Chevron

93 SEP 27 AM 11:52

September 23, 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 August 25, 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-4, MW-5, and MW-6 at concentrations of 27000, 2.6, 260, and 1.8 ppb, respectively. Depth to ground water was measured at approximately 3.2 feet to 4.0 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 76,000 gallons of hydrocarbon impacted ground water to date. The system is currently operating on a consistent basis.

Chevron will proceed with the Groundwater Technology work plan of June 16, 1993, with the following two modifications. As we discussed in our meeting of September 22, 1993, the proposed down gradient monitor well will be moved approximately 20 feet to the northeast. Additionally, the up gradient well in Gibbons Drive will be installed as a temporary well to be used for one time sampling. I have attached a site plan which shows these modifications.

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.

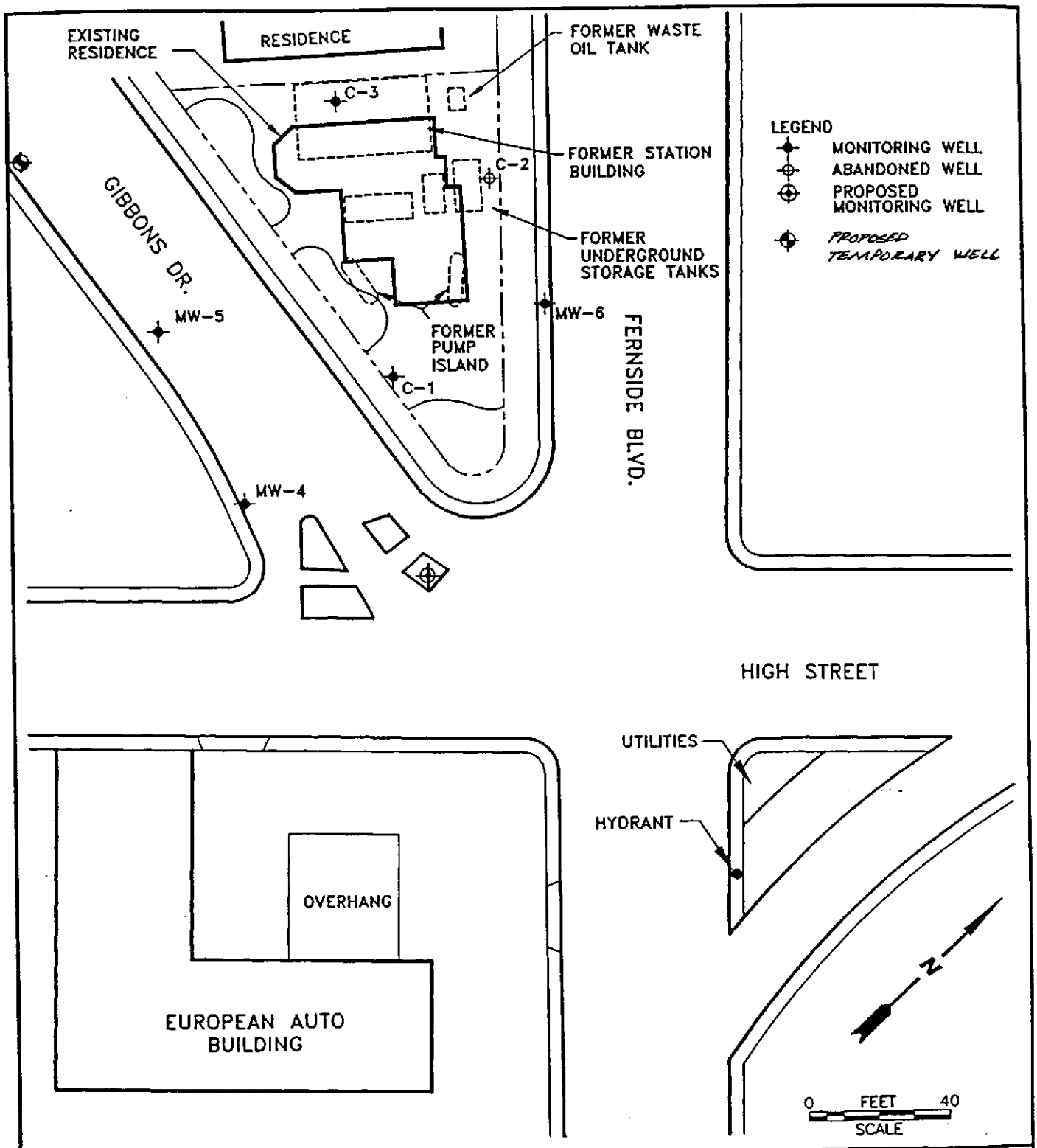
Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Eddy So, RWQCB - Bay Area
Mr. Tom Berry - Weiss Associates
Ms. B.C. Owen
File (9-1153 QM4)

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



SITE PLAN

CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-1153				LOCATION: 3126 FERNSIDE BLVD. ALAMEDA, CALIFORNIA	REV. NO.: 0	DATE:
PM	PE/RG	DESIGNED	DETAILED	ACAD FILE:	PROJECT NO.:	FIGURE:

SEP 2 '93 J.M.M.

GROUNDWATER TECHNOLOGY, INC.

4057 Port Chicago Highway, Concord, CA 94520 (415) 671-2387
FAX: (415) 685-9148

August 25, 1993

Project No. 020204100

Mr. Mark Miller
Chevron U.S.A. Inc.
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 attached quarterly groundwater monitoring and sampling data collected on July 13, 1993. Five groundwater monitoring wells at this site were gauged to measure depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons. **A separate-phase hydrocarbon sheen was detected in monitoring well C-1.** 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 total petroleum hydrocarbons-as-gasoline. Results of the chemical analyses are summarized in Table 1. Additional samples collected from wells C-1, C-3, MW-4, MW-5, and MW-6 were analyzed for total dissolved solids; results are presented in Table 2. The laboratory report and chain-of-custody record are included in Attachment 3. Attachment 4 contains the conductivity, temperature, and pH measurements before groundwater samples were collected. 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

Groundwater Technology, Inc.
Reviewed/Approved by

David R. Kleesattel
Registered Geologist
No. 5136

For:
Wendell Lattz
Vice President, General Manager
West Region

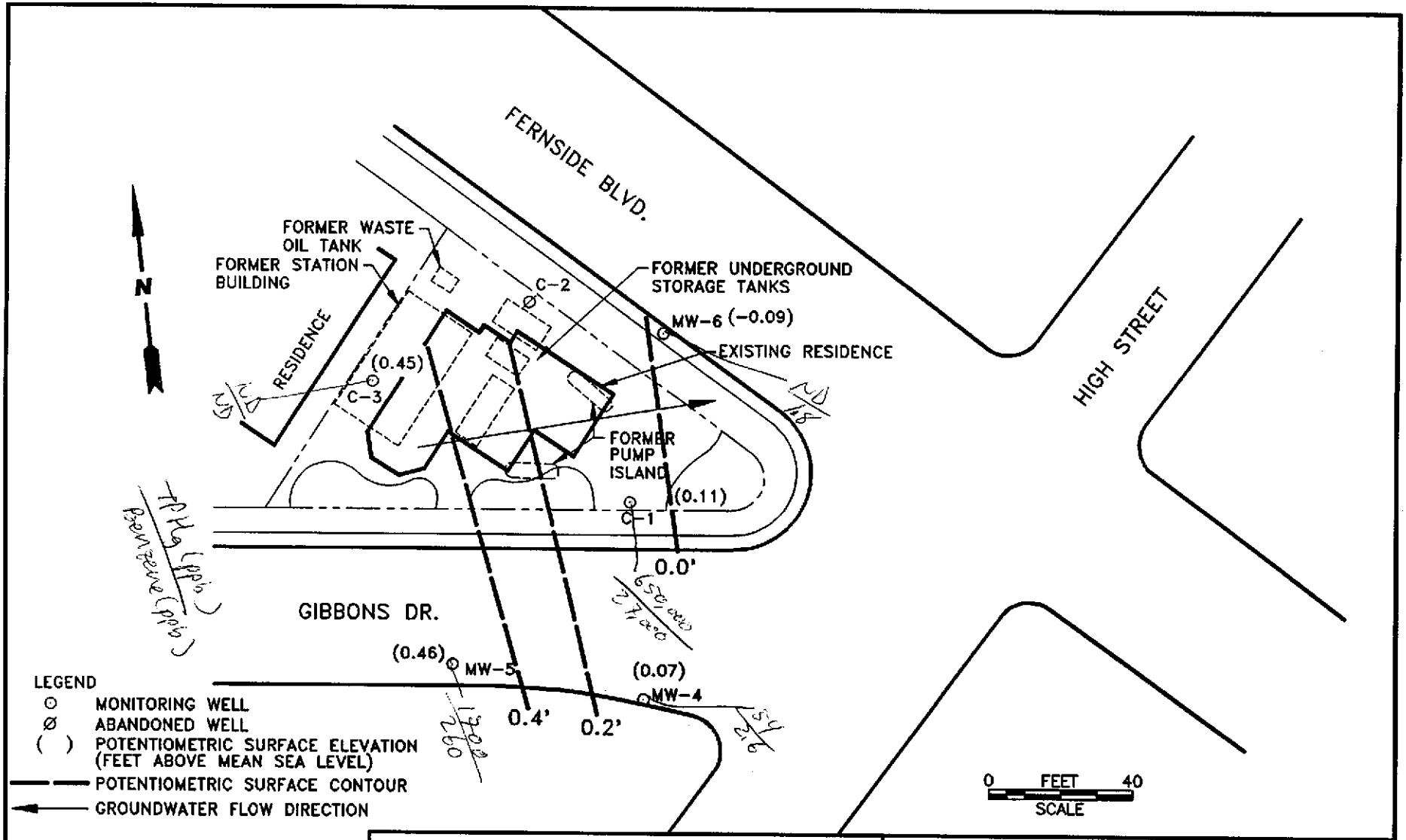
REGISTERED GEOLOGIST
DAVID R. KLEESATTEL
NO. 5136
STATE OF CALIFORNIA

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

4100R023.020

ATTACHMENT 1

Figure



GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY CONCORD, CA 94520 (510) 671-2387				**POTENTIOMETRIC SURFACE MAP (7/13/93)**		
CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-1153				LOCATION: 3126 FERNSIDE BLVD. ALAMEDA, CALIFORNIA	REV. NO.: 0	DATE: 8/19/93
PM: JAW	PE/RG: DRK	DESIGNED: TW	DETAILED: ML	ACAD FILE: PSM71393/SP693	PROJECT NO.: 020204098	FIGURE: 1

ATTACHMENT 2

Tables

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[1]	---[1]	---	---	---
	07/22/87	1,100	250	7	40[1]	---[1]	---	---	---
	05/03/89	6,900	3,800	190	229[1]	---[1]	4.46	---	---
	12/04/89	17,000	8,000	490	470[1]	---[1]	4.16	---	---
	02/14/90	19,000	12,000	990	1,050[1]	---[1]	3.64	---	---
	03/07/90	---	4,260	261	430[1]	---[1]	3.36	---	---
	09/06/91	21,000	10,000	100	240	560	4.43	0.00[2]	---
	12/15/91	20,000	4,900	43	110	330	4.78	0.00[2]	---
	03/03/92	13,000	5,800	730	340	1,200	2.39	0.00[2]	---
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
C-2	08/18/86	---	---	---	---	---	---	---	---
	09/04/86	1,100	49	18	84[1]	---[1]	---	---	---
	07/22/87	<50	1.8	<1.0	<4.0[1]	---[1]	---	---	---
	05/03/89	Abandoned	---	---	---	---	---	---	---
C-3	08/18/86	---	---	---	---	---	4.00	---	---
	09/04/86	50	3.2	5.4	5.8[1]	---[1]	---	---	---
	07/22/87	<50	<0.5	<1.0	<4.0[1]	---[1]	---	---	---
	05/03/89	<50	<0.5	<1.0	<2.0[1]	---[1]	4.15	---	---
	12/04/89	<250	<0.5	<0.5	<0.5[1]	---[1]	4.24	---	---
	02/14/90	<50	<0.5	<0.5	<0.5[1]	---[1]	3.57	---	---
	03/07/90	NA	<5	<5	<5[1]	---[1]	3.31	---	---
	09/06/91	<50	<0.5	<0.5	<0.5	<0.5	4.59	0.00[2]	---
	12/15/91	<50	<0.5	<0.5	<0.5	<0.5	4.84	0.00[2]	---
	03/03/92	<50	<0.5	<0.5	<0.5	<0.5	2.17	0.00[2]	---
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
MW-4	06/04/92	<50	0.8	<0.5	<0.5	<0.5	3.63	0.00	-0.05
3.58	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
MW-5	06/04/92	560	110	0.5	37	2.2	3.25	0.00	0.36
3.61	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

GROUNDWATER TECHNOLOGY, INC.

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	06/04/92	210	54	<0.5	1.9	2.4	3.89	0.00	-0.04
3.85	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
Trip	02/14/90	<50	<0.5	1.1	<0.5	<0.5	—	—	—
Blank	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	—	—	—

TPH-G = Total petroleum hydrocarbons-as-gasoline
DTW = Depth to water
SPT = Separate-phase hydrocarbon thickness
GWE = 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.

GROUNDWATER TECHNOLOGY, INC.

TABLE 2
Total Dissolved Solids
Collected on July 13, 1993
(Concentrations in milligrams per liter)

Date	Well Identifier	Total Dissolved Solids
07/13/93	C-1	640
07/13/93	C-3	360
07/13/93	MW-4	620
07/13/93	MW-5	460
07/13/93	MW-6	540

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 020204100
Reported 07/22/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
89249- 1	TB-LB	07/13/93	07/16/93	Water
89249- 2	C3	07/13/93	07/16/93	Water
89249- 3	MW4	07/13/93	07/16/93	Water
89249- 4	MW6	07/13/93	07/17/93	Water
89249- 5	MW5	07/13/93	07/17/93	Water
89249- 6	C1	07/13/93	07/17/93	Water

RESULTS OF ANALYSIS

Laboratory Number:	89249- 1	89249- 2	89249- 3	89249- 4	89249- 5
Gasoline:	ND<50	ND<50	54	ND<50	1700
Benzene:	ND<0.5	ND<0.5	2.6	1.8	260
Toluene:	ND<0.5	ND<0.5	1.6	ND<0.5	7.8
Ethyl Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	160
Xylenes:	ND<1.5	ND<1.5	ND<1.5	ND<1.5	100
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number:	89249- 6
Gasoline:	650000
Benzene:	27000
Toluene:	18000
Ethyl Benzene:	6300
Xylenes:	29000
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

QA/QC INFORMATION
SET: 89249

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:	98/108	10%	70-130
Benzene:	86/83	4%	70-130
Toluene:	85/89	5%	70-130
Ethyl Benzene:	100/98	2%	70-130
Xylenes:	108/107	1%	70-130

Richard Srna, Ph.D.
(for) 7/23/93
Laboratory Director

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 89249
CLIENT: GROUNDWATER TECHNOLOGY, INC.
CLIENT JOB NO.: 020204100

DATE RECEIVED:07/14/93
DATE REPORTED:07/22/93

ANALYSIS FOR TOTAL DISSOLVED SOLIDS
by EPA 160.1

LAB #	Sample Identification	Concentration(mg/L) Total Dissolved Solids
2	C3	360
3	MW4	620
4	MW6	540
5	MW5	460
6	C1	640

mg/L - parts per million (ppm)
Method Detection Limit : 4 mg/L

Richard Srna, Ph.D.
Laboratory Manager
7/23/93

Fax copy of Lab Report and COC to Chevron Contact: ■ Yes ☐ No   89 249

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) Mr. Mark Miller (Phone) 842-8134 Laboratory Name Superior Laboratory Release Number 590-1420 Samples Collected by (Name) Greg Mason Collection Date 7/13-93 Signature [signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	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 or AA)	Hold	CPH 160.1 (TDS)				Remarks: TB-LB Do Not Bill
TB-LB	1	1	W	D	2:00	HCl	Y	X									X				
RBC3	7	1				HCl										X					
C3	2	4			2:10	HCl/NONE		X									X				fax lab results
RBMW4	8	1				HCl										X					to Mark Miller
MW4	3	4			2:20	HCl/NONE		X									X				directly -
RBMW6	9	1				HCl										X					at 842-8252
MW6	4	4			2:30	HCl/NONE		X									X				
RBMW5	10	1				HCl										X					Call Tim W.
MW5	5	4			2:40	HCl/NONE		X									X				at 671-2387
RBC1	11	1				HCl										X					when you
C1	6	4			3:00	HCl/NONE		X									X				fax the results

Initial: [initials]
Samples Stored in ice: yes - hand delivered
Appropriate containers
Samples preserved
VOAs without headspace
Comments:

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Turn Around Time (Circle Choice)
[signature]	GTI	7/14				24 Hrs. 48 Hrs. 5 Days ~~10 Days~~ (As Contracted)
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Recieved For Laboratory By (Signature) K. Carlyon		Date/Time 7/14/93 8:45	

COC-3DWG/00 01/HCH

ATTACHMENT 4

Conductivity, Temperature, and pH Measurements

pH, TEMPERATURE AND CONDUCTIVITY FIELD DATA

JOB NAME: CHV Fernside
JOB NUMBER
DATE: 7/13

WELL I. D.	GALLONS PURGED		pH	TEMPERATURE (°F)	CONDUCTIVITY (mhos)
3	13	5	7.05	20.9	2.52
		10	6.97	20.6	3.08
		13	7.62	20.4	4.16
4	5	1	7.16	21.3	.89
		3	7.25	21.1	1.68
		5	7.26	20.8	2.01
6	5	1	7.62	20.9	1.63
		3	7.59	21.3	2.54
		5	7.79	20.7	2.60
5	5	1	7.05	21.2	3.61
		3	7.02	20.6	3.92
		5	7.09	20.5	3.99
1	12	5	7.69	20.5	.92
		10	7.91	20.9	2.51
		12	7.92	20.8	2.55

GROUNDWATER TECHNOLOGY