



**Chevron**

June 2, 1994

**Chevron U.S.A. Products Company**  
2410 Camino Ramon  
San Ramon, CA 94583  
P.O. Box 5004  
San Ramon, CA 94583-0804

**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: Former Chevron Service Station #9-1026  
3701 Broadway, Oakland, CA**

Dear Ms. Hugo:

Enclosed is the quarterly Groundwater Monitoring and Sampling Activities report dated April 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. The levels of dissolved hydrocarbon constituents in the ground water samples analyzed were consistent with previous observations at the site. Depth to ground water was measured at approximately 10.7 feet to 15.8 feet below grade and the direction of flow is to the south-southwest.

Separate phase hydrocarbons (SPH) were observed in monitor well B at a measured thickness of 0.04 feet. No measurable SPH could be removed from this well during this sampling event. The results of the bailing program are summarized in Table 2 of the enclosed report.

At this time we do not feel that ground water remediation is an appropriate corrective action to implement based on known upgradient sources of hydrocarbons in the ground water. Implementing remedial measures to address the contamination present in the ground water beneath the referenced site will not address the impacts from the upgradient sources as it is undetermined what extent has migrated beneath the Chevron site.

Based on discussions in our meeting of November 9, 1993, we are currently evaluating appropriate remedial measures for the site. 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 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

54 JUN -6 PM 4:17

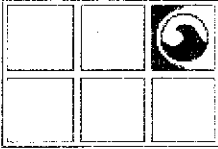
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Enclosure

cc: Mr. Rich Hiatt, RWQCB - Bay Area  
Ms. Allison Watts, Weiss Associates  
Ms. B.C. Owen

Mr. W. Bruce Bercovich  
Kay & Merkel  
100 The Embarcadero, 3rd Floor  
San Francisco, CA 94105

File: 9-1026 QM5



# GROUNDWATER TECHNOLOGY, INC.

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

FAX: (415) 685-9148

April 15, 1994

Project No. 020104090

Mr. Mark Miller  
Chevron U.S.A. Products Company  
2410 Camino Ramon  
San Ramon, CA 94583-0804

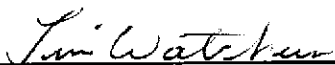
**SUBJECT:** *Groundwater Monitoring and Sampling Activities*  
Chevron Service Station No. 9-1026  
3701 Broadway, Oakland, California

Dear Mr. Miller:

Groundwater Technology, Inc. presents the quarterly groundwater monitoring and sampling data collected on March 9, 1994. The ten 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 detected in monitoring well B, with a separate-phase thickness of 0.04 feet. A potentiometric surface map and a summary of groundwater monitoring data are presented in Attachments 1 and 2, respectively. Table 2 presents the results of the product recovery program. After the DTW was measured, each monitoring well was purged and sampled, except monitoring well B. Field data sheets are presented in Attachment 3. 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 4. 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  
Project Manger

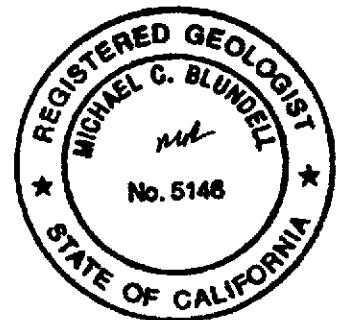
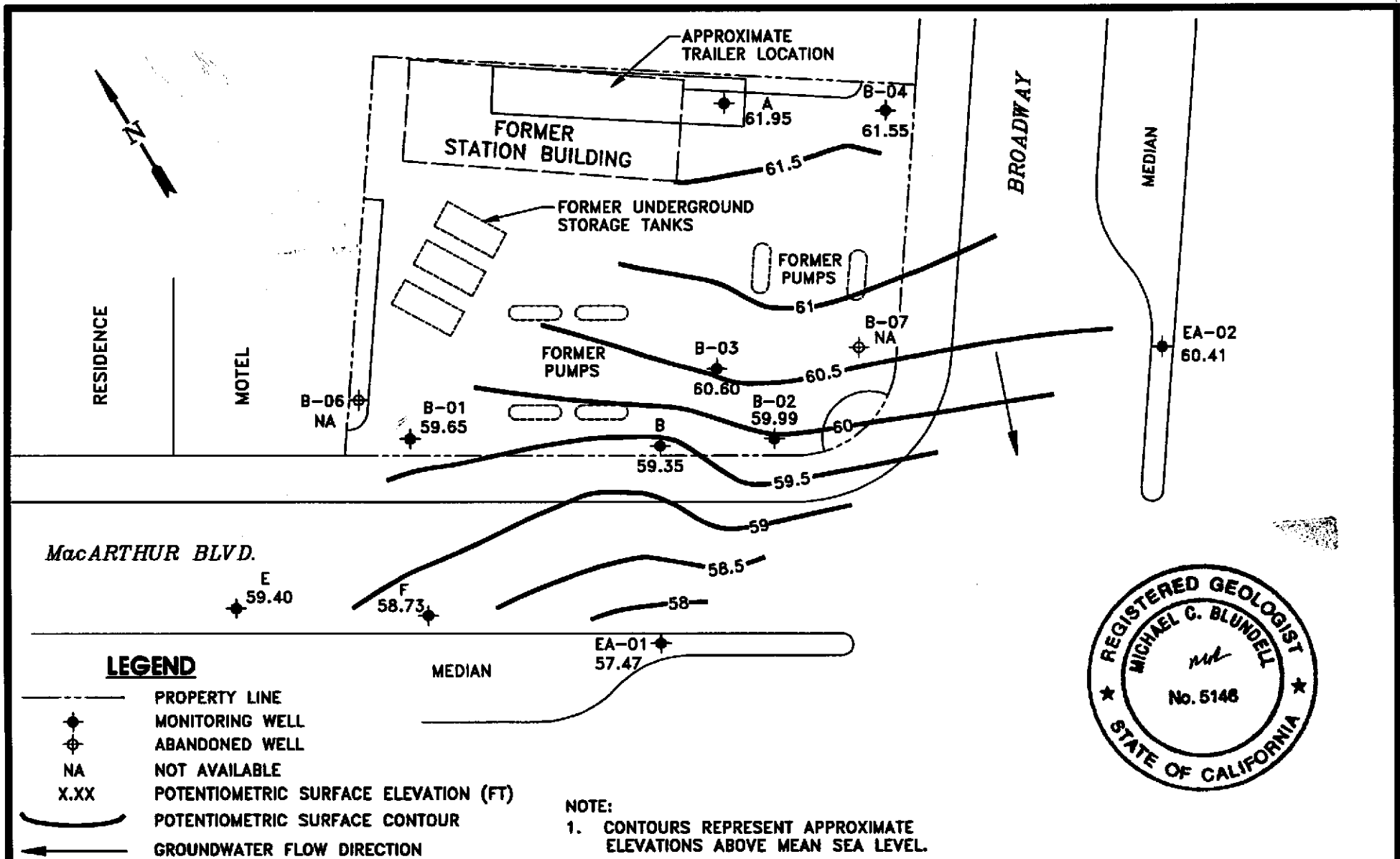
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Attachment 1 Figure  
Attachment 2 Tables  
Attachment 3 Field Data Sheets  
Attachment 4 Laboratory Report

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

**ATTACHMENT 1**

**Figure**



**CLIENT:**  
CHEVRON U.S.A. PRODUCTS CO.  
SERVICE STATION No. 9-1026

**POTENTIOMETRIC SURFACE MAP  
(3/9/94)**

**FILE:**  
4090PSM, (1:50)

**PROJECT NO.:**  
02010-4090

**LOCATION:**  
3701 BROADWAY  
OAKLAND, CALIFORNIA

**PM:**  
*JAW*

**PE/RG:**  
*MA*

**FIGURE:**  
1

**REV.:**

**DES.:**  
TW

**DET.:**  
SS

**DATE:**  
3/28/94

**ATTACHMENT 2**

**Tables**

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-1026**  
**3701 Broadway, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
A  75.28	05/09/89	11,000	260	<2	94	230	13.92	0.00	61.36
	08/09/89	12,000	370	<1.5	100	240	15.62	0.00	59.66
	11/09/89	16,000	690	10	180	350	15.95	0.00	59.33
	02/08/90	14,000	600	7	120	270	14.73	0.00	60.55
	05/10/90	16,000	840	4.8	140	340	15.48	0.00	59.80
	08/09/90	17,000	510	40.0	170	280	15.66	0.00	59.62
	11/13/90	9,000	570	3.1	86	170	16.48	0.00	58.80
	03/27/91	8,000	660	<5	110	250	---	---	---
	04/05/91	---	---	---	---	---	13.22	0.00	62.06
	06/19/91	8,900	740	<3	120	280	15.37	0.00	59.91
	08/21/91	6,800	620	23	85	200	15.99	0.00	59.29
	11/08/91	4,000	640	<5	77	160	16.15	0.00	59.13
	02/13/92	8,000	860	<5	120	390	14.58	0.00	60.70
	05/01/92	13,000	870	19	220	780	14.26	0.00	61.02
	11/18/92	12,000	1,500	83	360	530	16.38	0.00	58.91
	03/19/93	14,000	820	6.1	180	420	12.16	0.00	63.13
	06/10/93	9,000	700	13	170	310	14.25	0.00	61.04
	09/08/93	---	---	---	---	---	---	---	---
12/21/93	---	---	---	---	---	---	---	---	
03/09/94	9,600	860	21	200	390	13.34	0.00	61.95	
B  73.39	05/09/89	---	---	---	---	---	13.97	0.20	59.58
	08/09/89	---	---	---	---	---	15.69	0.20	57.86
	11/09/89	---	---	---	---	---	15.29	0.08	58.16
	02/08/90	---	---	---	---	---	14.46	0.00	58.93
	05/10/90	---	---	---	---	---	15.07	0.00	58.32
	08/09/90	---	---	---	---	---	15.12	0.00	58.27
	11/13/90	---	---	---	---	---	15.76	0.00	57.63
	04/05/91	---	---	---	---	---	13.38	0.00	60.01
	06/19/91	26,000	7,100	370	430	1,000	15.14	0.00	58.25
	08/21/91	16,000	4,900	270	390	640	15.58	0.00	57.81
	11/08/91	11,000	2,400	48	280	160	15.71	0.00	57.68
	02/13/92	6,800	2,400	60	220	140	14.66	0.00	58.73
	05/01/92	16,000	6,000	180	370	460	14.50	Sheen	58.89
	11/18/92	28,000	2,200	150	920	4,300	15.60	0.00	57.79
	03/19/93	---	---	---	---	---	13.29	0.03	60.12
	06/10/93	---	---	---	---	---	14.30	0.03	59.11
	09/08/93	---	---	---	---	---	15.33	0.24	58.25
	12/21/93	---	---	---	---	---	14.73	0.12	58.76
03/09/94	---	---	---	---	---	14.07	0.04	59.35	

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-1026**  
**3701 Broadway, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)	
B-1  71.77	05/09/89	16,000	2,300	260	81	740	12.58	0.00	59.19	
	08/09/89	12,000	2,600	340	100	870	14.09	0.00	57.68	
	11/09/89	17,000	340	140	110	760	14.06	0.00	57.71	
	02/08/90	5,500	70	19	17	150	12.65	0.00	59.12	
	05/10/90	18,000	770	110	73	600	13.62	0.00	58.15	
	08/09/90	82,000	750	66	95	980	13.87	0.00	57.90	
	11/13/90	43,000	1,300	120	74	760	14.38	0.00	57.39	
	03/27/91	18,000	580	92	94	770	---	---	---	
	04/05/91	---	---	---	---	---	11.73	0.00	60.04	
	06/19/91	21,000	910	56	96	810	13.56	0.00	58.21	
	08/21/91	50,000	2,400	610	300	1,800	13.90	0.00	57.87	
	11/08/91	540,000	3,600	1,500	1,900	5,900	14.05	0.00	57.72	
	02/13/92	20,000	500	100	150	920	12.68	0.00	59.09	
	05/01/92	27,000	2,800	200	310	1,900	12.92	Sheen	58.85	
72.30	11/18/92	300	9.7	3.4	2.3	21	14.30	0.00	58.00	
	03/19/93	130	23	0.9	<0.5	5.6	12.28	0.00	60.02	
	06/10/93	170	21	1.1	0.8	6.6	13.04	0.00	59.26	
	09/08/93	---	---	---	---	---	13.88	0.05	58.46	
	12/21/93	<50	6.7	0.5	<0.5	1.2	13.53	0.00	58.77	
	03/09/94	1,300	520	8.8	2.4	53	12.65	0.00	59.65	
B-2  74.51	05/09/89	170,000	30,000	8,400	2,300	12,000	14.58	0.00	59.93	
	08/09/89	60,000	29,000	8,700	2,400	12,000	16.06	0.00	58.45	
	11/09/89	110,000	32,000	5,500	2,800	12,000	16.95	0.00	57.56	
	02/08/90	67,000	28,000	5,900	2,300	11,000	15.56	0.00	58.95	
	05/10/90	69,000	24,000	4,800	2,000	11,000	15.94	0.00	58.57	
	08/09/90	100,000	33,000	4,000	2,100	12,000	15.97	0.00	58.54	
	11/13/90	110,000	33,000	4,300	2,900	13,000	16.70	0.00	57.81	
	03/27/91	160,000	26,000	3,200	2,600	15,000	---	---	---	
	04/05/91	---	---	---	---	---	14.20	0.00	60.31	
	06/19/91	100,000	22,000	2,500	2,000	11,000	15.83	0.00	58.68	
	08/21/91	80,000	28,000	2,800	2,400	12,000	16.31	0.00	58.20	
	11/08/91	94,000	29,000	1,900	2,200	11,000	16.60	0.00	57.91	
	02/13/92	280,000	34,000	2,500	4,600	23,000	15.93	0.00	58.58	
	05/01/92	29,000	1,700	300	1,100	4,300	14.94	Sheen	59.57	
	74.52	11/18/92	26,000	11,000	170	870	950	16.71	0.00	57.81
		03/19/93	110,000	28,000	1,200	2,200	12,000	14.06	0.00	60.46
		06/10/93	140,000	15,000	930	1,900	8,800	14.88	0.00	59.64
		09/08/93	---	---	---	---	---	16.03	0.04	58.52
		12/21/93	980,000	21,000	30,000	9,100	71,000	15.61	0.00	58.91
03/09/94		110,000	23,000	920	1,300	7,800	14.53	Sheen	59.99	



**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-1026**  
**3701 Broadway, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
B-3 74.12	05/09/89	70,000	12,000	9,500	400	8,900	14.02	0.00	60.01
	08/09/89	---	---	---	---	---	15.38	0.00	58.74
	11/09/89	---	---	---	---	---	15.55	0.05	58.61
	02/08/90	---	---	---	---	---	14.68	<0.01	59.44
	05/10/90	---	---	---	---	---	15.15	0.02	58.99
	08/09/90	---	---	---	---	---	15.27	<0.01	58.85
	11/13/90	---	---	---	---	---	16.04	0.06	58.13
	04/05/91	---	---	---	---	---	13.30	<0.01	60.82
	06/19/91	260,000	20,000	9,000	2,200	16,000	15.16	0.00	58.96
	08/21/91	70,000	28,000	11,000	1,800	11,000	15.61	0.00	58.51
	11/08/91	150,000	29,000	9,700	2,200	13,000	15.77	0.00	58.35
	02/13/92	100,000	27,000	9,906	2,000	11,000	14.88	0.00	59.24
	05/01/92	---	---	---	---	---	14.20	0.01	59.93
	11/18/92	---	---	---	---	---	15.68	0.03	58.47
	03/19/93	---	---	---	---	---	13.75	1.08	61.24
	06/10/93	---	---	---	---	---	14.79	0.87	60.04
09/08/93	---	---	---	---	---	15.38	0.08	58.81	
12/21/93	1,100,000	18,000	29,000	8,900	59,000	14.74	0.00	59.39	
03/09/94	130,000	11,000	20,000	1,700	15,000	13.53	0.00	60.60	
B-4 76.43	05/09/89	3,600	840	34	120	200	14.93	0.00	61.50
	08/09/89	<500	4,200	130	370	260	16.65	0.00	59.78
	11/09/89	5,000	4,200	83	400	250	---	---	---
	02/08/90	14,000	6,000	70	530	300	16.99	0.00	59.44
	05/10/90	12,000	5,400	130	460	320	16.05	0.00	60.38
	08/09/90	16,000	7,400	120	530	350	16.49	0.00	59.94
	11/13/90	21,000	7,000	100	550	320	16.64	0.00	59.79
	03/27/91	17,000	8,500	120	500	300	17.42	0.00	59.01
	04/05/91	14,000	7,700	75	610	210	14.66	0.00	61.77
	06/19/91	16,000	7,800	110	550	340	16.48	0.00	59.95
	08/21/91	18,000	11,000	110	450	340	17.00	0.00	59.43
	11/08/91	18,000	6,800	98	500	620	17.38	0.00	59.05
	02/13/92	15,000	9,100	86	570	350	16.42	0.00	60.01
	05/01/92	36,000	16,000	180	990	690	15.50	0.00	60.93
	03/19/93	26,000	15,000	150	900	790	14.11	0.00	62.32
	06/10/93	35,000	14,000	180	940	590	15.44	0.00	60.99
09/08/93	34,000	15,000	170	1,100	870	16.65	0.00	59.78	
12/21/93	30,000	12,000	74	610	340	16.45	0.00	59.98	
03/09/94	37,000	15,000	140	1,000	580	14.88	0.00	61.55	
B-6 72.66	05/09/89	26,000	120	110	250	1,300	12.11	0.00	60.55
	08/09/89	19,000	470	150	440	1,400	14.72	0.00	57.94
	11/09/89	13,000	70	36	36	440	13.85	0.00	58.81
	02/08/90	2,900	16	5	10	58	7.73	0.00	64.93
	05/10/90	---	---	---	---	---	---	---	---
	08/09/90	14,000	55	3	130	500	14.51	0.00	58.15
	11/13/90	---	---	---	---	---	14.86	0.00	57.80
	04/05/91	---	---	---	---	---	10.43	0.00	62.23
06/19/91	Abandoned	---	---	---	---	---	---	---	



**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-1026**  
**3701 Broadway, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
EA-2  75.24	05/09/89	760	<0.5	<0.5	1.1	<0.5	15.95	0.00	59.29
	08/09/89	<500	<0.5	<0.5	<0.5	<0.5	17.45	0.00	57.79
	11/09/89	<500	<0.5	1	<0.5	<0.5	17.41	0.00	57.83
	02/08/90	190	<0.3	<0.3	<0.3	<0.6	16.57	0.00	58.67
	05/10/90	<50	<0.3	<0.3	<0.3	<0.6	17.12	0.00	58.12
	08/09/90	120	<0.3	<0.3	<0.3	<0.6	17.20	0.00	58.04
	11/13/90	160	<0.4	1.0	<0.3	<0.4	17.88	0.00	57.36
	03/27/91	110	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/05/91	---	---	---	---	---	15.54	0.00	59.70
	06/19/91	<50	<0.5	<0.5	<0.5	<0.5	17.07	0.00	58.17
	08/21/91	70	0.8	1.4	<0.3	<0.4	17.46	0.00	57.78
	11/08/91	<50	<0.5	0.7	<0.5	<0.5	17.58	0.00	57.66
	02/13/92	<50	<0.5	<0.5	<0.5	<0.5	16.69	0.00	58.55
	05/01/92	340	<0.5	2.6	0.7	<0.5	16.16	0.00	59.08
	11/18/92	450	<0.5	3.3	<0.5	0.8	17.61	0.00	58.63
	03/19/93	450	<0.5	2.3	0.6	<1.5	15.00	0.00	61.24
	06/10/93	250	<0.5	1.3	<0.5	<1.5	16.08	0.00	60.16
	09/08/93	<50	<0.5	<0.5	<0.5	<1.5	17.07	0.00	59.17
	12/21/93	170	<0.5	1.3	<0.5	<0.5	16.60	0.00	59.64
03/09/94	200	1.8	1.4	<0.5	<0.5	15.83	0.00	60.41	
F  72.01	05/09/89	<500	<0.5	<0.5	0.6	1.0	18.70	0.00	53.31
	08/09/89	---	---	---	---	---	19.03	0.00	52.98
	11/09/89	---	---	---	---	---	19.02	0.00	52.99
	02/08/90	<50	0.4	<0.3	0.3	<0.6	18.70	0.00	53.31
	05/10/90	---	---	---	---	---	18.98	0.00	53.03
	08/09/90	---	---	---	---	---	18.95	0.00	53.06
	11/13/90	---	---	---	---	---	19.10	0.00	52.91
	03/27/91	64	<0.5	<0.5	<0.5	1	---	---	---
	06/19/91	---	---	---	---	---	18.95	0.00	53.06
	08/21/91	---	---	---	---	---	>19.94	0.00	<52.07
	11/08/91	---	---	---	---	---	>19.94	0.00	<52.07
	02/13/92	<50	<0.5	<0.5	<0.5	<0.5	18.60	0.00	53.41
	05/01/92	---	---	---	---	---	Dry	---	---
	11/18/92	<50	<0.5	<0.5	<0.5	<0.5	14.85	0.00	56.87
	03/19/93	<50	<0.5	<0.5	<0.5	<1.5	14.25	0.00	57.47
	06/10/93	<50	<0.5	<0.5	<0.5	<1.5	13.92	0.00	57.80
	09/08/93	---	---	---	---	---	14.80	0.04	56.95
	12/21/93	<50	<0.5	<0.5	<0.5	<0.5	13.31	0.00	58.41
	03/09/94	<50	<0.5	<0.5	<0.5	<0.5	12.99	0.00	58.73

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**Chevron Service Station No. 9-1026**  
**3701 Broadway, Oakland, California**

Well ID/ Elevation	Date	TPH-G	Benzene	Toluene	Ethyl- benzene	Xylenes	DTW (ft)	SPT (ft)	WTE (ft)
TBLB	05/09/89	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/09/89	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/09/89	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/08/90	<50	<0.3	<0.3	<0.3	<0.6	---	---	---
	05/10/90	<50	<0.3	<0.3	<0.3	<0.6	---	---	---
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	---	---	---
	11/13/90	<50	<0.4	<0.3	<0.3	<0.4	---	---	---
	03/27/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	06/19/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/21/91	<50	<0.4	<0.3	<0.3	<0.4	---	---	---
	11/08/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	02/13/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/01/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/18/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	03/19/93	<50	<0.5	<0.5	<0.5	<0.5	<1.5	---	---
	06/10/93	<50	<0.5	<0.5	<0.5	<0.5	<1.5	---	---
	09/08/93	<50	<0.5	<0.5	<0.5	<0.5	<1.5	---	---
	12/21/93	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---
03/09/94	<50	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	

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  
--- =Not applicable, not sampled, not measured

Data from May 9, 1989, through February 13, 1992, taken from *First Quarter 1992 Groundwater Monitoring Report*, dated February 28, 1992 (Weiss Associates).  
All elevations are given as feet above mean sea level.  
Concentrations shown in parts per billion.

**TABLE 2**  
**SEPARATE-PHASE HYDROCARBONS BAILED**  
**MONITORING WELLS B AND B-3**  
**Chevron Service Station No. 9-1026**  
**3701 Broadway, Oakland, California**

Well ID	Date	Amount Product Bailed (gallons)	Total Product Bailed (gallons)
B	06/22/93	0.66	0.66
	06/29/93	0.25	0.91
	07/09/93	0.25	1.16
	07/15/93	0.25	1.41
	07/20/93	0.50	1.91
	07/27/93	0.50	2.41
	08/06/93	0.01	2.42
	08/10/93	0.08	2.50
	08/16/83	0.22	2.72
	08/25/93	0.25	2.97
	08/31/93	0.03	3.00
	09/10/93	0.01	3.01
	09/16/93	0.15	3.16
B-3	06/22/93	0.33	0.33
	06/29/93	0.25	0.58
	07/09/93	0.25	0.83
	07/15/93	0.25	1.08
	07/20/93	0.50	1.58
	07/27/93	0.11	1.69
	08/06/93	0.01	1.70
	08/10/93	0.01	1.71
	08/16/93	0.01	1.72
	08/25/93	0.02	1.74
	08/31/93	0.01	1.75
	09/10/93	0.01	1.76
	09/16/93	0.01	1.77

**ATTACHMENT 3**

**Field Data Sheets**



Project Name: Chevron - Broadway

Date: 3/9/94

Site Address: 3701 Broadway, Oakland

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Project Number: 020104090.0610

Project Manager: Tim Watchers

Well ID: F

DTW Measurements:

Well Diameter: 2

Initial: 1299

Calc Well Volume: 9 gal

Recharge: \_\_\_\_\_

Well Volume: \_\_\_\_\_ gal

Purge Method      Pump Depth \_\_\_\_\_ ft.

Peristaltic \_\_\_\_\_ Hand Bailed \_\_\_\_\_

Gear Drive \_\_\_\_\_ Air Lift \_\_\_\_\_

Submersible  Other \_\_\_\_\_

Instruments Used

YSI:  \_\_\_\_\_ Other: \_\_\_\_\_

Hydac: \_\_\_\_\_

Omega: \_\_\_\_\_

Time	Temp	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
	<input checked="" type="checkbox"/> C _____ F					
6:15	20.9	1.11	6.19	2		
6:16	20.7	1.11	6.18	4		
6:17	20.9	1.11	6.17	7		
6:18	21.3	1.12	6.18	9	DRY	















Project Name: Chevron - Broadway

Date: 5/9/94

Site Address: 3701 Broadway, Oakland

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Project Number: 02004090.0610

Project Manager: Tim Watchers

Well ID: B-3

DTW Measurements:

Well Diameter: 2

Initial: \_\_\_\_\_ Calc Well Volume: 2 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	pH	Purge Volume Gallons	Turbidity	Comments
				1 gal dry		NOT enough water to do readings
						Product came into well while bailing

**ATTACHMENT 4**  
**Laboratory Report**





# Superior Precision Analytical, Inc.

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

GROUNDWATER TECHNOLOGY, INC.  
Attn: TIM WATCHERS

Project 9-1026  
Reported 03/17/94

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
30332- 1	TB-LB	03/09/94	03/11/94 Water
30332- 2	EA-1	03/09/94	03/11/94 Water
30332- 3	F	03/09/94	03/11/94 Water
30332- 4	E	03/09/94	03/11/94 Water
30332- 5	B-1	03/09/94	03/14/94 Water
30332- 6	EA-2	03/09/94	03/14/94 Water
30332- 7	A	03/09/94	03/14/94 Water
30332- 8	B-4	03/09/94	03/14/94 Water
30332- 9	B-2	03/09/94	03/15/94 Water
30332-10	B-3	03/09/94	03/15/94 Water

## RESULTS OF ANALYSIS

Laboratory Number:	30332- 1	30332- 2	30332- 3	30332- 4	30332- 5
--------------------	----------	----------	----------	----------	----------

Gasoline:	ND<50	ND<50	ND<50	ND<50	1300
Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	520
Toluene:	ND<0.5	1.0	ND<0.5	0.7	8.8
Ethyl Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.4
Total Xylenes:	ND<0.5	ND<0.5	ND<0.5	0.7	53

Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L
----------------	------	------	------	------	------

Laboratory Number:	30332- 6	30332- 7	30332- 8	30332- 9	30332-10
--------------------	----------	----------	----------	----------	----------

Gasoline:	200	9600	37000	110000	130000
Benzene:	1.8	860	15000	23000	11000
Toluene:	1.4	21	140	920	20000
Ethyl Benzene:	ND<0.5	200	1000	1300	1700
Total Xylenes:	ND<0.5	390	580	7800	15000

Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L
----------------	------	------	------	------	------



C E R T I F I C A T E   O F   A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

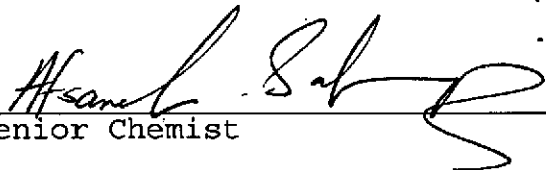
Page 2 of 2  
QA/QC INFORMATION  
SET: 30332

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
ug/L = parts per billion (ppb)

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	110/115	4%	70-130
Benzene:	90/93	3%	70-130
Toluene:	106/109	3%	70-130
Ethyl Benzene:	101/103	2%	70-130
Total Xylenes:	110/113	3%	70-130

  
Senior Chemist

