



## Chevron U.S.A. Products Company

2410 Camino Ramon, San Ramon, California • Phone (510) 842-9500  
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

Marketing Department

July 7, 1992

✓  
Mr. Edgar Howell  
Alameda County Health Care Services  
80 Swan Way, Room 200  
Oakland, CA 94621

TP  
STD 467

92 JUL 23 11:57

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

Dear Mr. Howell:

Enclosed we are forwarding the Quarterly Ground Water Monitoring Report dated June 2, 1992, and a Work Plan for Soil and Ground Water Assessment dated June 17, 1992, both prepared by our consultant Groundwater Technology, Inc. (GTI) for the above referenced site.

As indicated in the Quarterly Ground Water Monitoring Report, ground water samples collected were analyzed for total petroleum hydrocarbons as gasoline and BTEX. Benzene concentrations ranged from non-detectable to 16,000 ppb. Depth to ground water was measured at approximately 12.9 to 18.8-feet below grade, and the direction of flow is to the southwest.

The Soil and Ground Water Assessment Work Plan outlines additional work steps we propose to take at the site to delineate the extent of the hydrocarbon plume. In addition, monitor wells B-1 and F will be deepened due to insufficient water in the wells. All necessary documents have been recently compiled and will be submitted to the City of Oakland for obtaining the necessary permits to perform this work.

As requested in my letter to you dated April 7, 1992, I would like to schedule a meeting with the appropriate Hazardous Materials Specialist responsible for this site (formerly Gil Wistar) to review the site data and discuss appropriate site specific corrective actions. Please have the appropriate Hazardous Materials Specialist contact me to schedule this meeting. We do not feel at this time that ground water remediation is an appropriate corrective action for this site. This is based on up-gradient sources for hydrocarbons in ground water are known from ground water analytical data. The detected presence of hydrocarbon concentrations in ground water monitor wells located up-gradient of the site makes the presence of up-gradient sources likely. Implementing remedial measures to address the contamination present in the ground water beneath the referenced site will not address the impacts from the up-gradient sources as it is undetermined what extent has migrated beneath our site.


Also enclosed is a copy of the Soil Vapor Extraction Pilot Test Report dated April 7, 1992, prepared by our consultant Weiss Associates. This test was performed to assess the feasibility and effectiveness of this technology at the site. The data from this test reports that soil vapor extraction will not be effective at this site based on a relatively large vacuum required to induce small flow rates. This indicates that the subsurface soil permeabilities in the site's unsaturated zone are very low.

Page 2  
July 7, 1992  
#9-1026 - Oakland

Chevron will continue to monitor this site and report findings on a quarterly basis.

~~We would appreciate your review and formal concurrence of the work plan prior to implementation.~~

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

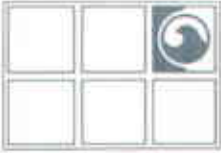
Very truly yours,  
CHEVRON U.S.A. PRODUCTS COMPANY  
  
Nancy Vukelich  
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Rich Hiatt, RWQCB-Bay Area  
Ms. Sandra Lindsey, GTI-Concord  
Ms. B.C. Owen  
File (9-1026Q4/W1)

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

92 JUL 23 11:58



# GROUNDWATER TECHNOLOGY, INC.

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

FAX: (415) 685-9148

June 2, 1992

Project No. 020302539

Ms. Nancy Vukelich  
Chevron U.S.A. Products Company  
P. O. Box 5004  
San Ramon, CA 94583-0804

**SUBJECT: GROUNDWATER MONITORING AND SAMPLING ACTIVITIES  
CHEVRON SERVICE STATION NO. 9-1026  
3701 BROADWAY, OAKLAND, CALIFORNIA**

Dear Ms. Vukelich:

Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on May 1, 1992. The nine groundwater monitoring wells at this site were gauged to determine depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons. **Water was not detected in monitoring well F.** A potentiometric surface map (Figure 1) and a summary of groundwater monitoring data (Table 1) are presented in Attachments A and B, respectively. After measuring the DTW, each monitoring well was purged and sampled. The groundwater samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), and total petroleum hydrocarbons (TPH)-as-gasoline. Results of the chemical analyses are summarized in Table 1. Laboratory reports and chain-of-custody records are included in Attachment C. **Monitoring well purge water was transported by Groundwater Technology, Inc. to the Chevron terminal in Richmond, California for recycling.**

Groundwater Technology, Inc. is pleased to assist Chevron on this project. If you have any questions or comments please call our Concord office.

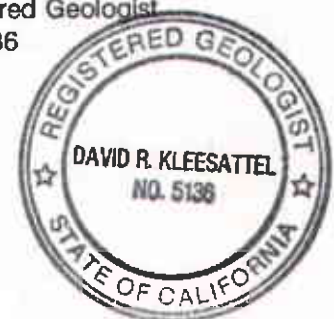
Sincerely,  
GROUNDWATER TECHNOLOGY, INC.

Sandra L. Lindsey  
Project Manager

David R. Kleesattel  
Registered Geologist  
No. 5136

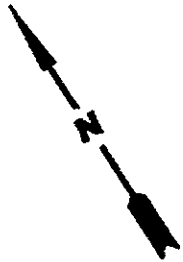
Attachments: Attachment A - Figure 1  
Attachment B - Table 1  
Attachment C - Laboratory Reports

LR2539A1.GM  
(061022)



**ATTACHMENT A**

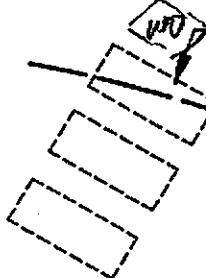
**FIGURE**



FORMER STATION BUILDING

A (61.02)  
13,000 TPHg  
810 B

B-4  
36,000 TPHg  
(60.93) 16,000 B

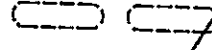


FORMER UNDERGROUND STORAGE TANKS

APPROX. GROUNDWATER FLOW DIRECTION



FORMER PUMPS



FORMER PUMPS

B-3 (59.93)  
Sheen  
6,000 B  
16,000 TPHg

B-7 → abandoned

(59.57)  
B-2  
24,000 TPHg  
1700 B  
59" Sheen

B (58.89)

B-1 (58.85)  
27,000 TPHg  
2,000 B  
Sheen

(59.08)

EA-2

340 TPHg  
20,540 B

MacARTHUR BLVD.

F<sup>o</sup> DRY

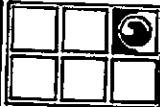
EA-1 (55.14)  
2.7 TPHg  
20,540 B

MEDIAN



LEGEND

- ⊙ MONITORING WELL
- ∅ ABANDONED WELL
- ( ) POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR



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

**POTENTIOMETRIC SURFACE MAP (5/1/92)**

CLIENT: <b>CHEVRON U.S.A. PRODUCTS CO.</b> SERVICE STATION No. 9-1026				LOCATION: <b>3701 BROADWAY</b> OAKLAND, CALIFORNIA		REV. NO.: 0	DATE: 5/4/92
PM GAM	FE/RG DKK	DESIGNED GM	DETAILED ML	ACAD FILE: PSM5192/SP592	PROJECT NO.: 020302539	FIGURE: 1	

**ATTACHMENT B**

**TABLE**



**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**CHEVRON SERVICE STATION NO. 9-1026**

WELL ID/ELEV	DATE	TPH-AS-GASOLINE	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	0.0	61.36
	08/09/89	12,000	370	<1.5	100	240	15.62	0.0	59.66
	11/09/89	16,000	690	10	180	350	15.95	0.0	59.33
	02/08/90	14,000	600	7	120	270	14.73	0.0	60.55
	05/10/90	16,000	840	4.8	140	340	15.48	0.0	59.80
	08/09/90	17,000	510	40.0	170	280	15.66	0.0	59.62
	11/13/90	9,000	570	3.1	86	170	16.48	0.0	58.80
	03/27/91	8,000	660	<5	110	250	---	---	---
	04/05/91	---	---	---	---	---	13.22	0.0	62.06
	06/19/91	8,900	740	<3	120	280	15.37	0.0	59.91
	08/21/91	6,800	620	23	85	200	15.99	0.0	59.29
	11/08/91	4,000	640	<5	77	160	16.15	0.0	59.13
	02/13/92	8,000	860	<5	120	390	14.58	0.0	60.70
	05/01/92	13,000	870	19	220	780	14.26	0.0	61.02

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**CHEVRON SERVICE STATION NO. 9-1026**

WELL ID/ELEV	DATE	TPH-AS-GASOLINE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	DTW (ft)	SPT (ft)	WTE (ft)
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	0.0	58.93
	05/10/90	---	---	---	---	---	15.07	0.0	58.32
	08/09/90	---	---	---	---	---	15.12	0.0	58.27
	11/13/90	---	---	---	---	---	15.76	0.0	57.63
	04/05/91	---	---	---	---	---	13.38	0.0	60.01
	06/19/91	26,000	7,100	370	430	1,000	15.14	0.0	58.25
	08/21/91	16,000	4,900	270	390	640	15.58	0.0	57.81
	11/08/91	11,000	2,400	48	280	160	15.71	0.0	57.68
	02/13/92	6,800	2,400	60	220	140	14.66	0.0	58.73
	05/01/92	<del>16,000</del>	6,000	180	370	460	14.50	<del>SHEEN</del>	58.89



**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**CHEVRON SERVICE STATION NO. 9-1026**

WELL ID/ELEV	DATE	TPH-AS-GASOLINE	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	0.0	59.19
	08/09/89	12,000	2,600	340	100	870	14.09	0.0	57.68
	11/09/89	17,000	340	140	110	760	14.06	0.0	57.71
	02/08/90	5,500	70	19	17	150	12.65	0.0	59.12
	05/10/90	18,000	770	110	73	600	13.62	0.0	58.15
	08/09/90	82,000	750	66	95	980	13.87	0.0	57.90
	11/13/90	43,000	1,300	120	74	760	14.38	0.0	57.39
	03/27/91	18,000	580	92	94	770	---	---	---
	04/05/91	---	---	---	---	---	11.73	0.0	60.04
	06/19/91	21,000	910	56	96	810	13.56	0.0	58.21
	08/21/91	50,000	2,400	610	300	1,800	13.90	0.0	57.87
	11/08/91	540,000	3,600	1,500	1,900	5,900	14.05	0.0	57.72
	02/13/92	20,000	500	100	150	920	12.68	0.0	59.09
	05/01/92	27,000	2,800	200	310	1,900	12.92	SHEEN	58.85

**TABLE 1  
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA  
CHEVRON SERVICE STATION NO. 9-1026**

WELL ID/ELEV	DATE	TPH-AS-GASOLINE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	DTW (ft)	SPT (ft)	WTE (ft)
B-2  74.51	05/09/89	170,000	30,000	8,400	2,300	12,000	14.58	0.0	59.93
	08/09/89	60,000	29,000	8,700	2,400	12,000	16.06	0.0	58.45
	11/09/89	110,000	32,000	5,500	2,800	12,000	16.95	0.0	57.56
	02/08/90	67,000	28,000	5,900	2,300	11,000	15.56	0.0	58.95
	05/10/90	69,000	24,000	4,800	2,000	11,000	15.94	0.0	58.57
	08/09/90	100,000	33,000	4,000	2,100	12,000	15.97	0.0	58.54
	11/13/90	110,000	33,000	4,300	2,900	13,000	16.70	0.0	57.81
	03/27/91	160,000	26,000	3,200	2,600	15,000	---	---	---
	04/05/91	---	---	---	---	---	14.20	0.0	60.31
	06/19/91	100,000	22,000	2,500	2,000	11,000	15.83	0.0	58.68
	08/21/91	80,000	28,000	2,800	2,400	12,000	16.31	0.0	58.20
	11/08/91	94,000	29,000	1,900	2,200	11,000	16.60	0.0	57.91
	02/13/92	280,000	34,000	2,500	4,600	23,000	15.93	0.0	58.58
	05/01/92	29,000	1,700	300	1,100	4,300	14.94	SHEEN	59.57

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**CHEVRON SERVICE STATION NO. 9-1026**

WELL ID/ELEV	DATE	TPH-AS-GASOLINE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	DTW (ft)	SPT (ft)	WTE (ft)
B-3  74.12	05/09/89	70,000	12,000	9,500	1,400	8,900	14.02	0.0	60.01
	08/09/89	---	---	---	---	---	15.38	0.0	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	0.0	58.96
	08/21/91	70,000	28,000	11,000	1,800	11,000	15.61	0.0	58.51
	11/08/91	150,000	29,000	9,700	2,200	13,000	15.77	0.0	58.35
	02/13/92	100,000	27,000	9,906	2,000	11,000	14.88	0.0	59.24
	05/01/92	---	---	---	---	---	14.20	0.01	59.93

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**CHEVRON SERVICE STATION NO. 9-1026**

WELL ID/ELEV	DATE	TPH-AS-GASOLINE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	DTW (ft)	SPT (ft)	WTE (ft)
B-4  76.43	05/09/89	3,600	840	34	120	200	14.93	0.0	61.50
	08/09/89	<500	4,200	130	370	260	16.65	0.0	59.78
	11/09/89	5,000	4,200	83	400	250	---	---	---
	02/08/90	14,000	6,000	70	530	300	16.99	0.0	59.44
	05/10/90	12,000	5,400	130	460	320	16.05	0.0	60.38
	08/09/90	16,000	7,400	120	530	350	16.49	0.0	59.94
	11/13/90	21,000	7,000	100	550	320	16.64	0.0	59.79
	03/27/91	17,000	8,500	120	500	300	17.42	0.0	59.01
	04/05/91	14,000	7,700	75	610	210	14.66	0.0	61.77
	06/19/91	16,000	7,800	110	550	340	16.48	0.0	59.95
	08/21/91	18,000	11,000	110	450	340	17.00	0.0	59.43
	11/08/91	18,000	6,800	98	500	620	17.38	0.0	59.05
	02/13/92	15,000	9,100	86	570	350	16.42	0.0	60.01
	05/01/92	36,000	16,000	180	990	690	15.50	0.0	60.93

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**CHEVRON SERVICE STATION NO. 9-1026**

WELL ID/ELEV	DATE	TPH-AS-GASOLINE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	DTW (ft)	SPT (ft)	WTE (ft)
B-6  72.66	05/09/89	26,000	120	110	250	1,300	12.11	0.0	60.55
	08/09/89	19,000	470	150	440	1,400	14.72	0.0	57.94
	11/09/89	13,000	70	36	36	440	13.85	0.0	58.81
	02/08/90	2,900	16	5	10	58	7.73	0.0	64.93
	05/10/90	---	---	---	---	---	---	---	---
	08/09/90	14,000	55	3	130	500	14.51	0.0	58.15
	11/13/90	---	---	---	---	---	14.86	0.0	57.80
	04/05/91	---	---	---	---	---	10.43	0.0	62.23
	06/19/91	ABND	---	---	---	---	---	---	---

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**CHEVRON SERVICE STATION NO. 9-1026**

WELL ID/ELEV	DATE	TPH-AS-GASOLINE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	DTW (ft)	SPT (ft)	WTE (ft)
B-7	05/09/89	210,000	13,000	19,000	2,000	20,000	14.73	0.0	60.67
	08/09/89	672,000	8,700	17,000	2,700	30,000	16.36	0.0	59.04
75.40	11/09/89	150,000	7,000	12,000	1,800	16,000	16.64	0.0	58.76
	02/08/90	41,000	2,500	6,900	1,100	11,000	15.69	0.0	59.71
	05/10/90	---	---	---	---	---	---	---	---
	08/09/90	50,000	1,100	3,900	640	7,200	16.31	0.0	59.09
	11/13/90	---	---	---	---	---	17.09	0.0	58.31
	04/05/91	---	---	---	---	---	14.36	0.0	61.04
	06/19/91	ABND							

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**CHEVRON SERVICE STATION NO. 9-1026**

WELL ID/ELEV	DATE	TPH-AS-GASOLINE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	DTW (ft)	SPT (ft)	WTE (ft)
EA-1  73.94	05/09/89	<500	<0.5	<0.5	<0.5	<0.5	14.56	0.0	59.38
	08/09/89	<500	<0.5	<0.5	<0.5	<0.5	16.09	0.0	57.85
	11/09/89	<500	<0.5	<0.5	<0.5	<0.5	15.84	0.0	58.10
	02/08/90	<50	<0.3	<0.3	<0.3	<0.6	15.05	0.0	58.89
	05/10/90	<50	1	<0.3	<0.3	<0.6	15.65	0.0	58.29
	08/09/90	<50	<0.3	<0.3	<0.3	<0.6	15.67	0.0	58.27
	11/13/90	<50	<0.4	<0.3	<0.3	<0.4	16.32	0.0	57.62
	03/27/91	<50	0.7	<0.5	<0.5	<0.5	---	---	---
	04/05/91	---	---	---	---	---	14.03	0.0	59.91
	06/19/91	<50	<0.5	<0.5	<0.5	<0.5	15.56	0.0	58.38
	08/21/91	<50	<0.4	<0.3	<0.3	<0.4	15.99	0.0	57.95
	11/08/91	<50	<0.5	<0.5	<0.5	<0.5	16.13	0.0	57.81
	02/13/92	<50	<0.5	<0.5	<0.5	<0.5	15.10	0.0	58.84
	05/01/92	<50	2.7	<0.5	<0.5	<0.5	18.80	0.0	55.14



**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**CHEVRON SERVICE STATION NO. 9-1026**

WELL ID/ELEV	DATE	TPH-AS-GASOLINE	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	0.0	59.29
	08/09/89	<500	<0.5	<0.5	<0.5	<0.5	17.45	0.0	57.79
	11/09/89	<500	<0.5	1	<0.5	<0.5	17.41	0.0	57.83
	02/08/90	190	<0.3	<0.3	<0.3	<0.6	16.57	0.0	58.67
	05/10/90	<50	<0.3	<0.3	<0.3	<0.6	17.12	0.0	58.12
	08/09/90	120	<0.3	<0.3	<0.3	<0.6	17.20	0.0	58.04
	11/13/90	160	<0.4	1.0	<0.3	<0.4	17.88	0.0	57.36
	03/27/91	110	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/05/91	---	---	---	---	---	15.54	0.0	59.70
	06/19/91	<50	<0.5	<0.5	<0.5	<0.5	17.07	0.0	58.17
	08/21/91	70	0.8	1.4	<0.3	<0.4	17.46	0.0	57.78
	11/08/91	<50	<0.5	0.7	<0.5	<0.5	17.58	0.0	57.66
	02/13/92	<50	<0.5	<0.5	<0.5	<0.5	16.69	0.0	58.55
	05/01/92	340	<0.5	2.6	0.7	<0.5	16.16	0.0	59.08

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**CHEVRON SERVICE STATION NO. 9-1026**

WELL ID/ELEV	DATE	TPH-AS-GASOLINE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	DTW (ft)	SPT (ft)	WTE (ft)
F 72.01	05/09/89	<500	<0.5	<0.5	0.6	1.0	18.70	0.0	53.31
	08/09/89	---	---	---	---	---	19.03	0.0	52.98
	11/09/89	---	---	---	---	---	19.02	0.0	52.99
	02/08/90	<50	0.4	<0.3	0.3	<0.6	18.70	0.0	53.31
	05/10/90	---	---	---	---	---	18.98	0.0	53.03
	08/09/90	---	---	---	---	---	18.95	0.0	53.06
	11/13/90	---	---	---	---	---	19.10	0.0	52.91
	03/27/91	64	<0.5	<0.5	<0.5	1	---	---	---
	06/19/91	---	---	---	---	---	18.95	0.0	53.06
	08/21/91	---	---	---	---	---	>19.94	0.0	<52.07
	11/08/91	---	---	---	---	---	>19.94	0.0	<52.07
	02/13/92	<50	<0.5	<0.5	<0.5	<0.5	18.60	0.0	53.41
	05/01/92	---	---	---	---	---	DRY	---	---

**TABLE 1**  
**HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA**  
**CHEVRON SERVICE STATION NO. 9-1026**

WELL ID/ELEV	DATE	TPH-AS-GASOLINE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	DTW (ft)	SPT (ft)	WTE (ft)
TRAVEL	05/09/89	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
BLANK	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	---	---	---

--- = Not applicable, not sampled, not measured  
 ABAND = Well abandoned  
 DTW = Depth to groundwater  
 SPT = Separate-phase hydrocarbon thickness  
 WTE = Water table elevation

Data from 5/9/89 through 2/13/92 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.

**ATTACHMENT C**  
**LABORATORY REPORTS**



# Superior Precision Analytical, Inc.

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

GROUNDWATER TECHNOLOGIES INC.  
Attn: Sandra Lindsey

Project 020302539.061004  
Reported 05/11/92

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
85636- 1	TB-LB	05/01/92	05/04/92 Water
85636- 2	RBE2	05/01/92	05/05/92 Water
85636- 3	E2	05/01/92	05/04/92 Water
85636- 5	E1	05/01/92	05/05/92 Water
85636- 7	A	05/01/92	05/05/92 Water
85636- 9	B	05/01/92	05/05/92 Water
85636-11	B4	05/01/92	05/05/92 Water
85636-13	B2	05/01/92	05/05/92 Water
85636-15	B1	05/01/92	05/05/92 Water

## RESULTS OF ANALYSIS

Laboratory Number:	85636- 1	85636- 2	85636- 3	85636- 5	85636- 7
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Gasoline:	ND<50	ND<50	340	ND<50	13000
Benzene:	ND<0.5	ND<0.5	ND<0.5	2.7	870
Toluene:	ND<0.5	ND<0.5	2.6	ND<0.5	19
Ethyl Benzene:	ND<0.5	ND<0.5	0.7	ND<0.5	220
Xylenes:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	780
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number:	85636- 9	85636-11	85636-13	85636-15
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Gasoline:	16000	36000	29000	27000
Benzene:	6000	16000	1700	2800
Toluene:	180	180	300	200
Ethyl Benzene:	370	990	1100	310
Xylenes:	460	690	4300	1900
Concentration:	ug/L	ug/L	ug/L	ug/L



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## 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 1  
QA/QC INFORMATION  
SET: 85636

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

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:  
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Water: 50ug/L

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	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	200 ng	97/96	1	70-130
Benzene:	200 ng	94/95	1	70-130
Toluene:	200 ng	104/104	1	70-130
Ethyl Benzene:	200 ng	108/107	1	70-130
Xylenes:	200 ng	109/109	1	70-130

Richard Srna, Ph.D.

*Ilomina Mangin* (for)  
Laboratory Director





