Chevron

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93 OCT -4 PM 2:11

September 30, 1993

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

Marketing Department
Phone 510 842 9500

Mr. Barney Chan
Alameda County Health Care Services
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

4249

Re: Former Chevron Service Station #9-4612
3616 San Leandro Street, Oakland, CA

Dear Mr. Chan:

Enclosed is the Groundwater Monitoring and Sampling Activities report dated September 24, 1993, 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 and BTEX. Benzene was detected in monitor wells VH-1, MW-2, and MW-3 at concentrations of 210, 1100, and 12 ppb, respectively.

Additional samples collected from monitor well MW-3 were analyzed for EPA Method 8010 compounds, total oil and grease, and total petroleum hydrocarbons as diesel (TPH-D). Concentrations of these constituents were below method detection limits with the exception of TPH-D which was detected at a concentration of 1400 ppb. We will continue to sample this well on a quarterly basis for this constituent.

Depth to ground water was measured at approximately 10.5 to 12.0 feet below grade and the direction of flow is to the northeast. The gradient and flow direction are consistent with historic measurements.

As we discussed by telephone, Chevron has instructed its consultant to prepare a work plan for additional assessment and delineation of hydrocarbons in the soil and ground water as requested in your letter of August 26, 1993. The monitor wells at the site will be resurveyed to confirm the direction of ground water flow and a work plan will be forwarded to your office shortly thereafter.

Chevron will continue to monitor and sample this site on a quarterly basis.

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

Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Rich Hiett, RWQCB - Bay Area
Ms. B.C. Owen
File (9-4612 QM2)

Mr. Jack Ratto
191 98th Avenue
Oakland, CA 94603

Mr. Vernon C.McIlraith
1809 Golden Rain Road, #5
Walnut Creek, CA 94595

GROUNDWATER TECHNOLOGY, INC.

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

September 24, 1993

Project No. 020204099

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. 9-4612
3616 San Leandro Street, Oakland, California

Dear Mr. Miller:

Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on August 18, 1993. The 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 (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 collected groundwater samples were analyzed for benzene, toluene, ethylbenzene, and xylenes and for total petroleum hydrocarbons-as-gasoline. Additional samples were collected from monitoring well MW-3 and analyzed for total petroleum hydrocarbons-as-diesel fuel, total oil and grease, and halogenated volatile organics. 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 call our Concord office at (510) 671-2387.

Sincerely,
Groundwater Technology, Inc.
Written/Submitted by

Tim Watchers
Project Geologist

PR

Attachment 1 Figure
Attachment 2 Tables
Attachment 3 Laboratory Report

Groundwater Technology, Inc.
Reviewed/Approved by

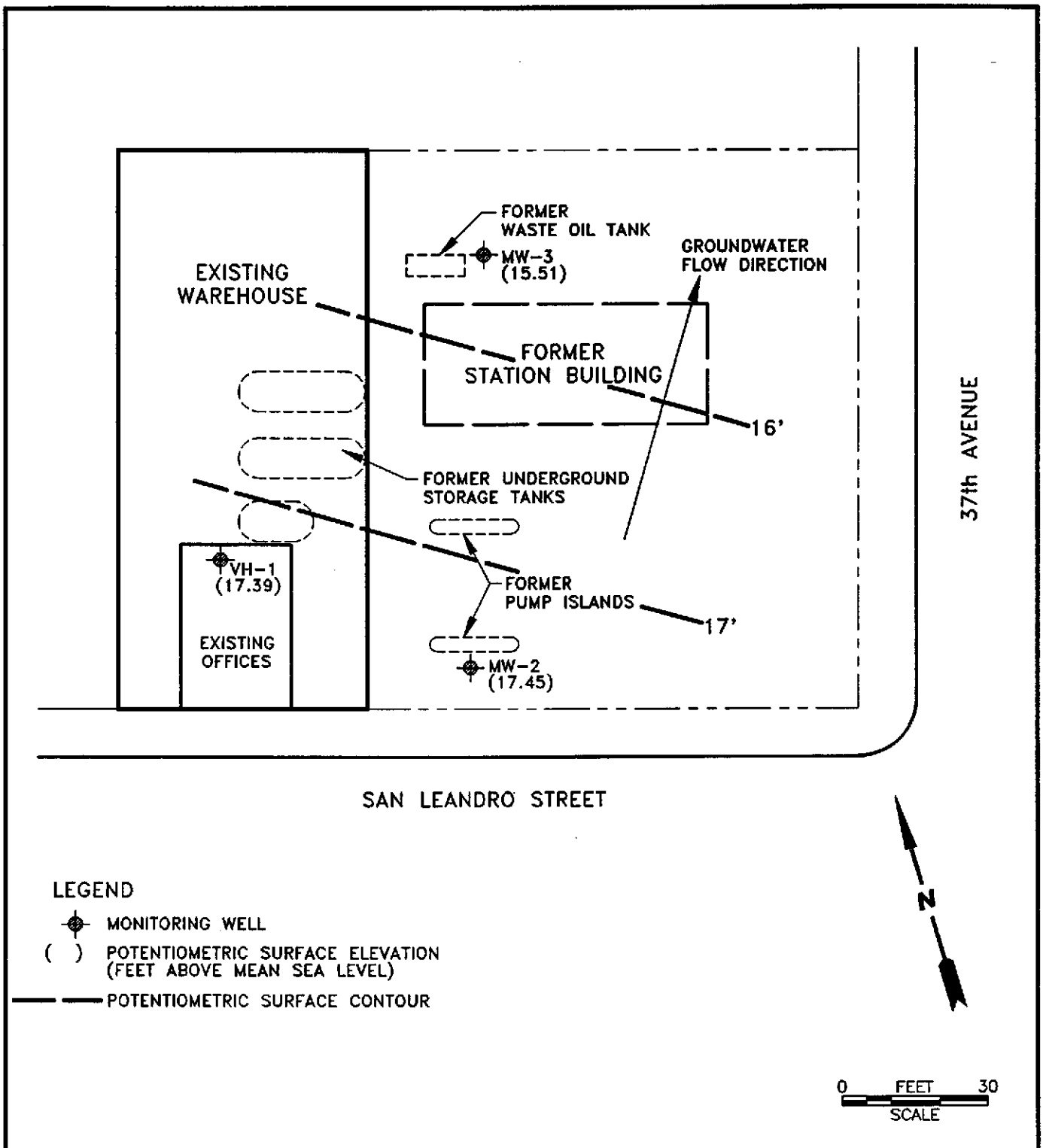
David R. Kleesattel
Registered Geologist
No. 5136

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

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

ATTACHMENT 1

Figure



GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY. CONCORD, CA 94520 (510) 671-2387				**POTENTIOMETRIC SURFACE MAP (8/18/93)**			
CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-4612				LOCATION: 3616 SAN LEANDRO STREET OAKLAND, CALIFORNIA		REV. NO.: 0	DATE: 9/17/93
PM JHW	PE/RG DRK	DESIGNED TW	DETAILED ML	ACAD FILE: PSM81893/SP493	PROJECT NO.: 020204116		FIGURE: 1

ATTACHMENT 2

Table

TABLE 1
MONITORING DATA AND ANALYTICAL RESULTS OF GROUNDWATER
Chevron Station No. 9-4612
3616 San Leandro Street, Oakland, California

Well ID/Elev	Date	TPH-G	Benzene	Toulene	Ethyl-benzene	Xylenes	TPH-D	TOG	HVO	DTW (ft)	SPT (ft)	GWE (ft)
VH-1	08/10/88	11,000	3,300	200	520	540	---	---	---	13.00	---	---
	06/01/89	15,000	2,200	120	540	310	---	---	---	10.32	---	---
	09/15/89	5,600	1,900	90	350	160	---	---	---	15.69	---	---
	12/08/89	11,000	1,900	69	270	99	---	---	---	14.77	---	---
	03/07/91	4,500	820	39	120	77	---	---	---	11.26	---	---
	09/24/91	3,300	520	19	39	27	---	---	---	12.98	---	---
	01/08/92	5,000	600	34	81	76	---	---	---	13.77	---	---
	04/20/92	7,400	670	60	110	140	---	---	---	8.18	---	---
27.85	03/26/93	4,900	600	40	72	94	---	---	---	6.71	0.00	21.14
	05/27/93	13,000	1,600	120	230	220	---	---	---	8.58	0.00	19.27
	08/18/93	2,700	210	10	8.1	18	---	---	---	10.46	0.00	17.39
MW-2	02/16/93	9,200	720	110	250	170	---	---	---	---	---	---
28.50	03/26/93	---	---	---	---	---	---	---	---	7.62	0.00	20.88
	05/27/93	360	5.3	2.1	1.8	2.5	---	---	---	9.47	0.00	19.03
	08/18/93	9,400	1,100	76	110	100	---	---	---	11.05	0.00	17.45
MW-3	02/16/93	3,500	<0.5	8.1	4.6	7.7	---	---	---	---	---	---
27.51	03/26/93	---	---	---	---	---	---	---	---	7.18	0.00	20.33
	05/27/93	4,200	580	84	150	100	---	---	---	9.33	0.00	18.18
	08/18/93	910	12	3.7	6.2	3.8	1,400	<5,000	ND	12.00	0.00	15.51
TRIP	05/27/93	<50	<0.5	<0.5	<0.5	<1.5	---	---	---	---	---	---
BLANK	08/18/93	<50	<0.5	<0.5	<0.5	<1.5	---	---	---	---	---	---

TPH-G = Total petroleum hydrocarbons-as-gasoline
DTW = Depth to water
SPT = Separate-phase hydrocarbons
GWE = Groundwater elevation in feet above mean sea level relative to United States Geological Survey brass disc
HVO = Halogenated volatile organics
--- = Not available, not sampled, not monitored
Data for VH-1 (August 10, 1988 to April 20, 1992) from Pacific Environmental Group Inc. Report, May 18, 1992.
Concentrations are presented in parts per billion (ppb).

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 020204099
Reported 08/27/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
89691- 1	TB-LB	08/18/93	08/26/93	Water
89691- 3	VH1	08/18/93	08/26/93	Water
89691- 5	MW3	08/18/93	08/26/93	Water
89691- 7	MW2	08/18/93	08/26/93	Water

RESULTS OF ANALYSIS

Laboratory Number:	89691- 1	89691- 3	89691- 5	89691- 7
Gasoline:	ND<50	2700	910	9400
Benzene:	ND<0.5	210	12	1100
Toluene:	ND<0.5	10	3.7	76
Ethyl Benzene:	ND<0.5	8.1	6.2	110
Total Xylenes:	ND<1.5	18	3.8	100
Diesel:	NA	NA	1400	NA
Oil and Grease:	NA	NA	ND<5000	NA
Concentration:	ug/L	ug/L	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

QA/QC INFORMATION
SET: 89691

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:	84/91	8%	70-130
Benzene:	110/113	3%	70-130
Toluene:	104/110	6%	70-130
Ethyl Benzene:	105/112	6%	70-130
Total Xylenes:	102/109	7%	70-130
Diesel:	95/96	1%	75-125
Oil and Grease:	61/70	14%	56-106

8/30/93

Senior Chemist

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 020204099
Reported 27-August-1993

HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.

Chronology

Laboratory Number 89691

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW3	08/18/93	08/20/93	/ /	08/23/93		5

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 020204099
Reported 27-August-1993

HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.

Laboratory Number	Sample Identification	Matrix
89691- 5	MW3	Water

RESULTS OF ANALYSIS

Laboratory Number: 89691- 5

Chloromethane/Vinyl Ch:	ND<1
Bromomethane:	ND<0.5
Chloroethane:	ND<0.5
Trichlorofluoromethane:	ND<0.5
1,1-Dichloroethene:	ND<0.5
Dichloromethane:	ND<0.5
t-1,2-Dichloroethene:	ND<0.5
1,1-Dichloroethane:	ND<0.5
c-1,2-Dichloroethene:	ND<0.5
Chloroform:	ND<0.5
1,1,1-Trichloroethane:	ND<0.5
Carbon tetrachloride:	ND<0.5
1,2-Dichloroethane:	ND<0.5
Trichloroethene:	ND<0.5
c-1,3-Dichloropropene:	ND<0.5
1,2-Dichloropropane:	ND<0.5
t-1,3-Dichloropropene:	ND<0.5
Bromodichloromethane:	ND<0.5
1,1,2-Trichloroethane:	ND<0.5
Tetrachloroethene:	ND<0.5
Dibromochloromethane:	ND<0.5
Chlorobenzene:	ND<0.5
Bromoform:	ND<0.5
1,1,2,2-Tetrachloroeth:	ND<0.5
1,3-Dichlorobenzene:	ND<0.5
1,2-Dichlorobenzene:	ND<0.5
1,4-Dichlorobenzene:	ND<0.5
Concentration:	ug/L

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

HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.
Quality Assurance and Control Data - Water

Laboratory Number 89691

Compound	Method Blank (ug/L)	PQL (ug/L)	Average Spike Recovery (%)	Limits (%)	RPD (%)
Chloromethane/Vinyl Ch:	ND<1	1			
Bromomethane:	ND<0.5	0.5			
Chloroethane:	ND<0.5	0.5			
Trichlorofluoromethane:	ND<0.5	0.5			
1,1-Dichloroethene:	ND<0.5	0.5	110%	75-125	11%
Dichloromethane:	ND<0.5	0.5			
t-1,2-Dichloroethene:	ND<0.5	0.5			
1,1-Dichloroethane:	ND<0.5	0.5			
c-1,2-Dichloroethene:	ND<0.5	0.5			
Chloroform:	ND<0.5	0.5			
1,1,1-Trichloroethane:	ND<0.5	0.5			
Carbon tetrachloride:	ND<0.5	0.5			
1,2-Dichloroethane:	ND<0.5	0.5			
Trichloroethene:	ND<0.5	0.5	104%	75-125	0%
c-1,3-Dichloropropene:	ND<0.5	0.5			
1,2-Dichloropropane:	ND<0.5	0.5			
t-1,3-Dichloropropene:	ND<0.5	0.5			
Bromodichloromethane:	ND<0.5	0.5			
1,1,2-Trichloroethane:	ND<0.5	0.5			
Tetrachloroethene:	ND<0.5	0.5			
Dibromochloromethane:	ND<0.5	0.5			
Chlorobenzene:	ND<0.5	0.5	107%	75-125	0%
Bromoform:	ND<0.5	0.5			
1,1,2,2-Tetrachloroeth:	ND<0.5	0.5			
1,3-Dichlorobenzene:	ND<0.5	0.5			
1,2-Dichlorobenzene:	ND<0.5	0.5			
1,4-Dichlorobenzene:	ND<0.5	0.5			

Definitions:

ND = Not Detected
PQL = Practical Quantitation Limit

RPD = Relative Percent Difference

QC File No. 89691

8/30/93
Senior Chemist
Account Manager

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No   89671

Chain-of-Custody-Record

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

Chevron Facility Number: 9-4612
Facility Address: 3616 San Leandro, Oakland
Consultant Project Number: 020204099
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: 763-3640
Samples Collected by (Name): Hector Merino
Collection Date: 8/18/93
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) EPA 601	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Hold					Remarks: Do not Bill TB-LB
TB-LB			W					X													
RBVH1			↓													X					
VH1			↓					X													
RBMW3			↓													X					
MW3			↓					X	X	X	X										
RBMW2			↓													X					
MW2			↓					X													

Please Initial: KC
Samples Stored in Ice. hand delivered-cold
Appropriate containers
Samples preserved
VOA's without headspace
Comments:

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
[signature]	GTI	8/18/93			
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature): K. Carlyon		Date/Time: 8/20/93 8 AM

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted (circled)

COC-3OMG/03 R1/HCH