

Chevron U.S.A. Products Company

2410 Camino Ramon, San Ramon, California • Phone (510) 842-9500 Mail Address: PD. Box 5004, San Ramon, CA 94583-0804

March 22, 1993

Cont. 19

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

Re: Chevron Service Station #9-0290

1802 Webster Street, Alameda, CA

Dear Ms. Shin:

Enclosed is the Groundwater Monitoring and Sampling Activities report dated March 9, 1993, prepared by our consultant Groundwater Technology for the above referenced site. As indicated in the report, groundwater samples collected were analyzed for total petroleum hydrocarbons as gasoline (TPH-G), total petroleum hydrocarbons as diesel (TPH-D), and BTEX. Separate-phase hydrocarbons were detected in monitor wells A-1 and A-2. The hydrocarbons were removed by hand-bailing and stored on site. Benzene was detected only in monitor wells B-3 and B-4 at concentrations of 490 ppb, and 2000 ppb, respectively. Depth to groundwater was measured at approximately 4.4 feet to 5.8 feet below grade, and the direction of flow is to the east.

The last sampling round at this site occurred on May 18, 1992. Subsequent to this sampling event, a work plan dated June 17, 1992, was submitted to your office which described the scope of work to be completed for delineation of subsurface hydrocarbons. The next sampling round was to occur in conjunction with the additional site assessment activities. Due to difficulties in obtaining access to off-site drilling locations and associated delays, Chevron instructed its consultant to sample the existing wells again prior to the completion of the additional work. Currently, activities outlined in that work plan are scheduled to occur during the week of March 28, 1993. A report documenting the results of the investigation will be submitted to your office within 45 days of completion of field activities. Chevron will continue to monitor and samples all wells at this site on a quarterly basis.

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

Very truly yours,

CHEVRON U.S.A. PRODUCTS COMPANY

This of Mille

Mark A. Miller

Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Eddy So, RWQCB - Bay Area

Ms. B.C. Owen File (9-0290 QM1)



Mr. Bruce E. Prigoff, Esq. Steefel, Levitt & Weiss One Embarcadero Center, 29th Floor San Francisco, CA 94111



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

FAX: (415) 685-9148

March 9, 1993

Project No. 020202803

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. 9-0290

1802 WEBSTER STREET, ALAMEDA, CALIFORNIA

Dear Mr. Miller:

Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on January 6, 1993. Five of the six groundwater monitoring wells at this site were gauged to determine depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were detected in monitoring well A-1, because of the product viscosity, the interface probe was unable to measure product thickness. Monitoring well A-2 was not monitored or sampled on January 6, 1993 because the well was secured with a non-Chevron. type lock. On February 2, 1993 new well caps and a lock were placed on wells A-1 and A-2. Well A-2 was monitored and separate-phase hydrocarbons were detected. The hydrocarbons were hand bailed from wells A-1 and A-2 and stored on site. A potentiometric surface map (Figure 1) and a summary of groundwater monitoring data (Table 1) are presented in Attachments A and B, respectively. After measuring the DTW each monitoring well, except monitoring wells A-1 and A-2 were purged and sampled. The groundwater samples collected were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), and total petroleum hydrocarbons (TPH)-as-gasoline and diesel fuel. Results of the chemical analyses are summarized in Table 1. Laboratory report and chain-of-custody record are included in Attachment C. Monitoring well purge water was transported by Groundwater Technology, Inc. to the Chevron terminal in Richmond, California for recycling.

Groundwater Technology, Inc. is pleased to assist Chevron on this project. If you have any questions or comments, please call feel free to contact Groundwater Technology Concord office at (510) 671-2387.

Sincerely,

Groundwater Technology, Inc.

Written/Submitted by

SANDRA L. LINDSEY

Project Manager

Attachments:

Attachment A - Figure 1

Attachment B - Table 1

Attachment C - Laboratory Report

RLR2974A1.NM

Groundwater Technology, Inc.

Reviewed/Approved by

DAVID R. KLEESATTEL

Registered Geologist No. 5136

For:

John S. Gaines, V.P. General Manager

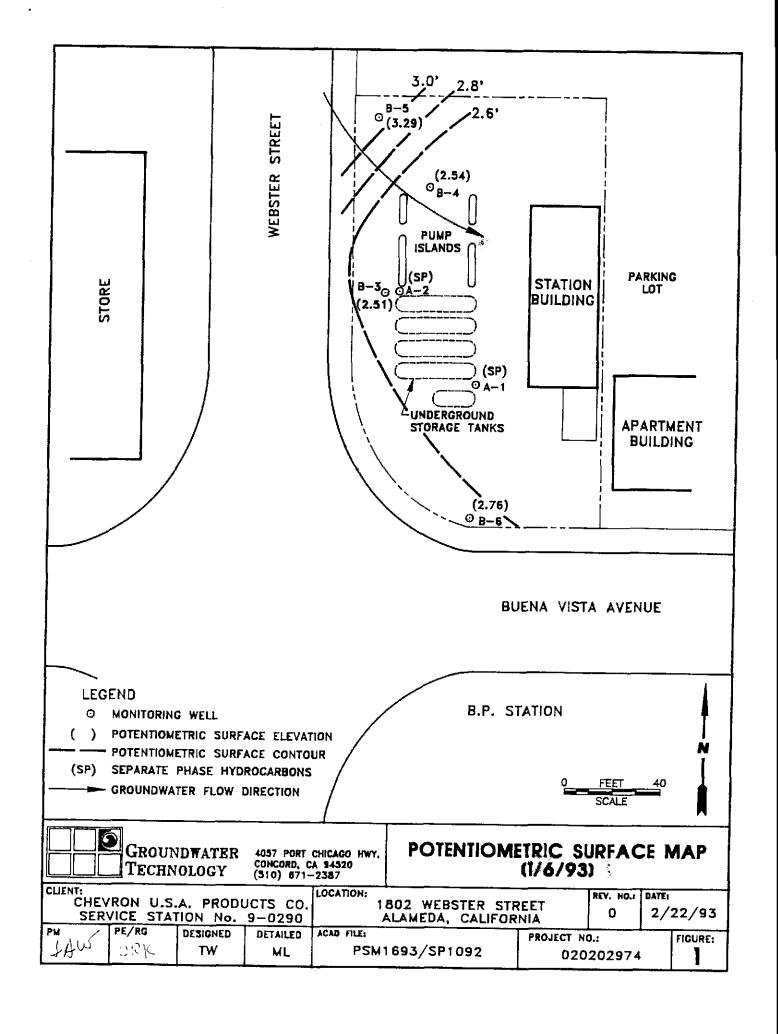
West Region

DAVID R. KLEESATTEL

ATTACHMENT A

FIGURE





ATTACHMENT B

TABLE



TABLE 1
HISTORICAL GROUNDWATER MONITORING AND ANALYTICAL RESULTS
CHEVRON SERVICE STATION NO 9-0290
1802 WEBSTER STREET, ALAMEDA, CALIFORNIA

WELL ID/	DATE	TPH-AS- GASOLINE	BENZENE	TOLUENE	ETHYL- Benzené	XYLENES	TOG	TPH-AS- DIESEL FUEL	DTW (ft)	SPT fig	WTE (ft)
A1	09/20/91				_	,			9.23	1.58	0.48
8.13	10/09/91					_		_	6.67	0.00	1.46
	10/17/91					-			7.28	0.58	1.43
I	10/23/91	–		_] —	**-	7.42	0.65	1.36
	11/01/91	_		_			l –		7.14	0.50	1.49
	11/07/91				_			-	7.14	0.51	1.50
	11/15/91		_		_				7.19	0.53	1.47
	11/21/91					_		-	7.28	0.54	1.28
	12/12/91			- :		_			7.33	0.49	1.29
	12/30/91	_			-		_		6.76	0.36	1.73
	01/13/92	-					-		6.29	0.37	2.21
	01/22/92		_					_	6.43	0.45	2.15
	02/12/92		_	***	-			_	6.30	0.38	2.21
	03/09/92	_		_		_			5.30	0.31	3.14
	04/10/92			_		_			5.37	0.07	2.83
	05/18/92	-] —		6.14	0.40	2.39
	01/06/93	<u> </u>		_] —		_		
	02/03/93				_					-	

TABLE 1
HISTORICAL GROUNDWATER MONITORING AND ANALYTICAL RESULTS
CHEVRON SERVICE STATION NO 9-0290
1802 WEBSTER STREET, ALAMEDA, CALIFORNIA

WELL ID/	DATE	TPH-AS- GASOLINE	BENZENE	TOLUENE	ETHYL- BENZENE	XYLENES	тов	TPH-AS- DIESEL FUEL	DTW (ft)	: (t)	WTE (ft)
A-2	09/20/91	8,100	860	14	110	53		**5,100	7.73	0.00	0.27
00.8	10/09/91			_			\	\	6.61	0.00	1.39
	10/17/91					***		_	6.66	0.00	1.34
	10/23/91	–	-	–		_			6.80	0.09	1.29
	11/01/91	_		_		_	l		6.63	0.15	1.45
	11/07/91						l —		6.64	0.21	1.45
	11/15/91		_		_		l —		6.81	0.19	1.38
	11/21/91					***		– i	6.93	0.24	1.31
	12/12/91) i]	–	6.97	0.15	1.24
	12/30/91	_		_		_			6.54	0.24	1.70
	01/13/92	_		_		_			5.92	0.08	2.16
	01/22/92		_				_		6.01	0.10	2.00
	02/12/92		_		_				6.06	0.26	2.20
	03/09/92	-		_		_			4.93	0.04	3.11
	04/10/92	-		_	[j		l –	_	5.20	<0.01	2.80
	05/18/92) – '		_			-	_	5.66	0.02	2.36
	01/06/93			_	 	<u></u>	_	_	_		_
	02/03/93		-		I – i				4.98	0.22	3.20



TABLE 1
HISTORICAL GROUNDWATER MONITORING AND ANALYTICAL RESULTS
CHEVRON SERVICE STATION NO 9-0290
1802 WEBSTER STREET, ALAMEDA, CALIFORNIA

WELL ID/ ELEV	DATE	TPH-AS- GASOLINE	BENZENE	TOLUENE	ETHYL- BENZENE	XYLENES	TOG	TPH-AS- DIESEL FUEL	DTW (ft)	SPT' (ft)	WTE (ft)
B-3	09/20/91			_			_		6.94	0.01	1.08
8.01	10/09/91	_]			_	6.35	0.00	1.66
	10/17/91	_						_	6.44	0.00	1.57
	10/23/91	_			_				6.84	0.00	1.53
	11/01/91				_				6.31	0.00	1.70
	11/07/91		_			_			6.32	0.00	1.69
	11/15/91						I —		6.39	0.00	1.62
	11/21/91	-						_	6.44	0.00	1.57
	12/12/91		***						6.82	<0.01	1.19
	12/30/91								6.37	0.00	1.64
	01/13/92	_			_	_			5.94	0.00	2.07
	01/22/92		_			-	_		5.99	0.00	2.02
	02/12/92			_			I —		5.82	<0.01	2.19
	03/09/92	_			_			_	5.10	0.00	2.91
	04/10/92	-						_	5.36	0.00	2.65
1	05/18/92	6,200	550	58	13	51	<5,000	**250	5.72	0.00	2.29
1	01/06/93	5,400	490	54	51	62	1 -	***10,000	5.50	SHEEN	2.51
	02/03/93			_			i –				



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CHEVRON SERVICE STATION NO 9-0290
1802 WEBSTER STREET, ALAMEDA, CALIFORNIA

WELL ID/	DATE	TPH-AS- GASOLINE	BENZENE	TOLUENE	ETHYL- BENZENE	XYLENES	TOG	TPH-AS- DIESEL FUEL	DTW (ft)	SPT (ft)	WIE (ft)
B-4	09/20/91	19,000	710	160	650	2,000	_	*1,400	6.82	0.00	1.22
8.04	10/09/91					-,	_ '	— ·	6.63	0.00	1.41
	10/17/91		_				_	-	6.84	0.00	1.20
	10/23/91			_				_	6.87	0.00	1.17
	11/01/91			_				_	6.70	0.00	1.34
	11/07/91				_				6.73	0.00	1.31
	11/15/91			;	_	_		***	6.83	0.00	1.21
	11/21/91	-	_				_		6.84	0.00	1.20
	12/12/91	_	_			_	_		6.87	0.00	1.17
	12/30/91			_					6.46	0.00	1.58
	01/13/92	***		_		_			5.91	0.00	2.13
	01/22/92	-				_			5.95	0.00	2.09
	02/12/92	15,000	920	75	520	940		*860	5.78	0.00	2.26
!	03/09/92		!					_	5.09	0.00	2.95
:	04/10/92	-	_				J – ,	—. <u> </u>	5.39	0.00	2.65
	05/18/92	19,000	2,000	97	560	1,200	<5,000	<50	5.59	0.00	2.45
	01/06/93	19,000	2,000	69	490	740	_	*2,700	5.50	SHEEN	2.54
	02/03/93	_ ·				_					_



TABLE 1
HISTORICAL GROUNDWATER MONITORING AND ANALYTICAL RESULTS
CHEVRON SERVICE STATION NO 9-0290
1802 WEBSTER STREET, ALAMEDA, CALIFORNIA

WELL ID/ ELEV	DATE	TPH-AS- GASOLINE	BENZENE	TOLUENE	ETHYL- BENZENE	XYLENES	TOG	TPH-AS- DIESEL FUEL	DTW (ft)	SPT (ft)	WTE (ft)
B-5	09/20/91	<50	<0.5	<0.5	<0.5	<0.5		<50	5.53	0.00	2.20
7.73	10/09/91	-	_	-					5.31	0.00	2.42
	10/17/91		_						5.64	0.00	2.09
	10/23/91				_				5.68	0.00	2.05
j	11/01/91			_	_				5.49	0.00	2.24
	11/07/91						<u> </u>	_	5.54	0.00	2.19
	11/15/91							_	5.63	0.00	2.10
	11/21/91	_	_							-	l –
	12/12/91	_	_				l –		5.68	0.00	2.05
	12/30/91			_	_	_			5.19	0.00	2.54
	01/13/92			_	_	_			4.65	0.00	3.07
	01/22/92	_			-			-	4.70	0.00	3.03
	02/12/92	<50	<0.5	<0.5	<0.5	<0.5		<50	4.45	0.00	3.28
	03/09/92		_	_	-				4.05	0.00	3,68
	04/10/92		_						4.43	0.00	3.30
	05/18/92	390	39	1.9	11	24	<5,000		3.79	0.00	3.94
	01/06/93	<50	<0.5	<0.5	<0.5	<0.5	_	<50	4.44	SHEEN	3.29
	02/03/93	_							–	I – .	l –

TABLE 1
HISTORICAL GROUNDWATER MONITORING AND ANALYTICAL RESULTS
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1802 WEBSTER STREET, ALAMEDA, CALIFORNIA

WELL ID/	DATE	TPH-AS- GASOLINE	BENZENE	TOLUENE	ETHYL- BENZENE	XYLENES	TOG	TPHAS- DIESEL FUEL	DTW (ft)	SPT (R)	WTE (ft)
B-6	09/20/91	<50	<0.5	<0.5	<0.5	<0.5		<50	6.85	0.00	1.70
8.55	10/09/91	_			_				6.83	0.00	1.72
	10/17/91				_				6.90	0.00	1.65
	10/23/91	_	l _			_	l _		6.93	0.00	1.62
	11/01/91	_	-			_	_		6.78	0.00	1.77
	11/07/91			_				_	6.81	0.00	1.74
	11/15/91			_					6.88	0.00	1.67
	11/21/91	_			_				6.95	0.00	1.60
	12/12/91	_			_				7.14	0.00	1.41
	12/30/91		_			_	l —		6.50	0.00	2.05
	01/13/92		_			_	l —		6.19	0.00	2.36
	01/22/92			_					6.27	0.00	2.28
	02/12/92	<50	<0.5	<0.5	<0.5	<0.5		<50	6.12	0.00	2.43
	03/09/92	_				_			5.28	0.00	3.27
	04/10/92	_				_			5.48	0.00	3.07
	05/18/92	<50	<0.5	<0.5	<0.5	<0.5	<5,000	<50	5.90	0.00	2.65
	01/06/93	<50	<0.5	<0.5	<0.5	<0.5	-	<50	5.79	0.00	2.76
	02/03/93				-				_		-
TRIP Blank	01/06/93	<50	<0.5	<0.5	<0.5	<0.5					_

— = Not applicable/not sampled/not measured

DTW = Depth to water

SPT = Separate-phase hydrocarbon thickness

WTE = Water table elevation in feet above mean sea level

TOG = Total Oil and Grease

* = Diesel fuel range concentration reported. The pattern of peaks observed in the chromatogram is typical of gasoline.

** = Does not match typical diesel patterns

*** = Diesel fuel range concentration reported. The pattern of peaks observed in the chromatogram is a mixture of gasoline and heavy hydrocarbons.

Analytical results in micrograms/liter (μ /l), parts per billion

Page 6 of 6
GROUNDWATER
TECHNOLOGY

ATTACHMENT C LABORATORY ANALYTICAL REPORT



Superior Precision Analytical, Inc.

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

GROUNDWATER TECHNOLOGY, INC.

Attn: Sandra Lindsey

Project 020302974 Reported 01/14/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
87570- 1	TBLB	01/06/93	01/12/93 Water
87570- 2	RB-B-6	01/06/93	01/09/93 Water
87570- 3	B-6	01/06/93	01/12/93 Water
87570- 5	B -5	01/06/93	01/13/93 Water
87570- 7	Be3	01/06/93	01/13/93 Water
87570 - [%] 9	B-4	01/06/93	01/13/93 Water

RESULTS OF ANALYSIS

Laboratory Number: 87570-1 87570-2 87570-3 87570-5 87570-7

Gasoline:	ND<50	ND<50	ND<50	ND<50	54 8 0
Benzene:	ND<0.5	ND<0.5	ND < 0.5	ND<0.5	490
Toluene:	ND < 0.5	ND<0.5	ND<0.5	ND<0.5	84
Ethyl Benzene:	ND<0.5	ND<0.5	ND < 0.5	ND<0.5	51
Xylenes:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	82
Diesel:	NA	NA	ND<50	ND<50	1 00000**
Concentration:	uq/L	uq/L	uq/L	ug/L	ug/L
COMCEMELACION.	49/1	α9/ H	~5/1	~9, ~	-5/-

Laboratory Number: 87570- 9

Gasoline: 19000
Benzene: 2000
Toluene: 89
Ethyl Benzene: 490
Xylenes: 740
Diesel: 2700*

Concentration: ug/L

- * Diesel range concentration reported. The pattern of peaks observed in the chromatogram is typical of gasoline.
- ** Diesel range concentration reported. The pattern of peaks observed in the chromatogram is a mixture of gasoline and heavy hydrocarbons.

Page 1 of 2

CERTIFICATE OF ANALYSIS

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2 QA/QC INFORMATION SET: 87570

NA = ANALYSIS NOT REQUESTED

ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT

ug/L = parts per billion (ppb)

*Diesel concentration reported. A non-standard diesel pattern was observed in the chromatogram.

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 Line for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE

Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	200 ng	89/94	5%	70-130
Benzene:	200 ng	86/90	5%	70-130
Toluene:	200 ng	90/94	4%	70-130
Ethyl Benzene:	200 ng	96/99	3 %	70-130
Xylenes:	600 ng	95/97	28	70-130
Diesel:	200 ppm	114/114	0%	70-130

Richard Srna, Ph.D.

Laboratory Director

Fax cop	by of	Lab	Rep	ort d	and	COC to	Che	vron	Со	ntac	t: E	Ye No	s <	379	571		Chain-of-Custody-Record	
Chevron U.S P.O. BOX San Ramon, (FAX (415)8	5004 CA 94583	Cone Cone	Consultant Project Number 020302974 Consultant Nome Groundwater Technology, Inc. 4057 Port Chicago Hwy., Concord, CA Project Contact (Name) Ms. Sandra L. Lindsey 671-2387 685-9148									- U	Chevron Contact (Name) (Phone) 510-842-8134 (suboratory Name Superior Analytical Laboratory Release Number 614-8570 Samples Collected by (Name) Hector Merino Collection Date 1-6-93 Signature					
			3										Analyses To Be Performed					
Sample Humber	Lab Somple Number	Number of Containers	Metric Sol A = Ar S = Sol A = Ar W = Webs C = Chare	Type G = Grab C = Composite D = Discrete	The	Sample Preservation	load (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Disass (8015)	Oil and Grease (5620)	Purgeoble Holocorbons (8010)	Purpeable Aromotics (8020)	Purgeoble Organica (8240)	Extractoble Organics (8270)	Metals C4.C4.Pb.Zn.M (CAP or AA)	HOLD	TBLB ANAlyze but Do Not Charge Remorks	
TBLB		1	W	6		HCR.	405	X										
RB B-6	2	1				HCE		\times										
B-6	3	3				HLC		X									1 1 1 1 1 1	
B-6	J	1							×									
RB B-S	44	1	·			HCE		<u> </u>								\times	200	
B-5	5	3				HLC	<u> </u>	\times	<u> </u>				<u> </u>					
B-5	1	/							X				<u> </u>				eg eg	
RBB3	*6	1				HLE							ļ	<u> </u>		X		
B-3	7	3				HLL		\times									ini tet: nec.	
B-3	V	1		Ц_			<u> </u>		X								00 00 00 00 00 00 00 00 00 00 00 00 00	
RBB4	18					HLE		<u> </u>	<u> </u>		<u> </u>					X	Sion Sion Sion Sion Sion Sion Sion Sion	
B-4	9	3	l ,			HLL	1	X									Pleaso Property Comme	
B-4	V	Ĺ	W	6			109		X							<u> </u>	S S S S S S S S S S S S S S S S S S S	
\								<u> </u>			<u> </u>							
Months	Relinquished By (Signature) Organization Relinquished By (Signature) Organization			Date/Time -1-97 Date/Time	Rec	pelved B	y (Sign	oture)		-	Organizat Organizat		Data	o/Time	24 Hrs. 48 Hrs. 5 Days 10 Days			
Relinquished By	(Signature)		Org	onization		Date/Time	1	they F	or Labo	rotor E	y Bign	eyers)	9/1		Dol.	193	3 9180 As Contracted	