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Chevron

December 31, 1993

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

Marketing Department
Phone 510 842 9500

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

**Re: Chevron Service Station #9-1583
5509 Martin Luther King Way, Oakland, CA**

Dear Ms. Hugo:

Enclosed is the quarterly Groundwater Monitoring and Sampling Activities report dated November 22, 1993, prepared by our consultant Groundwater Technology, Inc. (GTI) for the above referenced site. As indicated in the report, groundwater samples collected were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and BTEX. Benzene was detected in monitor wells MW-1, MW-2, and MW-3 at concentrations of 270, 1, and 2300 ppb, respectively. Depth to groundwater was measured at approximately 9.1 feet to 14.0 feet below grade, and the direction of flow is to the northwest.

Generally, dissolved hydrocarbon concentrations observed in the monitor wells at this site have decreased over the last two sampling events. This is most likely associated with a slight decrease in ground water elevation over the past six months.

Chevron will continue to monitor and sample all wells at this site on a quarterly basis. We have been awaiting your review and concurrence of GTI's June 7, 1993 work plan for the installation of additional on-site wells for over six months. Due to the high dissolved concentrations observed on-site and the necessity to define the dissolved hydrocarbon plume in a timely manner, I will instruct GTI to proceed with the work plan upon verbal notification to your office.

?
WP
approved
in a letter
dated
6/93

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

Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Eddy So, RWQCB - Bay Area
Mr. M.R. Purcell
File (9-1583 QM6)

GROUNDWATER TECHNOLOGY, INC.

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

FAX (415) 685-9148

November 22, 1993

Project No. 020204101

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. 9-1583
5509 Martin Luther King Jr. Way, Oakland, California

Dear Mr. Miller:

Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on October 21, 1993. The six groundwater monitoring wells at the site were gauged to measure depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not detected in the monitoring wells. A potentiometric surface map (Figure 1) and a summary of groundwater monitoring data (Table 1) are presented in Attachments 1 and 2, respectively. After the DTW was measured, each monitoring well was purged and sampled. The groundwater samples were analyzed for benzene, toluene, ethylbenzene, 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. 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 with 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

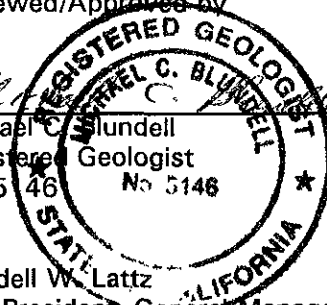
PR *Jm*

Attachment 1 Figure
Attachment 2 Table
Attachment 3 Laboratory Report

Groundwater Technology, Inc.
Reviewed/Approved by

Michael C. Blundell
Michael C. Blundell
Registered Geologist
No. 5146 No. 5146





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

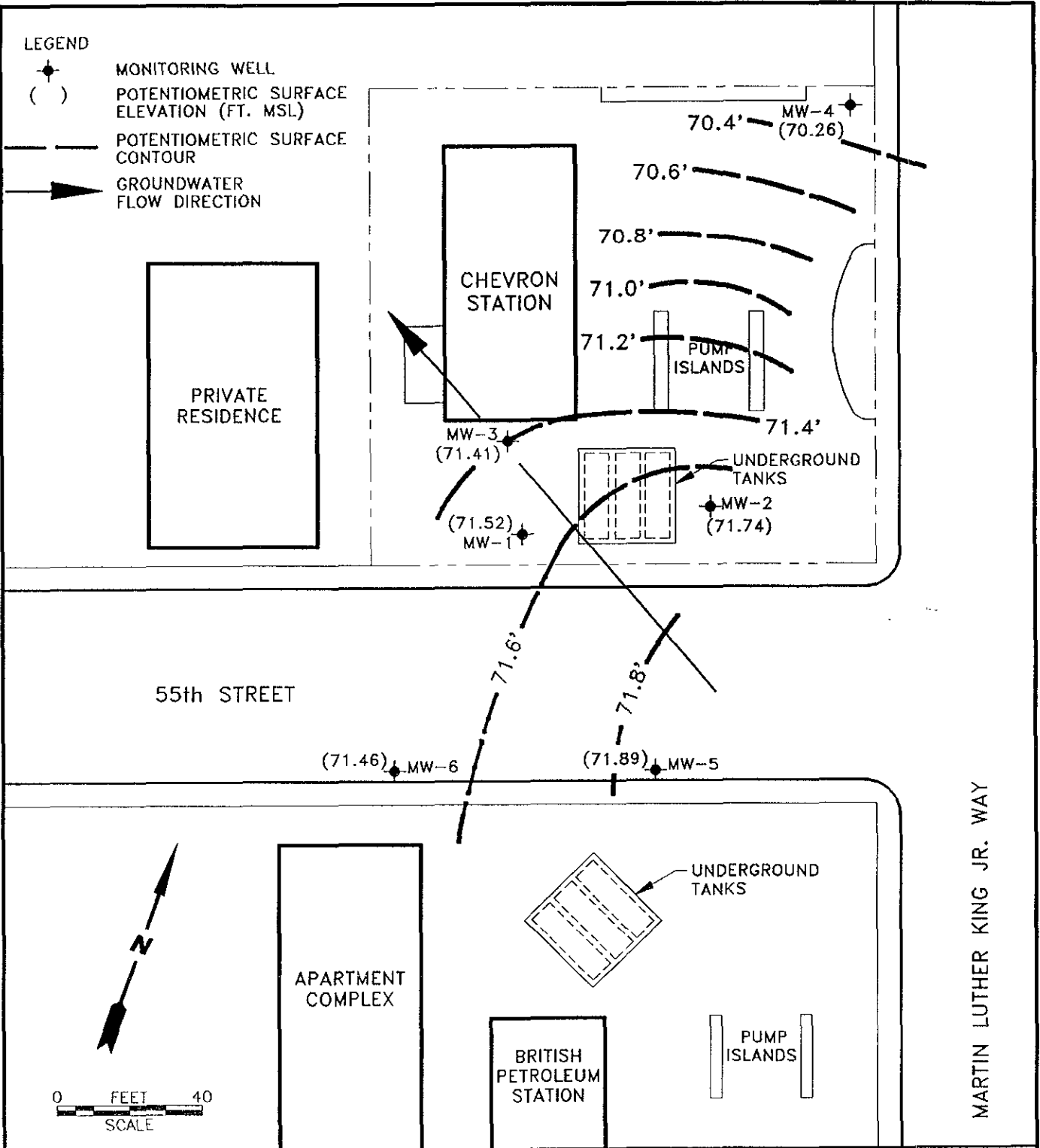


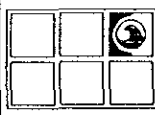
ATTACHMENT 1

Figure

LEGEND

-  MONITORING WELL
-  POTENTIOMETRIC SURFACE ELEVATION (FT. MSL)
-  POTENTIOMETRIC SURFACE CONTOUR
-  GROUNDWATER FLOW DIRECTION



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

**POTENTIOMETRIC SURFACE MAP
(10/21/93)**

CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-1583		LOCATION: 5509 MARTIN LUTHER KING JR. WAY OAKLAND, CALIFORNIA		REV. NO.: 0	DATE: 11/15/93
PM: <i>J.H.W.</i>	PE/RG: <i>p.r.g.</i>	DESIGNED: TW	DETAILED: CY	ACAD FILE: PSMN93	PROJECT NO.: 020204115
					FIGURE: I

ATTACHMENT 2

Table

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-1583
5509 Martin Luther King Jr. Way, Oakland, California

Well ID/ Elev	Date	TPH-as- Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
MW-1	12/22/83	---	---	---	---	---	10.25	0.00	71.72
	12/30/83	---	---	---	---	---	9.17	0.00	72.80
*81.97/ 82.42	03/12/90	50,000	3,000	7,300	1,900	18,000	10.08	0.00	71.89
	03/25/90	---	---	---	---	---	10.46	0.00	71.51
	10/18/90	---	---	---	---	---	---	---	---
	10/31/90	---	---	---	---	---	---	---	---
	11/16/90	---	---	---	---	---	11.58	0.00	70.84
	02/08/91	100,000	4,200	8,400	16,000	2,600	10.11	0.00	72.31
	05/08/91	31,000	200	66	670	2,000	10.45	0.00	71.97
	08/12/91	17,000	81	7.2	270	710	11.23	0.00	71.19
	11/07/91	7,100	24	6	130	170	10.70	0.00	71.72
	02/05/92	110,000	8,900	14,000	2,700	12,000	10.37	0.00	72.05
	05/13/92	19,000	450	85	480	870	10.58	0.00	71.84
	07/17/92	8,500	170	<10	360	600	11.05	0.00	71.37
	10/05/92	22,000	4,300	5,100	570	2,900	11.41	0.00	71.01
	11/11/92	---	---	---	---	---	---	---	---
	11/17/92	---	---	---	---	---	---	---	---
	11/24/92	---	---	---	---	---	---	---	---
	12/01/92	---	---	---	---	---	---	---	---
	12/29/92	---	---	---	---	---	---	---	---
	01/05/93	---	---	---	---	---	---	---	---
	01/08/93	14,000,000	12,000	79,000	270,000	1,300,000	8.11	0.00	74.31
	02/02/93	---	---	---	---	---	---	---	---
	04/14/93	***48,000	670	1,100	1,600	6,300	9.85	0.00	72.57
	08/06/93	44,000	660	990	1,600	6,100	10.83	0.00	71.59
	10/21/93	18,000	270	460	1,300	4,700	10.90	0.00	71.52

TABLE 1
 HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
 Chevron Service Station No. 9-1583
 5509 Martin Luther King Jr. Way, Oakland, California

Well ID/ Elev	Date	TPH-as- Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
MW-2	12/22/83	---	---	---	---	---	10.50	0.00	72.98
	12/30/83	---	---	---	---	---	9.92	0.00	73.56
83.48	03/12/90	800	400	22	18	55	11.02	0.00	72.46
	03/25/90	---	---	---	---	---	11.33	0.00	72.15
	10/18/90	---	---	---	---	---	12.31	0.00	71.17
	10/31/90	---	---	---	---	---	---	---	---
	11/16/90	---	---	---	---	---	---	---	---
	02/08/91	4,600	820	440	720	210	11.05	0.00	72.43
	05/08/91	<50	5	<0.5	<0.5	<0.5	11.36	0.00	72.12
	08/12/91	<50	<0.5	<0.5	<0.5	<0.5	11.97	0.00	71.51
	11/07/91	<50	<0.5	<0.5	<0.5	<0.5	11.50	0.00	71.98
	02/05/92	1,700	390	170	60	200	11.19	0.00	72.29
	05/13/92	**74	9.3	<0.5	<0.5	<0.5	11.49	0.00	71.99
	07/17/92	<50	2.0	<0.5	<0.5	<0.5	11.85	0.00	71.63
	10/05/92	3,500	1,200	530	86	220	12.00	0.00	71.48
	11/11/92	---	---	---	---	---	---	---	---
	11/17/92	---	---	---	---	---	---	---	---
	11/24/92	---	---	---	---	---	---	---	---
	12/01/92	---	---	---	---	---	---	---	---
	12/29/92	---	---	---	---	---	---	---	---
	01/05/93	---	---	---	---	---	---	---	---
	01/08/93	390	140	0.8	7.7	26	8.83	0.00	74.65
	02/02/93	---	---	---	---	---	---	---	---
	04/14/93	<50	5	<0.5	<0.5	<0.5	10.79	0.00	72.69
	08/06/93	<50	1	<0.5	<0.5	<0.5	11.71	0.00	71.77
	10/21/93	***<50	1	<0.5	9	<0.5	11.74	0.00	71.74

TABLE 1
 HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
 Chevron Service Station No. 9-1583
 5509 Martin Luther King Jr. Way, Oakland, California

Well ID/ Elev	Date	TPH-as- Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
MW-3	12/22/83	---	---	---	---	---	11.58	0.00	72.78
	12/30/83	---	---	---	---	---	11.17	0.00	73.19
84.36/ 84.38	03/12/90	47,000	1,000	9,900	1,700	9,800	12.14	0.00	72.22
	03/25/90	---	---	---	---	---	12.55	0.00	71.81
	10/18/90	---	---	---	---	---	---	---	---
	10/31/90	---	---	---	---	---	---	---	---
	11/16/90	---	---	---	---	---	13.62	0.00	70.76
	02/08/91	58,000	4,900	5,200	9,500	2,000	12.18	0.00	72.20
	05/08/91	50,000	2,100	1,400	2,000	9,400	12.52	0.00	71.86
	08/12/91	15,000	1,300	160	920	1,900	13.27	0.00	71.11
	11/07/91	26,000	1,000	310	1,900	5,900	12.81	0.00	71.57
	02/05/92	35,000	2,800	1,300	1,500	4,700	12.47	0.00	71.91
	05/13/92	47,000	1,500	1,200	1,100	4,800	12.62	0.00	71.76
	07/17/92	15,000	120	11	88	140	13.13	0.00	71.25
	10/05/92	---	---	---	---	---	13.62	0.24	70.95
	11/11/92	---	---	---	---	---	12.89	0.17	71.63
	11/17/92	---	---	---	---	---	12.89	0.06	71.54
	11/24/92	---	---	---	---	---	12.86	0.05	71.56
	12/01/92	---	---	---	---	---	12.92	0.03	71.48
	12/29/92	---	---	---	---	---	11.24	Sheen	73.14
	01/05/93	---	---	---	---	---	11.15	Sheen	73.23
	01/08/93	250,000	5,000	17,000	5,500	28,000	10.10	0.00	74.28
	02/02/93	---	---	---	---	---	---	---	---
	04/14/93	---	---	---	---	---	11.91	0.01	72.48
	08/06/93	150,000	3,800	6,600	3,700	17,000	12.90	0.01	71.48
	10/21/93	***22,000	2,300	1,700	1,400	5,100	12.97	0.00	71.41

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-1583
5509 Martin Luther King Jr. Way, Oakland, California

Well ID/ Elev	Date	TPH-as- Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
MW-4	10/18/90	---	---	---	---	---	15.75	0.00	68.50
	10/31/90	<50	<0.5	<0.5	<0.5	1	13.90	0.00	70.35
84.25	11/16/90	---	---	---	---	---	14.25	0.00	70.00
	02/08/91	60	17	2	12	<0.5	12.32	0.00	71.93
	05/08/91	65	<0.5	<0.5	<0.5	<0.5	12.23	0.00	72.02
	08/12/91	<50	<0.5	<0.5	<0.5	<0.5	13.93	0.00	70.32
	11/07/91	<50	<0.5	<0.5	<0.5	<0.5	13.42	0.00	70.83
	02/05/92	<50	<0.5	<0.5	<0.5	<0.5	12.83	0.00	71.42
	05/13/92	<50	<0.5	<0.5	<0.5	<0.5	13.28	0.00	70.97
	07/17/92	<50	<0.5	<0.5	<0.5	<0.5	13.98	0.00	70.27
	10/05/92	<50	<0.5	<0.5	<0.5	<0.5	14.23	0.00	70.02
	11/11/92	---	---	---	---	---	---	---	---
	11/17/92	---	---	---	---	---	---	---	---
	11/24/92	---	---	---	---	---	---	---	---
	12/01/92	---	---	---	---	---	---	---	---
	12/29/92	---	---	---	---	---	---	---	---
	01/05/93	---	---	---	---	---	---	---	---
	01/08/93	<50	<0.5	<0.5	<0.5	<0.5	10.16	0.00	74.09
	02/02/93	---	---	---	---	---	---	---	---
	04/14/93	<50	<0.5	<0.5	<0.5	<0.5	12.04	0.00	72.21
	08/06/93	<50	<0.5	<0.5	<0.5	<0.5	13.91	0.00	70.34
	10/21/93	<50	<0.5	<0.5	<0.5	1	13.99	0.00	70.26

TABLE 1
 HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
 Chevron Service Station No. 9-1583
 5509 Martin Luther King Jr. Way, Oakland, California

Well ID/ Elev	Date	TPH-as- Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
MW-5	10/18/90	---	---	---	---	---	10.78	0.00	71.17
	10/31/90	110	<0.5	<0.5	<0.5	<0.5	10.63	0.00	71.32
81.95	11/16/90	---	---	---	---	---	10.68	0.00	71.27
	02/08/91	<50	<0.5	<0.5	<0.5	<0.5	9.17	0.00	72.78
	05/08/91	<50	<0.5	<0.5	<0.5	<0.5	8.68	0.00	73.27
	08/12/91	<50	<0.5	<0.5	<0.5	<0.5	10.33	0.00	71.82
	11/07/91	<50	<0.5	<0.5	<0.5	<0.5	9.76	0.00	72.19
	02/05/92	**69	<0.5	<0.5	<0.5	<0.5	9.47	0.00	72.48
	05/13/92	**74	<0.5	<0.5	<0.5	<0.5	9.70	0.00	72.25
	07/17/92	880	2.6	<1.2	4.6	11	10.21	0.00	71.74
	10/05/92	120	<0.5	<0.5	0.6	4.9	10.61	0.00	71.34
	11/11/92	---	---	---	---	---	---	---	---
	11/17/92	---	---	---	---	---	---	---	---
	11/24/92	---	---	---	---	---	---	---	---
	12/01/92	---	---	---	---	---	---	---	---
	12/29/92	---	---	---	---	---	---	---	---
	01/05/93	---	---	---	---	---	---	---	---
	01/08/93	**61	<0.5	<0.5	<0.5	<0.5	7.34	0.00	74.61
	02/02/93	---	---	---	---	---	---	---	---
	04/14/93	---	---	---	---	---	---	---	---
	08/06/93	<50	<0.5	<0.5	<0.5	<0.5	9.96	0.00	71.99
	10/21/93	<50	<0.5	<0.5	2	4	10.06	0.00	71.89

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-1583
5509 Martin Luther King Jr. Way, Oakland, California

Well ID/ Elev	Date	TPH-as- Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
MW-6	10/18/90	---	---	---	---	---	9.79	0.00	70.81
	10/31/90	<50	<0.5	<0.5	<0.5	3	9.69	0.00	70.91
80.60	11/16/90	---	---	---	---	---	9.74	0.00	70.86
	02/08/91	---	---	---	---	---	---	---	---
	05/08/91	56	<0.5	<0.5	<0.5	<0.5	9.54	0.00	71.06
	08/12/91	<50	<0.5	<0.5	<0.5	<0.5	9.50	0.00	71.10
	11/07/91	<50	<0.5	<0.5	<0.5	<0.5	8.89	0.00	71.71
	02/05/92	<50	<0.5	<0.5	<0.5	<0.5	8.59	0.00	72.01
	05/13/92	---	---	---	---	---	---	---	---
	07/17/92	---	---	---	---	---	---	---	---
	10/05/92	---	---	---	---	---	---	---	---
	11/11/92	---	---	---	---	---	---	---	---
	11/17/92	---	---	---	---	---	---	---	---
	11/24/92	---	---	---	---	---	---	---	---
	12/01/92	---	---	---	---	---	---	---	---
	12/29/92	---	---	---	---	---	---	---	---
	01/05/93	---	---	---	---	---	---	---	---
	01/08/93	---	---	---	---	---	---	---	---
	02/02/93	<50	2.1	<0.5	<0.5	2.2	7.71	0.00	72.89
	04/14/93	**<50	1	<0.5	<0.5	<0.5	8.19	0.00	72.41
	08/06/93	***<50	<0.5	<0.5	<0.5	<0.5	9.08	0.00	71.52
	10/21/93	***<50	<0.5	<0.5	<0.5	<0.5	9.14	0.00	71.46

TABLE 1
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
Chevron Service Station No. 9-1583
5509 Martin Luther King Jr. Way, Oakland, California

Well ID/ Elev	Date	TPH-as- Gasoline	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
Trip	03/12/90	<50	<0.3	<0.3	<0.3	<0.6	---	---	---
Blank	02/08/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/08/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/12/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/07/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/05/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/13/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/17/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/05/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/11/92	---	---	---	---	---	---	---	---
	11/17/92	---	---	---	---	---	---	---	---
	11/29/92	---	---	---	---	---	---	---	---
	12/01/92	---	---	---	---	---	---	---	---
	12/29/92	---	---	---	---	---	---	---	---
	01/05/93	---	---	---	---	---	---	---	---
	01/08/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/02/93	---	---	---	---	---	---	---	---
	04/14/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
08/06/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	
10/21/93	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	

- TPH = Total petroleum hydrocarbons
DTW = Depth to water
SPT = Separate-phase hydrocarbon thickness
WTE = Water-table elevation
--- = Not applicable/not sampled/not measured
*81.97/82.42 = March 3, 1990, survey/November 30, 1990, survey
** = The laboratory reported that a nonstandard gasoline pattern was observed in the chromatogram.
*** = Uncategorized compound is not included in gasoline hydrocarbon total.

All elevations are presented as feet above mean sea level.
Analytical results in micrograms per liter, equivalent to parts per billion.

ATTACHMENT 3

Laboratory Report



GTEL

ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region

4080-C Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*
(510) 825-0720 (FAX)

Client Number: 020204101
Consultant Project Number: 020204101
Facility Number: 9-1583
Project ID: 5509 Martin Luther
Work Order Number: C3-10-0448

November 4, 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 10/22/93.

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.

Eileen F. Bullen
Laboratory Director

Client Number: 020204101
 Consultant Project Number: 020204101
 Facility Number: 9-1583
 Project ID: 5509 Martin Luther
 Work Order Number: C3-10-0448

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	02	03	04
Client Identification		TBLB	MW4	MW6	MW5
Date Sampled		10/21/93	10/21/93	10/21/93	10/21/93
Date Analyzed		10/28/93	10/29/93	10/29/93	10/29/93
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	2
Xylene, total	0.5	<0.5	1	<0.5	4
BTEX, total	--	--	1	--	6
TPH as Gasoline	50	<50	<50	<50 ^b	<50
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		102	100	93.4	94.7

- 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%.
- b. Uncategorized compound not included in the gasoline hydrocarbon concentration.

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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		05	06	07	S10289301
Client Identification		MW2	MW1	MW3	METHOD BLANK
Date Sampled		10/21/93	10/21/93	10/21/93	--
Date Analyzed		10/29/93	10/30/93	10/30/93	10/28/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	1	270	2300	<0.5
Toluene	0.5	<0.5	460	1700	<0.5
Ethylbenzene	0.5	9	1300	1400	<0.5
Xylene, total	0.5	<0.5	4700	5100	<0.5
BTEX, total	--	10	6700	11000	--
TPH as Gasoline	50	<50 ^b	18000	22000 ^b	<50
Detection Limit Multiplier		1	50	50	1
BFB surrogate, % recovery		89.3	102	103	104

- 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%.
- b. Uncategorized compound not included in the gasoline hydrocarbon concentration.

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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	C3100449-07	20.0	ug/L	92.0	97.0	5.3	55 - 129
Toluene	C3100449-07	20.0	ug/L	94.0	103	9.1	72 - 149
Ethylbenzene	C3100449-07	20.0	ug/L	101	108	6.7	75 - 138
Xylene, total	C3100449-07	60.0	ug/L	95.7	108	12.1	74 - 147

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

Chain-of-Custody-Record

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

Chevron Facility Number 9-1583 ✓
Facility Address 5509 Martin Luther ✓
Consultant Project Number 020204101 ✓
Consultant Name Groundwater Technology, Inc. ✓
Address 4057 Port Chicago Hwy, Concord, CA 94520 ✓
Project Contact (Name) Nicole Merchant ✓
(Phone) 671-2387 (Fax Number) 685-9148

Chevron Contact (Name) Mark Miller
(Phone) 842-8134
Laboratory Name GTEL
Laboratory Release Number 876-6770
Samples Collected by (Name) Rick Hoffmeyer
Collection Date 10/21/93
Signature [Signature]

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analytes To Be Performed											Remarks						
								BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Greases (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA)	Hold									
TBLUB	01 ✓	2	W	G	1520	Hel	X	X																Do not Bull TB-LB	
RBMW4																									
MW4	02 ✓	2	W	G	1550	Hel	Y	X																	
RBMW6																									
MW6	03 ✓	2	W	G	1420	Hel	X	X																	
RBMW5																									
MW5	04 ✓	2	W	G	1445	Hel	Y	X																	
RBMW2																									
MW2	05 ✓	2	W	G	1520	Hel	Y	X																	
RBMW1																									
MW1	06 ✓	2	W	G	1310	Hel	Y	X																	
RBMW3																									
MW3	07 ✓	2	W	G	1545	Hel	X	X																	

Relinquished By (Signature) <u>[Signature]</u>	Organization <u>GTEL</u>	Date/Time <u>10/22/93</u>	Received By (Signature) <u>Joel Weber</u>	Organization <u>GTEL</u>	Date/Time <u>10-22-93</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days As Contracted
Relinquished By (Signature) <u>Joel Weber</u>	Organization <u>GTEL</u>	Date/Time <u>10/22/93</u>	Received By (Signature) <u>[Signature]</u>	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) <u>[Signature]</u>		Date/Time	

LHA/IR CO/SMTC-COC