



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

April 7, 1992

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

**Re: Former Chevron Service Station #9-1026
3701 Broadway, Oakland 94611**

Dear Mr. Howell:

Enclosed we are forwarding the Quarterly Ground Monitoring Report dated February 28, 1992, prepared by our consultant Weiss Associates 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 concentrations ranged from non-detectable to 34,000 ppb. Depth to ground water was measured at approximately 12.6 to 18.6-feet below grade, and the direction of flow is to the south-southwest.

The deepening of existing monitor wells F and B-1 has been held up while necessary documents are compiled per the City of Oakland encroachment permit requirements. The cities encroachment permit requirements state that encroachment permits can only be issued to owners or tenants of properties from which encroachment is requested. However, the city will issue a permit if Chevron formally notifies the property owner of their intent to perform said work, assuming full responsibility, and secure written acknowledgement for Chevron to perform this additional work. I am still pending their signing this authorization for Chevron. In addition, we plan to install an additional off-site well to obtain down-gradient delineation based on the fluctuating ground water flow direction from the southwest to the south.

Our consultant, Weiss Associates has performed a soil vapor extraction pilot test to assess the feasibility and effectiveness of this technology at the referenced site. Informal data from this test suggests 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. A report documenting the results of the test is currently being prepared and will be forwarded to you. We will continue to evaluate remedial options at this site.

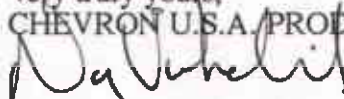
I would like to schedule a meeting with the appropriate Hazardous Materials Specialist responsible for this site (formerly Gil Wistar) to review the site data and discuss appropriate site specific corrective actions. Please have the appropriate Hazardous Materials Specialist contact me to schedule this 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.

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#9-1026 - Oakland

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

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. Eddy So, RWQCB-Bay Area
Ms. Sandra Lindsey, GTI-Concord
Ms. B.C. Owen
File (9-1026Q3)

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



WA 92 T.L.H.

February 28, 1992

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

Re: First Quarter 1992
Ground Water Monitoring Report
Former Chevron Service Station #9-1026
3701 Broadway
Oakland, California
WA Job #4-418-91

Dear Ms. Vukelich:

As you requested, Weiss Associates (WA) is providing this Ground Water Monitoring Report for the site referenced above (Figure 1). WA sampled the ground water monitoring wells (Figure 2) on February 13, 1992, in accordance with the requirements and procedures of the California Regional Water Quality Control Board - San Francisco Bay Region and local regulatory agencies.

SAMPLING PROCEDURES

Prior to purging and sampling the wells, WA measured the depth to ground water in each well to the nearest 0.01 ft using an electronic sounder (Table 1). We also checked the wells for floating hydrocarbons or sheen. A hydrocarbon sheen was observed on the surface of purge water from wells B-1, B-2 and B-3.

WA collected ground water samples for analysis after purging at least 3 well-casing volumes of ground water from each well. Each sample was decanted from either a steam-cleaned or dedicated bailer into the appropriate clean sample containers and delivered to a California-certified laboratory following proper sample preservation and chain-of-custody procedures. Purged ground water was removed from the site and transported to the Chevron Richmond terminal for recycling.

MONITORING AND ANALYTIC RESULTS

The top-of-casing elevation, depth to ground water and the ground water elevation for each well is presented in Table 1. The ground water elevation contours and ground water flow direction are shown on Figure 2.

Current and historical ground water analytic results are summarized in Table 2. The water sample collection records and the analytic report and chain-of-custody forms are included as Attachments A and B, respectively. Last quarter WA reported that ground water from well B-1 contained elevated hydrocarbon concentrations. Based on the results of the sampling conducted before and after last quarter, it now appears that the results were over-reported by a factor of ten. This may have occurred in the laboratory if the dilution factor was recorded higher than the dilution factor used in the analysis.

PROPOSED WORK SCHEDULE

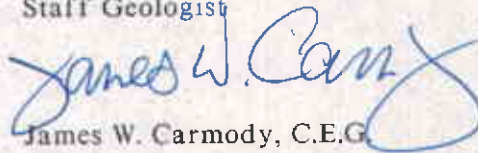
The Second Quarter 1992 ground water sampling is scheduled for May 7, 1992. We will submit a report presenting the field and analytic data by June 1992.

We appreciate this opportunity to provide hydrogeologic consulting services to Chevron USA and trust that this submittal meets your needs. Please call if you have any questions regarding this report.



Sincerely,
Weiss Associates


David C. Elias
Staff Geologist


James W. Carmody, C.E.G.
Senior Hydrogeologist

DCE/JWC:cr

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Attachments A - Water Sample Collection Records
B - Analytic Report and Chain-of-Custody Forms

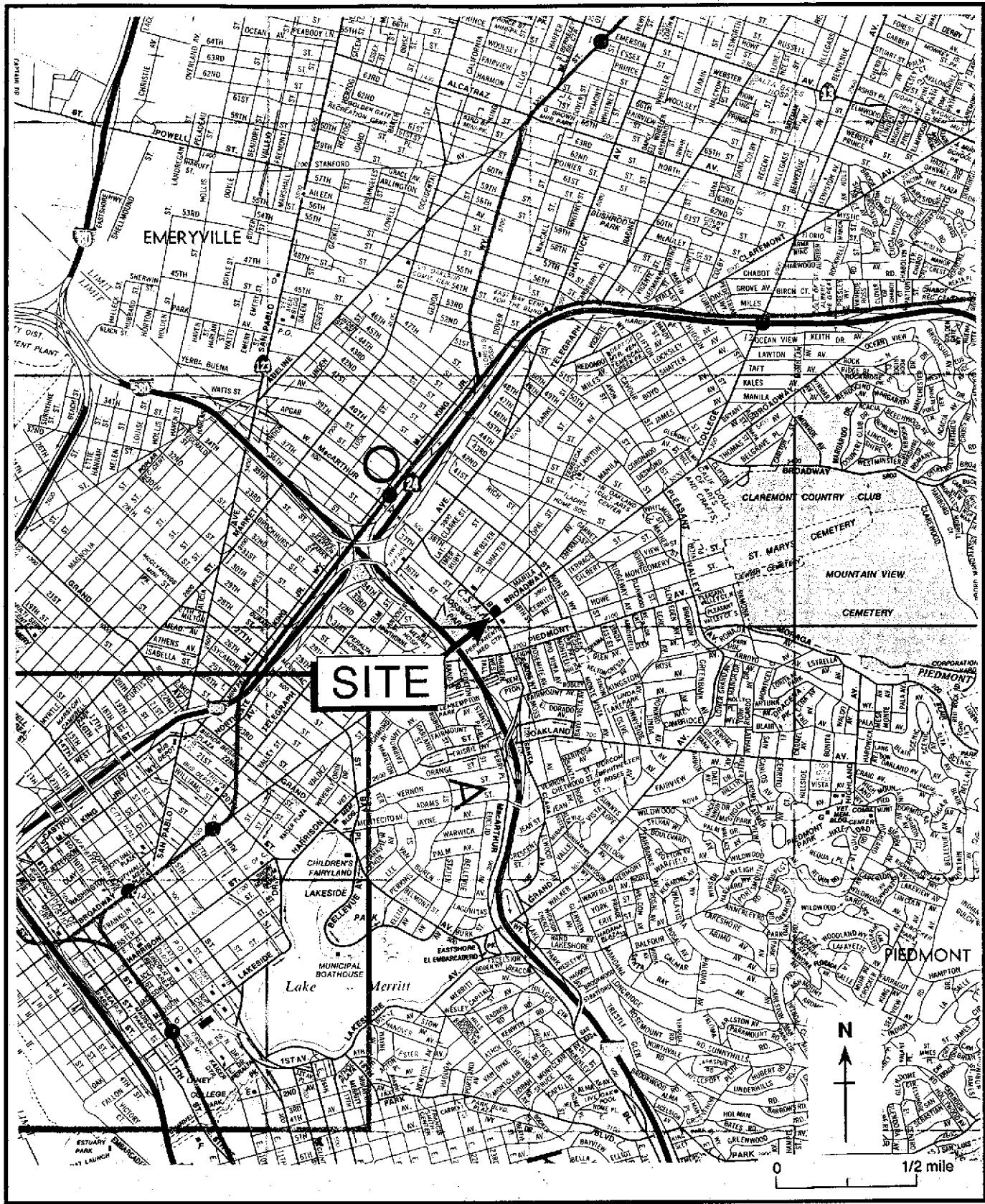
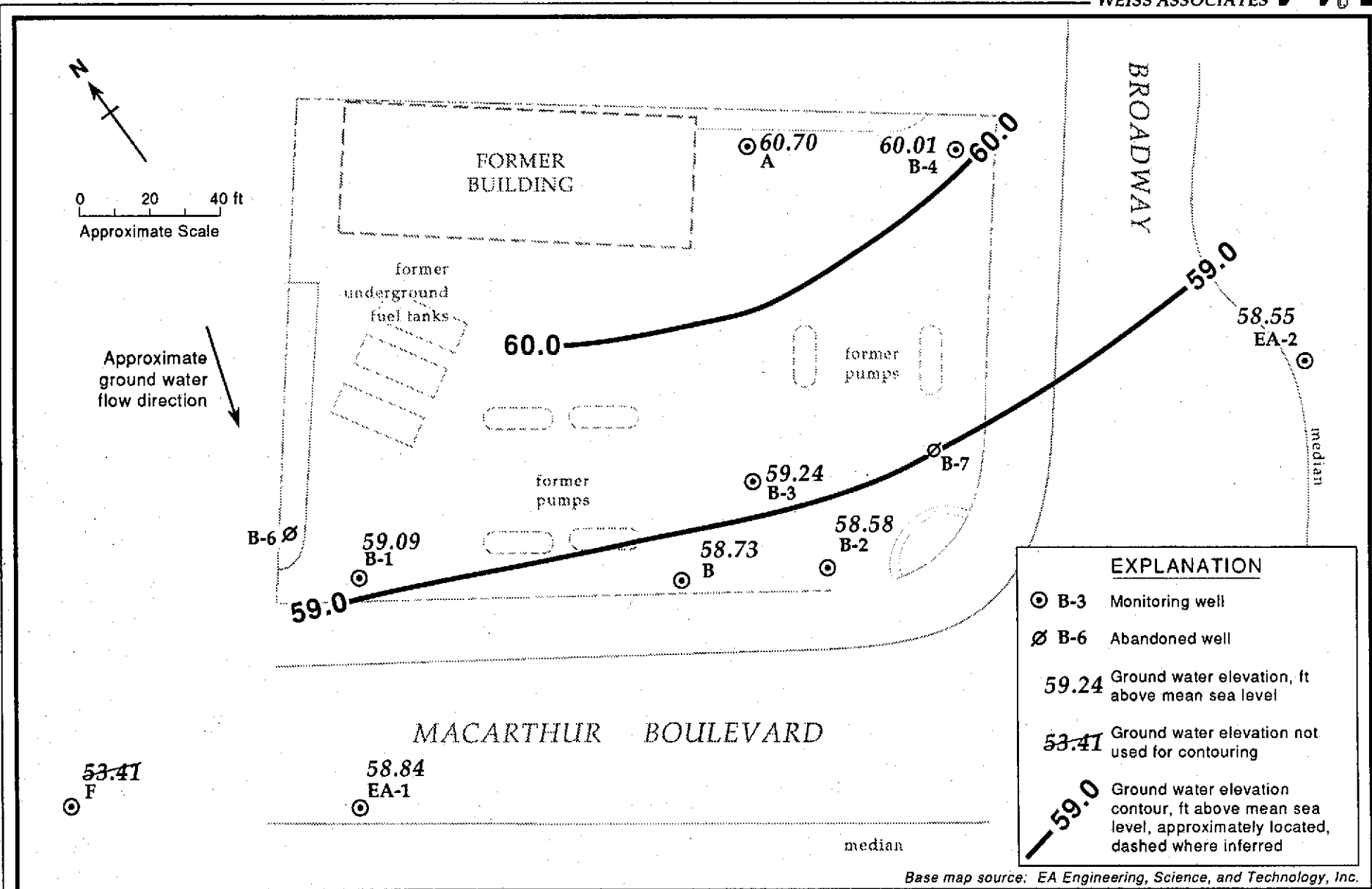


Figure 1. Site Location Map - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California



Base map source: EA Engineering, Science, and Technology, Inc.

Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - February 13, 1992 - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California

TABLE 1. Ground Water Elevation Data, Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Thickness of Floating Hydrocarbons in Well (ft)	Ground Water Elevation (ft above msl)
A	05/10/89	75.28 ^a	13.92		61.36
	08/09/89		15.62		59.66
	11/09/89		15.95		59.33
	02/08/90		14.73		60.55
	05/10/90		15.48		59.80
	08/09/90		15.66		59.62
	11/13/90		16.48		58.80
	04/05/91		13.22		62.06
	06/19/91		15.37		59.91
	08/21/91		15.99		59.29
	11/08/91		16.15		59.13
	02/13/92		14.58		60.70
B	05/10/89	73.39 ^a	13.97	0.20	59.58 ^b
	08/09/89		15.69	0.20	57.86 ^b
	11/09/89		15.29	0.08	58.16 ^b
	02/08/90		14.46		58.93
	05/10/90		15.07		58.32
	08/09/90		15.12		58.27
	11/13/90		15.76		57.63
	04/05/91		13.38		60.01
	06/19/91		15.14		58.25
	08/21/91		15.58		57.81
	11/08/91		15.71		57.68
	02/13/92		14.66		58.73
B-1	05/10/89	71.77 ^a	12.58		59.19
	08/09/89		14.09		57.68
	11/09/89		14.06		57.71
	02/08/90		12.65		59.12
	05/10/90		13.62		58.15
	08/09/90		13.87		57.90
	11/13/90		14.38		57.39
	04/05/91		11.73		60.04
	06/19/91		13.56		58.21
	08/21/91		13.90		57.87
	11/08/91		14.05		57.72
	02/13/92		12.68		59.09

-- Table 1 continues on next page --

TABLE 1. Ground Water Elevation Data, Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Thickness of Floating Hydrocarbons in Well (ft)	Ground Water Elevation (ft above msl)
B-2	05/10/89	74.51 ^a	14.58		59.93
	08/09/89		16.06		58.45
	11/09/89		16.95		57.56
	02/08/90		15.56		58.95
	05/10/90		15.94		58.57
	08/09/90		15.97		58.54
	11/13/90		16.70		57.81
	04/05/91		14.20		60.31
	06/19/91		15.83		58.68
	08/21/91		16.31		58.20
	11/08/91		16.60		57.91
	02/13/92		15.93		58.58
B-3	05/10/89	74.12 ^a	14.02		60.01
	08/09/89		15.38		58.74
	11/09/89		15.55	0.05	58.61 ^b
	02/08/90		14.68	<0.01	59.44 ^b
	05/10/90		15.15	0.02	58.99 ^b
	08/09/90		15.27	<0.01	58.85 ^b
	11/13/90		16.04	0.06	58.13 ^b
	04/05/91		13.30	<0.01	60.82 ^b
	06/19/91		15.16		58.96
	08/21/91		15.61		58.51
	11/08/91		15.77		58.35
	02/13/92		14.88		59.24
B-4	05/10/89	76.43 ^a	14.93		61.50
	08/09/89		16.65		59.78
	11/09/89		16.99		59.44
	02/08/90		16.05		60.38
	05/10/90		16.49		59.94
	08/09/90		16.64		59.79
	11/13/90		17.42		59.01
	04/05/91		14.66		61.77
	06/19/91		16.48		59.95
	08/21/91		17.00		59.43
	11/08/91		17.38		59.05
	02/13/92		16.42		60.01

-- Table 1 continues on next page --

TABLE 1. Ground Water Elevation Data, Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Thickness of Floating Hydrocarbons in Well (ft)	Ground Water Elevation (ft above msl)
B-6	05/10/89	72.66 ^a	12.11		60.55
	08/09/89		14.72		57.94
	11/09/89		13.85		58.81
	02/08/90		7.73		64.93
	05/10/90		^c		
	08/09/90		14.51		58.15
	11/13/90		14.86		57.80
	04/05/91		10.43		62.23
	06/19/91 ^c		---		---
B-7	05/10/89	75.40 ^a	14.73		60.67
	08/09/89		16.36		59.04
	11/09/89		16.64		58.76
	02/08/90		15.69		59.71
	05/10/90		^c		
	08/09/90		16.31		59.09
	11/13/90		17.09		58.31
	04/05/91		14.36		61.04
	06/19/91 ^c		---		---
EA-1	05/10/89	73.94 ^a	14.56		59.38
	08/09/89		16.09		57.85
	11/09/89		15.84		58.10
	02/08/90		15.05		58.89
	05/10/90		15.65		58.29
	08/09/90		15.67		58.27
	11/13/90		16.32		57.62
	04/05/91		14.03		59.91
	06/19/91		15.56		58.38
	08/21/91		15.99		57.95
	11/08/91		16.13		57.81
	02/13/92		15.10		58.84
EA-2	05/10/89	75.24 ^a	15.95		59.29
	08/09/89		17.45		57.79
	11/09/89		17.41		57.83
	02/08/90		16.57		58.67
	05/10/90		17.12		58.12
	08/09/90		17.20		58.04
	11/13/90		17.88		57.36
	04/05/91		15.54		59.70
	06/19/91		17.07		58.17
	08/21/91		17.46		57.78
	11/08/91		17.58		57.66
	02/13/92		16.69		58.55

-- Table 1 continues on next page --

TABLE 1. Ground Water Elevation Data, Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Thickness of Floating Hydrocarbons in Well (ft)	Ground Water Elevation (ft above msl)
F	05/10/89	72.01 ^a	18.70		53.31
	08/09/89		19.03		52.98
	11/09/89		19.02		52.99
	02/08/90		18.70		53.31
	05/10/90		18.98		53.03
	08/09/90		18.95		53.06
	11/13/90		19.10		52.91
	04/05/91		--- ^d		---
	06/19/91		18.95		53.06
	08/21/91		>19.94		<52.07
	11/08/91		>19.94		<52.07
	02/13/92		18.60		53.41

^a = Top-of-Casing surveyed on 02/08/90

^b = Ground water elevation adjusted for floating hydrocarbons in the well by the relation: Corrected ground water elevation = top-of-casing - depth to water + (0.8 x hydrocarbon thickness)

^c = Well abandoned in May 1991.

^d = Water level not recorded

TABLE 2. Analytic Results for Ground Water - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California

Well ID	Date Sampled	Depth-to Water (ft)	Analytical Lab	TPH-G B E T X				
				parts per billion (µg/L)				
A	05-09-89	13.92	SPA	11,000	260	94	<2	230
	08-09-89	15.62	SPA	12,000	370	100	<1.5	240
	11-09-89	15.95	SPA	16,000	690	180	10	350
	02-08-90	14.73	GTEL	14,000	600	120	7	270
	05-10-90	15.48	GTEL	16,000	840	140	4.8	340
	08-09-90	15.66	GTEL	17,000	510	170	40.0	280
	11-13-90	16.48	CEC	9,000	570	86	3.1	170
	03-27-91	13.22	SPA	8,000	660	110	<5	250
	06-19-91	15.37	SPA	8,900	740	120	<3	280
	08-21-91	15.99	CEC	6,800	620	85	23	200
	11-08-91	16.15	SPA	4,000	640	77	<5	160
	02-13-92	14.58	SPA	8,000	860	120	<5	390
	B	05-09-89 ^a	13.97	---	---	---	---	---
08-09-89		15.69	---	---	---	---	---	---
11-09-89 ^a		15.29	---	---	---	---	---	---
02-08-90 ^b		14.46	---	---	---	---	---	---
05-10-90 ^c		15.07	---	---	---	---	---	---
08-09-90 ^a		15.12	---	---	---	---	---	---
11-13-90 ^d		15.76	---	---	---	---	---	---
03-27-91 ^d		13.38	---	---	---	---	---	---
06-19-91		15.14	SPA	26,000	7,100	430	370	1,000
08-21-91		15.58	CEC	16,000	4,900	390	270	640
11-08-91		15.71	SPA	11,000	2,400	280	48	160
02-13-92		14.66	SPA	6,800	2,400	220	60	140
B-1		05-10-89	12.58	SPA	16,000	2,300	81	260
	08-09-89	14.09	SPA	12,000	2,600	100	340	870
	11-09-89	14.06	SPA	17,000	340	110	140	760
	02-08-90	12.65	GTEL	5,500	70	17	19	150
	05-10-90	13.62	GTEL	18,000	770	73	110	600
	08-09-90	13.87	GTEL	82,000	750	95	66	980
	11-13-90	14.38	CEC	43,000	1,300	74	120	760
	03-27-91	11.73	SPA	18,000	580	94	92	770
	06-19-91	13.56	SPA	21,000	910	96	56	810
	08-21-91 ^e	13.90	CEC	50,000	2,400	300	610	1,800
	11-08-91 ^f	14.05	SPA	54,000	3,600	1,900	1,500	5,900
	02-13-92	12.68	SPA	20,000	500	150	100	920

-- Table 2 continues on next page --

TABLE 2. Analytic Results for Ground Water - former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID	Date Sampled	Depth-to Water (ft)	Analytical Lab	TPH-G	parts per billion (µg/L)				
					B	E	T	X	
B-2	05-09-89	14.58	SPA	170,000	30,000	2,300	8,400	12,000	
	08-10-89	16.06	SPA	60,000	29,000	2,400	8,700	12,000	
	11-09-89	16.95	SPA	110,000	32,000	2,800	5,500	12,000	
	02-08-90	15.56	GTEL	67,000	28,000	2,300	5,900	11,000	
	05-10-90	15.94	GTEL	69,000	24,000	2,000	4,800	11,000	
	08-09-90	15.97	GTEL	100,000	33,000	2,100	4,000	12,000	
	11-13-90	16.70	CEC	110,000	33,000	2,900	4,300	13,000	
	03-27-91	14.20	SPA	160,000	26,000	2,600	3,200	15,000	
	06-19-91	15.83	SPA	100,000	22,000	2,000	2,500	11,000	
	08-21-91	16.31	CEC	80,000	28,000	2,400	2,800	12,000	
	11-08-91	16.60	SPA	94,000	29,000	2,200	1,900	11,000	
	02-13-92	15.93	SPA	280,000	34,000	4,600	2,500	23,000	
B-3	05-10-89	14.02	SPA	70,000	12,000	1,400	9,500	8,900	
	08-09-89	15.38	---	---	---	---	---	---	
	11-09-89	15.55	---	---	---	---	---	---	
	02-08-90	14.68	---	---	---	---	---	---	
	05-10-90	15.15	---	---	---	---	---	---	
	08-09-90	15.27	---	---	---	---	---	---	
	11-13-90	16.04	---	---	---	---	---	---	
	03-27-91	13.30	---	---	---	---	---	---	
	06-19-91	15.16	SPA	260,000	20,000	2,200	9,000	16,000	
	08-21-91	15.61	CEC	70,000	28,000	1,800	11,000	11,000	
	11-08-91	15.77	SPA	150,000	29,000	2,200	9,700	13,000	
	02-13-92	14.88	SPA	100,000	27,000	2,000	9,900	11,000	
B-4	05-10-89	14.93	SPA	3,600	840	120	34	200	
	08-09-89	16.65	SPA	<500	4,200	370	130	260	
	08-09-89 (dup)	16.65	SPA	5,000	4,200	400	83	250	
	11-09-89	16.99	SPA	14,000	6,000	530	70	300	
	02-08-90	16.05	GTEL	12,000	5,400	460	130	320	
	05-10-90	16.49	GTEL	16,000	7,400	530	120	350	
	08-09-90	16.64	GTEL	21,000	7,000	550	100	320	
	11-13-90	17.42	CEC	17,000	8,500	500	120	300	
	03-27-91	14.66	SPA	14,000	7,700	610	75	210	
	06-19-91	16.48	SPA	16,000	7,800	550	110	340	
	08-21-91	17.00	CEC	18,000	11,000	450	110	340	
	11-08-91	17.38	SPA	18,000	6,800	500	98	620	
	02-13-92	16.42	SPA	15,000	9,100	570	86	350	
	B-6 <i>abandoned</i>	05-09-89	12.11	SPA	26,000	120	250	110	1,300
08-09-89		14.72	SPA	19,000	470	440	150	1,400	
11-09-89		13.85	SPA	13,000	70	36	36	440	
02-08-90		7.73	GTEL	2,900	16	10	5	58	
05-10-90		---	---	---	---	---	---	---	
08-09-90		14.51	GTEL	14,000	55	130	3	500	
11-13-90		14.86	---	---	---	---	---	---	
03-27-91		10.43	---	---	---	---	---	---	
06-19-91		---	---	---	---	---	---	---	

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TABLE 2. Analytic Results for Ground Water - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID	Date Sampled	Depth-to Water (ft)	Analytical Lab	TPH-G					X
				parts per billion (µg/L)					
				B	E	T			
B-7	05-10-89	14.73	SPA	210,000	13,000	2,000	19,000	20,000	
	08-09-89	16.36	SPA	672,000	8,700	2,700	17,000	30,000	
	11-09-89	16.64	SPA	150,000	7,000	1,800	12,000	16,000	
	02-08-90	15.69	GTEL	41,000	2,500	1,100	6,900	11,000	
	05-10-90	---	---	---	---	---	---	---	
	08-09-90	16.31	GTEL	50,000	1,100	640	3,900	7,200	
	11-13-90	17.09	---	---	---	---	---	---	
	03-27-91	14.36	---	---	---	---	---	---	
	06-19-91	---	---	---	---	---	---	---	
	06-19-91	---	---	---	---	---	---	---	
EA-1	05-09-89	14.56	SPA	<500	<0.5	<0.5	<0.5	<0.5	
	08-09-89	16.09	SPA	<500	<0.5	<0.5	<0.5	<0.5	
	11-09-89	15.84	SPA	<500	<0.5	<0.5	<0.5	<0.5	
	02-08-90	15.05	GTEL	<50	<0.3	<0.3	<0.3	<0.6	
	05-10-90	15.65	GTEL	<50	1	<0.3	<0.3	<0.6	
	08-09-90	15.67	GTEL	<50	<0.3	<0.3	<0.3	<0.6	
	11-13-90	16.32	CEC	<50	<0.4	<0.3	<0.3	<0.4	
	03-27-91	14.03	SPA	<50	0.7	<0.5	<0.5	<0.5	
	06-19-91	15.56	SPA	<50	<0.5	<0.5	<0.5	<0.5	
	08-21-91	15.99	CEC	<50	<0.4	<0.3	<0.3	<0.4	
	11-08-91	16.13	SPA	<50	<0.5	<0.5	<0.5	<0.5	
	02-13-92	15.10	SPA	<50	<0.5	<0.5	<0.5	<0.5	
	EA-2	05-09-89	15.95	SPA	760	<0.5	1.1	<0.5	<0.5
08-09-89		17.45	SPA	<500	<0.5	<0.5	<0.5	<0.5	
11-09-89		17.41	SPA	<500	<0.5	<0.5	1	<0.5	
02-08-90		16.57	GTEL	190	<0.3	<0.3	<0.3	<0.6	
05-10-90		17.12	GTEL	<50	<0.3	<0.3	<0.3	<0.6	
08-09-90		17.20	GTEL	120	<0.3	<0.3	<0.3	<0.6	
11-13-90		17.88	CEC	160	<0.4	<0.3	1.0	<0.4	
03-27-91		15.54	SPA	110	<0.5	<0.5	<0.5	<0.5	
06-19-91		17.07	SPA	<50	<0.5	<0.5	<0.5	<0.5	
08-21-91		17.46	CEC	70	0.8	<0.3	1.4	<0.4	
11-08-91		17.58	SPA	<50	<0.5	<0.5	0.7	<0.5	
02-13-92		16.69	SPA	<50	<0.5	5<0.5	<0.5	<0.5	
F		05-09-89	18.70	SPA	<500	<0.5	<0.5	0.6	1.0
	08-09-89	19.03	---	---	---	---	---	---	
	11-09-89	19.02	---	---	---	---	---	---	
	02-08-90	18.70	GTEL	<50	0.4	<0.3	0.3	<0.6	
	05-10-90	18.98	---	---	---	---	---	---	
	08-09-90	18.95	---	---	---	---	---	---	
	11-13-90	19.10	---	---	---	---	---	---	
	03-27-91	---	SPA	64	<0.5	<0.5	<0.5	1	
	06-19-91	18.95	---	---	---	---	---	---	
	08-21-91	>19.94	---	---	---	---	---	---	
	11-08-91	>19.94	---	---	---	---	---	---	
02-13-92	18.60	SPA	<50	<0.5	<0.5	<0.5	<0.5		

-- Table 2 continues on next page --



TABLE 2. Analytic Results for Ground Water - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California (continued)

Well ID	Date Sampled	Depth-to Water (ft)	Analytical Lab	TPH-G	B	E	T	X	
									-----parts per billion (µg/L) ----->
Travel	05-10-89		SPA	<500	<0.5	<0.5	<0.5	<0.5	
Blank	08-09-89		SPA	<500	<0.5	<0.5	<0.5	<0.5	
	11-09-89		SPA	<500	<0.5	<0.5	<0.5	<0.5	
	02-08-90		GTEL	<50	<0.3	<0.3	<0.3	<0.6	
	05-10-90		GTEL	<50	<0.3	<0.3	<0.3	<0.6	
	08-09-90		GTEL	<50	<0.3	<0.3	<0.3	<0.6	
	11-13-90		CEC	<50	<0.4	<0.3	<0.3	<0.4	
	03-27-91		SPA	<50	<0.5	<0.5	<0.5	<0.5	
	06-19-91		SPA	<50	<0.5	<0.5	<0.5	<0.5	
	08-21-91		CEC	<50	<0.4	<0.3	<0.3	<0.4	
	11-08-91		SPA	<50	<0.5	<0.5	<0.5	<0.5	
	02-13-92		SPA	<50	<0.5	<0.5	<0.5	<0.5	
	Bailer	05-10-89		SPA	<500	<0.5	<0.5	<0.5	<0.5
	Blank	02-08-90		GTEL	<50	<0.3	<0.3	0.3	<0.6
03-27-91			SPA	<50	<0.5	<0.5	<0.5	0.6	
11-08-91			SPA	<50	<0.5	<0.5	<0.5	<0.5	
DHS MCLs				NE	1	680	100 ⁱ	1,750	

Abbreviations:

TPH-G = Total Petroleum Hydrocarbons as Gasoline by EPA Method 8015
 B = Benzene by EPA Method 8020
 E = Ethylbenzene by EPA Method 8020
 T = Toluene by EPA Method 8020
 X = Xylenes by EPA Method 8020
 dup = Duplicate analysis
 <n = Not detected at detection limit of n parts per billion
 DHS MCLs = Department of Health Services Maximum Contaminant Level for Drinking Water
 NE = Not established by DHS

Analytical Laboratory:

GTEL = GTEL Environmental Laboratories, Inc. of Concord, California
 SPA = Superior Precision Analytical of San Francisco and Martinez, California
 CEC = Clayton Environmental Consultants of Pleasanton, California

Notes:

- a = Not sampled due to presence of floating hydrocarbons
- b = Not sampled due to large volume of evacuation water necessary
- c = Not sampled because screened interval of well needs to be assessed
- d = Well was not sampled due to poor surface water seals
- e = A groundwater sample was analyzed for Priority Pollutant Metals; concentrations were below detection limits.
- f = Probable over reporting error by a factor of ten
- g = Well abandoned in May 1991
- h = Not sampled because of insufficient water in the well
- i = DHS Recommended Action Level for Drinking Water, MCL not established



ATTACHMENT A
WATER SAMPLE COLLECTION RECORDS



WATER SAMPLING DATA

Well Name A Date 2/13/92 Time of Sampling 12:45
 Job Name CHEV. OAKLAND III Job Number 4-418-91 Initials PL
 Sample Point Description M (M = Monitoring Well)
 Location E EDGE OF SITE

WELL DATA: Depth to Water 14.58 ft (static pumping) Depth to Product — ft.
 Product Thickness — Well Depth 20.08 ft (spec) Well Depth — ft (sounded) Well Diameter 2 in
 Initial Height of Water in Casing 5.5 ft. = volume .90 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 2.70 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —
 Bailer # and type TEF. Dedicated Y (Y/N)
 Other —

Evacuation Time: Stop 11:05 12:38
 Start 11:02 12:35
 Total Evacuation Time 6 min
 Total Evacuated Prior to Sampling 2.75 gal.
 Evacuation Rate .4 gal. per minute

Formulas/Conversions

- r = well radius in ft.
- h = ht of water col in ft.
- vol. in cyl. = $\pi r^2 h$
- 7.48 gal/ft³
- V_{2"} casing = 0.163 gal/ft
- V_{3"} casing = 0.367 gal/ft
- V_{4"} casing = 0.653 gal/ft
- V_{4.5"} casing = 0.826 gal/ft
- V_{6"} casing = 1.47 gal/ft
- V_{8"} casing = 2.61 gal/ft

Depth to Water during Evacuation — ft. — time
 Depth to Water at Sampling — ft. — time
 Evacuated Dry? Yes After 1.5 gal. Time 11:05
 80% Recovery = 15.68
 % Recovery at Sample Time — Time —

CHEMICAL DATA: Meter Brand/Number —

Calibration:	4.0	7.0	10.0		
Measured:	SC/ μ mhos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color Clear Odor Strong
 Description of matter in sample: Flaky material
 Sampling Method: decanted from dedicated bailer
 Sample Port: Rate — gpm Totalizer — gal.
 Time —

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
<u>3</u>	<u>022-A</u>	<u>W/CV</u>	<u>40ml</u>	<u>N</u>	<u>Y</u>	<u>HCl</u>	<u>EPA 8015/8020</u>	<u>N</u>	<u>SPA</u>

1 Sample Type Codes: W = Water, S = Soil, Describe Other
 Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
 Cap Codes: PT = Plastic, Teflon lined;
 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]
ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name B Date 2/13/92 Time of Sampling 10:55
 Job Name CHEV. OAKLAND III Job Number 4-418-91 Initials LJ
 Sample Point Description M (M = Monitoring Well)
 Location SW EDGE OF SITE

WELL DATA: Depth to Water 14.66 ft (static/pumping) Depth to Product — ft.
 Product Thickness — Well Depth 34.5 ft (spec) Well Depth — ft (sounded) Well Diameter 4 in
 Initial Height of Water in Casing 19.84 ft = volume 1296 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 38.88 gal.

EVACUATION METHOD: Pump # and type Grundfos Hose # and type Braided
 Bailer # and type WATeflon #RO Dedicated N (Y/N)
 Other —

Evacuation Time: Stop 11:51
 Start 11:34
 Total Evacuation Time 15
 Total Evacuated Prior to Sampling 39 gal.
 Evacuation Rate 2.6 gal. per minute

Formulas/Conversions
 r = well radius in ft.
 h = ht of water col in ft.
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 V₂" casing = 0.163 gal/ft
 V₃" casing = 0.367 gal/ft
 V₄" casing = 0.653 gal/ft
 V_{4.5}" casing = 0.826 gal/ft
 V₆" casing = 1.47 gal/ft
 V₈ casing = 2.61 gal/ft

Depth to Water during Evacuation — ft. — time
 Depth to Water at Sampling — ft. — time
 Evacuated Dry? — After — gal. Time —
 80% Recovery = —
 % Recovery at Sample Time — Time —

CHEMICAL DATA: Meter Brand/Number —

Calibration:	4.0	7.0	10.0		
Measured:	SC/ μ mhos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color Clear Odor Slight
 Description of matter in sample: None
 Sampling Method: Decanted from Weiss Ass. Teflon bailer # RO
 Sample Port: Rate — gpm Totalizer — gal.
 Time —

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
<u>3</u>	<u>022-B</u>	<u>w/cv</u>	<u>40ml</u>	<u>N</u>	<u>Y</u>	<u>HCl</u>	<u>EPA 8015/8020</u>	<u>N</u>	<u>SPA</u>

1 Sample Type Codes: W = Water, S = Soil, Describe Other
 Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
 Cap Codes: PT = Plastic, Teflon lined;
 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name B-1 Date _____ Time of Sampling 7:16
 Job Name CHEV. OAKLAND III Job Number 4-418-91 Initials PC
 Sample Point Description M (M = Monitoring Well)
 Location W. CORNER OF SITE

WELL DATA: Depth to Water 12.68 ft (static) pumping Depth to Product _____ ft.
 Product Thickness _____ Well Depth 15.2 ft (spec) Well Depth _____ ft (sounded) Well Diameter 2 in
 Initial Height of Water in Casing 2.52 ft. = volume _____ gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 1.23 gal.

EVACUATION METHOD: Pump # and type _____ Hose # and type _____
 Bailer# and type WA 2 1/2" PVC Dedicated N (Y/N)
 Other sampled with teflon bailer #KIK (WA)

Evacuation Time: Stop 10:39 12:10
 Start 10:37 12:09
 Total Evacuation Time 3 min
 Total Evacuated Prior to Sampling 1.25 gal.
 Evacuation Rate .42 gal. per minute

Formulas/Conversions

- r = well radius in ft.
- h = ht of water col in ft.
- vol. in cyl. = $\pi r^2 h$
- 7.48 gal/ft³
- V_{2"} casing = 0.163 gal/ft
- V_{3"} casing = 0.367 gal/ft
- V_{4"} casing = 0.653 gal/ft
- V_{4.5"} casing = 0.826 gal/ft
- V_{6"} casing = 1.47 gal/ft
- V_{8"} casing = 2.61 gal/ft

Depth to Water during Evacuation _____ ft. _____ time
 Depth to Water at Sampling _____ ft. _____ time
 Evacuated Dry? Yes After 1.25 gal. Time 10:39
 80% Recovery = _____
 % Recovery at Sample Time _____ Time _____

CHEMICAL DATA: Meter Brand/Number _____

Calibration:	4.0	7.0	10.0		
Measured:	SC/ μ mhos	pH	T $^{\circ}$ C	Time	Volume Evacuated (gal.)
		<u>N/A</u>			

SAMPLE: Color Light black Odor Strong
 Description of matter in sample: silt, flaky material, Spec on surface
 Sampling Method: Decanted from WA action bailer #KIK
 Sample Port: Rate _____ gpm Totalizer _____ gal.
 Time _____

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
<u>3</u>	<u>022-BK</u>	<u>W/CV</u>	<u>40ml</u>	<u>N</u>	<u>Y</u>	<u>HCl</u>	<u>EPA 8015/8020</u>	<u>N</u>	<u>SPA</u>

1 Sample Type Codes: W = Water, S = Soil, Describe Other
 Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
 Cap Codes: PT = Plastic, Teflon lined;
 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name B-2 Date 2/13/92 Time of Sampling 17:01
 Job Name CHEV. OAKLAND III Job Number 4-418-91 Initials PL
 Sample Point Description M (M = Monitoring Well)
 Location S. CORNER OF SITE

WELL DATA: Depth to Water 15.93 ft. (static) pumping) Depth to Product — ft.
 Product Thickness — Well Depth 19.0 ft (spec) Well Depth — ft (sounded) Well Diameter 2 in
 Initial Height of Water in Casing 3.07 ft. = volume .50 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 1.50 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —
 Bailer# and type TEF Dedicated Y (Y/N)
 Other —

Evacuation Time: Stop 11:18 12:51
 Start 11:16 12:50
 Total Evacuation Time 3min
 Total Evacuated Prior to Sampling 1.5 gal.
 Evacuation Rate .5 gal. per minute

Formulas/Conversions

- r = well radius in ft.
- h = ht of water col in ft.
- vol. in cyl. = $\pi r^2 h$
- 7.48 gal/ft³
- V_{2"} casing = 0.163 gal/ft
- V_{3"} casing = 0.367 gal/ft
- V_{4"} casing = 0.653 gal/ft
- V_{4.5"} casing = 0.826 gal/ft
- V_{6"} casing = 1.47 gal/ft
- V_{8"} casing = 2.61 gal/ft

Depth to Water during Evacuation — ft. — time
 Depth to Water at Sampling — ft. — time
 Evacuated Dry? Yes After 1 gal. Time —
 80% Recovery = —
 % Recovery at Sample Time — Time —

CHEMICAL DATA: Meter Brand/Number

Calibration:	4.0	7.0	10.0		
Measured:	SC/ μ mhos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color Clear Odor Strong
 Description of matter in sample: Flaky material (gran) Sheen on surface.
 Sampling Method: Decanted from dedicated bailer
 Sample Port: Rate — gpm Totalizer — gal.
 Time —

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
3	022-B2	W/CV	40ml	N	Y	HCl	EPA 8015/8020	N	SPA

1 Sample Type Codes: W = Water, S = Soil, Describe Other
 Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
 Cap Codes: PT = Plastic, Teflon lined;
 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name B-3 Date 2/13/92 Time of Sampling 12:27
 Job Name CHEV. OAKLAND III Job Number 4-418-91 Initials PC
 Sample Point Description M (M = Monitoring Well)
 Location S. SIDE OF SITE

WELL DATA: Depth to Water 14.88 ft (static pumping) Depth to Product — ft.
 Product Thickness — Well Depth 18.9 ft (spec) Well Depth — ft (sounded) Well Diameter 2 in
 Initial Height of Water in Casing 4.02 ft. = volume .66 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 1.98 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —
 Bailer# and type disposable Dedicated N (Y/N)
 Other —

Evacuation Time: Stop 10:53 12:10
 Start 10:37 12:56 12:09
 Total Evacuation Time 4min
 Total Evacuated Prior to Sampling 2.0 gal.
 Evacuation Rate .5 gal. per minute

Formulas/Conversions

- r = well radius in ft.
- h = ht of water col in ft.
- vol. in cyl. = $\pi r^2 h$
- 7.48 gal/ft³
- V_{2"} casing = 0.163 gal/ft
- V_{3"} casing = 0.367 gal/ft
- V_{4"} casing = 0.653 gal/ft
- V_{4.5"} casing = 0.826 gal/ft
- V_{6"} casing = 1.47 gal/ft
- V8 casing = 2.61 gal/ft

Depth to Water during Evacuation — ft. — time
 Depth to Water at Sampling — ft. — time
 Evacuated Dry? Yes After 1.5 gal. Time 10:53
 80% Recovery = —
 % Recovery at Sample Time — Time —

CHEMICAL DATA: Meter Brand/Number —

Calibration:	4.0	7.0	10.0		
Measured:	SC/ μ mhos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color Clear Odor Strong
 Description of matter in sample: Fine silt, Sheen on surface
 Sampling Method: decanted from disposable bailer
 Sample Port: Rate — gpm Totalizer — gal.
 Time —

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
3	022-B3	w/cv	40ml	N	Y	HCl	EPA 8015/8020	N	SPA

1 Sample Type Codes: W = Water, S = Soil, Describe Other
 Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
 Cap Codes: PT = Plastic, Teflon lined;
 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name B-4 Date 2/13/92 Time of Sampling 11:03
 Job Name CHEV. OAKLAND III Job Number 4-418-91 Initials LJ
 Sample Point Description M (M = Monitoring Well)
 Location E. CORNER OF SITE

WELL DATA: Depth to Water 11.42 ft (static/pumping) Depth to Product — ft.
 Product Thickness — Well Depth 19.37 ft (spec) Well Depth — ft (sounded) Well Diameter 2 in
 Initial Height of Water in Casing 2.95 ft. = volume .48 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 1.44 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —
 Bailer # and type 1 1/2 x 2' TEF. Dedicated Y (Y/N)
 Other —

Evacuation Time: Stop 11:02
 Start 10:57
 Total Evacuation Time 5min
 Total Evacuated Prior to Sampling 1.5 gal.
 Evacuation Rate .30 gal. per minute

Formulas/Conversions

- r = well radius in ft.
- h = ht of water col in ft.
- vol. in cyl. = $\pi r^2 h$
- 7.48 gal/ft³
- V_{2"} casing = 0.163 gal/ft
- V_{3"} casing = 0.367 gal/ft
- V_{4"} casing = 0.653 gal/ft
- V_{4.5"} casing = 0.826 gal/ft
- V_{6"} casing = 1.47 gal/ft
- V_{8"} casing = 2.61 gal/ft

Depth to Water during Evacuation — ft. — time
 Depth to Water at Sampling — ft. — time
 Evacuated Dry? — After — gal. Time —
 80% Recovery = —
 % Recovery at Sample Time — Time —

CHEMICAL DATA: Meter Brand/Number —

Calibration: — 4.0 — 7.0 — 10.0
 Measured: — SC/ μ mhos — pH — T°C — Time — Volume Evacuated (gal.) —

NA

SAMPLE: Color light grey Odor Strong
 Description of matter in sample: Fine Grey silt
 Sampling Method: Decanted from dedicated teflon bailer
 Sample Port: Rate — gpm Totalizer — gal.
 Time —

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
3	-84	W/cv	40ml	N	Y	HCl	EPA 8015/8020	N	SPA

1 Sample Type Codes: W = Water, S = Soil, Describe Other
 Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
 Cap Codes: PT = Plastic, Teflon lined;
 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name EA-1 Date 2/13/92 Time of Sampling 10:20
 Job Name CHEV. OAKLAND III Job Number 4-418-91 Initials LJ
 Sample Point Description M (M = Monitoring Well)
 Location BY MEDIAN, MACARTHUR BLVD.

WELL DATA: Depth to Water 15.1 ft (static) pumping) Depth to Product — ft.
 Product Thickness — Well Depth 30.2 ft (spec) Well Depth — ft (sounded) Well Diameter 4 in
 Initial Height of Water in Casing 15.1 ft = volume 9.86 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 29.58 gal.

EVACUATION METHOD: Pump # and type Grundfos Hose # and type Braided
 Bailer # and type 3'x4' PVC Dedicated Y (Y/N)
 Other —

Evacuation Time: Stop 10:13
 Start 10:05
 Total Evacuation Time 13 min
 Total Evacuated Prior to Sampling 30.0 gal.
 Evacuation Rate 2.31 gal. per minute

Formulas/Conversions

- r = well radius in ft.
- h = ht of water col in ft.
- vol. in cyl. = $\pi r^2 h$
- 7.48 gal/ft³
- V_{2"} casing = 0.163 gal/ft
- V_{3"} casing = 0.367 gal/ft
- V_{4"} casing = 0.653 gal/ft
- V_{4.5"} casing = 0.826 gal/ft
- V_{6"} casing = 1.47 gal/ft
- V_{8"} casing = 2.61 gal/ft

Depth to Water during Evacuation — ft. — time
 Depth to Water at Sampling — ft. — time
 Evacuated Dry? No After — gal. Time —
 80% Recovery = —
 % Recovery at Sample Time — Time —

CHEMICAL DATA: Meter Brand/Number —

Calibration: 4.0 7.0 10.0
 Measured: SC/ μ mhos pH T°C Time Volume Evacuated (gal.)

NA

SAMPLE: Color light brown Odor Moderate
 Description of matter in sample: small amount of fine brown silt
 Sampling Method: port sample from dedicated PVC bailer
 Sample Port: Rate — gpm Totalizer — gal.
 Time —

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
3	-EA1	W/CV	40ml	N	Y	HCl	EPA 8015/8020	N	SPA

1 Sample Type Codes: W = Water, S = Soil, Describe Other
 Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
 Cap Codes: PT = Plastic, Teflon lined;
 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]
ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name EA-2 Date 2/13/92 Time of Sampling 11:46
 Job Name CHEV. OAKLAND III Job Number 4-418-91 Initials PC
 Sample Point Description M (M = Monitoring Well)
 Location MEDIAN, BROADWAY

WELL DATA: Depth to Water 16.64 ft (static/pumping) Depth to Product — ft.
 Product Thickness — Well Depth 30.1 ft (spec) Well Depth — ft (sounded) Well Diameter 4 in
 Initial Height of Water in Casing 13.41 ft. = volume 8.76 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 26.28 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —
 Bailer# and type 3x36" PVC Dedicated Y (Y/N)
 Other —

Evacuation Time: Stop 11:41
 Start 11:28
 Total Evacuation Time 13M/11
 Total Evacuated Prior to Sampling 27 gal.
 Evacuation Rate 2.08 gal. per minute

Formulas/Conversions
 r = well radius in ft.
 h = ht of water col in ft.
 vol. in cyl. = $\pi r^2 h$
 7.48 gal/ft³
 V_{2"} casing = 0.163 gal/ft
 V_{3"} casing = 0.367 gal/ft
 V_{4"} casing = 0.653 gal/ft
 V_{4,5"} casing = 0.826 gal/ft
 V_{6"} casing = 1.47 gal/ft
 V_{8"} casing = 2.61 gal/ft

Depth to Water during Evacuation — ft. — time
 Depth to Water at Sampling — ft. — time
 Evacuated Dry? No After — gal. Time —
 80% Recovery = —
 % Recovery at Sample Time — Time —

CHEMICAL DATA: Meter Brand/Number —
 Calibration: — 4.0 — 7.0 — 10.0
 Measured: SC/ μ mhos pH T°C Time Volume Evacuated (gal.)

SC/ μ mhos	pH	T°C	Time	Volume Evacuated (gal.)
<u>N/A</u>				

SAMPLE: Color Light tan Odor None
 Description of matter in sample: fine silt
 Sampling Method: sample port on dedicated bailer
 Sample Port: Rate — gpm Totalizer — gal.
 Time —

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
3	022-EA2	w/cv	40ml	N	Y	HCl	EPA 8015/8020	N	SPA

1 Sample Type Codes: W = Water, S = Soil, Describe Other
 Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
 Cap Codes: PT = Plastic, Teflon lined;
 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]
 ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name F Date 2/13/92 Time of Sampling 13:05
 Job Name CHEV. OAKLAND II Job Number 4-418-91 Initials LJ
 Sample Point Description M (M = Monitoring Well)
 Location NEAR MEDIAN, MACARTHUR

WELL DATA: Depth to Water 18.60 ft. (static) pumping) Depth to Product — ft.
 Product Thickness — Well Depth 19.63 ft (spec) Well Depth — ft (sounded) Well Diameter 2 in
 Initial Height of Water in Casing 1.03 ft. = volume .17 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated .51 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —
 Bailer # and type WA # 101, 102, 103, 104, 105 Dedicated N (Y/N)
 Other 5 Teflon # LL

Evacuation Time: Stop 10:16
 Start 10:15
 Total Evacuation Time —
 Total Evacuated Prior to Sampling .25 gal.
 Evacuation Rate — gal. per minute

Formulas/Conversions

- r = well radius in ft.
- h = ht of water col in ft.
- vol. in cyl. = $\pi r^2 h$
- 7.48 gal/ft³
- V₂" casing = 0.163 gal/ft
- V₃" casing = 0.367 gal/ft
- V₄" casing = 0.653 gal/ft
- V_{4.5}" casing = 0.826 gal/ft
- V₆" casing = 1.47 gal/ft
- V8 casing = 2.61 gal/ft

Depth to Water during Evacuation — ft. — time
 Depth to Water at Sampling — ft. — time
 Evacuated Dry? YES After .25 gal. Time 10:16
 80% Recovery = —
 % Recovery at Sample Time — Time —

CHEMICAL DATA: Meter Brand/Number —

Calibration:	4.0	7.0	10.0		
Measured:	SC/ μ mos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color Black/Brown Odor Slight
 Description of matter in sample: Black/brown particles
 Sampling Method: decanted from WA Teflon bailer # LL
 Sample Port: Rate — gpm Totalizer — gal.
 Time —

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
3	-F	W/VCV	40ml	N	Y	HCl	EPA 8015/8020	N	SPA

1 Sample Type Codes: W = Water, S = Soil, Describe Other
 Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
 Cap Codes: PT = Plastic, Teflon lined;
 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]
ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name TRIP BLANKS Date 2/13/92 Time of Sampling 07:40
 Job Name CHEV. OAKLAND III Job Number 14-418-91 Initials PC
 Sample Point Description _____ (M = Monitoring Well)
 Location _____

WELL DATA: Depth to Water _____ ft (static, pumping) Depth to Product _____ ft.
 Product Thickness _____ Well Depth _____ ft (spec) Well Depth _____ ft (sounded) Well Diameter _____ in
 Initial Height of Water in Casing _____ ft. = volume _____ gal.
 Casing Volumes to be Evacuated. Total to be evacuated _____ gal.

EVACUATION METHOD: Pump # and type _____ Hose # and type _____
 Bailer # and type _____ Dedicated _____ (Y/N)
 Other _____

Evacuation Time: Stop _____
 Start _____
 Total Evacuation Time _____
 Total Evacuated Prior to Sampling _____ gal.
 Evacuation Rate _____ gal. per minute

Formulas/Conversions

- r = well radius in ft.
- h = ht of water col in ft.
- vol. in cyl. = $\pi r^2 h$
- 7.48 gal/ft³
- V_{2"} casing = 0.163 gal/ft
- V_{3"} casing = 0.367 gal/ft
- V_{4"} casing = 0.653 gal/ft
- V_{4.5"} casing = 0.826 gal/ft
- V_{6"} casing = 1.47 gal/ft
- V_{8"} casing = 2.61 gal/ft

Depth to Water during Evacuation _____ ft _____ time
 Depth to Water at Sampling _____ ft _____ time
 Evacuated Dry? _____ After _____ gal. _____ Time _____
 80% Recovery = _____
 % Recovery at Sample Time _____ Time _____

CHEMICAL DATA: Meter Brand/Number _____

Calibration: _____ 4.0 _____ 7.0 _____ 10.0

Measured:	SC/ μ mhos	pH	T°C	Time	Volume Evacuated (gal.)

SAMPLE: Color _____ Odor _____

Description of matter in sample: _____

Sampling Method: _____

Sample Port: Rate _____ gpm Totalizer _____ gal.
 Time _____

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
3	022-21	W/CV	40ml	N	Y	HCl	EPA 8015/8020	N	SPA

1 Sample Type Codes: W = Water, S = Soil, Describe Other
 Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
 Cap Codes: PT = Plastic, Teflon lined;
 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

ATTACHMENT B

ANALYTIC REPORT AND CHAIN-OF-CUSTODY FORMS



Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

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

LABORATORY NO.: 12808
CLIENT: Weiss Associates
CLIENT JOB NO.: 4-418-91

DATE RECEIVED: 02/14/92
DATE REPORTED: 02/18/92

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
12808- 1	022-A	02/13/92	02/17/92
12808- 2	022-B	02/13/92	02/14/92
12808- 3	022-B1	02/13/92	02/14/92
12808- 4	022-B2	02/13/92	02/14/92
12808- 5	022-B3	02/13/92	02/14/92
12808- 6	022-B4	02/13/92	02/17/92
12808- 7	022-EA1	02/13/92	02/17/92
12808- 8	022-EA2	02/13/92	02/14/92
12808- 9	022-F	02/13/92	02/14/92
12808-10	022-21	02/13/92	02/14/92

Laboratory Number:	12808 1	12808 2	12808 3	12808 4	12808 5
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ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	8000	6800	20000	280000	100000
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	860	2400	500	34000	27000
TOLUENE:	ND<5	60	100	2500	9900
ETHYL BENZENE:	120	220	150	4600	2000
XYLENES:	390	140	920	23000	11000

Laboratory Number:	12808 6	12808 7	12808 8	12808 9	12808 10
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ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	15000	ND<50	ND<50	ND<50	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	9100	ND<0.5	ND<0.5	ND<0.5	ND<0.5
TOLUENE:	86	ND<0.5	ND<0.5	ND<0.5	ND<0.5
ETHYL BENZENE:	570	ND<0.5	ND<0.5	ND<0.5	ND<0.5
XYLENES:	350	ND<0.5	ND<0.5	ND<0.5	ND<0.5



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: 12808

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

OIL AND GREASE ANALYSIS By Standard Methods Method 503E:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L
Standard Reference: NA

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L
Standard Reference: 10/12/91

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L
Standard Reference: 11/29/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	11/29/91	200ng	102/102	0	70-114
Benzene	11/29/91	200ng	92/95	3.2	78-123
Toluene	11/29/91	200ng	93/95	2.1	77-119
Ethyl Benzene	11/29/91	200ng	102/103	1.5	79-122
Total Xylene	11/29/91	600ng	87/88	1.1	78-119

Richard Srna, Ph.D.

Omig A. Nwogu
Laboratory Director



Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

MOCK INVOICE

Chevron USA
P.O. Box 5004
San Ramon, CA 94583

Date: 02/18/92
Date Rcvd: 02/14/92
Date Rptd: 02/18/92
Our Job #: 12808
Invoice #: 12808

Weiss Associates Job # 4-418-91
Chevron USA Release # 4950430

Facility #: 9-1026

QTY/MATRIX	ANALYSIS	EXT. PRICE
10 WATER	sample(s) for VPH-BTXE @ \$0.00 (NORMAL)	0.00
TOTAL INVOICE		0.00

Please Send Payment To:
Superior Analytical Labs
P.O. Box 1545
Martinez, CA 94553

TERMS: NET 30

A charge of 1.5% per month may be applied to unpaid balances

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

Chevron Facility Number 9-1026
Facility Address 3701 BROADWAY, OAKLAND
Consultant Project Number 4-418-91
Consultant Name WEISS ASSOCIATES
Address 5500 SHELLMOUND ST., EMERYVILLE, CA
Project Contact (Name) DAVID ELIAS
(Phone) (510) 547-5420 (Fax Number) (510) 547-5043

Chevron Contact (Name) NANCY VUKELICH
(Phone) (510) 842-9581
Laboratory Name SUPERIOR PRECISION ANALYTICAL
Laboratory Release Number 4950430
Samples Collected by (Name) Paul Cardona / Lore James
Collection Date 2/13/92
Signature Paul Cardona

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed										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)							
1 022-A		3	W	G	12:45	HCL	Y	X														
2 022-B					11:55																	
3 022-B1					12:16																	
4 022-B2					13:01																	
5 022-B3					12:27																	
6 022-B4					11:03																	
7 022-EA1					10:20																	
8 022-EA2					11:46																	
9 022-F					13:05																	
10 022-21					07:40																	

Please initial: ABC
 Samples Stored in ice. Yes
 Appropriate containers. Yes
 Samples preserved. Yes
 VOA's without headspace. Yes
 Comments:

Relinquished By (Signature) <u>Paul Cardona</u>	Organization <u>Weiss Associates</u>	Date/Time <u>2/13/92</u> <u>21:45</u>	Received By (Signature) <u>Robert L. Brewer</u>	Organization <u>Weiss</u>	Date/Time <u>2/14/92 10:30am</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature) <u>Robert L. Brewer</u>	Organization <u>Weiss</u>	Date/Time <u>2/14/92 10:30</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>Express-11</u>	Date/Time <u>2/14/92 10:30</u>	
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>Express-11</u>	Date/Time <u>2/14/92 11:49</u>	Received For Laboratory By (Signature) <u>[Signature]</u>	Date/Time <u>2-14-92</u> <u>1200</u>		

COC-3.DWG/03 91/HCH

