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HAZMAT

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**Chevron**

April 21, 1994

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

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

**Marketing Department**  
Phone 510 842 9500

**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 February 25, 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 (TPH-G) and BTEX. Benzene was detected in monitor wells C-1, MW-5, MW-6, and MW-7 at concentrations of 8600, 100, 45, and 21 ppb, respectively. Depth to ground water was measured at approximately 2.4 feet to 4.5 feet below grade and the direction of flow is to the east.

The ground water monitoring data continues to indicate that the extent of the dissolved hydrocarbon plume has been sufficiently defined. We will continue to monitor and sample all wells at this site on a quarterly basis in conjunction with operating the ground water extraction system.

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

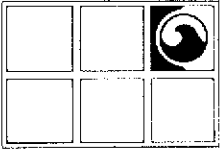
Mark A. Miller  
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Eddy So, RWQCB - Bay Area  
Mr. Mike Cooke - Weiss Associates  
Ms. B.C. Owen

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

File: 9-1153 QM6



# GROUNDWATER TECHNOLOGY, INC.

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

FAX: (415) 685-9148

February 25, 1994

Project No. 020104100

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 Fernside Boulevard, Alameda, California

Dear Mr. Miller:

Groundwater Technology, Inc. presents the quarterly groundwater monitoring and sampling data collected on January 27, 1994. Six 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 and a summary of groundwater monitoring data are presented in Attachments 1 and 2, respectively. After the DTW was measured, each monitoring well was purged and sampled. Field data sheets are presented in Attachment 3. 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 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*  
\_\_\_\_\_  
Tim Watchers  
Project Manager

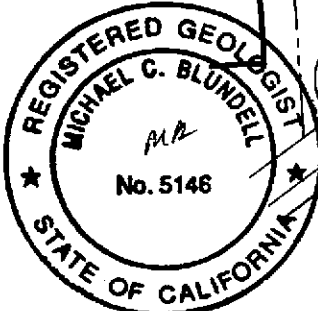
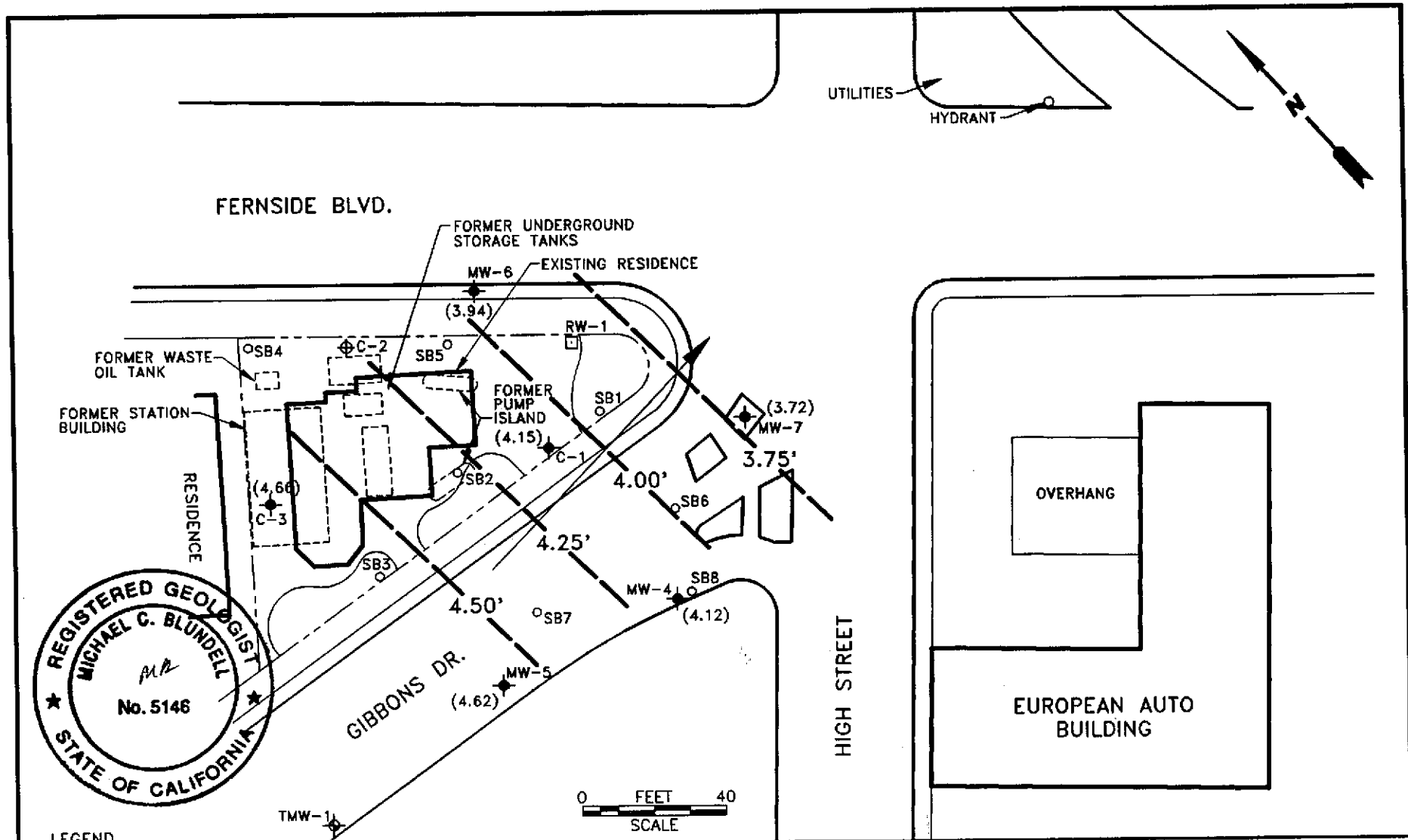
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Attachment 1 Figure  
Attachment 2 Table  
Attachment 3 Field Data Sheets  
Attachment 4 Laboratory Report

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

**ATTACHMENT 1**

**Figure**



- LEGEND**
- ◆ MONITORING WELL
  - EXTRACTION WELL
  - ⊕ ABANDONED WELL
  - ⊕ TEMPORARY MONITORING WELL
  - SOIL BORING
  - ( ) POTENTIOMETRIC SURFACE ELEVATION
  - 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>(1/27/94)</b>	
<b>CLIENT:</b> CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-1153				<b>LOCATION:</b> 3126 FERNSIDE BLVD. ALAMEDA, CALIFORNIA		<b>REV. NO.:</b> 0	<b>DATE:</b> 2/24/94
<b>PM</b> <i>Jaw</i>	<b>PE/RG</b> <i>MB</i>	<b>DESIGNED</b> TW	<b>DETAILED</b> ML	<b>ACAD FILE:</b> PSM12794/SP194	<b>PROJECT NO.:</b> 020104100	<b>FIGURE:</b> 1	

**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	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>	---	
	4.08	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	
7.50	10/19/93	40,000	12,000	730	1,100	3,600	4.50	0.00	-0.42	
	11/30/93	---	---	---	---	---	4.27	0.00	3.23	
	01/27/94	36,000	8,600	220	670	1,900	3.35	0.00	4.15	
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	<b>Abandoned</b>	---	---	---	---	---	---	---	

**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-3	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>	---	
	4.41	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	<1.5	3.96	0.00	0.45	
7.83	10/19/93	66	12	1.4	1.0	8.4	4.53	0.00	-0.12	
	11/30/93	---	---	---	---	---	4.04	0.00	3.79	
	01/27/94	<50	<0.5	<0.5	<0.5	<0.5	3.17	0.00	4.66	
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	
7.01	11/30/93	---	---	---	---	---	4.01	0.00	3.00	
	01/27/94	<50	<0.5	<0.5	<0.5	<0.5	2.89	0.00	4.12	

**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-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	2,600	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
	11/30/94	---	---	---	---	---	3.56	0.00	3.48
	01/27/94	4,000	100	12	210	110	2.42	0.00	4.62
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
	11/30/94	---	---	---	---	---	4.16	0.00	3.11
	01/27/94	120	45	<0.5	<0.5	<0.5	3.33	0.00	3.94



**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-7 8.22	11/30/93	480	110	41	4.4	38	5.33	0.00	2.89
	01/27/94	120	21	1.1	2.2	4.8	4.50	0.00	3.72
TMW-1 ---	11/11/93	<1	<0.5	<0.5	<0.5	<0.5	---	0.00	---
TBLB	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	---	---	---
01/27/94	<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 = 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.
- <sup>1</sup> = Ethylbenzene and xylenes were reported together.
- <sup>2</sup> = 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**

**Field Data Sheets**











1/23/94

6 of 6

well ID C-1

well Dia 3"

DTM MERS  
Initial 3.35

well vol 18

Had failed +

YSI +

Time	Temp °C	Cond	pH	Purge Vol gals	Comments
1144	8.2	0.76	6.86	2	Cloudy Dark grey / sediment GAS SHEEN
1147	16.0	0.80	6.94	5	
1152	17.2	0.92	6.93	10	
1159	17.1	0.96	7.07	15	✓
1207	17.1	0.98	7.01	18	✓



**ATTACHMENT 4**

**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: TIM WATCHERS

Project 9-1153  
Reported 02/04/94

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
30237- 1	TB-LB	01/27/94	02/02/94 Water
30237- 2	C-3	01/27/94	02/02/94 Water
30237- 3	MW-7	01/27/94	02/02/94 Water
30237- 4	MW-4	01/27/94	02/02/94 Water
30237- 5	MW-6	01/27/94	02/02/94 Water
30237- 7	MW-5	01/27/94	02/02/94 Water
30237- 8	C-1	01/27/94	02/03/94 Water

## RESULTS OF ANALYSIS

Laboratory Number: 30237- 1 30237- 2 30237- 3 30237- 4 30237- 5

Gasoline:	ND<50	ND<50	120	ND<50	120
Benzene:	ND<0.5	ND<0.5	21	ND<0.5	45
Toluene:	ND<0.5	ND<0.5	1.1	ND<0.5	ND<0.5
Ethyl Benzene:	ND<0.5	ND<0.5	2.2	ND<0.5	ND<0.5
Total Xylenes:	ND<0.5	ND<0.5	4.8	ND<0.5	ND<0.5
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number: 30237- 7 30237- 8

Gasoline:	4000	36000
Benzene:	100	8600
Toluene:	12	220
Ethyl Benzene:	210	670
Total Xylenes:	110	1900
Concentration:	ug/L	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: 30237

NA = ANALYSIS NOT REQUESTED

ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT

ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:

Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:

Minimum Quantitation Limit for Diesel in Water: 50ug/L

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:	120/118	2%	70-130
Benzene:	99/97	2%	70-130
Toluene:	93/93	0%	70-130
Ethyl Benzene:	79/78	1%	70-130
Total Xylenes:	96/96	0%	70-130

Senior Chemist

GTIUD 50007  Yes  No

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 <u>4-1153</u>	Chevron Contact (Name) <u>Mark Miller</u>
	Facility Address <u>3126 Fernside Blvd Alameda</u>	(Phone) <u>(510) 842-8134</u>
	Consultant Project Number <u>020104100-0610</u>	Laboratory Name <u>Superior Labs</u>
	Consultant Name <u>Groundwater Technology, Inc.</u>	Laboratory Release Number <u>590-1420</u>
	Address <u>4057 Port Chicago Hwy, Concord, CA. 94520</u>	Samples Collected by (Name) <u>JEFF NELSON</u>
Project Contact (Name) <u>Tim Watchers</u>	Collection Date <u>1/27/94</u>	Signature <u>[Signature]</u>
	(Phone) <u>510-671-2387</u> (Fax Number)	

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type C = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed										Remarks		
								BTX + 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 or AA)	EPA 8010				
TOLD	1	2	W	G	1253	HCL	Y	X												
C-3	2	3			1304			X												
MW-2	3	3			1314			X												
MW-4	4	3			1322			X												
MW-6	5	3			1333			X												5 Day Turnaround*
MW-6	6	3			1335			X												ON HOLD
MW-5	7	3			1346			X												
C-1	8	3			1253			X												

Please Initial:

Sample stored in ice yes

Appropriate containers yes

Sample preserved yes

VOL's checked yes

Sanitized yes

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>GTI</u>	Date/Time <u>1/27/94</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>HERO</u>	Date/Time <u>1/28/94</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days As Contracted
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>GTI</u>	Date/Time <u>1-28-94</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>HERO</u>	Date/Time <u>1/28/94</u>	
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>HERO</u>	Date/Time <u>1/28/1994</u>	Received For Laboratory By (Signature) <u>[Signature]</u>	Organization <u>HERO</u>	Date/Time <u>11:30 am</u>	

\* If single contact shows up - Contact Tim Watchers