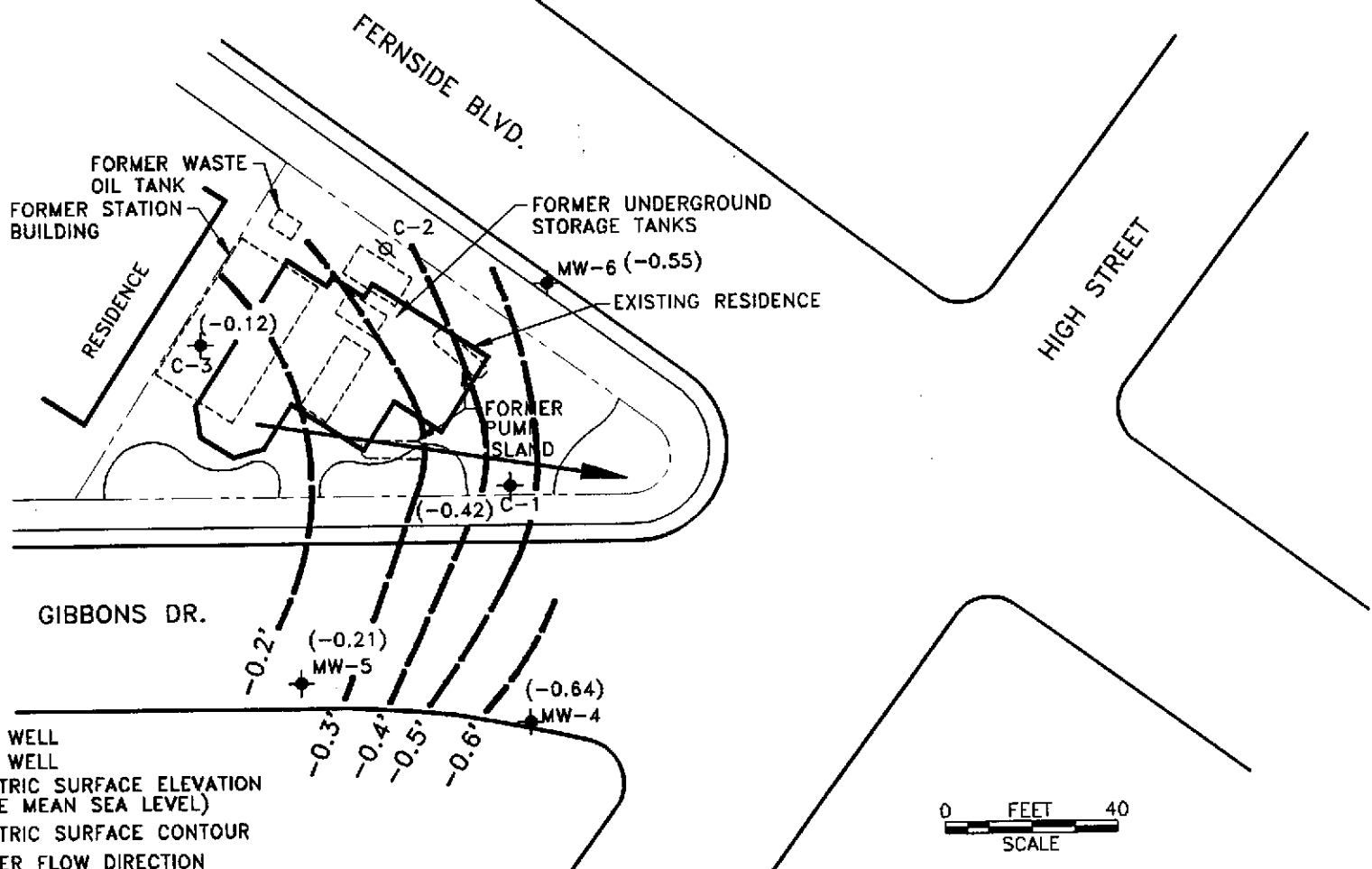
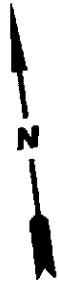


For:  
Wendell W. Lattz  
Vice President, General Manager  
West Region

4100R033.020

**ATTACHMENT 1**

**Figure**



**LEGEND**

- MONITORING WELL
- ABANDONED WELL
- POTENTIOMETRIC SURFACE ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- POTENTIOMETRIC SURFACE CONTOUR
- GROUNDWATER FLOW DIRECTION



<b>GROUNDWATER TECHNOLOGY</b>				4057 PORT CHICAGO HWY CONCORD, CA 94520 (510) 671-2387		<b>POTENTIOMETRIC SURFACE MAP</b> <b>(10/19/93)</b>	
CLIENT: <b>CHEVRON U.S.A. PRODUCTS CO.</b> SERVICE STATION No. 9-1153				LOCATION: <b>3126 FERNSIDE BLVD.</b> <b>ALAMEDA, CALIFORNIA</b>		REV. NO.: 0	DATE: 11/15/93
PM <i>J. A. ...</i>	PE/RG <i>epu/B</i>	DESIGNED TW	DETAILED CY	ACAD FILE: PSMN93	PROJECT NO.: 020204098	FIGURE: <b>1</b>	

**ATTACHMENT 2**

**Table**

**TABLE 1**  
**HISTORICAL GROUNDWATER MONITORING AND ANALYTICAL RESULTS**  
 Chevron Service Station No. 9-1153  
 3126 Fernside Boulevard, Alameda, California

Well ID/ Elev	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
C-1          4.08	08/18/86	---	---	---	---	---	4.10	---	---
	09/04/86	15,000	760	820	1,500 <sup>1</sup>	---	---	---	---
	07/22/87	1,100	250	7	40 <sup>1</sup>	---	---	---	---
	05/03/89	6,900	3,800	190	229 <sup>1</sup>	---	4.46	---	---
	12/04/89	17,000	8,000	490	470 <sup>1</sup>	---	4.16	---	---
	02/14/90	19,000	12,000	990	1,050 <sup>1</sup>	---	3.64	---	---
	03/07/90	---	4,260	261	430 <sup>1</sup>	---	3.36	---	---
	09/06/91	21,000	10,000	100	240	560	4.43	0.00 <sup>2</sup>	---
	12/15/91	20,000	4,900	43	110	330	4.78	0.00 <sup>2</sup>	---
	03/03/92	13,000	5,800	730	340	1,200	2.39	0.00 <sup>2</sup>	---
	06/04/92	34,000	9,400	350	290	1,200	4.08	0.00	0.00
	10/13/92	24,000	11,000	98	280	530	4.75	0.00	-0.67
	01/11/93	7,100	1,500	130	150	700	2.26	Sheen	1.82
04/14/93	29,000	7,300	4,000	640	2,300	2.90	Sheen	1.18	
07/13/93	650,000	27,000	18,000	6,300	29,000	3.97	Sheen	0.11	
10/19/93	40,000	12,000	730	1,100	3,600	4.50	0.00	-0.42	
C-2	08/18/86	---	---	---	---	---	---	---	---
	09/04/86	1,100	49	18	84 <sup>1</sup>	---	---	---	---
	07/22/87	<50	1.8	<1.0	<4.0 <sup>1</sup>	---	---	---	---
	05/03/89	Abandoned	---	---	---	---	---	---	---

**TABLE 1**  
**HISTORICAL GROUNDWATER MONITORING AND ANALYTICAL RESULTS**  
**Chevron Service Station No. 9-1153**  
**3126 Fenside Boulevard, Alameda, California**

Well ID/ Elev	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
C-3         4.41	08/18/86	---	---	---	---	---	4.00	---	---
	09/04/86	50	3.2	5.4	5.8 <sup>1</sup>	---	---	---	---
	07/22/87	<50	<0.5	<1.0	<4.0 <sup>1</sup>	---	---	---	---
	05/03/89	<50	<0.5	<1.0	<2.0 <sup>1</sup>	---	4.15	---	---
	12/04/89	<250	<0.5	<0.5	<0.5 <sup>1</sup>	---	4.24	---	---
	02/14/90	<50	<0.5	<0.5	<0.5 <sup>1</sup>	---	3.57	---	---
	03/07/90	NA	<5	<5	<5 <sup>1</sup>	---	3.31	---	---
	09/06/91	<50	<0.5	<0.5	<0.5	<0.5	4.59	0.00 <sup>2</sup>	---
	12/15/91	<50	<0.5	<0.5	<0.5	<0.5	4.84	0.00 <sup>2</sup>	---
	03/03/92	<50	<0.5	<0.5	<0.5	<0.5	2.17	0.00 <sup>2</sup>	---
	06/04/92	<50	<0.5	<0.5	<0.5	<0.5	4.01	0.00	0.40
	10/13/92	<50	<0.5	<0.5	<0.5	<0.5	4.79	0.00	-0.38
	01/11/93	<50	<0.5	<0.5	<0.5	<0.5	2.01	0.00	2.40
	04/14/93	<50	<0.5	<0.5	<0.5	<0.5	2.76	0.00	1.65
07/13/93	<50	<0.5	<0.5	<0.5	<0.5	3.96	0.00	0.45	
10/19/93	66	12	1.4	1.0	8.4	4.53	0.00	-0.12	
MW-4 3.58	06/04/92	<50	0.8	<0.5	<0.5	<0.5	3.63	0.00	-0.05
	10/13/92	---	---	---	---	---	---	---	---
	01/11/93	<50	<0.5	<0.5	<0.5	<0.5	1.89	0.00	1.69
	04/14/93	<50	<0.5	<0.5	<0.5	<1.5	2.20	0.00	1.38
	07/13/93	54	2.6	1.6	<0.5	<1.5	3.51	0.00	0.07
	10/19/93	<50	<0.5	<0.5	<0.5	<0.5	4.22	0.00	-0.64
MW-5 3.61	06/04/92	560	110	0.5	37	2.2	3.25	0.00	0.36
	10/13/92	1,200	150	<2.5	84	8.6	4.20	0.00	-0.59
	01/11/93	1,300	48	1.0	83	33	1.30	0.00	2.31
	04/14/93	2,800	240	6.1	250	170	1.20	0.00	2.41
	07/13/93	1,700	260	7.8	160	100	3.15	0.00	0.46
	10/19/93	1,900	190	3.3	200	93	3.82	0.00	-0.21



**TABLE 1**  
**HISTORICAL GROUNDWATER MONITORING AND ANALYTICAL RESULTS**  
 Chevron Service Station No. 9-1153  
 3126 Fernside Boulevard, Alameda, California

Well ID/ Elev	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
MW-6 3.85	06/04/92	210	54	<0.5	1.9	2.4	3.89	0.00	-0.04
	10/13/92	*10,000	5,300	<10	70	<10	4.56	0.00	-0.71
	01/11/93	100	50	<0.5	<0.5	<0.5	2.36	0.00	1.49
	04/14/93	<50	<0.5	<0.5	<0.5	<0.5	3.15	0.00	0.70
	07/13/93	<50	1.8	<0.5	<0.5	<1.5	3.94	0.00	-0.09
	10/19/93	320	150	<0.5	0.8	0.5	4.40	0.00	-0.55
Trip Blank	02/14/90	<50	<0.5	1.1	<0.5	<0.5	---	---	---
	09/06/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	12/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	03/03/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	06/04/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/13/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/11/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/14/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/13/93	<50	<0.5	<0.5	<0.5	<1.5	---	---	---
10/19/93	<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 = Groundwater elevation in feet above mean sea level  
 --- = Not applicable/not sampled/not measured  
 \* = Gasoline range concentration reported. The chromatogram shows only a single peak in the gasoline range.  
 1 = Ethylbenzene and xylenes were reported together.  
 2 = Product thickness was measured with an MMC flexi-dip interface probe.

Before June 4, 1992, the top-of-casing elevations were unknown.  
 Analytical results are in micrograms per liter or parts per billion.

**ATTACHMENT 3**

**Laboratory Report**



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

GROUNDWATER TECHNOLOGY, INC.  
Attn: Nicole Merchant

Project 9-1153  
Reported 10/28/93

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
30012- 1	TBLB	10/19/93	10/27/93 Water
30012- 2	C3	10/19/93	10/26/93 Water
30012- 3	MW4	10/19/93	10/27/93 Water
30012- 4	MW6	10/19/93	10/26/93 Water
30012- 5	MW5	10/19/93	10/26/93 Water
30012- 6	C1	10/19/93	10/27/93 Water

## RESULTS OF ANALYSIS

Laboratory Number: 30012- 1    30012- 2    30012- 3    30012- 4    30012- 5

Gasoline:	ND<50	66	ND<50	320	1900
Benzene:	ND<0.5	12	ND<0.5	150	190
Toluene:	ND<0.5	1.4	ND<0.5	ND<0.5	3.3
Ethyl Benzene:	ND<0.5	1.0	ND<0.5	0.8	200
Total Xylenes:	ND<0.5	8.4	ND<0.5	0.5	93
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number: 30012- 6

Gasoline:	40000
Benzene:	12000
Toluene:	730
Ethyl Benzene:	1100
Total Xylenes:	3600
Concentration:	ug/L



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

## C E R T I F I C A T E   O F   A N A L Y S I S

### ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

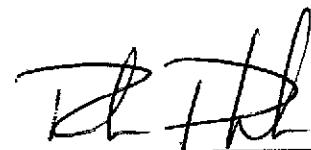
Page 2 of 2  
QA/QC INFORMATION  
SET: 30012

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
ug/L = parts per billion (ppb)

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	89/93	4%	70-130
Benzene:	80/97	19%	70-130
Toluene:	91/108	18%	70-130
Ethyl Benzene:	100/117	16%	70-130
Total Xylenes:	100/117	16%	70-130

 11/2/93  
Senior Chemist

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

30012

Chain-of-Custody-Record

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

Chevron Facility Number 9-1153  
Facility Address 3126 Fernside Blvd  
Consultant Project Number 020204100  
Consultant Name Groundwater Technology, Inc.  
Address 4057 Port Chicago Hwy, Concord, CA 94520  
Project Contact (Name) Nicole Merchant  
(Phone) 671-2387 (Fax Number) 685-9148

Chevron Contact (Name) Mark Miller  
(Phone) 842-8134  
Laboratory Name Superior  
Laboratory Release Number 590-1420  
Samples Collected by (Name) Anthony Smith  
Collection Date 10/19/93  
Signature \_\_\_\_\_

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analytes To Be Performed											Remarks			
								BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP, for AA)	SS	WE					
TBUB		2	W		5:15	HCL	Y	X														Do not Bill TB-UB
<del>RBC3</del>																						
C3		3			5:15			X														Stay turnaround for MW-6 only
<del>RBMW4</del>																						If single peaks shows
MW4		3			5:20			X														up call →
<del>RBMW6</del>																						X hold samples for 8010. IF
MW6		6			5:25			X		X												single peaks show
<del>RBMW5</del>																						up. Call Tim
MW5		3			5:30			X														Watch at
<del>RBC1</del>																						671-2387
C1		3			5:35		Y	X														before running sample.

SS  
WE  
HOLD  
HOLD  
8010 SAMPLE FOR MW6  
8010 UNPREPARED

Relinquished By (Signature) <u>Anthony Smith</u>	Organization <u>GTE</u>	Date/Time <u>10/20/93 8:00</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>GTE</u>	Date/Time <u>10/20/93 8:00</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days As Contracted
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>GTE</u>	Date/Time <u>10/20/93 4:10</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>AERO</u>	Date/Time <u>10/20/93</u>	
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>AERO</u>	Date/Time <u>10/20/93 4:35pm</u>	Received For Laboratory By (Signature) <u>[Signature]</u>		Date/Time <u>10/20/93</u>	

COC-3/JMG/03 8/1/93