



**Chevron**

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July 26, 1993

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

**Marketing Department**  
Phone 510 842 9500

478  
Ms. Jennifer Eberle  
Alameda County Health Care Services  
80 Swan Way, Room 200  
Oakland, CA 94621

**Re: Former Chevron Service Station #9-4816  
301 14th Street, Oakland**

Dear Ms. Eberle:

Enclosed we are forwarding the Quarterly Ground Water Monitoring 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 collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Benzene was detected in monitor wells C-1, C-2, C-3, C-4, C-5, C-8 and CR-1 only at concentrations ranging from 1 to 56,000 ppb. Separate-phase hydrocarbons were not observed during this monitoring event. Depth to ground water was measured at approximately 20-feet below grade.

Chevron will continue to monitor this site and report findings on a quarterly basis and monitor the effectiveness of the soil vapor extraction system. As you are aware, the soil vapor extraction system has resumed operation under the new configuration.

If you have any questions or comments, please do not hesitate to contact me at (510) 842-9581.

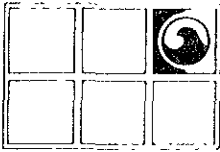
Sincerely,  
CHEVRON U.S.A. PRODUCTS COMPANY

  
Nancy Vukelitch  
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Rich Hiatt, RWQCB  
Mr. Tom Berry, Weiss Associates  
Mr. R.W. Cosby, 225/1936  
Ms B.C. Owen  
File (9-4816Q8)

Ms. Beth D. Castleberry  
Ware & Freidenrich  
400 Hamilton Avenue  
Palo Alto, CA 94301-1825



# GROUNDWATER TECHNOLOGY, INC.

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

FAX: (415) 685-9148

July 19, 1993

Project No. 020204084

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. 9-4816  
301 14th Street, Oakland, California

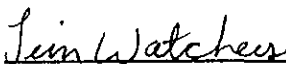
Dear Ms. Vukelich:

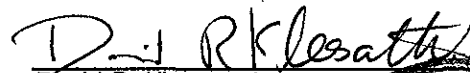
Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on **June 8, 1993**. The 11 groundwater monitoring wells at this site were gauged to measure depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not detected in the monitoring wells. A potentiometric surface map (Figure 1) and a summary of groundwater monitoring data (Table 1) are presented in Attachments 1 and 2, respectively. After the DTW was measured, each monitoring well was purged and sampled. The 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. 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

**Groundwater Technology, Inc.**  
Reviewed/Approved by

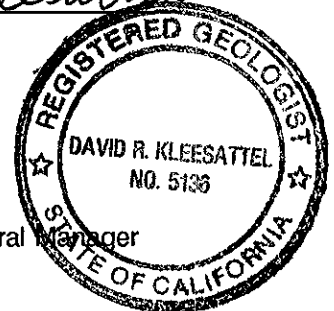
  
\_\_\_\_\_  
Tim Watchers  
Project Geologist

  
\_\_\_\_\_  
David R. Kleesattel  
Registered Geologist  
No. 5136

PR\_\_

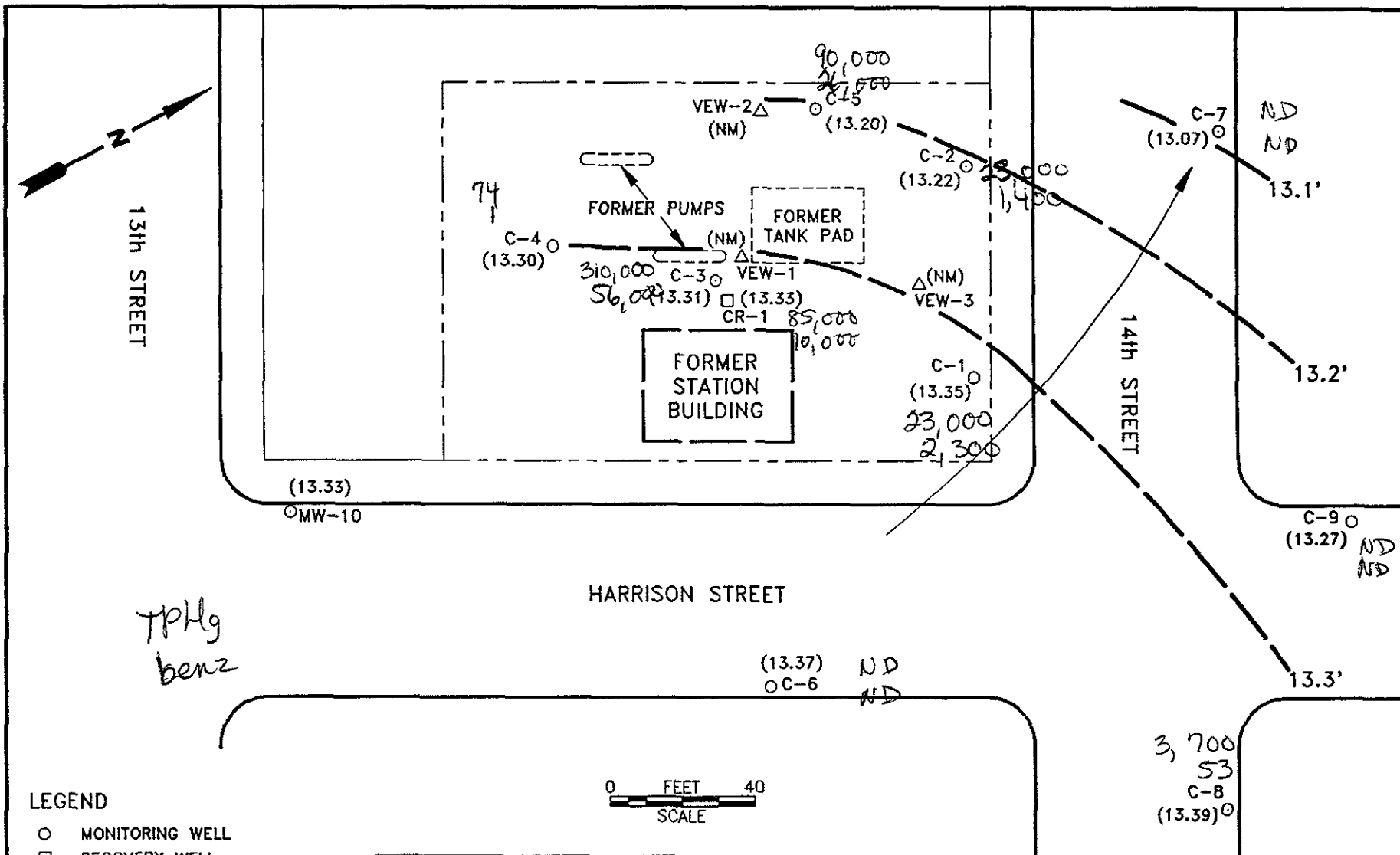
Attachment 1 Figure  
Attachment 2 Table  
Attachment 3 Laboratory Report

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



**ATTACHMENT 1**

**Figure**



**LEGEND**

- MONITORING WELL
- RECOVERY WELL
- △ VAPOR EXTRACTION WELL
- ( ) POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR
- (NM) NOT MONITORED

		<b>GROUNDWATER TECHNOLOGY</b> 4057 PORT CHICAGO HWY CONCORD, CA 94520 (510) 671-2387		<b>POTENTIOMETRIC SURFACE MAP</b> <b>(6/8/93)</b>		
CLIENT: <b>CHEVRON U.S.A. PRODUCTS Co.</b> SERVICE STATION No. 9-4816			LOCATION: <b>301 14th STREET</b> <b>OAKLAND, CALIFORNIA</b>		REV. NO.: <b>0</b>	DATE: <b>7/14/93</b>
PM <i>JAW</i>	PE/RG <i>[Signature]</i>	DESIGNED <b>TW</b>	DETAILED <b>ML</b>	ACAD FILE: <b>PSM6893/SP493</b>	PROJECT NO.: <b>020204084</b>	FIGURE: <b>1</b>

**ATTACHMENT 2**

**Table**

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-4816**  
**301 14th Street, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
C-1	06/13/90	26,000	2,800	5,100	400	2,600	21.97	--	8.85
	10/30/90	67,000	6,700	8,700	900	5,000	21.72	--	9.10
30.82	01/04/91	--	--	--	--	--	21.84	--	8.98
	01/07/91	100,000	12,000	20,000	1,600	11,000	21.95	--	8.87
	01/11/91	--	--	--	--	--	21.99	--	8.83
	02/15/91	--	--	--	--	--	22.12	--	8.70
	05/02/91	59,000	5,600	7,700	700	5,200	22.06	--	8.76
	05/30/91	--	--	--	--	--	22.04	--	8.78
	06/13/91	--	--	--	--	--	21.80	--	9.02
	07/12/91	--	--	--	--	--	22.01	--	8.81
	08/07/91	7,900	2,000	150	240	330	--	--	--
	09/24/91	--	--	--	--	--	--	--	--
30.87	10/18/91	--	--	--	--	--	22.42	--	8.45
	11/05/91	8,700	1,500	1,200	150	580	22.36	--	8.51
	01/06/92	--	--	--	--	--	22.34	--	8.53
	01/16/92	--	--	--	--	--	22.28	0.03	8.61
	01/22/92	--	--	--	--	--	22.43	0.09	8.51
	01/28/92	--	--	--	--	--	22.28	0.02	8.61
	02/04/92	--	--	--	--	--	22.24	0.01	8.64
	02/14/92	--	--	--	--	--	22.16	Sheen	8.71
	02/21/92	--	--	--	--	--	22.07	Sheen	8.80
	02/25/92	--	--	--	--	--	21.95	Sheen	8.92
	03/06/92	--	--	--	--	--	21.85	0.00	9.02
	03/19/92	--	--	--	--	--	20.54	0.00	10.33
	05/06/92	--	--	--	--	--	21.39	Sheen	9.48
	08/31/92	--	--	--	--	--	21.51	Sheen	9.36
12/01/92	--	--	--	--	--	21.88	Sheen	8.99	
32.81	03/15/93	130,000	8,900	13,000	1,800	11,000	20.90	0.00	11.91
	06/08/93	23,000	2,300	2,900	540	3,300	19.46	0.00	13.35

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-4816**  
**301 14th Street, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
C-2	06/13/90	15,000	1,100	1,900	260	1,700	22.08	—	8.83
	10/30/90	13,000	2,800	1,900	240	1,000	21.81	—	9.10
30.91	01/04/91	—	—	—	—	—	21.90	—	9.01
	01/07/91	15,000	3,400	2,500	340	1,400	22.03	—	8.88
	01/11/91	—	—	—	—	—	22.13	—	8.78
	02/15/91	—	—	—	—	—	22.36	—	8.55
	05/02/91	19,000	4,500	3,200	660	2,900	22.44	—	8.47
	05/02/91	21,000	3,200	2,200	410	2,000	22.44	—	8.47
	05/30/91	—	—	—	—	—	22.44	—	8.47
	06/13/91	—	—	—	—	—	—	—	—
	07/12/91	—	—	—	—	—	22.57	0.01	8.35
	08/07/91	—	—	—	—	—	—	0.11	—
30.72	09/24/91	—	—	—	—	—	—	—	—
	10/18/91	—	—	—	—	—	22.34	0.07	8.44
	11/05/91	—	—	—	—	—	22.26	0.04	8.49
	01/06/92	—	—	—	—	—	22.25	—	8.47
	01/16/92	—	—	—	—	—	22.16	0.01	8.57
	01/22/92	—	—	—	—	—	22.25	0.02	8.49
	01/28/92	—	—	—	—	—	22.18	0.01	8.55
	02/04/92	—	—	—	—	—	22.15	0.01	8.58
	02/14/92	—	—	—	—	—	22.09	0.00	8.63
	02/21/92	—	—	—	—	—	22.06	Sheen	8.66
	02/25/92	—	—	—	—	—	21.96	0.00	8.76
	03/06/92	—	—	—	—	—	21.80	0.00	8.92
	03/19/92	—	—	—	—	—	21.12	0.00	9.60
	05/06/92	—	—	—	—	—	21.30	Sheen	9.42
	08/31/92	—	—	—	—	—	21.43	Sheen	9.29
12/01/92	—	—	—	—	—	21.74	Sheen	8.98	
33.27	03/15/93	66,000	2,200	3,900	1,300	7,300	20.92	0.00	12.35
	06/08/93	23,000	1,400	2,300	680	4,000	20.05	0.00	13.22

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-4816**  
**301 14th Street, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)	
C-3	06/13/90	--	--	--	--	--	24.75	3.00	--	
	10/30/90	--	--	--	--	--	23.81	2.50	--	
	01/04/91	--	--	--	--	--	24.15	2.70	--	
	01/07/91	--	--	--	--	--	24.13	2.50	--	
	01/11/91	--	--	--	--	--	24.35	2.66	--	
	02/15/91	--	--	--	--	--	24.70	2.93	--	
	05/02/91	--	--	--	--	--	--	--	--	
	05/30/91	--	--	--	--	--	24.08	2.49	--	
	06/13/91	--	--	--	--	--	--	--	--	
	07/12/91	--	--	--	--	--	--	--	--	
	08/07/91	--	--	--	--	--	--	2.64	--	
	09/24/91	--	--	--	--	--	--	--	--	
	30.79	10/18/91	--	--	--	--	--	24.44	2.50	-- #
		11/05/91	--	--	--	--	--	24.31	2.46	-- #
		01/06/92	--	--	--	--	--	24.25	2.39	-- #
		01/16/92	--	--	--	--	--	24.02	2.29	-- #
		01/22/92	--	--	--	--	--	24.10	2.28	-- #
01/28/92		--	--	--	--	--	24.06	2.29	-- #	
02/04/92		--	--	--	--	--	24.04	2.31	-- #	
02/14/92		--	--	--	--	--	23.93	2.31	-- #	
02/21/92		--	--	--	--	--	24.61	3.05	-- #	
02/25/92		--	--	--	--	--	23.69	2.23	-- #	
03/06/92		--	--	--	--	--	23.69	2.23	-- #	
03/19/92		--	--	--	--	--	22.98	2.26	-- #	
05/06/92		--	--	--	--	--	22.74	1.93	-- #	
08/31/92	--	--	--	--	--	21.77	1.93	-- #		
12/01/92	--	--	--	--	--	22.63	1.32	-- #		
33.28	03/15/93	530,000	69,000	58,000	6,000	32,000	22.63	1.32	10.65	
	06/08/93	310,000	56,000	58,000	7,000	41,000	19.97	0.00	13.31	



**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-4816**  
**301 14th Street, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
C-4	06/13/90	440	47	47	3	61	22.73	--	8.69
	10/30/90	210	72	13	1	11	22.48	--	8.94
31.42	01/04/91	--	--	--	--	--	22.64	--	8.78
	01/07/91	890	100	130	15	88	22.74	--	8.68
	01/11/91	--	--	--	--	--	22.81	--	8.61
	02/15/91	--	--	--	--	--	22.55	--	8.87
	05/02/91	330	140	11	2	9	22.54	--	8.88
	05/30/91	--	--	--	--	--	22.55	--	8.87
	06/13/91	--	--	--	--	--	--	--	--
	07/12/91	--	--	--	--	--	--	--	--
	08/07/91	1,500	400	79	13	61	--	--	--
	09/24/91	--	--	--	--	--	--	--	--
31.20	10/18/91	--	--	--	--	--	22.97	--	8.23
	11/05/91	310	130	11	2.6	6.8	22.90	--	8.30
	01/06/92	--	--	--	--	--	22.84	--	8.36
	01/16/92	--	--	--	--	--	22.75	--	8.45
	01/22/92	--	--	--	--	--	22.81	--	8.39
	01/28/92	--	--	--	--	--	22.77	--	8.43
	02/04/92	300	100	26	2.4	14	22.72	--	8.48
	02/14/92	--	--	--	--	--	22.58	--	8.62
	02/21/92	--	--	--	--	--	22.60	--	8.60
	02/25/92	--	--	--	--	--	22.50	--	8.70
	03/06/92	--	--	--	--	--	--	--	--
	03/19/92	--	--	--	--	--	21.75	--	9.45
	05/06/92	200	26	<0.5	1.2	1.4	21.82	--	9.38
33.85	08/31/92	190	20	1.2	1.7	1.7	21.88	--	9.32
	12/01/92	72	5	0.5	ND<0.5	1.3	22.23	--	8.97
	03/15/93	84	2.1	0.9	<0.5	<1.5	33.85	--	12.47
	06/08/93	74	1	<0.5	<0.5	0.5	20.55	0.00	13.30

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-4816**  
**301 14th Street, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
C-5	10/30/90	20,000	2,500	3,300	320	2,200	22.11	—	9.14
	01/04/91	—	—	—	—	—	22.55	0.31	—
31.25	01/07/91	—	—	—	—	—	22.36	0.04	9.26
	01/11/91	—	—	—	—	—	23.08	0.73	—
	02/15/91	—	—	—	—	—	24.70	2.74	—
	05/02/91	—	—	—	—	—	22.02	2.00	—
	05/30/91	—	—	—	—	—	24.78	2.70	—
	06/13/91	—	—	—	—	—	24.70	2.77	—
	07/12/91	—	—	—	—	—	25.10	2.72	—
	08/07/91	—	—	—	—	—	—	2.69	—
	09/24/91	—	—	—	—	—	—	—	—
30.16	10/18/91	—	—	—	—	—	24.71	2.51	— #
	11/05/91	—	—	—	—	—	24.47	2.29	— #
	01/06/92	—	—	—	—	—	24.68	—	— #
	01/16/92	—	—	—	—	—	24.03	1.82	— #
	01/22/92	—	—	—	—	—	24.01	1.67	— #
	01/28/92	—	—	—	—	—	23.79	1.46	— #
	02/04/92	—	—	—	—	—	23.81	1.54	— #
	02/14/92	—	—	—	—	—	22.79	1.59	— #
	02/21/92	—	—	—	—	—	24.40	2.22	— #
	02/25/92	—	—	—	—	—	23.25	1.03	— #
	03/06/92	—	—	—	—	—	23.20	1.19	— #
	03/19/92	—	—	—	—	—	—	—	—
	05/06/92	—	—	—	—	—	—	—	—
	08/31/92	—	—	—	—	—	21.86	Sheen	—
	12/01/92	—	—	—	—	—	22.24	Sheen	—
33.85	03/15/93	—	—	—	—	—	20.96	—	20.96
	06/08/93	90,000	26,000	11,000	2,000	16,000	20.65	0.00	13.20

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-4816**  
**301 14th Street, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
C-6	05/02/91	<50	<0.5	<0.5	<0.5	<0.5	21.84	—	8.57
	05/30/91	—	—	—	—	—	—	—	—
30.41	07/12/91	—	—	—	—	—	22.86	—	7.55
	08/07/91	—	—	—	—	—	—	—	—
	09/24/91	—	—	—	—	—	21.88	—	8.53
	10/18/91	—	—	—	—	—	22.18	—	8.23
	11/05/91	<50	<0.5	<0.5	<0.5	<0.5	22.14	—	8.27
	01/06/92	—	—	—	—	—	22.09	—	8.32
	01/16/92	—	—	—	—	—	22.04	—	8.37
	01/22/92	—	—	—	—	—	22.04	—	8.37
	01/28/92	—	—	—	—	—	21.99	—	8.42
	02/04/92	<50	<0.5	<0.5	<0.5	0.6	21.94	—	8.47
	02/14/92	—	—	—	—	—	21.87	—	8.54
	02/21/92	—	—	—	—	—	21.83	—	8.58
	02/25/92	—	—	—	—	—	21.71	—	8.70
	03/06/92	—	—	—	—	—	21.53	—	8.88
	03/19/92	—	—	—	—	—	20.92	—	9.49
	05/06/92	<50	<0.5	<0.5	<0.5	<0.5	21.02	—	9.39
	08/31/92	80	<0.5	<0.5	<0.5	<0.5	21.14	—	9.27
33.09	01/21/93	<50	<0.5	<0.5	<0.5	<0.5	20.91	—	9.50
	03/15/93	<50	<0.5	<0.5	<0.5	<1.5	20.00	—	13.09
	06/08/93	<50	<0.5	<0.5	<0.5	<0.5	19.72	0.00	13.37

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-4816**  
**301 14th Street, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
C-7	05/02/91	<50	<0.5	<0.5	<0.5	<0.5	21.81	--	8.75
	05/30/91	--	--	--	--	--	--	--	--
30.56	07/12/91	--	--	--	--	--	22.15	--	8.41
	08/07/91	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	09/24/91	--	--	--	--	--	21.53	--	9.03
	10/18/91	--	--	--	--	--	22.07	--	8.49
	11/05/91	<50	<0.5	<0.5	<0.5	<0.5	22.01	--	8.55
	01/06/92	--	--	--	--	--	22.03	--	8.53
	01/16/92	--	--	--	--	--	21.98	--	8.58
	01/22/92	--	--	--	--	--	22.05	--	8.51
	01/28/92	--	--	--	--	--	22.01	--	8.55
	02/14/92	--	--	--	--	--	21.94	--	8.62
	02/21/92	--	--	--	--	--	21.94	--	8.62
	02/25/92	--	--	--	--	--	21.82	--	8.74
	03/06/92	--	--	--	--	--	21.65	--	8.91
	03/19/92	--	--	--	--	--	20.92	--	9.64
33.06	05/06/92	<50	<0.5	<0.5	<0.5	<0.5	21.21	--	9.35
	08/31/92	<50	<0.5	0.7	<0.5	0.9	21.39	--	9.17
	12/01/92	<50	<0.5	<0.5	<0.5	0.9	21.79	--	8.77
	03/15/93	<50	<0.5	<0.5	<0.5	<1.5	20.94	--	12.12
	06/08/93	<50	<0.5	<0.5	<0.5	<0.5	19.99	0.00	13.07

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-4816**  
**301 14th Street, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)	
C-8	05/02/91	5,000	<0.5	17	140	470	21.24	—	8.88	
	05/30/91	—	—	—	—	—	—	—	—	
30.12	07/12/91	—	—	—	—	—	—	—	—	
	08/07/91	6,300	<0.5	28	100	120	—	—	—	
	09/24/91	—	—	—	—	—	21.33	—	8.79	
	10/18/91	—	—	—	—	—	21.76	—	8.36	
	11/05/91	5,100	<0.5	20	92	74	21.70	—	8.42	
	01/06/92	—	—	—	—	—	21.73	—	8.39	
	01/16/92	—	—	—	—	—	21.63	—	8.49	
	01/22/92	—	—	—	—	—	21.70	—	8.42	
	01/28/92	—	—	—	—	—	21.65	—	8.47	
	02/04/92	5,300	<2.5	2.5	97	61	21.62	—	8.50	
	02/14/92	—	—	—	—	—	21.53	—	8.59	
	02/21/92	—	—	—	—	—	21.51	—	8.61	
	02/25/92	—	—	—	—	—	21.39	—	8.73	
	03/06/92	—	—	—	—	—	21.21	—	8.91	
	03/19/92	—	—	—	—	—	20.57	—	9.55	
	05/06/92	3,700	<0.5	29	110	130	20.77	—	9.35	
	08/31/92	1,100	1.3	2.0	31	48	20.91	—	9.21	
	12/01/92	3,400	<0.5	19	140	290	21.17	—	8.95	
	32.77	03/15/93	4,200	<0.5	20	54	33	19.76	—	13.01
		06/08/93	3,700	53	6	74	120	19.38	0.00	13.39

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-4816**  
**301 14th Street, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
C-9	05/02/91	<50	<0.5	<0.5	<0.5	0.8	21.27	--	8.88
	05/30/91	--	--	--	--	--	--	--	--
30.15	07/12/91	--	--	--	--	--	21.57	--	8.58
	08/07/91	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	08/07/91	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	09/24/91	--	--	--	--	--	21.10	--	9.05
	10/18/91	--	--	--	--	--	21.67	--	8.48
	11/05/91	<50	<0.5	<0.5	<0.5	<0.5	21.65	--	8.50
	11/05/91	<50	<0.5	<0.5	<0.5	<0.5	21.65	--	8.50
	01/06/92	--	--	--	--	--	21.65	--	8.50
	01/16/92	--	--	--	--	--	21.58	--	8.57
	01/22/92	--	--	--	--	--	21.65	--	8.50
	01/28/92	--	--	--	--	--	21.63	--	8.52
	02/04/92	<50	<0.5	0.7	<0.5	0.7	21.58	--	8.57
	02/04/92	<50	<0.5	<0.5	<0.5	<0.5	21.58	--	8.57
	02/14/92	--	--	--	--	--	21.54	--	8.61
	02/21/92	--	--	--	--	--	21.52	--	8.63
	02/25/92	--	--	--	--	--	21.39	--	8.76
	03/06/92	--	--	--	--	--	21.21	--	8.94
03/19/92	--	--	--	--	--	20.47	--	9.68	
05/06/92	<50	<0.5	<0.5	<0.5	<0.5	20.81	--	9.34	
08/31/92	<50	<0.5	<0.5	<0.5	<0.5	20.97	--	9.18	
12/01/92	<50	<0.5	<0.5	<0.5	<0.5	21.27	--	8.88	
32.70	03/15/93	<50	<0.5	<0.5	<0.5	<1.5	20.42	--	12.28
	06/08/93	<50	<0.5	<0.5	<0.5	<0.5	19.43	0.00	13.27

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-4816**  
**301 14th Street, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
CR-1	10/30/90	—	—	—	—	—	23.81	2.50	—
	01/04/91	—	—	—	—	—	24.08	2.70	—
30.17	01/07/91	—	—	—	—	—	23.30	3.00	—
	01/11/91	—	—	—	—	—	24.24	2.64	—
	02/15/91	—	—	—	—	—	24.72	2.92	—
	05/02/91	—	—	—	—	—	—	—	—
	05/30/91	—	—	—	—	—	23.07	2.42	—
	06/13/91	—	—	—	—	—	—	—	—
	07/12/91	—	—	—	—	—	—	—	—
	08/07/91	—	—	—	—	—	—	2.69	—
	09/24/91	—	—	—	—	—	—	—	—
	10/18/91	—	—	—	—	—	23.75	2.50	— #
	11/05/91	—	—	—	—	—	23.64	2.43	— #
	01/06/92	—	—	—	—	—	23.57	—	— #
	01/16/92	—	—	—	—	—	23.41	2.30	— #
	01/22/92	—	—	—	—	—	23.44	2.24	— #
	01/28/92	—	—	—	—	—	23.40	2.29	— #
	02/14/92	—	—	—	—	—	23.31	2.34	— #
	02/21/92	—	—	—	—	—	24.10	3.19	— #
	02/25/92	—	—	—	—	—	23.15	1.03	— #
03/06/92	—	—	—	—	—	—	—	—	
03/19/92	—	—	—	—	—	—	—	—	
05/06/92	—	—	—	—	—	—	—	—	
08/31/92	—	—	—	—	—	21.84	0.41	—	
12/01/92	—	—	—	—	—	22.06	0.21	—	
33.40	03/15/93	410,000	28,000	42,000	5,200	37,000	20.34	—	—
	06/08/93	85,000	10,000	21,000	3,200	20,000	20.07	0.00	13.33
MW-10 31.59	01/21/93	<50	<0.5	<0.5	<0.5	<0.5	21.27	—	10.32
	03/15/93	<50	<0.5	<0.5	<0.5	<1.5	21.10	—	12.18
	06/08/93	<50	<0.5	<0.5	<0.5	1	19.95	0.00	13.33

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-4816**  
**301 14th Street, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
TB-LB	05/02/91	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	08/07/91	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	11/05/91	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	02/04/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	05/06/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	08/31/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	12/01/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	03/15/93	<50	<0.5	<0.5	<0.5	<1.5	NA	NA	NA
06/08/93	<50	<0.5	<0.5	<0.5	<0.5	—	—	—	
RINSATE	08/07/91	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	11/05/91	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	02/04/92	<50	<0.5	1.1	<0.5	<0.5	NA	NA	NA
	05/06/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	08/31/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	12/01/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA

TPH-G = Total petroleum hydrocarbons-as-gasoline  
DTW = Depth to groundwater  
SPT = Separate-phase hydrocarbon thickness  
WTE = Water-table elevation  
TB-LB = Trip blank, lab blank

Groundwater elevations not compiled for wells containing greater than 0.20 feet of free product  
Concentrations in parts per billion  
Data from June 13, 1990 to March 15, 1993 are from Alton GeoSciences report dated April 27, 1993.



Quarterly Monitoring and Sampling Report  
Chevron Service Station No. 9-4816, 301 14th St., Oakland, CA

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**ATTACHMENT 3**  
**Laboratory Report**

4084R013.202



**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: 020204084  
Consultant Project Number: 020204084  
Project ID: 301 14th St,  
Oakland  
Work Order Number: C3-06-0142  
Date Reissued: 07-07-93

July 7, 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 06/08/93.

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: 020204084  
 Consultant Project Number: 020204084  
 Project ID: 301 14th St.  
 Oakland  
 Work Order Number: C3-06-0142  
 Date Reissued: 07-07-93

**Table 1**  
**ANALYTICAL RESULTS**  
 Aromatic Volatile Organics and  
 Total Petroleum Hydrocarbons as Gasoline in Water  
 EPA Methods 5030, 8020, and Modified 8015<sup>a</sup>

GTEL Sample Number		01	03	05	07
Client Identification		TB-LB	MW10	C6	C9
Date Sampled		06/08/93	06/08/93	06/08/93	06/08/93
Date Analyzed		06/16/93	06/20/93	06/17/93	06/17/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	1	<0.5	<0.5
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5
Xylene, total	0.5	<0.5	1	<0.5	<0.5
BTEX, total	--	--	2	--	--
TPH as Gasoline	50	<50	<50	<50	<50
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		89.8	86.5	89.4	89.8

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: 020204084  
 Consultant Project Number: 020204084  
 Project ID: 301 14th St.  
 Oakland  
 Work Order Number: C3-06-0142  
 Date Reissued: 07-07-93

**Table 1 (Continued)**

**ANALYTICAL RESULTS**

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

**EPA Methods 5030, 8020, and Modified 8015<sup>a</sup>**

GTEL Sample Number		09	11	13	15
Client Identification		C7	CR1	C4	C8
Date Sampled		06/08/93	06/08/93	06/08/93	06/08/93
Date Analyzed		06/17/93	06/17/93	06/17/93	06/17/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	10000	1	53
Toluene	0.5	<0.5	21000	<0.5	6
Ethylbenzene	0.5	<0.5	3200	<0.5	74
Xylene, total	0.5	<0.5	20000	0.5	120
BTEX, total	--	--	54000	2	250
TPH as Gasoline	50	<50	85000	74	3700
Detection Limit Multiplier		1	100	1	1
BFB surrogate, % recovery		88.2	101	91.3	132*

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%.

\* BFB surrogate recovery high due to target compound interference.

Client Number: 020204084  
 Consultant Project Number: 020204084  
 Project ID: 301 14th St.  
 Oakland  
 Work Order Number: C3-06-0142  
 Date Reissued: 07-07-93

**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		C3	C2	C1	C5
Date Sampled		06/08/93	06/08/93	06/08/93	06/08/93
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	56000	1400	2300	26000
Toluene	0.5	58000	2300	2900	11000
Ethylbenzene	0.5	7000	680	540	2000
Xylene, total	0.5	41000	4000	3300	16000
BTEX, total	--	160000	8400	9000	55000
TPH as Gasoline	50	310000	23000	23000	90000
Detection Limit Multiplier		500	10	100	100
BFB surrogate, % recovery		83.6	92.9	84.8	97.7

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%.

Client Number: 020204084  
 Consultant Project Number: 020204084  
 Project ID: 301 14th St.  
 Oakland  
 Work Order Number: C3-06-0142  
 Date Reissued: 07-07-93

**Table 1 (Continued)**

**ANALYTICAL RESULTS**

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

**EPA Methods 5030, 8020, and Modified 8015<sup>a</sup>**

GTEL Sample Number		061793			
Client Identification		METHOD BLANK			
Date Sampled		--			
Date Analyzed		06/17/93			
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		95.3			

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: 020204084  
 Consultant Project Number: 020204084  
 Project ID: 301 14th St.  
 Oakland  
 Work Order Number: C3-06-0142  
 Date Reissued: 07-07-93

### QC Matrix Spike and Duplicate Spike Results

Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
<b>Modified EPA 8020:</b>							
Benzene	Reagent Water	20.0	ug/L	103	97.5	5.0	70 - 147
Toluene	Reagent Water	20.0	ug/L	108	103	4.7	67 - 150
Ethylbenzene	Reagent Water	20.0	ug/L	101	95.5	5.6	69 - 145
Xylene, total	Reagent Water	60.0	ug/L	105	99.7	5.1	71 - 152

Chevron Facility Number 9-4816  
 Facility Address 301 14th St, Oakland  
 Consultant Project Number 020204084  
 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 913-6850  
 Samples Collected by (Name) Randy Ray Phillips  
 Collection Date 6/8/93  
 Signature Randy Ray Phillips

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)	Analyses To Be Performed											Do NOT BILL TB-LB Page 1 of 2 Remarks
								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)	Hold	1/2		
TB-LB	01	1	W	G	1:45	HCl	Yes	X											SEALS INTACT
RB MW10	02	1			1:45													X	ON ICE AT SC
MW10	03	3			1:45			X											6/8/93 (REC)
RBC6	04	1			2:00													X	
C6	05	3			2:00			X											
RBC9	06	1			2:10													X	
CA	07	3			2:10			X											
RBC7	08	1			2:20													X	
C7	09	3			2:20			X											
RBC11	10	1			3:10													X	
CR1	11	3			3:10			X											
RBC4	12	1	✓	✓	2:30	✓	✓											X	
CH	13				2:30			X											

F. M. M. 6/8/93

C3060142

Relinquished By (Signature) <u>Randy Ray Phillips</u>	Organization <u>GTEL</u>	Date/Time <u>6/8/93 5:10</u>	Received By (Signature) <u>R. REC</u>	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	Received For Laboratory By (Signature) <u>Randy Ray Phillips</u>	Date/Time <u>6/8/93</u>		

CUC-3/2/93 9/1/MLB



