



Chevron

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July 26, 1993

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

Ms. Jennifer Eberle
Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

3812

Marketing Department
Phone 510 842 9500

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

Dear Ms. Eberle:

Enclosed we are forwarding the **Quarterly Monitoring and Sampling Report** dated July 19, 1993, prepared by our consultant Groundwater Technology, Inc. for the above referenced site. As indicated in the report, ground water samples were collected and analyzed for total petroleum hydrocarbons and BTEX. Wells MW-1, MW-4, MW-5 and MW-14 were not accessible during this monitoring event due to vehicles being parked over the wells. MW-12's lid was stuck and could not be opened during this event. Benzene was detected in monitor wells MW-7, MW-9 and MW-13 only at concentrations of 4, 170 and 6 ppb, respectively. Depth to ground water was measured at approximately 20-feet below grade, and the direction of flow is to the east.

~~Chevron will implement the modified sampling schedule as outlined in your approval letter dated July 14, 1993. As you are aware, the remediation system has been activated. Quarterly progress reports on the system effectiveness will be provided to you. If you have any questions or comments, please do not hesitate to contact me at (510) 842-9581.~~

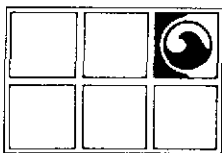
Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY


Nancy Vukelich
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Rich Hiett, RWQCB-Bay Area
Mr. Kent O'Brien, Geraghty & Miller
Ms. B.C. Owen
File (9-0020Q5)

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



GROUNDWATER TECHNOLOGY, INC.

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

FAX: (415) 685-9148

July 19, 1993

Project No. 020204081

Ms. Nancy Vukelich
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 Ms. Vukelich:

Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on June 9, 1993. Twelve of the 16 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 wells MW-1, MW-4, MW-5, and MW-14 were not gauged or sampled because vehicles were parked over the wells. The lid to monitoring well MW-12 was stuck and could not be opened. 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 (except monitoring wells MW-1, MW-4, MW-5, MW-12, and MW-14) was purged and sampled. The groundwater samples collected were analyzed for benzene, toluene, ethylbenzene, and xylenes and for total petroleum hydrocarbons-as-gasoline. Results of the chemical analyses are summarized in Table 1. The laboratory report and chain-of-custody record are included in Attachment 3. Table 2 contains historical groundwater analytical results for halogenated volatile organics. Monitoring-well purge water was transported by Groundwater Technology to the Chevron Terminal in Richmond, California, for recycling.

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

Sincerely,
Groundwater Technology, Inc.
Written/Submitted by

Tim Watchers

Tim Watchers
Project Geologist

PR *[Signature]*

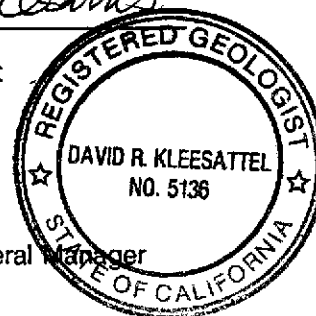
Attachment 1 Figures
Attachment 2 Tables
Attachment 3 Laboratory Report

Groundwater Technology, Inc.
Reviewed/Approved by

David R. Kleesattel

David R. Kleesattel
Registered Geologist
No. 5136

For:
John S. Gaines
Vice President, General Manager
West Region

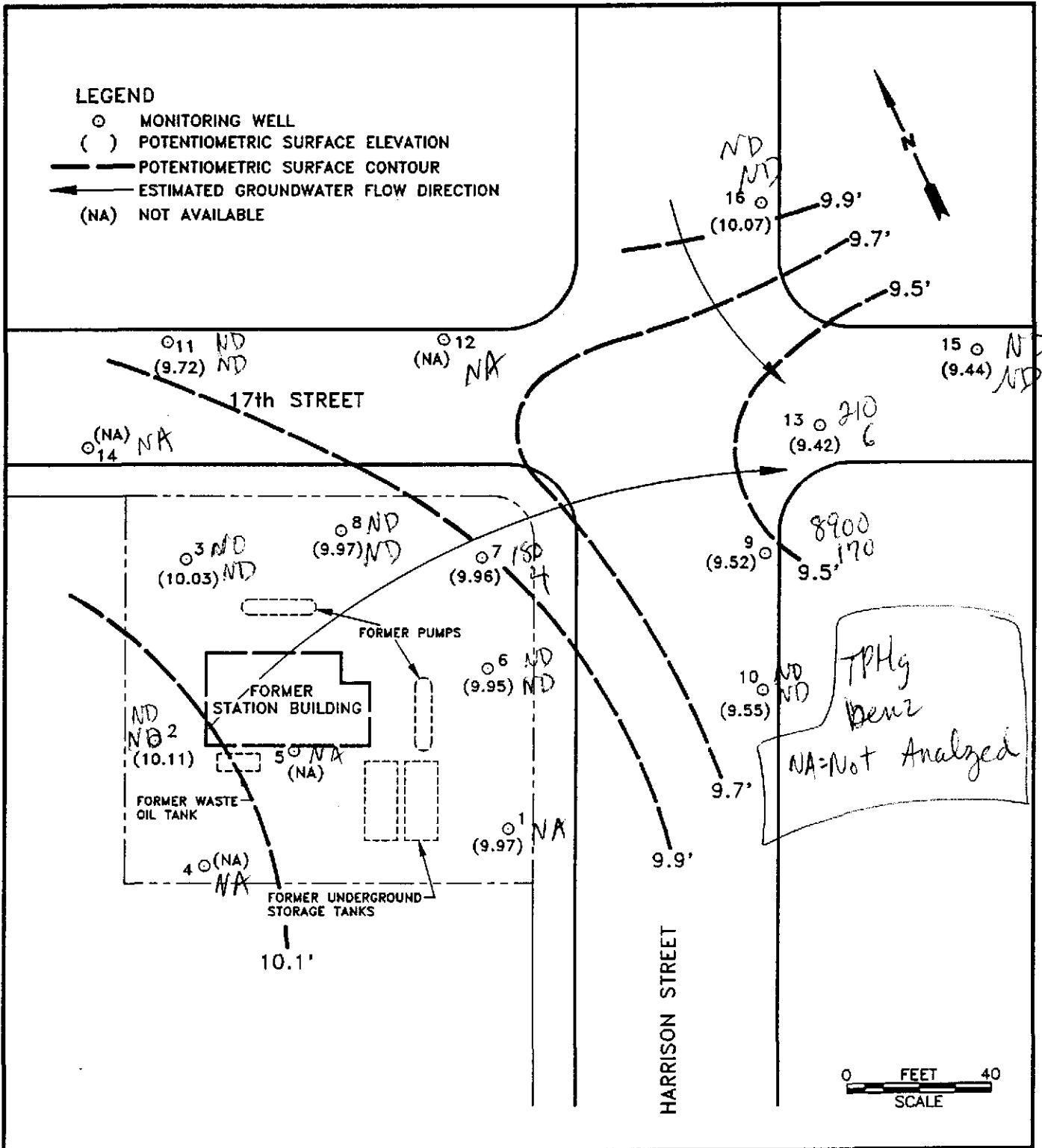


ATTACHMENT 1

Figure

LEGEND

- MONITORING WELL
- () POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR
- ← ESTIMATED GROUNDWATER FLOW DIRECTION
- (NA) NOT AVAILABLE



GROUNDWATER TECHNOLOGY
 4057 PORT CHICAGO HWY.
 CONCORD, CA 94520
 (510) 671-2387

**POTENTIOMETRIC SURFACE MAP
 (6/9/93)**

CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-0020		LOCATION: 1633 HARRISON STREET OAKLAND, CALIFORNIA		REV. NO.: 0	DATE: 7/14/93
PM JAW	PE/RC [Signature]	DESIGNED TW	DETAILED ML	ACAD FILE: PSM6993/SP193	PROJECT NO.: 020204084
				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 29.82	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
	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
29.82	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
	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

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-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

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-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

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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-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	—	—	—	—	—	—	—	—	—

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-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	—	—	—	—	—	—	—	—	—

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

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-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

ppb

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 29.57	04/23/89	—	—	—	—	—	—	20.14	0.0	9.43	
	04/24/89	<50	<0.5	<1.0	<1.0	<1.0	3,000	—	—	—	
	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	
MW-9 28.67	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

PpL

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-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
28.62	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
	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
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
	11/13/90	76	0.6	1	0.9	4	—	20.93	0.0	8.44
29.37	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
29.39	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
	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

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-12 28.43	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
	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
	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	---	---	---	---	---	---	---	---	---	
MW-13 28.63 28.62	11/15/91	3,100	88	40	110	270	---	21.07	0.0	7.56
	02/20/92	3,100	120	50	240	400	---	22.17	0.0	6.46
	06/15/92	3,200	35	33	210	300	---	20.67	0.0	7.96
	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	
MW-14 29.46 29.45	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
	06/15/92	---	---	---	---	---	---	---	---	---
	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	20.66	0.0	8.79
	04/07/93	---	---	---	---	---	---	---	---	---
06/09/93	---	---	---	---	---	---	---	---	---	
MW-15 28.04	12/16/92	<50	<0.5	<0.5	<0.5	<0.5	---	19.74	0.0	8.30
	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
MW-16 28.32	12/16/92	---	---	---	---	---	---	19.58	0.0	8.74
	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

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)
TB/LB	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	—	—	—	—	

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

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	Chloroform	PCE	TCE	1,2-DCE	1,1,2-DCE	c-1,2-DCE	TCA	1,2-DCA	1,2-DCP	MC	Other ¹ 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

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	Chloroform	PCE	TCE	1,2-DCE	1,1,2-DCE	c-1,2-DCE	TCA	1,2-DCA	1,2-DCP	MC	Other* 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	Chloroform	PCE	TCE	1,2-DCE	1,1,2-DCE	c-1,2-DCE	TCA	1,2-DCA	1,2-DCP	MC	Other [®] 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 Tel	Chloro- form	PCE	TCE	1,2-DCE	1,1,2-DCE	c-1,2-DCE	TCA	1,2-DCA	1,2-DCP	MC	Other ¹ 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

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	Chloroform	PCE	TCE	1,2-DCE	1,1,2-DCE	c-1,2-DCE	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	—	—	—	—	—	—	—	—	—	—	—	—

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	Chloroform	PCE	TCE	1,2-DCE	1,1,2-DCE	o-1,2-DCE	TCA	1,2-DCA	1,2-DCP	MC	Other ^g 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	^g
	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	—	—	—	—	—	—	—	—	—	—	—	—

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	Chloroform	PCE	TCE	1,2-DCE	t-1,2-DCE	c-1,2-DCE	TCA	1,2-DCA	1,2-DCP	MC	Other ^a HVOCs
Trip	11/03/88	<1.0	<1.0	<1.0	<1.0	--	<1.0	--	<1.0	<1.0	--	--	--
Blank	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
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 Monitoring and Sampling Activities
Chevron Service Station No. 9-0020, 1633 Harrison St., Oakland, CA

ATTACHMENT 3
Laboratory Report

4081R013.020



4080 Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
(800) 423-7143 Outside CA
(510) 825-0720 FAX

Client Number: 020204081
Consultant Project Number: 020204081
Facility Number: 9-0020
Project ID: 1633 Harrison St.
Oakland
Work Order Number: C3-06-0159

June 22, 1993

Nicole Merchant
Groundwater Technology, Inc.
4057 Port Chicago Hwy.
Concord, CA 94520

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 06/09/93.

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 California State Department of Health Services, Laboratory certification number E1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

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

Sincerely,
GTEL Environmental Laboratories, Inc.

A handwritten signature in cursive script that reads 'Eileen F. Bullen'.

Eileen F. Bullen
Laboratory Director

Client Number: 020204081
 Consultant Project Number: 020204081
 Facility Number: 9-0020
 Project ID: 1633 Harrison St.
 Oakland
 Work Order Number: C3-06-0159

Table 1

ANALYTICAL RESULTS

**Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline in Water**

EPA Methods 5030, 8020, and Modified 8015^a

GTEL Sample Number		01	03	05	07
Client Identification		TB-LB	MW6	MW8	MW3
Date Sampled		06/09/93	06/09/93	06/09/93	06/09/93
Date Analyzed		06/19/93	06/19/93	06/19/93	06/19/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5
Xylene, total	0.5	<0.5	<0.5	<0.5	<0.5
BTEX, total	--	--	--	--	--
TPH as Gasoline	50	<50	<50	<50	<50
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		99.4	95.9	96.1	103

- a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. Bromofluorobenzene surrogate recovery acceptability limits are 70 - 130%.

Client Number: 020204081
 Consultant Project Number: 020204081
 Facility Number: 9-0020
 Project ID: 1633 Harrison St.
 Oakland
 Work Order Number: C3-06-0159

Table 1 (Continued)

ANALYTICAL RESULTS

**Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline in Water**

EPA Methods 5030, 8020, and Modified 8015a

GTEL Sample Number		09	11	13	15
Client Identification		MW11	MW16	MW15	MW10
Date Sampled		06/09/93	06/09/93	06/09/93	06/09/93
Date Analyzed		06/19/93	06/19/93	06/19/93	06/19/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5
Xylene, total	0.5	<0.5	<0.5	<0.5	<0.5
BTEX, total	--	--	--	--	--
TPH as Gasoline	50	<50	<50	<50	<50
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		103	102	101	103

- a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. Bromofluorobenzene surrogate recovery acceptability limits are 70 - 130%.

Client Number: 020204081
 Consultant Project Number: 020204081
 Facility Number: 9-0020
 Project ID: 1633 Harrison St.
 Oakland
 Work Order Number: C3-06-0159

Table 1 (Continued)

ANALYTICAL RESULTS

**Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline in Water**

EPA Methods 5030, 8020, and Modified 8015a

GTEL Sample Number		17	19	21	23
Client Identification		MW2	MW7	MW13	MW9
Date Sampled		06/09/93	06/09/93	06/09/93	06/09/93
Date Analyzed		06/19/93	06/20/93	06/20/93	06/22/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	4	6	170
Toluene	0.5	<0.5	1	2	160
Ethylbenzene	0.5	<0.5	1	7	350
Xylene, total	0.5	<0.5	3	16	1100
BTEX, total	--	--	9	31	1800
TPH as Gasoline	50	<50	180	210	8900
Detection Limit Multiplier		1	1	1	5
BFB surrogate, % recovery		105	103	101	118

- a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. Bromofluorobenzene surrogate recovery acceptability limits are 70 - 130%.

Client Number: 020204081
 Consultant Project Number: 020204081
 Facility Number: 9-0020
 Project ID: 1633 Harrison St.
 Oakland
 Work Order Number: C3-06-0159

Table 1 (Continued)

ANALYTICAL RESULTS

**Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline in Water**

EPA Methods 5030, 8020, and Modified 8015^a

GTEL Sample Number		M061993			
Client Identification		METHOD BLANK			
Date Sampled		--			
Date Analyzed		06/19/93			
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5			
Toluene	0.5	<0.5			
Ethylbenzene	0.5	<0.5			
Xylene, total	0.5	<0.5			
BTEX, total	--	--			
TPH as Gasoline	50	<50			
Detection Limit Multiplier		1			
BFB surrogate, % recovery		92.7			

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. Bromofluorobenzene surrogate recovery acceptability limits are 70 - 130%.

NA = Not Applicable.

Client Number: 020204081
 Consultant Project Number: 020204081
 Facility Number: 9-0020
 Project ID: 1633 Harrison St.
 Oakland
 Work Order Number: C3-06-0159

QC Matrix Spike and Duplicate Spike Results

Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
Modified EPA 8020:							
Benzene	Reagent Water	20.0	ug/L	96.0	96.5	0.5	70 - 147
Toluene	Reagent Water	20.0	ug/L	107	109	1.9	67 - 150
Ethylbenzene	Reagent Water	20.0	ug/L	95.5	98.5	3.1	69 - 145
Xylene, total	Reagent Water	60.0	ug/L	112	114	1.8	71 - 152

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

Chevron Facility Number 9-0020
Facility Address 1633 Harrison St, Oakland
Consultant Project Number 020204081
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) Nancy Vukelich
(Phone) 842-9581
Laboratory Name GTEL
Laboratory Release Number 922-4670
Samples Collected by (Name) Randy Ray Phillips
Collection Date 6/9/93
Signature Randy Ray Phillips

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type C = Grab D = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analytes To Be Performed											Do not Bill TB-LB Page 1 of 3 Remarks			
								ETEX + 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						
TB-LB	01	1			2:20			X													SEALS INTACT	
RBMW4	02	0						X													X	ONICE AS 60
MW4		0						X														REC 6/9/93
RBMW5		0						X														
MW5		0						X														
RBMW1		0						X														
MW1		0						X														
RBMW6	02	1			2:20																	
MW6	03	3			2:20			X														
RBMW8	04	1			2:30																	
MW8	05	3			2:30			X														
RBMW3	06	1			2:40																	
MW3	07	3			2:40			X														

C3060199

G.M.W.
CH2193

Relinquished By (Signature) <u>Randy Ray Phillips</u>	Organization <u>G.T.I.</u>	Date/Time <u>6/9/93 5:10</u>	Received By (Signature)	Organization	Date/Time	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Replied For Laboratory By (Signature) <u>Bun... C...</u>		Date/Time <u>6/9/93</u>	

COC-3/20/93 W/mch

