Chevron

August 22, 1994

Chevron U.S.A. Products Company
6001 Bollinger Canyon Road
Building L
San Ramon, CA 94583
P.O. Box 5004
San Ramon, CA 94583-0804

Marketing – Northwest Region
Phone 510 842 9500

Ms. Jennifer Eberle
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Former Chevron Service Station #9-0020
1633 Harrison Street, Oakland, CA

Dear Ms. Eberle:

Enclosed is the quarterly Groundwater Monitoring and Sampling Activities report dated July 15, 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. Monitor well MW-7 could not be sampled due to remediation equipment in the well. Per prior agreement between Chevron and Alameda County Health Care Services, monitor wells MW-5, MW-6, MW-8, MW-12, and MW-14 were not sampled. As approved in your February 14, 1994 letter, we will also discontinue sampling MW-11.

Benzene was detected in monitor wells MW-9, MW-13, and MW-16 at concentrations of 4.8, 63, and 0.9 ppb, respectively. Depth to ground water was measured at approximately 20.0 feet to 21.2 feet below grade and the direction of flow is to the northeast.

We are currently evaluating the feasibility and cost-effectiveness of continued operation of the dewatering and soil vapor extraction remedial systems. We have asked our consultant to review all historical data gathered and develop a comprehensive site management plan to guide future activities at this site. We currently anticipate completing this plan during the 3rd quarter of 1994. Chevron will continue to monitor and sample 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.

Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Kevin Graves, RWQCB - Bay Area
Ms. Alison Watts, Weiss Associates
Ms. B.C. Owen

The Oakland Housing Authority
Attn.: Mr. Harold Davis
1619 Harrison Street
Oakland, CA 94612

File: 9-0020 QM4

GROUNDWATER TECHNOLOGY, INC.

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

July 15, 1994 Project No. 020104081

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. 9-0020
1633 Harrison Street, Oakland, California

Dear Mr. Miller:

Groundwater Technology, Inc. presents the quarterly groundwater monitoring and sampling data collected on June 16, 17 and 20, 1994. Ten of the sixteen 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. Monitoring well MW-7 was not gauged or sampled due to a pump in the well. Groundwater monitoring wells MW-5, MW-6, MW-8, MW-12, and MW-14 are suspended from the monitoring and sampling program as requested by Cheveron. A potentiometric surface map and a summary of groundwater monitoring data are presented in Attachments 1 and 2, respectively. After the DTW was measured, the monitoring wells were purged and sampled. Groundwater monitoring and sample collection protocol and field data sheets are presented in Attachment 3. The groundwater samples collected were analyzed for benzene, toluene, ethylbenzene, xylenes and for total petroleum hydrocarbons-as-gasoline. Results of the chemical analyses are summarized in Attachment 2. The laboratory report and chain-of-custody record are included in Attachment 4. Historical groundwater analytical results for halogenated volatile organic compounds are also provided in Attachment 2. 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

Kenneth P. Johnson
Project Manager

PR

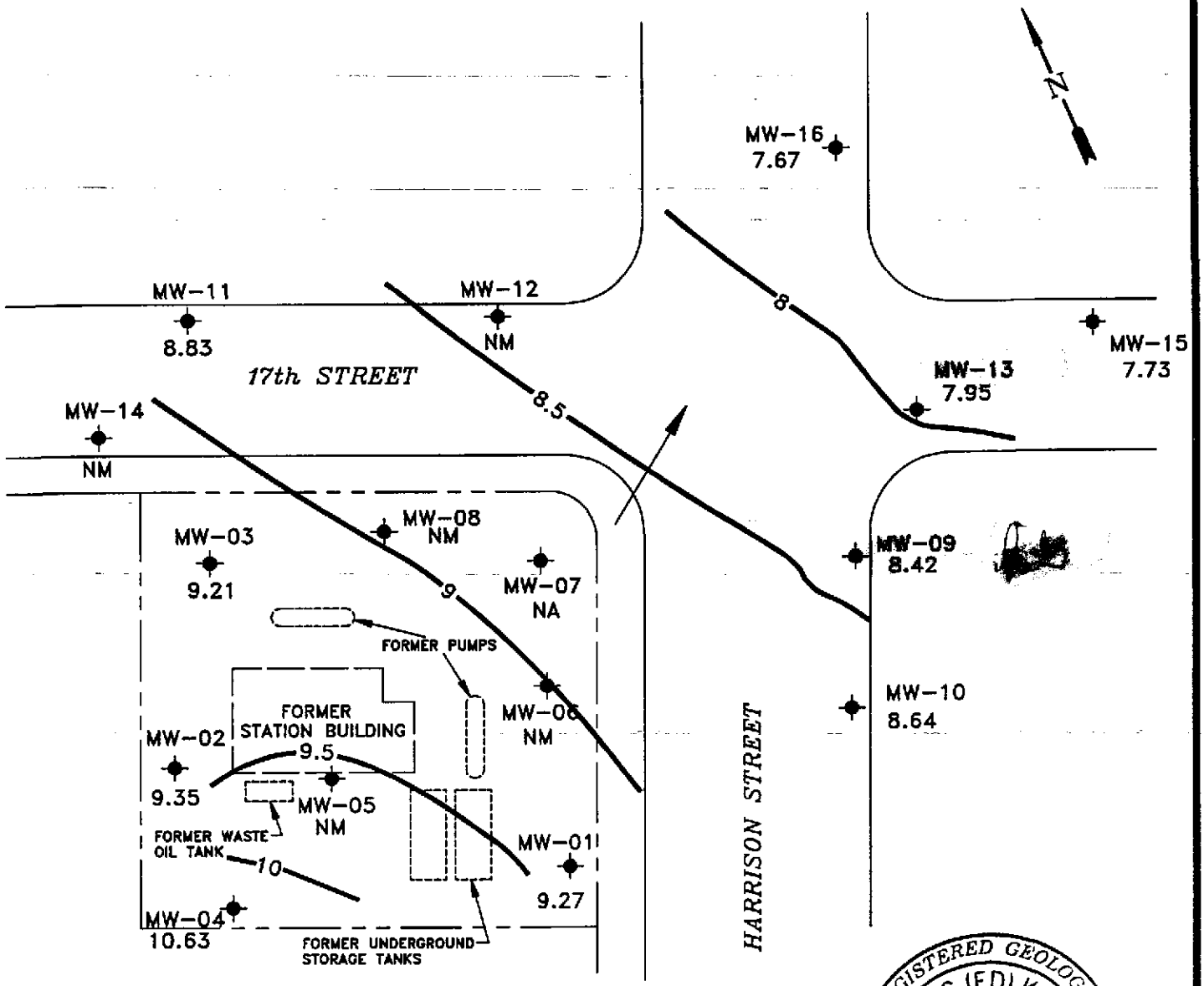
For:
Wendell W. Lattz
Vice President, General Manager
West Region

Attachment 1 Figures
Attachment 2 Tables
Attachment 3 Protocol and Field Data Sheets
Attachment 4 Laboratory Report

4081qmsr.294

ATTACHMENT 1

Figure



REGISTERED GEOLOGIST
EDVARDAS (ED) K. SIMONS
No. 4422
STATE OF CALIFORNIA

LEGEND

———	PROPERTY LINE
✦	MONITORING WELL
NA	NOT AVAILABLE
NM	NOT MONITORED PER CLIENT REQUEST
X.XX	POTENTIOMETRIC SURFACE ELEVATION (FT)
⌒	POTENTIOMETRIC SURFACE CONTOUR
←	GROUNDWATER FLOW DIRECTION

NOTE:
1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.

GROUNDWATER TECHNOLOGY

0 FEET 40
SCALE

POTENTIOMETRIC SURFACE MAP (6/16/94)

CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-0020	FILE: 4081PSM, (1:40)	PROJECT NO.: 02010-4081	PM KJ	PE/RG: [illegible]
LOCATION: 1633 HARRISON STREET OAKLAND, CALIFORNIA	REV.	DES. SS	DET. SS	DATE: 6/24/94	FIGURE: 1

ATTACHMENT 2

Tables

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
MW-1	11/03/88	<1,000[1]	<1.0	<1.0	<1.0	<1.0	---	20.40	0.0	9.42
	02/02/89	---	---	---	---	---	---	20.71	0.0	9.11
29.82	02/10/89	<100	<0.2	<0.2	<0.2	<0.4	---	---	---	---
	04/23/89	---	---	---	---	---	---	20.34	0.0	9.48
	04/24/89	<50	<0.5	<1.0	<1.0	<1.0	<3,000	---	---	---
	07/28/89	<50	<0.1	<0.5	<0.2	<0.5	<3,000	20.58	0.0	9.24
	10/30/89	<500	<0.3	<0.3	<0.3	<0.6	---	20.52	0.0	9.30
	01/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	20.77	0.0	9.05
	04/18/90	<50	<0.3	<0.3	<0.3	<0.6	---	20.95	0.0	8.87
	06/22/90	---	---	---	---	---	---	21.00	0.0	8.82
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	20.94	0.0	8.88
	11/13/90	<50	<0.5	<0.5	<0.5	<0.5	---	20.98	0.0	8.84
	05/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	20.64	0.0	9.18
	08/27/91	110[2]	<0.5	<0.5	<0.5	<0.5	---	20.79	0.0	9.03
	11/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	20.75	0.0	9.07
	02/20/92	<50	0.5	0.6	<0.5	0.9	---	20.90	0.0	8.92
	06/15/92	<50	<0.5	<0.5	<0.5	<0.5	---	20.64	0.0	9.18
29.82	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	20.84	0.0	8.98
	04/07/93	<50	<0.5	<0.5	<0.5	<1.5	---	19.91	0.0	9.91
	06/09/93	---	---	---	---	---	---	19.85	0.0	9.97
	09/10/93	---	---	---	---	---	---	---	---	---
	09/27/93	<50	<0.5	<0.5	<0.5	<0.5	---	20.35	0.0	9.47
	12/17/93	<50	<0.5	<0.5	<0.5	<0.5	---	20.68	0.0	9.14
	03/10/94	<50	<0.5	<0.5	<0.5	<0.5	---	20.57	0.0	9.25
	06/16/94	<50	<0.5	<0.5	<0.5	<0.5	---	20.55	0.0	9.27

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Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
MW-2	11/03/88	<1,000[1]	<1.0	<1.0	<1.0	<1.0	---	20.89	0.0	9.70
	02/02/89	---	---	---	---	---	---	21.21	0.0	9.38
30.59	02/10/89	<100	<0.2	<0.2	<0.2	<0.4	---	---	---	---
	04/23/89	---	---	---	---	---	---	20.82	0.0	9.77
	04/24/89	<50	<0.5	<1.0	<1.0	<1.0	<3,000	---	---	---
	07/28/89	<100	<0.2	<1.0	<0.2	<0.4	<3,000	21.02	0.0	9.57
	10/30/89	<500	<0.3	<0.3	<0.3	<0.6	---	20.96	0.0	9.63
	01/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	21.25	0.0	9.34
	04/18/90	<50	<0.3	<0.3	<0.3	<0.6	---	21.53	0.0	9.06
	06/22/92	---	---	---	---	---	---	21.57	0.0	9.02
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	21.55	0.0	9.04
	11/13/90	<50	<0.5	0.8	<0.5	0.9	---	21.54	0.0	9.05
	05/15/91	83[2]	<0.5	<0.5	<0.5	<0.5	---	21.15	0.0	9.44
	08/27/91	97[2]	<0.5	<0.5	<0.5	<0.5	---	21.27	0.0	9.32
	11/15/91	<50	0.5	1.5	0.8	3.6	---	21.30	0.0	9.29
	02/20/92	<50	<0.5	<0.5	<0.5	<0.5	---	21.43	0.0	9.13
	06/15/92	<50	<0.5	<0.5	<0.5	<0.5	---	21.18	0.0	9.41
30.56	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	21.47	0.0	9.09
	04/07/93	66*	<0.5	<0.5	<0.5	<1.5	---	20.53	0.0	10.03
	06/09/93	<50	<0.5	<0.5	<0.5	<0.5	---	20.45	0.0	10.11
	09/10/93	---	---	---	---	---	---	---	---	---
	09/27/93	---	---	---	---	---	---	20.97	0.0	9.59
	12/17/93	<50	<0.5	<0.5	<0.5	<0.5	---	21.31	0.0	9.25
	03/10/94	<50	<0.5	<0.5	<0.5	<0.5	---	21.23	0.0	9.33
	06/16/94	<50	<0.5	<0.5	<0.5	<0.5	---	21.21	0.0	9.35

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Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
MW-3	11/03/88	<1,000[1]	<1.0	<1.0	<1.0	<1.0	---	20.54	0.0	9.55
	02/02/89	---	---	---	---	---	---	20.85	0.0	9.24
30.09	02/10/89	<100	<0.2	<0.2	<0.2	<0.4	---	---	---	---
	04/23/89	---	---	---	---	---	---	20.43	0.0	9.66
	04/24/92	<50	<0.5	<1.0	<1.0	<1.0	<3,000	---	---	---
	07/28/89	<100	<0.2	<1.0	<0.2	<0.4	<3,000	20.64	0.0	9.45
	10/30/89	<500	<0.3	<0.3	<0.3	<0.6	---	20.61	0.0	9.48
	01/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	20.88	0.0	9.21
	04/18/90	<50	<0.3	<0.3	<0.3	<0.6	---	21.15	0.0	8.94
	06/22/90	---	---	---	---	---	---	21.20	0.0	8.89
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	21.18	0.0	8.91
	11/13/90	51[2]	<0.5	<0.5	<0.5	<0.5	---	21.15	0.0	8.94
	05/15/91	85[2]	<0.5	<0.5	<0.5	<0.5	---	20.91	0.0	9.18
	08/27/91	91[2]	<0.5	<0.5	<0.5	<0.5	---	20.89	0.0	9.20
	11/15/91	<50	<0.5	0.7	<0.5	1.3	---	21.02	0.0	9.07
	02/02/92	<50	<0.5	<0.5	<0.5	0.9	---	21.07	0.0	9.02
	06/15/92	50[2]	<0.5	<0.5	<0.5	<0.5	---	20.82	0.0	9.27
30.08	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	21.07	0.0	9.07
	04/07/93	<50	<0.5	<0.5	<0.5	<1.5	---	20.13	0.0	9.95
	06/09/93	<50	<0.5	<0.5	<0.5	<0.5	---	20.05	0.0	10.03
	09/10/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	09/27/93	---	---	---	---	---	---	20.58	0.0	9.50
	12/17/93	<50[5]	<0.5	<0.5	<0.5	<0.5	---	21.01	0.0	9.07
	03/10/94	<50	<0.5	<0.5	<0.5	1.1	---	20.86	0.0	9.22
	06/16/94	<50	<0.5	<0.5	<0.5	<0.5	---	20.87	0.0	9.21

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1633 Harrison Street, Oakland, California

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
MW-4	04/23/89	---	---	---	---	---	---	21.33	0.0	9.84
	04/24/89	<50	<0.5	<1.0	<1.0	<1.0	<3,000	---	---	---
31.17	07/28/89	<50	<0.1	<0.5	<0.1	<0.2	<3,000	21.58	0.0	9.59
	10/30/89	<500	<0.3	<0.3	<0.3	<0.6	---	21.54	0.0	9.63
	01/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	21.82	0.0	9.35
	04/18/90	<50	<0.3	<0.3	<0.3	<0.6	---	22.09	0.0	9.08
	06/22/90	---	---	---	---	---	---	22.12	0.0	9.05
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	22.11	0.0	9.06
	11/13/90	<50	<0.5	1	0.5	1	---	22.10	0.0	9.07
	05/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	21.71	0.0	9.46
	08/27/91	<50	<0.5	<0.5	<0.5	<0.5	---	21.87	0.0	9.30
	11/15/91	97	<0.5	0.9	<0.5	1.9	---	21.80	0.0	9.37
	02/20/92	<50	<0.5	<0.5	<0.5	<0.5	---	21.99	0.0	9.18
	06/15/92	<50	<0.5	<0.5	<0.5	<0.5	---	21.74	0.0	9.43
31.17	12/16/92	<50	0.7	0.5	0.5	1.3	---	22.05	0.0	9.12
	04/07/93	<50	<0.5	<0.5	<0.5	<1.5	---	21.11	0.0	10.06
	06/09/93	---	---	---	---	---	---	---	---	---
	09/10/93	---	---	---	---	---	---	---	---	---
	09/27/93	<50	<0.5	<0.5	<0.5	<0.5	---	21.54	0.0	9.63
	12/17/93	<50	<0.5	<0.5	<0.5	<0.5	---	21.89	0.0	9.28
	03/10/94	---	---	---	---	---	---	---	---	---
	06/16/94	---	---	---	---	---	---	20.54	0.0	10.63

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Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
MW-5	04/23/89	---	---	---	---	---	---	20.62	0.0	9.66
	04/24/89	<50	<0.5	<1.0	<1.0	<1.0	<3,000	---	0.0	---
	07/28/89	<100	<0.2	<1.0	<0.2	<0.4	<3,000	20.86	0.0	9.42
30.28	10/30/89	<500	<0.3	<0.3	<0.3	<0.6	---	20.82	0.0	9.46
	01/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	21.07	0.0	9.21
	04/18/90	<50	<0.3	<0.3	<0.3	<0.6	---	21.35	0.0	8.93
	06/22/90	---	---	---	---	---	---	21.38	0.0	8.90
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	21.36	0.0	8.92
	11/13/90	<50	<0.5	1	<0.5	1	---	21.35	0.0	8.93
	05/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	21.29	0.0	8.99
	08/27/91	94	3.0	5.0	1.5	5.5	---	21.11	0.0	9.17
	11/15/91	<50	0.9	1.7	<0.5	2.2	---	21.18	0.0	9.10
	02/20/92	<50	<0.5	<0.5	<0.5	<0.5	---	21.25	0.0	9.03
	06/15/92	<50	<0.5	<0.5	<0.5	<0.5	---	21.00	0.0	9.28
30.28	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	21.23	0.0	9.05
	04/07/93	<50	<0.5	<0.5	<0.5	<1.5	---	20.31	0.0	9.97
	06/09/93	---	---	---	---	---	---	---	---	---
	09/10/93	---	---	---	---	---	---	---	---	---
	09/27/93 Suspended	---	---	---	---	---	---	20.76	0.0	9.52

TABLE 1
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Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
MW-6	04/23/89	---	---	---	---	---	---	20.05	0.0	9.41
	04/24/89	<50	<0.5	<1.0	<1.0	<1.0	<3	---	---	---
	07/28/89	<100	<0.2	<1.0	<0.2	<0.4	<3	20.30	0.0	9.16
29.46	10/30/89	<500	<0.3	<0.3	<0.3	<0.6	---	20.32	0.0	9.14
	01/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	20.51	0.0	8.95
	04/18/90	<50	<0.3	<0.3	<0.3	<0.6	---	20.72	0.0	8.74
	06/22/90	---	---	---	---	---	---	20.77	0.0	8.69
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	20.74	0.0	8.72
	11/13/90	<50	3	5	0.5	2	---	20.75	0.0	8.71
	05/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	20.61	0.0	8.85
	08/27/91	180	6.1	12	3.8	14	---	20.53	0.0	8.93
	11/15/91	<50	<0.5	0.6	<0.5	<0.5	---	20.53	0.0	8.93
	02/20/92	<50	0.9	1.1	<0.5	1.4	---	20.69	0.0	8.77
	06/15/92	<50	<0.5	<0.5	<0.5	<0.5	---	20.38	0.0	9.08
29.45	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	20.57	0.0	8.88
	04/07/93	<50	<0.5	<0.5	<0.5	<1.5	---	19.59	0.0	9.86
	06/09/93	<50	<0.5	<0.5	<0.5	<0.5	---	19.50	0.0	9.95
	09/10/93	---	---	---	---	---	---	---	---	---
	09/27/93 Suspended	---	---	---	---	---	---	20.07	0.0	9.38

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Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
MW-7	04/23/89	---	---	---	---	---	---	18.99	0.0	10.02
	04/24/89	8,400[3]	100	260	160	1,300	3[4]	---	---	---
29.01	07/28/89	7,000[3]	230	90	70	440	<3,000	19.94	0.0	9.07
(D)	07/28/89	6,000[3]	280	180	58	430	---	---	---	---
	10/30/89	10,000[3]	570	55	160	400	---	19.97	0.0	9.04
(D)	10/30/89	9,900[3]	520	82	180	410	---	---	---	---
	01/09/90	3,400[3]	290	72	9	200	---	20.15	0.0	8.86
	04/18/90	6,800[3]	350	140	110	400	---	20.37	0.0	8.64
	06/22/90	---	---	---	---	---	---	20.40	0.0	8.61
	08/09/90	11,000[3]	360	130	14	660	---	20.38	0.0	8.63
	11/13/90	6,500	230	110	97	460	---	20.41	0.0	8.60
	05/15/91	4,600	180	55	46	300	---	20.47	0.0	8.54
	08/27/91	7,000	220	53	63	340	---	20.14	0.0	8.87
	11/15/91	3,300	150	19	4.9	200	---	20.22	0.0	8.79
	02/20/92	5,200	520	150	100	380	---	20.32	0.0	8.69
	06/15/92	10,000	760	430	320	1,100	---	19.98	0.0	9.03
29.01	12/16/92	11,000	810	350	280	1,100	---	20.14	0.0	8.87
	04/07/93	150	1.4	0.9	0.9	4.5	---	19.14	0.0	9.87
	06/09/93	180	4	1	1	3	---	19.05	0.0	9.96
	09/10/93	---	---	---	---	---	---	---	---	---
	09/27/93	---	---	---	---	---	---	---	---	---
	12/17/93	---	---	---	---	---	---	---	---	---
	03/10/94	---	---	---	---	---	---	---	---	---
	06/16/94	---	---	---	---	---	---	---	---	---

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
MW-8	04/23/89	---	---	---	---	---	---	20.14	0.0	9.43
	04/24/89	<50	<0.5	<1.0	<1.0	<1.0	3,000	---	---	---
29.57	04/24/89	<50	<0.5	<1.0	<1.0	<1.0	---	---	---	---
	07/28/89	<100	<0.2	<1.0	<0.2	<0.4	<3,000	20.37	0.0	9.20
	10/30/89	<500	<0.3	<0.3	<0.3	<0.6	---	20.32	0.0	9.25
	01/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	20.60	0.0	8.97
	04/18/90	<50	<0.3	<0.3	<0.3	<0.6	---	20.87	0.0	8.70
	06/22/90	---	---	---	---	---	---	20.34	0.0	9.23
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	20.89	0.0	8.68
	11/13/90	<50	<0.5	0.8	<0.5	2	---	20.86	0.0	8.71
	05/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	20.49	0.0	9.08
	08/27/91	73[2]	<0.5	<0.5	<0.5	<0.5	---	20.60	0.0	8.97
	11/15/91	<50	<0.5	0.7	<0.5	2.1	---	20.62	0.0	8.95
	02/20/92	<50	<0.5	<0.5	<0.5	<0.5	---	20.80	0.0	8.77
	06/15/92	<50	<0.5	<0.5	<0.5	<0.5	---	20.48	0.0	9.09
29.57	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	20.68	0.0	8.89
	04/07/93	<50	<0.5	<0.5	<0.5	<1.5	---	19.70	0.0	9.87
	06/09/93	<50	<0.5	<0.5	<0.5	<0.5	---	19.60	0.0	9.97
	09/10/93	---	---	---	---	---	---	---	---	---
	09/27/93 Suspended	---	---	---	---	---	---	20.22	0.0	9.35

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
MW-9	06/22/90	5,700[3]	47	31	280	530	<1,000	20.80	0.0	7.87
	08/09/90	8,000[3]	<0.3	17	210	480	---	20.74	0.0	7.93
	11/13/90	6,400	<3	20	240	450	---	20.78	0.0	7.89
28.67	05/15/91	5,700	2	16	190	390	---	20.48	0.0	8.19
	08/27/91	6,700	<3	31	180	350	---	20.55	0.0	8.12
	11/15/91	4,000	8.8	26	150	280	---	20.57	0.0	8.10
	02/20/92	3,400	13	30	230	460	---	21.77	0.0	6.90
	06/15/92	4,500	19	72	280	560	---	20.37	0.0	8.30
28.68	12/16/92	9,900	380	220	380	1,300	---	20.29	0.0	8.39
	04/07/93	8,700	51	150	360	1,000	---	19.32	0.0	9.36
	06/09/93	8,900	170	160	350	1,100	---	19.16	0.0	9.52
	09/10/93	4,600	110	63	190	350	---	---	---	---
	09/27/93	---	---	---	---	---	---	19.94	0.0	8.74
	12/17/93	4,600	92	85	180	300	---	20.31	0.0	8.37
	03/10/94	3,300	8.0	29	120	170	---	20.30	0.0	8.38
	06/16/94	[redacted]	[redacted]	16	85	64	---	20.26	0.0	8.42
MW-10	06/22/90	<50[3]	<0.5	<0.5	<0.5	<0.5	<1,000	20.48	0.0	8.12
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	20.45	0.0	8.15
	11/13/90	<50	<0.5	2	0.5	2	---	20.47	0.0	8.13
28.60	05/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	20.15	0.0	8.45
	08/27/91	<50	<0.5	<0.5	<0.5	<0.5	---	20.27	0.0	8.33
	11/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	20.33	0.0	8.27
	02/20/92	<50	2.0	2.2	<0.5	2.1	---	21.45	0.0	7.15
	06/15/92	<50	<0.5	<0.5	<0.5	<0.5	---	21.30	0.0	7.30
28.62	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	20.17	0.0	8.45
	04/07/93	<50	<0.5	<0.5	<0.5	<1.5	---	19.26	0.0	9.41
	06/09/93	<50	<0.5	<0.5	<0.5	<0.5	---	19.07	0.0	9.55
	09/10/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	09/24/93	---	---	---	---	---	---	19.72	0.0	8.90
	12/17/93	<50	<0.5	<0.5	<0.5	<0.5	---	20.07	0.0	8.55
	03/10/94	<50	<0.5	<0.5	<0.5	<0.5	---	19.97	0.0	8.65
	06/16/94	<50	<0.5	<0.5	<0.5	<0.5	---	19.98	0.0	8.64

GROUNDWATER TECHNOLOGY

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
MW-11	06/22/90	<50[3]	<0.5	<0.5	<0.5	<0.5	<1,000	21.03	0.0	8.34
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	21.02	0.0	8.35
29.37	11/13/90	76	0.6	1	0.9	4	---	20.93	0.0	8.44
	05/15/91	78[2]	<0.5	<0.5	<0.5	<0.5	---	20.61	0.0	8.76
	08/27/91	110[2]	<0.5	<0.5	<0.5	<0.5	---	20.70	0.0	8.67
	11/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	20.68	0.0	8.69
	02/20/92	<50	1.9	2.1	1.0	4.4	---	21.91	0.0	7.46
	06/15/92	---	---	---	---	---	---	20.56	0.0	8.81
29.39	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	20.75	0.0	8.64
	04/07/93	<50	<0.5	<0.5	<0.5	<1.5	---	19.83	0.0	9.56
	06/09/93	<50	<0.5	<0.5	<0.5	<0.5	---	19.67	0.0	9.72
	09/10/93	---	---	---	---	---	---	---	---	---
	09/27/93	<50	<0.5	<0.5	<0.5	<0.5	---	20.33	0.0	9.06
	12/17/93	<50	<0.5	<0.5	<0.5	<0.5	---	20.73	0.0	8.66
	03/10/94	---	---	---	---	---	---	20.69	0.0	8.70
	06/16/94	<50	<0.5	<0.5	<0.5	<0.5	---	20.56	0.0	8.83
MW-12	06/22/90	<50[3]	<0.5	<0.5	<0.5	<0.5	<1,000	20.45	0.0	7.98
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	20.43	0.0	8.00
28.43	11/13/90	<50	<0.5	<0.5	<0.5	<0.5	---	20.45	0.0	7.98
	05/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	20.07	0.0	8.36
	08/27/91	56[2]	<0.5	<0.5	<0.5	<0.5	---	20.15	0.0	8.28
	11/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	20.25	0.0	8.18
	02/20/92	<50	2.5	3.1	0.7	3.0	---	21.37	0.0	7.06
	06/15/92	<50	<0.5	<0.5	<0.5	<0.5	---	19.90	0.0	8.53
28.43	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	19.80	0.0	8.63
	04/07/93	<50	<0.5	<0.5	<0.5	<1.5	---	18.75	0.0	9.68
	06/09/93	---	---	---	---	---	---	---	---	---
	09/10/93	---	---	---	---	---	---	---	---	---
	09/27/93	---	---	---	---	---	---	19.63	0.0	8.80
	Suspended									

GROUNDWATER TECHNOLOGY ®

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
MW-13	11/15/91	3,100	68	40	110	270	---	21.07	0.0	7.56
	02/20/92	3,100	120	50	240	400	---	22.17	0.0	6.46
28.63	06/15/92	3,200	35	33	210	300	---	20.67	0.0	7.96
28.62	12/16/92	87,000	1,400	540	2,400	11,000	---	20.34	0.0	8.28
	04/07/93	1,500	72	12	70	160	---	19.41	0.0	9.21
	06/09/93	210	6	2	7	16	---	19.20	0.0	9.42
	09/10/93	73	3	<0.5	2	3	---	---	---	---
	09/27/93	---	---	---	---	---	---	20.35	0.0	8.27
	12/17/93	640	43	12	12	37	---	20.76	0.0	7.86
	03/10/94	540	44	22	10	69	---	20.69	0.0	7.93
	06/16/94	[redacted]	[redacted]	12	18	64	---	20.67	0.0	7.95
MW-14	11/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	20.33	0.0	9.13
	02/20/92	<50	1.3	1.8	1.1	5.2	---	21.41	0.0	8.05
29.46	06/15/92	---	---	---	---	---	---	---	---	---
29.45	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	20.66	0.0	8.79
	04/07/93	---	---	---	---	---	---	---	---	---
	06/09/93	---	---	---	---	---	---	---	---	---
	09/10/93	---	---	---	---	---	---	---	---	---
	09/27/93	---	---	---	---	---	---	20.26	0.0	9.19
	Suspended									
MW-15	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	19.74	0.0	8.30
28.04	04/07/93	<50	1.3	<0.5	<0.5	<1.5	---	18.80	0.0	9.24
	06/09/93	<50	<0.5	<0.5	<0.5	<0.5	---	18.60	0.0	9.44
	09/10/93	---	---	---	---	---	---	---	---	---
	09/27/93	<50	2	<0.5	<0.5	<0.5	---	19.93	0.0	8.11
	12/17/93	<50	<0.5	<0.5	<0.5	<0.5	---	20.32	0.0	7.72
	03/10/94	<50	<0.5	<0.5	<0.5	<0.5	---	20.29	0.0	7.75
	06/16/94	<50	<0.5	<0.5	<0.5	<0.5	---	20.31	0.0	7.73

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
MW-16	12/16/92	---	---	---	---	---	---	19.58	0.0	8.74
28.32	12/21/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	04/07/93	<50	<0.5	6.8	<0.5	<0.5	---	18.41	0.0	9.91
	06/09/93	<50	<0.5	<0.5	<0.5	<0.5	---	18.25	0.0	10.07
	09/10/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	09/27/93	---	---	---	---	---	---	20.16	0.0	8.16
	12/17/93	---	---	---	---	---	---	---	---	---
	03/10/94	<50	<0.5	<0.5	<0.5	<0.5	---	20.55	0.0	7.77
	06/16/94	<50	0.9	0.7	<0.5	<0.5	---	20.65	0.0	7.67
Rinsate	12/17/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	03/10/94	<50	<0.5	0.8	<0.5	0.6	---	---	---	---

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG	DTW (ft)	SPT (ft)	WTE (ft)
TBLB	11/03/88	---	<1.0	<1.0	<1.0	<1.0	---	---	---	---
	02/10/89	<50	<0.1	<0.1	<0.1	<0.2	---	---	---	---
	04/24/89	<50	<0.5	<0.5	<1.0	<1.0	---	---	---	---
	07/28/89	<50	<0.1	<0.1	<0.1	<0.2	---	---	---	---
	10/30/89	<500	<0.3	<0.3	<0.3	<0.6	---	---	---	---
	01/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	---	---	---
	04/18/90	<50	<0.3	<0.3	<0.3	<0.6	---	---	---	---
	06/22/90	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	---	---	---
	11/13/90	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	05/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	08/27/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	11/15/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	02/20/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	06/15/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	04/07/93	<50	<0.5	<0.5	<0.5	<1.5	---	---	---	---
	06/09/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	09/10/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	09/27/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	12/17/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---
	03/10/94	<50	<0.5	0.6	<0.5	0.6	---	---	---	---
	06/16/94	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---

NOTES FOR TABLE 1
CHEVRON SERVICE STATION No. 9-6991
1633 HARRISON STREET, OAKLAND, CALIFORNIA

Concentrations in parts per billion.
All elevations are presented as feet above mean sea level.
TPH-G = Total petroleum hydrocarbons-as-gasoline
TOG = Total oil and grease
DTW = Depth to groundwater
SPT = Separate-phase hydrocarbon thickness
WTE = Water-table elevation
TB-LB = Trip blank/Lab blank
--- = Not applicable, not sampled, not measured
(D) = Duplicate analysis
* = Gasoline range concentration reported. The chromatogram indicates only a single peak in the gasoline range.
1 = Analyzed for total fuel hydrocarbons
2 = Laboratory reported that peaks did not match typical gasoline pattern.
3 = Fuel characterized as gasoline
4 = Acetone and 2-butanone were detected at 5 ppb and 160 ppb, respectively.

TABLE 2
HISTORICAL GROUNDWATER ANALYTICAL RESULTS FOR HALOGENATED VOLATILE ORGANICS
Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID	Date	Carbon Tet	Chloro-form	PCE	TCE	1,2,-DCE	t-1,2-DCE	c-1,2-DCE	1,1,1-TCA	1,2-DCA	1,2-DCP	MC	Other[a] HVOCs
MW-1	11/03/88	18.0	7.0	<1.0	<1.0	---	<1.0	---	<1.0	<1.0	---	---	---
	02/10/89	17.0	6.0	<0.2	<0.2	---	<0.2	<0.2	<0.2	<0.2	---	---	---
	04/24/89	16.0	6.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	---	---
	07/28/89	20.0	6.4	<0.1	<0.1	---	<0.1	<0.1	0.3	<0.1	---	---	---
	10/30/89	11.0	4.9	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	01/09/90	24.0	7.2	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	04/18/90	23.0	5.5	<0.5	<0.5	<0.5	---	---	1.4	<0.5	<0.5	<0.5	---
	08/09/90	32.0	11.0	0.7	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	24	7	60.7	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	05/15/91	15	5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	08/27/91	18	4.2	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	11/15/91	21	7.9	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	02/20/92	24	7.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	06/15/92	10	3.2	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
MW-2	11/03/88	3.0	2.0	34.0	3.0	---	10.0	---	<1.0	<1.0	---	---	---
	02/10/89	1.4	1.0	17.2	<0.2	---	<0.2	6.3	<0.2	<0.2	---	---	---
	04/24/89	2.0	2.0	38.0	3.0	9.0	---	---	<1.0	<1.0	---	---	---
	07/28/89	3.7	2.0	46.0	2.6	---	<0.2	<0.2	<0.2	<0.2	---	---	---
	10/30/89	1.4	2.6	53.0	1.1	14.0	---	---	<0.5	<0.5	---	---	---
	01/09/90	3.6	3.9	78.0	5.3	16.0	---	---	<0.5	<0.5	---	---	---
	04/18/90	1.5	2.7	130.0	3.9	19.0	---	---	<0.5	<0.5	<0.5	<0.5	---
	08/09/90	2.1	2.1	74.0	6.1	15.0	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	<0.5	2	40	4	---	<0.5	10	<0.5	<0.5	<0.5	<0.5	---
	05/15/91	2	2	56	6	---	<0.5	15	<0.5	<0.5	<0.5	<0.5	ND
	08/27/91	1.1	0.9	46	3.9	---	---	8.0	<0.5	<0.5	<0.5	<0.5	ND
	11/15/91	0.6	1.1	58	3.1	---	<0.5	6.3	<0.5	<0.5	<0.5	<0.5	ND
	02/20/92	11	<2.5	62	3.1	---	<2.5	4.3	<2.5	<2.5	<2.5	<2.5	ND
	06/15/92	<0.5	1.2	45	3.1	---	<0.5	4.8	<0.5	<0.5	<0.5	<0.5	ND

GROUNDWATER TECHNOLOGY ®

TABLE 2
HISTORICAL GROUNDWATER ANALYTICAL RESULTS FOR HALOGENATED VOLATILE ORGANICS
Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID	Date	Carbon Tet	Chloro-form	PCE	TCE	1,2,-DCE	t-1,2-DCE	c-1,2-DCE	1,1,1-TCA	1,2-DCA	1,2-DCP	MC	Other[a] HVOCs
MW-3	11/03/88	8.0	6.0	84.0	3.0	---	5.0	---	<1.0	<1.0	---	---	---
	02/10/89	5.8	4.0	53.0	1.9	---	<0.2	9.0	<0.2	<0.2	---	---	---
	04/24/89	7.0	6.0	110.0	3.0	11.0	---	---	<1.0	<1.0	---	---	---
	07/28/89	8.6	5.0	49.0	2.1	---	<0.2	11.0	<0.2	<0.1	---	---	---
	10/30/89	5.6	5.3	62.0	0.7	8.2	---	---	<0.5	<0.5	---	---	---
	01/09/90	8.6	6.1	81.0	73.8	8.7	---	---	<0.5	<0.5	---	---	---
	04/18/90	7.6	5.8	120.0	2.4	11.0	---	---	<0.5	<0.5	<0.5	<0.5	---
	08/09/90	11.0	6.7	81.0	5.1	11.0	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	7	5	43	4	---	<0.5	9	<0.5	<0.5	<0.5	<0.5	---
	05/15/91	6	4	46	3	---	<0.5	8	<0.5	<0.5	<0.5	<0.5	ND
	08/27/91	5.5	3.8	43	2.6	---	---	8.1	<0.5	<0.5	<0.5	<0.5	c,d,e,f
	11/15/91	6.3	5.0	67	3.4	---	0.8	7.4	0.9	<0.5	<0.5	<0.5	ND
	02/20/92	2.8	4.0	96	3.0	---	<2.5	6.1	<2.5	<2.5	<2.5	<0.5	ND
	06/15/92	5.0	3.9	86	2.9	---	<0.5	7.5	<0.5	<0.5	<0.5	<0.5	ND
MW-4	04/24/89	35.0	11.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	---	---
	07/28/89	32.0	9.3	<0.1	<0.1	---	<0.1	<0.1	<0.1	<0.1	---	---	---
	10/30/89	32.0	8.5	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	01/09/90	36.0	9.8	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	04/18/90	41.0	9.5	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	08/09/90	38.0	11.0	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	40	11	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	05/15/91	35	10	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	08/27/91	28	6.1	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	11/15/91	23	9.1	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	02/20/92	400	140	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	06/15/92	38	11	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND

TABLE 2
HISTORICAL GROUNDWATER ANALYTICAL RESULTS FOR HALOGENATED VOLATILE ORGANICS
Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID	Date	Carbon Tet	Chloro-form	PCE	TCE	1,2,-DCE	t-1,2-DCE	c-1,2-DCE	1,1,1-TCA	1,2-DCA	1,2-DCP	MC	Other[a] HVOCs
MW-5	04/24/89	4.0	5.0	4.0	<1.0	2.0	---	---	<1.0	<1.0	---	---	---
	07/28/89	5.6	4.0	5.3	0.3	---	0.2	2.3	0.5	<0.2	---	---	---
	10/30/89	2.9	2.0	2.7	<0.5	0.86	---	---	<0.5	<0.5	---	---	---
	01/09/90	8.2	4.6	7.8	0.6	3.1	---	---	<0.5	<0.5	---	---	---
	04/18/90	6.3	2.8	2.6	<0.5	1.7	---	---	<0.5	<0.5	<0.5	<0.5	---
	08/09/90	11.0	4.8	6.0	<0.5	2.3	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	7	3	5	<0.5	---	<0.5	1	<0.5	<0.5	<0.5	<0.5	---
	05/15/91	4	2	3	<0.5	---	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	ND
	08/27/91	3.3	1.1	2.3	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/15/91	5.7	2.8	5.5	<0.5	---	<0.5	1.7	<0.5	<0.5	<0.5	<0.5	ND
	02/20/92	4.0	2.0	3.9	<0.5	---	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	ND
	06/15/92	4.0	2.0	5.0	<0.5	---	<0.5	1.4	<0.5	<0.5	<0.5	<0.5	ND
MW-6	04/24/89	13.0	7.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	---	---
	07/28/89	9.6	4.0	<0.2	<0.2	---	<0.2	<0.2	0.5	0.6	---	---	---
	10/30/89	8.2	3.6	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	01/09/90	10.0	4.2	<0.5	<0.5	<0.5	---	---	<0.5	1.8	---	---	---
	04/18/90	11.0	3.8	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	08/09/90	20.0	6.6	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	15	5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	05/15/91	11	4	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	08/27/91	8.0	2.2	2.4	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	11/15/91	13	5.4	<0.5	<0.5	---	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	ND
	02/20/92	11	4.0	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	06/15/92	9.6	4.2	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND

TABLE 2
HISTORICAL GROUNDWATER ANALYTICAL RESULTS FOR HALOGENATED VOLATILE ORGANICS
Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID	Date	Carbon Tet	Chloro-form	PCE	TCE	1,2,-DCE	t-1,2-DCE	c-1,2-DCE	1,1,1-TCA	1,2-DCA	1,2-DCP	MC	Other[a] HVOCs
MW-7	04/24/89	3.0	9.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	---	---
	07/28/89	<2.0	<10.0	<2.0	<2.0	---	<2.0	<2.0	<10.0	6.0	---	---	---
	07/28/89[b]	<5.0	<20.0	<5.0	<5.0	---	<5.0	<0.5	<5.0	<5.0	---	---	---
	10/30/89	<1.0	3.9	<1.0	<1.0	<1.0	---	---	<1.0	6.4	---	---	---
	10/30/89[b]	<1.0	3.1	<1.0	<1.0	<1.0	---	---	<1.0	6.2	---	---	---
	01/09/90	<0.5	3.0	<0.5	<0.5	<0.5	---	---	<0.5	8.4	---	---	---
	04/18/90	<0.5	3.2	<0.5	<0.5	<0.5	---	---	<0.5	7.7	0.6	0.6	---
	08/09/90	3.3	7.7	<0.5	<0.5	<0.5	---	---	<0.5	8.4	<0.5	1.8	---
	11/13/90	0.6	3	<0.5	<0.5	---	<0.5	<0.5	<0.5	4	<0.5	<0.5	---
	05/15/91	2	2	<0.5	<0.5	---	<0.5	<0.5	<0.5	3	<0.5	<0.5	ND
	08/27/91	0.7	2.8	<0.5	<0.5	---	---	<0.5	<0.5	2.7	<0.5	<0.5	ND
	11/15/91	0.8	2.7	<0.5	<0.5	---	<0.5	<0.5	<0.5	3.1	<0.5	0.8	ND
	02/20/92	2.2	1.9	<0.5	<0.5	---	<0.5	<0.5	<0.5	3.3	<0.5	<0.5	ND
	06/15/92	1.1	1.8	<0.5	<0.5	---	<0.5	<0.5	<0.5	4.5	<0.5	<0.5	ND
MW-8	04/24/89	2.0	3.0	6.0	<1.0	4.0	---	---	<1.0	<1.0	---	---	---
	04/24/89[b]	2.0	2.0	6.0	<1.0	3.0	---	---	<1.0	<1.0	---	---	---
	07/28/89	2.3	2.0	5.6	<0.2	---	<0.2	3.8	<0.2	<0.2	---	---	---
	10/30/89	2.5	2.6	8.0	<0.5	5.5	---	---	<0.5	<0.5	---	---	---
	01/09/90	4.9	3.9	19.0	0.9	6.6	---	---	<0.5	<0.5	---	---	---
	04/18/90	3.8	2.8	17.0	0.6	5.7	---	---	<0.5	<0.5	<0.5	<0.5	---
	08/09/90	5.3	4.4	27.0	1.2	9.2	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	3	2	21	0.7	---	<0.5	6	<0.5	<0.5	<0.5	<0.5	---
	05/15/91	2	2	30	0.9	---	<0.5	6	<0.5	<0.5	<0.5	<0.5	ND
	08/27/91	1.4	1.1	32	1.0	---	---	4.7	<0.5	<0.5	<0.5	<0.5	ND
	11/15/91	1.5	1.9	50	<0.5	---	<0.5	5.8	<0.5	<0.5	2.0	<0.5	ND
	02/20/92	1.3	2.3	68	2.4	---	<0.5	7.6	<0.5	<0.5	<0.5	<0.5	ND
	06/15/92	0.7	1.9	46	1.6	---	<0.5	5.6	<0.5	---	<0.5	<0.5	ND

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Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID	Date	Carbon Tet	Chloro-form	PCE	TCE	1,2,-DCE	t-1,2-DCE	c-1,2-DCE	1,1,1-TCA	1,2-DCA	1,2-DCP	MC	Other[a] HVOCs
MW-9	06/22/90	<0.5	<0.5	<0.5	<0.5	---	<0.5	---	<0.5	<0.5	<0.5	<0.5	---
	08/09/90	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	<0.5	0.71	<0.5	<0.5	---
	11/13/90	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	1	<0.5	<0.5	---
	05/15/91	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	ND
	08/27/91	<0.5	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	11/15/91	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	ND
	02/20/92	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	06/15/92	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
MW-10	06/22/90	9.6	8.9	<0.5	<0.5	---	<0.5	---	<0.5	<0.5	<0.5	<0.5	---
	08/09/90	11.0	7.8	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	5	4	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	05/15/91	5	4	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	08/27/91	6.9	3.4	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	11/15/91	2.7	3.3	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	02/20/92	3.3	3.4	3.0	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	06/15/92	4.5	2.9	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
MW-11	06/22/90	4.6	6.5	73	1.3	---	<0.5	8.9	<0.5	<0.5	<0.5	<0.5	---
	08/09/90	8.1	6.8	84	2.0	4.6	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	<0.5	<0.5	39	<0.5	---	<0.5	2	5	<0.5	<0.5	<0.5	---
	05/15/91	1	3	7	0.5	---	<0.5	2	<0.5	<0.5	<0.5	<0.5	ND
	08/27/91	4.1	3.3	73	1.0	---	---	2.4	<0.5	<0.5	<0.5	<0.5	ND
	11/15/91	3.3	3.6	64	0.9	---	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	ND
	02/20/92	<2.5	<2.5	62	<2.5	---	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	ND
	06/15/92	---	---	---	---	---	---	---	---	---	---	---	---

GROUNDWATER TECHNOLOGY ®

TABLE 2
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Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID	Date	Carbon Tet	Chloro-form	PCE	TCE	1,2,-DCE	t-1,2-DCE	c-1,2-DCE	1,1,1-TCA	1,2-DCA	1,2-DCP	MC	Other[a] HVOCs
MW-12	06/22/90	6.0	7.3	7.4	<0.5	---	<0.5	13	<0.5	<0.5	<0.5	<0.5	---
	08/09/90	8.0	7.0	6.7	<0.5	5.8	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	<0.5	<0.5	9	<0.5	---	<0.5	3	3	<0.5	<0.5	<0.5	---
	05/15/91	4	4	10	<0.5	---	<0.5	3	<0.5	<0.5	<0.5	<0.5	ND
	08/27/91	3.1	2.6	10	<0.5	---	---	2.3	<0.5	<0.5	<0.5	<0.5	ND
	11/15/91	1.9	3.5	8.9	<0.5	---	<0.5	5.9	<0.5	<0.5	<0.5	<0.5	ND
	02/20/92	3.3	3.4	3.7	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	06/15/92	2.2	3.7	13	<0.5	---	<0.5	4.5	<0.5	<0.5	<0.5	<0.5	ND
MW-13	11/15/91	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	[9]
	02/20/92	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	06/15/92	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
MW-14	11/15/91	<0.5	5.5	33	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	02/20/92	<0.5	4.3	38	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	06/15/92	---	---	---	---	---	---	---	---	---	---	----	---

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Chevron Service Station No. 9-0020
1633 Harrison Street, Oakland, California

Well ID	Date	Carbon Tet	Chloro-form	PCE	TCE	1,2,-DCE	t-1,2-DCE	c-1,2-DCE	1,1,1-TCA	1,2-DCA	1,2-DCP	MC	Other[a] HVOCs
Trip Blank	11/03/88	<1.0	<1.0	<1.0	<1.0	---	<1.0	---	<1.0	<1.0	---	---	---
	02/10/89	<0.1	<0.5	<0.1	<0.1	---	<0.1	<0.1	<0.1	<0.1	---	---	---
	04/24/89	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	---	---
	07/28/89	<0.1	<0.5	<0.1	<0.5	<0.1	---	<0.1	<0.1	<0.1	---	---	---
	10/30/89	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	01/09/90	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	---	---	---
	04/18/90	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	06/22/90	<0.5	<0.5	<0.5	<0.5	---	<0.5	---	<0.5	<0.5	<0.5	<0.5	---
	08/09/90	<0.5	<0.5<	<0.5	<0.5	<0.5	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/13/90	<0.5	0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	05/15/91	---	---	---	---	---	---	---	---	---	---	---	---
	08/27/91	---	---	---	---	---	---	---	---	---	---	---	---
	11/15/91	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	---	ND
	02/20/92	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	---	ND
	06/15/92	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND

Carbon Tet = Carbon Tetrachloride
PCE = Tetrachloroethene
TCE = Trichloroethene
1,2-DCE = 1,2-Dichloroethene
t-1,2-DCE = trans-1,2-Dichloroethene
c-1,2-DCE = cis-1,2-Dichloroethene
1,1,1-TCA = 1,1,1-Trichloroethane
1,2-DCA = 1,2-Dichloroethane
1,2-DCP = 1,2-Dichloropropane
MC = Methylene chloride (dichloromethane)

Other HVOCs = Other halogenated volatile organic compounds
--- = Not applicable, not analyzed, not sampled
ND = Not detected above method detection limit
a = The tabulated analytical results for ground water prior to May 15, 1991 do not specify whether other HVOCs were detected
b = Duplicate analyses
c = Trichlorofluoromethane was detected at 1.4 ppb
d = 1,1-Dichloroethene was detected at 1.3 ppb
e = 1,1-Dichloroethane was detected at 0.5 ppb
f = Chlorobenzene was detected at 0.7 ppb
g = 1,1-Dichloroethane was detected at 0.6 ppb

GROUNDWATER TECHNOLOGY ®

ATTACHMENT 3

Groundwater Monitoring and Sample Collection Protocol
and
Field Data Sheets

GROUNDWATER TECHNOLOGY GROUNDWATER MONITORING AND SAMPLE COLLECTION PROTOCOL

Groundwater Monitoring

Groundwater monitoring is accomplished using a INTERFACE PROBE™ Well Monitoring System. The INTERFACE PROBE™ Well Monitoring System is a hand held, battery operated device for measuring the depth to separate-phase hydrocarbons and depth to water. The INTERFACE PROBE™ Well Monitoring System consists of a dual-sensing probe which utilizes an optical liquid sensor and electrical conductivity to distinguish between water and petroleum products.

Monitoring is accomplished by measuring from the surveyed top of well casing or grade to groundwater and separate-phase hydrocarbons if present. The static water elevation is then calculated for each well and a potentiometric surface map is constructed. If separate-phase hydrocarbons are detected the water elevation is adjusted by the following calculation:

(Product thickness) x (0.8) + (Water elevation) = Corrected water elevation

Groundwater monitoring wells are monitored in order of wells with lowest concentrations of volatile organic compounds to wells with the highest concentrations, based upon historical concentrations. If separate-phase hydrocarbons are encountered in a well, the product is visually inspected to confirm and note color, amount, and viscosity. Monitoring equipment is washed with laboratory grade detergent and rinsed with distilled or deionized water before monitoring each well.

Groundwater Sampling

Before groundwater samples are collected, sufficient water is purged from each well to ensure representative formation water is entering the well. Wells are purged and sampled in the same order as monitoring, from wells with the lowest concentrations of volatile organic compounds to wells with the highest concentrations. Wells are purged using either a polyvinyl chloride (PVC) bailer fitted with a check valve or with a stainless steel submersible Grundfos pump. The purge equipment is decontaminated before use in each well by washing with laboratory grade detergent and tripled rinsing with deionized or distilled water. A minimum of 3 well-casing volumes of water are removed from each well while pH, electrical conductivity, and temperature are recorded to verify that "fresh" formation water is being sampled and the parameters have stabilized. If the well is low yielding, it may be purged dry and sampled before 3 casing volumes are purged. The wells are then allowed to recharge to approximately 80 percent of the initial water level before a sample is collected.

Groundwater samples are collected from each well using a new, prepackaged disposable bailer and string. The water sample is decanted from the bailer into laboratory-provided containers (appropriate for the analyses required) so that there is no headspace in the containers. Samples collected for benzene, toluene, ethylbenzene, xylene, and total petroleum hydrocarbons (TPH)-as-gasoline analyses are collected in 40-milliliter vials fitted with Teflon® septum lids. Samples are preserved with hydrochloric acid (HCL) to a pH of less than 2. Dissolved metals samples are filtered through a 0.45-micron paper filter in the field and preserved as required before submitting to the laboratory for analyses. All samples are labeled immediately upon collection and logged on the chain-of-custody record. Sample label and chain-of-custody recorded information includes the project name and number, sample identification, date and time of collection, analyses requested, and the sampler's name. Sample bottles are placed in plastic bags (to protect the bottles and labels) and on ice (frozen water) in an insulated cooler and are shipped under chain-of-custody protocol to the laboratory.

The chain-of-custody record documents who has possession of the samples until the analyses is performed. Other pertinent information is also noted for the laboratory use on the chain-of-custody record.

Trip blanks (TBLBs) are used for each project as a quality assurance/quality control measure. The TBLBs are prepared by the laboratory and are placed in the insulated cooler and accompany the field samples throughout the sampling event.

Project Name: _____ Date: 6-20-94

Site Address: 1633 Harrison Page _____ of _____

Project Number: 020104061 Project Manager: _____

Well ID: MW-4

Well Diameter: 4

DTW Measurements:
Initial: 20.54 Calc Well Volume: 25 gal
Recharge: _____ Well Volume: _____ gal

Purge Method
Peristaltic _____
Gear Drive _____
Submersible _____

Pump Depth _____ ft.
Hand Bailed X
Air Lift _____
Other _____

Instruments Used
YSI: X
Hydac: _____
Omega: _____
Other: _____

Time	Temp ~~C~~ F	Conductivity mS/cm	pH	Purge Volume Gallons	Turbidity	Comments
9:30	19.7	1.33	6.40	0		murky brown
9:34	19.3	1.31	6.51	10		
9:39	19.1	1.29	6.53	20		
9:43	19.1	1.27	6.53	25		

Project Name: Chevron - Harrison

Date: 6-16-94

Site Address: 1633 Harrison St. Oakland

Page 1 of 9

Project Number: 020104081.0610

Project Manager: Tim Watchers

Well ID: MW-1

Well Diameter: 4

DTW Measurements:
Initial: 20.55
Recharge:

Calc Well Volume: 17 gal
Well Volume: gal

Purge Method
Peristaltic
Gear Drive
Submersible

Pump Depth ft.
Hand Bailed Y
Air Lift
Other

Instruments Used
YSI: Y
Hydac:
Omega:
Other:

Time	Temp Y C / F	Conductivity mS/cm	pH	Purge Volume Gallons	Turbidity	Comments
8:31	19.2	1.23	6.12	0		Clear gray water
8:34	19.1	1.21	6.43	5		
8:37	19.1	1.18	6.54	10		
8:40	19.1	1.16	6.61	17		

Project Name: Chevron - Harrison

Date: 6/16/94

Site Address: 1633 Harrison St. Oakland

Page 2 of 9

Project Number: 020104081.0610

Project Manager: Tim Watchers

Well ID: MW-2

DTW Measurements:
Initial: 20.89 Calc Well Volume: _____ gal
Recharge: _____ Well Volume: _____ gal

Well Diameter: 4

Purge Method
Peristaltic_____
Gear Drive_____
Submersible_____

Pump Depth_____ ft.
Hand Bailed X
Air Lift_____
Other_____

Instruments Used
YSI: X
Hydac: _____
Omega: _____
Other: _____

Time	Temp X C / F	Conductivity ms/cm	pH	Purge Volume Gallons	Turbidity	Comments
9:12	18.3	.73	7.24	0		1. brown water
9:15	18.4	.70	7.06	6		
9:18	18.6	.66	6.97	10		
9:20	18.6	.69	6.92	15		
9:23	18.6	.65	6.93	21		

Project Name: Chevron - Harrison

Date: 6-16-94

Site Address: 1633 Harrison St. Oakland

Page 3 of 9

Project Number: 020104081.0610

Project Manager: Tim Watchers

Well ID: MW - 11

Well Diameter: 11

DTW Measurements:
Initial: 20.50
Recharge:

Calc Well Volume: 3 gal
Well Volume: gal

Purge Method
Peristaltic
Gear Drive
Submersible

Pump Depth ft.
Hand Bailed Y
Air Lift
Other

Instruments Used
YSI: Y
Hydac:
Omega:

Other:

Time	Temp X C / F	Conductivity ms/cm	pH	Purge Volume Gallons	Turbidity	Comments
9:40	19.6	1.60	6.92	0		clear water
9:41	19.6	.81	6.92	1		
9:42	19.5	.81	6.90	2		
9:43	19.5	.81	6.90	3		

Project Name: Chevron - Harrison

Site Address: 1633 Harrison St. Oakland

Project Number: 020104081.0610

Date: 6-17

Page 4 of 9

Project Manager: Tim Watchers

Well ID: MW-2

Well Diameter: 4

DTW Measurements:
Initial: 21.21
Recharge:

Calc Well Volume: 14 gal
Well Volume: gal

Purge Method
Peristaltic
Gear Drive
Submersible

Pump Depth ft.
Hand Bailed Y
Air Lift
Other

Instruments Used
YSI: Y
Hydac:
Omega:

Other:

Time	Temp °C / °F	Conductivity mS/cm	pH	Purge Volume Gallons	Turbidity	Comments
7:33	17.7	.84	6.60	0		1. gray water
7:36	17.8	.84	6.54	5		
7:38	17.7	.84	6.60	10		
7:41	17.8	.84	6.61	14		

Project Name: Chevron - Harrison

Site Address: 1633 Harrison St. Oakland

Project Number: 020104081.0610

Date: 6-17

Page 5 of 9

Project Manager: Tim Watchers

Well ID: MW-9

Well Diameter: 2

DTW Measurements:
Initial: 20.26
Recharge:

Calc Well Volume: 2 gal
Well Volume: gal

Purge Method
Peristaltic
Gear Drive
Submersible

Pump Depth ft.
Hand Bailed Y
Air Lift
Other

Instruments Used
YSI: Y
Hydac:
Omega:

Other:

Time	Temp F / C	Conductivity mS/cm	pH	Purge Volume Gallons	Turbidity	Comments
7:06	19.4	1.24	6.89	0		murky l. brown w/odor
7:07	19.4	1.24	6.89	1		
7:08	19.3	1.24	6.89	2		

Project Name: Chevron - Harrison

Site Address: 1633 Harrison St, Oakland

Project Number: 020104081.0610

Date: 6-17

Page 6 of 9

Project Manager: Tim Watchers

Well ID: MW-16

Well Diameter: 2

DTW Measurements:
Initial: 20.65
Recharge:

Calc Well Volume: 3 gal
Well Volume: gal

Purge Method
Peristaltic
Gear Drive
Submersible

Pump Depth ft.
Hand Bailed X
Air Lift
Other

Instruments Used
YSI: X
Hydac:
Omega:

Other:

Time	Temp ↓ C / F	Conductivity mS/cm	pH	Purge Volume Gallons	Turbidity	Comments
8:10	18.9	.83	7.16	0		1. brown water
8:11	18.9	.83	7.15	1		
8:12	19.0	.82	7.15	2		
8:13	19.0	.81	7.15	3		

Project Name: Chevron - Harrison

Site Address: 1633 Harrison St. Oakland

Project Number: 020104081.0610

Date: 6-17-94

Page 1 of 9

Project Manager: Tim Watchers

Well ID: MW-10

Well Diameter: 2

DTW Measurements:
Initial: 19.94
Recharge:

Calc Well Volume: gal
Well Volume: gal

Purge Method
Peristaltic
Gear Drive
Submersible

Pump Depth ft.
Hand Bailed X
Air Lift
Other

Instruments Used
YSI: Y
Hydac:
Omega:

Other:

Time	Temp °C / °F	Conductivity mS/cm	pH	Purge Volume Gallons	Turbidity	Comments
8:25	19.2	.93	7.11	0		1. brown water w/odor
8:26	19.2	.93	7.11	1		
8:27	19.2	.93	7.10	2		

Project Name: Chevron - Harrison

Site Address: 1633 Harrison St. Oakland

Project Number: 020104081.0610

Date: 6-17-94

Page 8 of 9

Project Manager: Tim Watchers

Well ID: MW-13

Well Diameter: 2

DTW Measurements:
Initial: 20.61
Recharge:

Calc Well Volume: gal
Well Volume: gal

Purge Method
Peristaltic
Gear Drive
Submersible

Pump Depth ft.
Hand Bailed 4
Air Lift
Other

Instruments Used
YSI: X
Hydac:
Omega:

Other:

Time	Temp 4 C / F	Conductivity mS/cm	pH	Purge Volume Gallons	Turbidity	Comments
8:37	18.7	.72	6.80	0		1: brown water
8:38	18.7	.72	6.80	1		
8:39	18.5	.72	6.80	2		
8:40	18.5	.72	6.79	3		
8:41	18.5	.71	6.79	4		

Project Name: Chevron - Harrison

Site Address: 1633 Harrison St. Oakland

Project Number: 020104081.0610

Date: 6-12

Page 9 of 9

Project Manager: Tim Watchers

Well ID: MW-15

Well Diameter: 2

DTW Measurements:
Initial: 20.31
Recharge:_____

Calc Well Volume:_____gal
Well Volume: _____gal

Purge Method
Peristaltic_____
Gear Drive_____
Submersible_____

Pump Depth_____ft.
Hand Bailed Y
Air Lift_____
Other_____

Instruments Used
YSI: Y
Hydac: _____
Omega:_____

Other:_____

Time	Temp C / F	Conductivity mS/cm	pH	Purge Volume Gallons	Turbidity	Comments
8:59	18.4	.72	7.03	0		1. gray water w/odor
8:59	18.3	.72	7.02	1		
9:00	18.1	.72	7.02	2		
9:01	18.1	.72	7.02	3		

ATTACHMENT 4

Laboratory Report

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Western Region
4080 Pike Lane, Suite C
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
FAX (510) 825-0720

June 27, 1994

Ken Johnson
Groundwater Technology, Inc.
4057 Port Chicago Hwy
Concord, CA 94520

RE: GTEL Client ID: 020104081
Login Number: C4060374
Project ID (number): 020104081.0610
Project ID (name): CHEVRON/#9-0020/Oakland, CA

Dear Ken Johnson:

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 06/22/94.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified by the Department of Health Service under Certification Number E1075.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Rashmi Shah
Laboratory Director

GTEL Client ID: 020104081
Login Number: C4060374
Project ID (number): 020104081.0610
Project ID (name): CHEVRON/#9-0020/Oakland, CA

ANALYTICAL RESULTS

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

GTEL Sample Number	C4060374-01	C4060374-02	C4060374-03	C4060374-04
Client ID	TBLB	MW-1	MW-3	MW-11
Date Sampled	06/16/94	06/16/94	06/16/94	06/16/94
Date Analyzed	06/24/94	06/24/94	06/25/94	06/25/94
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
Benzene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes (total)	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
TPH as GAS	50.	ug/L	< 50.	< 50.	< 50.	< 50.
BFB (Surrogate)	--	%	103.	102.	106.	106.

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020:

"Test Methods for Evaluating Solid Waste, Physical and Chemical Methods, SW-846", Third Edition, Revision 1, US EPA November 1986. Bromofluorobenzene surrogate recovery acceptability limits are 62-129%. Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap.

GTEL ENVIRONMENTAL LABORATORIES, INC

GTEL Client ID: 020104081
Login Number: C4060374
Project ID (number): 020104081.0610
Project ID (name): CHEVRON/#9-0020/Oakland, CA

ANALYTICAL RESULTS

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

GTEL Sample Number	C4060374-05	C4060374-06	C4060374-07	C4060374-08
Client ID	MW-2	MW-9	MW-16	MW-10
Date Sampled	06/16/94	06/16/94	06/16/94	06/16/94
Date Analyzed	06/24/94	06/25/94	06/24/94	06/25/94
Dilution Factor	1.00	2.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
Benzene	0.5	ug/L	< 0.5	4.8	0.9	< 0.5
Toluene	0.5	ug/L	< 0.5	16.	0.7	< 0.5
Ethylbenzene	0.5	ug/L	< 0.5	85.	< 0.5	< 0.5
Xylenes (total)	0.5	ug/L	< 0.5	64.	< 0.5	< 0.5
TPH as GAS	50.	ug/L	< 50.	2900	< 50.	< 50.
BFB (Surrogate)	--	%	103.	104.	110.	107.

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020:

"Test Methods for Evaluating Solid Waste, Physical and Chemical Methods, SW-846", Third Edition, Revision 1, US EPA November 1986. Bromofluorobenzene surrogate recovery acceptability limits are 62-129%. Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap.

GTEL ENVIRONMENTAL LABORATORIES, INC

GTEL Client ID: 020104081
Login Number: C4060374
Project ID (number): 020104081.0610
Project ID (name): CHEVRON/#9-0020/Oakland, CA

ANALYTICAL RESULTS

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

GTEL Sample Number	C4060374-09	C4060374-10	C4060374-11	--
Client ID	MW-13	MW-15	MW-4	--
Date Sampled	06/16/94	06/16/94	06/16/94	--
Date Analyzed	06/25/94	06/25/94	06/25/94	--
Dilution Factor	1.00	1.00	1.00	--

Analyte	Reporting Limit	Units	Concentration:			
Benzene	0.5	ug/L	63.	< 0.5	< 0.5	--
Toluene	0.5	ug/L	12.	< 0.5	< 0.5	--
Ethylbenzene	0.5	ug/L	18.	< 0.5	< 0.5	--
Xylenes (total)	0.5	ug/L	64.	< 0.5	< 0.5	--
TPH as GAS	50.	ug/L	1800	< 50.	< 50.	--
BFB (Surrogate)	--	%	107.	105.	104.	--

Notes:

Dilution Factor:

--Dilution factor indicates the adjustments made for sample dilution.

EPA 8020:

"Test Methods for Evaluating Solid Waste, Physical and Chemical Methods, SW-846", Third Edition, Revision 1, US EPA November 1986. Bromofluorobenzene surrogate recovery acceptability limits are 62-129%. Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap.

GTEL ENVIRONMENTAL LABORATORIES, INC

GTEL Client ID: 020104081 QUALITY CONTROL RESULTS
Login Number: C4060374 Volatile Organics
Project ID (number): 020104081.0610 Method: EPA 8020
Project ID (name): CHEVRON/#9-0020/Oakland, CA Matrix: Aqueous

Method Blank Results

QC Batch No: M062494-1
Date Analyzed: 24-JUN-94

Analyte	Method: EPA 8020	Concentration: ug/L
Benzene	< 0.30	
Toluene	< 0.30	
Ethylbenzene	< 0.30	
Xylenes (Total)	< 0.50	
TPH as Gasoline	< 10.0	

Notes:

GTEL ENVIRONMENTAL LABORATORIES, INC

GTEL Client ID: 020104081
Login Number: C4060374
Project ID (number): 020104081.0610
Project ID (name): CHEVRON/#9-0020/Oakland, CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

Matrix Spike and Matrix Spike Duplicate Results

Analyte	Original Concentration	Spike Amount	Matrix Spike Concentration	Matrix Spike Recovery, %	Matrix Spike Duplicate Concentration	Matrix Spike Duplicate Recovery, %	RPD, %	Acceptability Limits RPD, %	Acceptability Limits Recovery, %
EPA 8020	GTEL Sample ID:C4060358-08		Spike ID:M062494-3		Dup. ID:M062494-4				
Units: ug/L	Analysis Date:23-JUN-94			24-JUN-94		24-JUN-94	Client ID:Batch QC		
Benzene	< 0.50	20.0	14.1	70.5	14.5	72.5	2.8	34	57.3-138%
Toluene	< 1.0	20.0	17.7	88.2	18.4	91.7	3.8	31	63-134%
Ethylbenzene	< 1.0	20.0	17.9	89.3	18.0	89.8	0.5	38	59.3-137%
Xylenes (Total)	< 2.0 **	60.0	61.6	103.	62.6	104.	0.9	31	59.3-144%

Notes:

**: C4060358-08: Xylenes (Total): For data validation purposes an estimated concentration of 0.171, which is below the reporting limit, was used to calculate the spike recovery results.

GTEL ENVIRONMENTAL LABORATORIES, INC

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

Chain-of-Custody-Reco

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

Chevron Facility Number: 9-0020
Facility Address: 1633 Harrison Oakland
Consultant Project Number: 020104081.C110
Consultant Name: Groundwater Technology, Inc.
Address: 4057 Port Chicago Hwy, Concord, CA. 94520
Project Contact (Name): Tim Watchers
(Phone) 510-671-2387 (Fax Number)

Chevron Contact (Name): Mark Miller
(Phone) 510) 842-8134
Laboratory Name: Gtel
Laboratory Release Number: 922-4670
Samples Collected by (Name): C.A.G.
Collection Date: 6-16-94
Signature: Chris Angle

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)	Analyses To Be Performed: 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)					
TBLB	01	2	W	G	—	HCL	Y	Y												
MW-1	02	3			9:15							ND				ND				
MW-3	03	3			9:28															
MW-11	04	3			9:50															
MW-2	05	3			7:45															
MW-9	06	3			8:06															
MW-16	07	3			8:41															
MW-8	08	3			8:33															
MW-17	09	3			8:47															
MW-10	10	3			9:07															
MW-4	11	3			9:50															

NOTE:
DO NOT BILL
TB-LB SAMPLE
(5°)
seals
intact
Remarks

C40603

	Organization	Date/Time		Organization	Date/Time
Relinquished By (Signature): Chris Angle	GTI	6-20-94 7:00	Received By (Signature)		
Relinquished By (Signature)	GTI	6-22-94 1400	Received By (Signature): John Weber	GTEL	6-22-94 1400
Relinquished By (Signature)	GTEL	6-22-94 16:00	Received For Laboratory By (Signature)		6/22/94 16:00

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