Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500
Mail Address: PO. Box 5004, San Ramon, CA 94583-0804

Marketing Operations

D. Moller
Manager, Operations
S. L. Patterson
Area Manager, Operations
C. G. Trimbach
Manager, Engineering

December 27, 1990

Rafat Shahid
Alameda County Environmental Health Department
80 Swan Way # 200
Oakland, California 94621

Re: Former Chevron Facility #9-1026
3701 Broadway
Oakland, California

Dear Mr. Shahid:

Enclosed are the results of the quarterly ground water sampling conducted by Weiss Associates at the subject site. As indicated in the report, all water samples were analyzed for total petroleum hydrocarbons as gasoline and benzene, ethylbenzene, toluene and xylenes. Ground water samples from monitoring wells A, B-1, B-2 and B-4 contain benzene above the California Department of Health Services (DHS) maximum contaminant level (MCL) for drinking water, and samples from well B-2 contained ethylbenzene and xylenes above the DHS MCLs. Monitoring well B-3 was not sampled due to floating hydrocarbons. Samples from monitoring wells B-1, B-2 and B-4 contained toluene above the DHS recommended action level for drinking water.

The County of Alameda requested the operator of the property upgradient of the Chevron site to investigate whether hydrocarbons from former fuel tanks at this site have impacted ground water beneath the Chevron site. It is unknown if this investigation has been completed.

Chevron will continue to monitor the site and report findings on a quarterly basis. A remediation system is being designed for this site. If you have any questions or comments, please contact Lisa Backlund at 415-842-9527.

I declare under penalty of perjury that, to the best of my knowledge, the information contained in the attached report is true and correct, and that any recommended actions are appropriate under the circumstances.

Sincerely,
D. Moller

By _____
Lisa Backlund
Engineer

LAB:wa
Enclosure

cc: Lester Feldman RWQCB - 1800 Harrison Street, Oakland, CA 94612

Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

Marketing Operations

D. Moller
Manager, Operations
S. L. Patterson
Area Manager, Operations
C. G. Trimbach
Manager, Engineering

December 27, 1990

Rafat Shahid
Alameda County Environmental Health Department
80 Swan Way # 200
Oakland, California 94621

Re: Former Chevron Facility #9-1026
3701 Broadway
Oakland, California

Dear Mr. Shahid:

Enclosed are the results of the quarterly ground water sampling conducted by Weiss Associates at the subject site. As indicated in the report, all water samples were analyzed for total petroleum hydrocarbons as gasoline and benzene, ethylbenzene, toluene and xylenes. Ground water samples from monitoring wells A, B-1, B-2 and B-4 contain benzene above the California Department of Health Services (DHS) maximum contaminant level (MCL) for drinking water, and samples from well B-2 contained ethylbenzene and xylenes above the DHS MCLs. Monitoring well B-3 was not sampled due to floating hydrocarbons. Samples from monitoring wells B-1, B-2 and B-4 contained toluene above the DHS recommended action level for drinking water.

The County of Alameda requested the operator of the property upgradient of the Chevron site to investigate whether hydrocarbons from former fuel tanks at this site have impacted ground water beneath the Chevron site. It is unknown if this investigation has been completed.

Chevron will continue to monitor the site and report findings on a quarterly basis. A remediation system is being designed for this site. If you have any questions or comments, please contact Lisa Backlund at 415-842-9527.

I declare under penalty of perjury that, to the best of my knowledge, the information contained in the attached report is true and correct, and that any recommended actions are appropriate under the circumstances.

Sincerely,
D. Moller

By _____
Lisa Backlund
Engineer

LAB:wa
Enclosure

cc: Lester Feldman RWQCB - 1800 Harrison Street, Oakland, CA 94612

December 27, 1990

Rafat Shahid
Alameda County Environmental Health Department
80 Swan Way # 200
Oakland, California 94621

Re: Former Chevron Facility #9-1026
3701 Broadway
Oakland, California

Dear Mr. Shahid:

Enclosed are the results of the quarterly ground water sampling conducted by Weiss Associates at the subject site. As indicated in the report, all water samples were analyzed for total petroleum hydrocarbons as gasoline and benzene, ethylbenzene, toluene and xylenes. Ground water samples from monitoring wells A, B-1, B-2 and B-4 contain benzene above the California Department of Health Services (DHS) maximum contaminant level (MCL) for drinking water, and samples from well B-2 contained ethylbenzene and xylenes above the DHS MCLs. Monitoring well B-3 was not sampled due to floating hydrocarbons. Samples from monitoring wells B-1, B-2 and B-4 contained toluene above the DHS recommended action level for drinking water.

The County of Alameda requested the operator of the property upgradient of the Chevron site to investigate whether hydrocarbons from former fuel tanks at this site have impacted ground water beneath the Chevron site. It is unknown if this investigation has been completed.

Chevron will continue to monitor the site and report findings on a quarterly basis. A remediation system is being designed for this site. If you have any questions or comments, please contact Lisa Backlund at 415-842-9527.

I declare under penalty of perjury that, to the best of my knowledge, the information contained in the attached report is true and correct, and that any recommended actions are appropriate under the circumstances.

Sincerely,
D. Moller

By _____
Lisa Backlund
Engineer

LAB:wa
Enclosure

cc: Lester Feldman RWQCB - 1800 Harrison Street, Oakland, CA 94612

WEISS ASSOCIATES
Geologic and Environmental Services
Fax: 415-547-5043 Phone: 415-547-5420
5500 Shellmound Street, Emeryville, CA 94608

December 27, 1990

Lisa Backlund
Chevron USA
P.O. Box 5004
San Ramon, CA 94583-0804

Re: Former Chevron Service Station #9-1026
3701 Broadway
Oakland, California
WA Job #4-418-01

Dear Ms. Backlund:

Weiss Associates (WA) collected ground water samples from six of eleven monitoring wells on November 13, 1990, as part of the quarterly ground water monitoring program at former Chevron Service Station #9-1026 in Oakland, California (Figure 1). Ground water samples from monitoring wells A, B-1, B-2 and B-4 (Figure 2) contained benzene above the California Department of Health Services (DHS) maximum contaminant level (MCL) for drinking water and samples from well B-2 contained ethylbenzene and xylenes above DHS MCLs. Samples from monitoring wells B-1, B-2, and B-4 contained toluene above the DHS recommended action level for drinking water.

Hydrocarbons detected in ground water from wells A and B-4 may be from former underground fuel tanks located about 30 ft upgradient of the site. The operator of this property has been requested by the Alameda County Department of Environmental Health (ACDEH) to determine if these former tanks are contributing to the hydrocarbon plume beneath the former Chevron station[1]. We do not know if they have completed their investigation.

[1] ACDEH, 1990, letter from Gil Wistar, Hazardous Materials Specialist, to Brady McQueen, General Manager of Val Strough Honda, June 11, 1990, 2 pp.

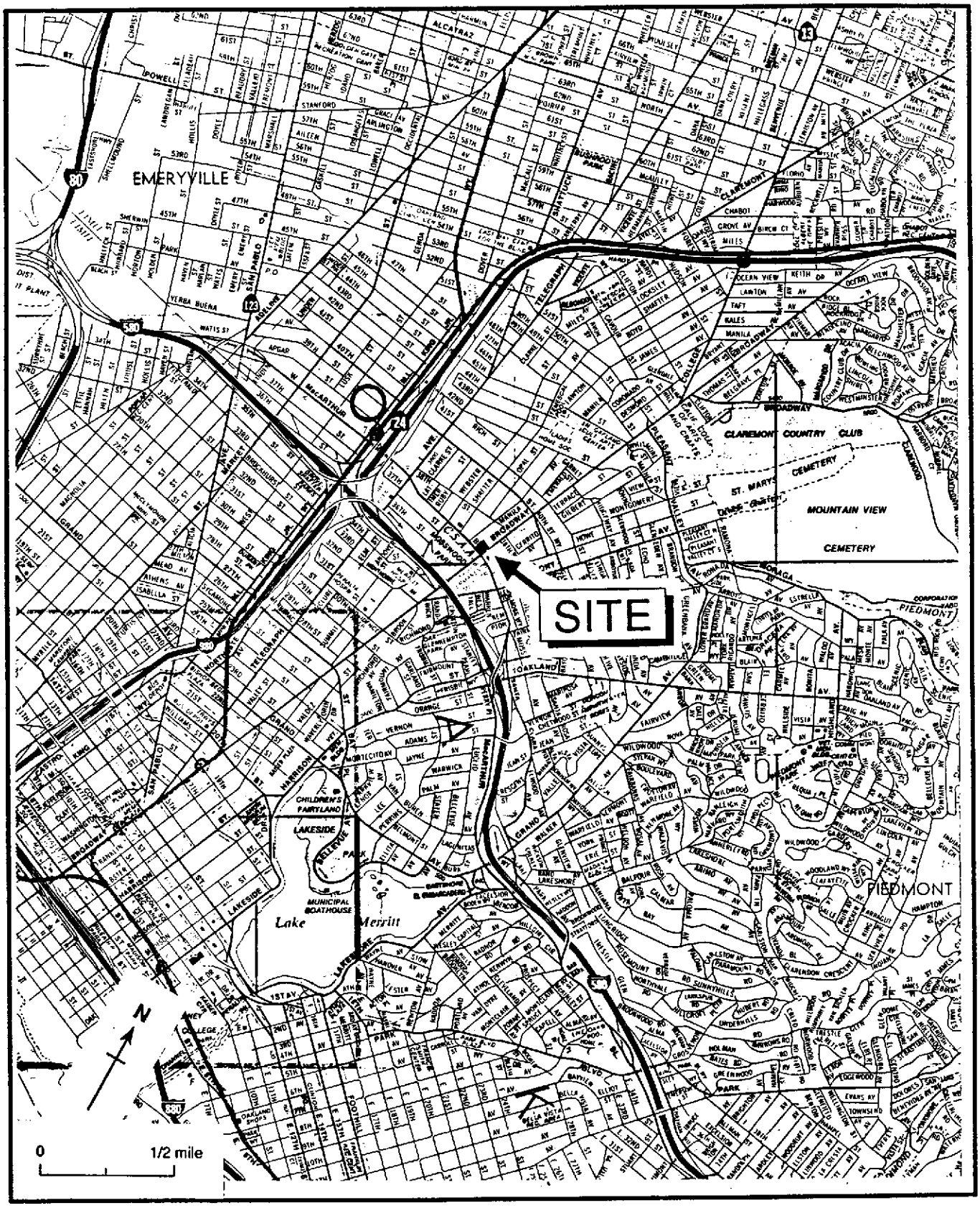

Figure 1. Site Location Map -Former Chevron Service Station #91026, 3701 Broadway, Oakland, California

12/6/89

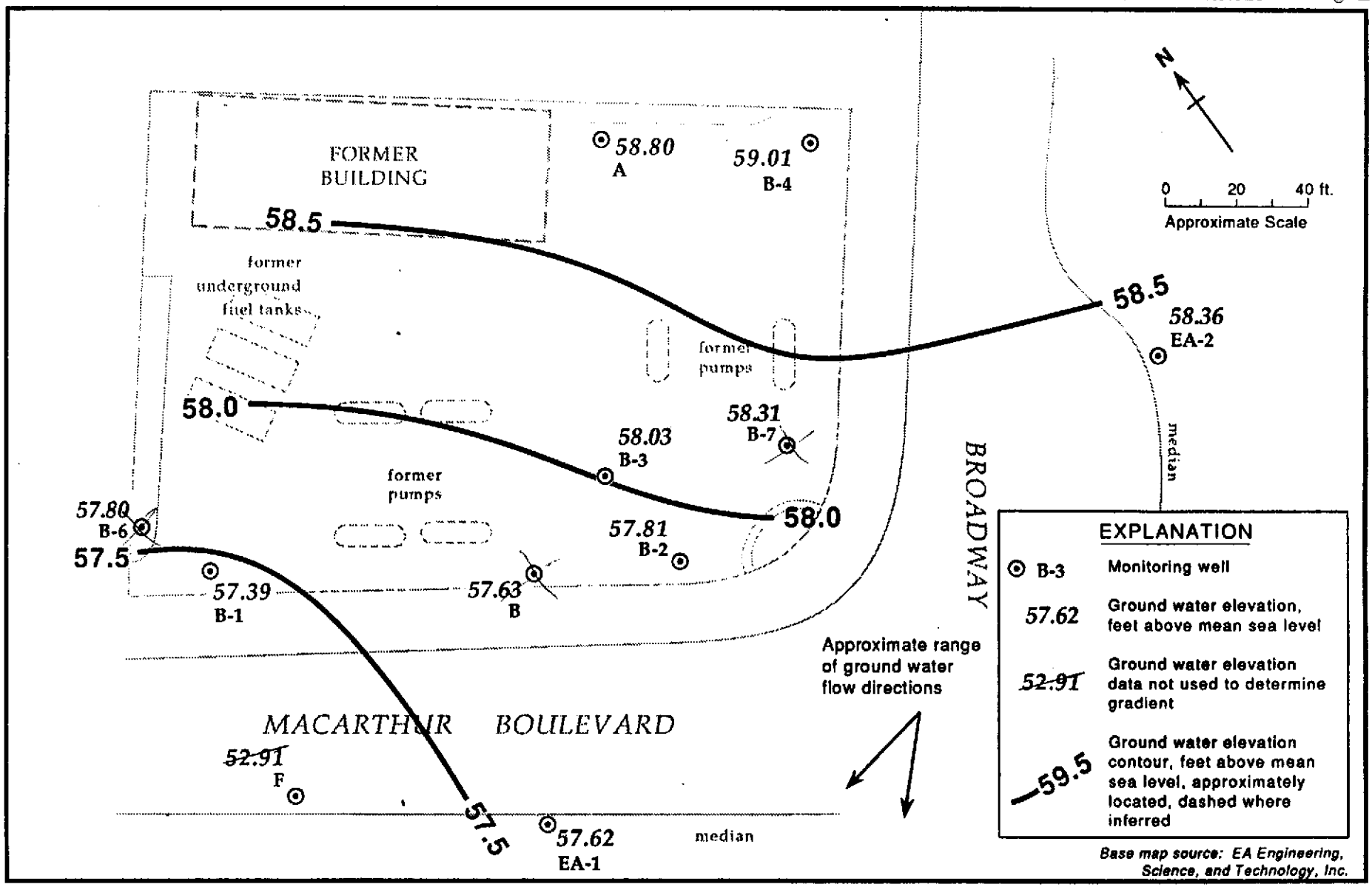

Figure 2. Monitoring Well Locations and Ground Water Contours - November 13, 1990 - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California

12/26/90

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

Well ID	Date Sampled	Analytical Lab	Analytic Method	TPH-G	B	E	T	X
				<----------parts per billion (µg/L) ---------->				
A	5-09-89	SAL	8015/8020	11,000	260	94	<2	230
	8-09-89	SAL	8015/8020	12,000	370	100	<1.5	240
	11-09-89	SAL	8015/8020	16,000	690	180	10	350
	2-08-90	GTEL	8015/8020	14,000	600	120	7	270
	5-10-90	GTEL	8015/8020	16,000	840	140	4.8	340
	8-09-90	GTEL	8015/8020	17,000	510	170	40.0	280
	11-13-90	CEC	8015/602	9,000	570	86	3.1	170
B	5-09-89 [a]	---	---	---	---	---	---	---
	8-09-89 [a]	---	---	---	---	---	---	---
	11-09-89 [a]	---	---	---	---	---	---	---
	2-08-90 [b]	---	---	---	---	---	---	---
	5-10-90 [c]	---	---	---	---	---	---	---
	8-09-90 [a]	---	---	---	---	---	---	---
	11-13-90 [d]	---	---	---	---	---	---	---
B-1	5-10-89	SAL	8015/8020	16,000	2,300	81	260	740
	8-09-89	SAL	8015/8020	12,000	2,600	100	340	870
	11-09-89	SAL	8015/8020	17,000	340	110	140	760
	2-08-90	GTEL	8015/8020	5,500	70	17	19	150
	5-10-90	GTEL	8015/8020	18,000	770	73	110	600
	8-09-90	GTEL	8015/8020	82,000	750	95	66	980
	11-13-90	CEC	8015/602	43,000	1,300	74	120	760
B-2	5-09-89	SAL	8015/8020	170,000	30,000	2,300	8,400	12,000
	8-10-89	SAL	8015/8020	60,000	29,000	2,400	8,700	12,000
	11-09-89	SAL	8015/8020	110,000	32,000	2,800	5,500	12,000
	2-08-90	GTEL	8015/8020	67,000	28,000	2,300	5,900	11,000
	5-10-90	GTEL	8015/8020	69,000	24,000	2,000	4,800	11,000
	8-09-90	GTEL	8015/8020	100,000	33,000	2,100	4,000	12,000
	11-13-90	CEC	8015/602	110,000	33,000	2,900	4,300	13,000
B-3	5-10-89	SAL	8015/8020	70,000	12,000	1,400	9,500	8,900
	5-10-89 [a]	---	---	---	---	---	---	---
	11-09-89 [a]	---	---	---	---	---	---	---
	2-08-90 [a]	---	---	---	---	---	---	---
	5-10-90 [a]	---	---	---	---	---	---	---
	8-09-90 [a]	---	---	---	---	---	---	---
	11-13-90 [a]	---	---	---	---	---	---	---
B-4	5-10-89	SAL	8015/8020	3,600	840	120	34	200
	8-09-89	SAL	8015/8020	<500	4,200	370	130	260
	8-09-89 (dup)	SAL	8015/8020	5,000	4,200	400	83	250
	11-09-89	SAL	8015/8020	14,000	6,000	530	70	300
	2-08-90	GTEL	8015/8020	12,000	5,400	460	130	320
	5-10-90	GTEL	8015/8020	16,000	7,400	530	120	350
	8-09-90	GTEL	8015/8020	21,000	7,000	550	100	320
	11-13-90	CEC	8015/602	17,000	8,500	500	120	300

poor surface water seals

F.P

-- Table 2 continues next page--

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

Well ID	Date Sampled	Analytical Lab	Analytic Method	TPH-G	B	E	T	X
				<----------parts per billion (µg/L) ---------->				
B-6	5-09-89	SAL	8015/8020	26,000	120	250	110	1,300
	5-10-89	SAL	8015/8020	19,000	470	440	150	1,400
	11-09-89	SAL	8015/8020	13,000	70	36	36	440
	2-08-90	GTEL	8015/8020	2,900	16	10	5	58
	5-10-90 [c]	---	---	---	---	---	---	---
	8-09-90	GTEL	8015/8020	14,000	55	130	3	500
	11-13-90 [d]	---	---	---	---	---	---	---
B-7	5-10-89	SAL	8015/8020	210,000	13,000	2,000	19,000	20,000
	8-09-89	SAL	8015/8020	672,000	8,700	2,700	17,000	30,000
	11-09-89	SAL	8015/8020	150,000	7,000	1,800	12,000	16,000
	2-08-90	GTEL	8015/8020	41,000	2,500	1,100	6,900	11,000
	5-10-90 [c]	---	---	---	---	---	---	---
	8-09-90	GTEL	8015/8020	50,000	1,100	640	3,900	7,200
	11-13-90 [d]	---	---	---	---	---	---	---
EA-1	5-09-89	SAL	8015/8020	<500	<0.5	<0.5	<0.5	<0.5
	8-09-89	SAL	8015/8020	<500	<0.5	<0.5	<0.5	<0.5
	11-09-89	SAL	8015/8020	<500	<0.5	<0.5	<0.5	<0.5
	2-08-90	GTEL	8015/8020	<50	<0.3	<0.3	<0.3	<0.6
	5-10-90	GTEL	8015/8020	<50	1	<0.3	<0.3	<0.6
	8-09-90	GTEL	8015/8020	<50	<0.3	<0.3	<0.3	<0.6
	11-13-90	CEC	8015/602	<50	<0.4	<0.3	<0.3	<0.4
EA-2	5-09-89	SAL	8015/8020	760	<0.5	1.1	<0.5	<0.5
	8-09-89	SAL	8015/8020	<500	<0.5	<0.5	<0.5	<0.5
	11-09-89	SAL	8015/8020	<500	<0.5	<0.5	1	<0.5
	2-08-90	GTEL	8015/8020	190	<0.3	<0.3	<0.3	<0.6
	5-10-90	GTEL	8015/8020	<50	<0.3	<0.3	<0.3	<0.6
	8-09-90	GTEL	8015/8020	120	<0.3	<0.3	<0.3	<0.6
	11-13-90	CEC	8015/602	160	<0.4	<0.3	1.0	<0.4
F	5-09-89	SAL	8015/8020	<500	<0.5	<0.5	0.6	1.0
	8-09-89 [e]	---	---	---	---	---	---	---
	11-09-89 [e]	---	---	---	---	---	---	---
	2-08-90	GTEL	8015/8020	<50	0.4	<0.3	0.3	<0.6
	5-10-90 [e]	---	---	---	---	---	---	---
	8-09-90 [e]	---	---	---	---	---	---	---
	11-13-90 [e]	---	---	---	---	---	---	
Travel Blank	5-10-89	SAL	8015/8020	<500	<0.5	<0.5	<0.5	<0.5
	8-09-89	SAL	8015/8020	<500	<0.5	<0.5	<0.5	<0.5
	11-09-89	SAL	8015/8020	<500	<0.5	<0.5	<0.5	<0.5
	2-08-90	GTEL	8015/8020	<50	<0.3	<0.3	<0.3	<0.6
	5-10-90	GTEL	8015/8020	<50	<0.3	<0.3	<0.3	<0.6
	8-09-90	GTEL	8015/8020	<50	<0.3	<0.3	<0.3	<0.6
	11-13-90	CEC	8015/602	<50	<0.4	<0.3	<0.3	<0.4

-- 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	Analytical Lab	Analytic Method	TPH-G	B	E	T	X
				<----------parts per billion (µg/L) ---------->				
Bailer	5-10-89	SAL	8015/8020	<500	<0.5	<0.5	<0.5	<0.5
Blank	2-08-90	GTEL	8015/8020	<50	<0.3	<0.3	0.3	<0.6
DHS MCLs				NE	1	680	100[f]	1,750

Abbreviations:

TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
E = Ethylbenzene
T = Toluene
X = Xylenes
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
SAL = Superior Analytical Laboratories of San Francisco and Martinez, California
CEC = Clayton Environmental Consultants of Pleasanton, California

Analytic Methods

602 = EPA Method 602 for BETX
8015 = Modified EPA Method 8015 for TPH-G
8020 = EPA Method 8020 for BETX

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] = Not sampled because of insufficient water in the well
[f] = DHS Recommended Action Level for Drinking Water, MCL not established

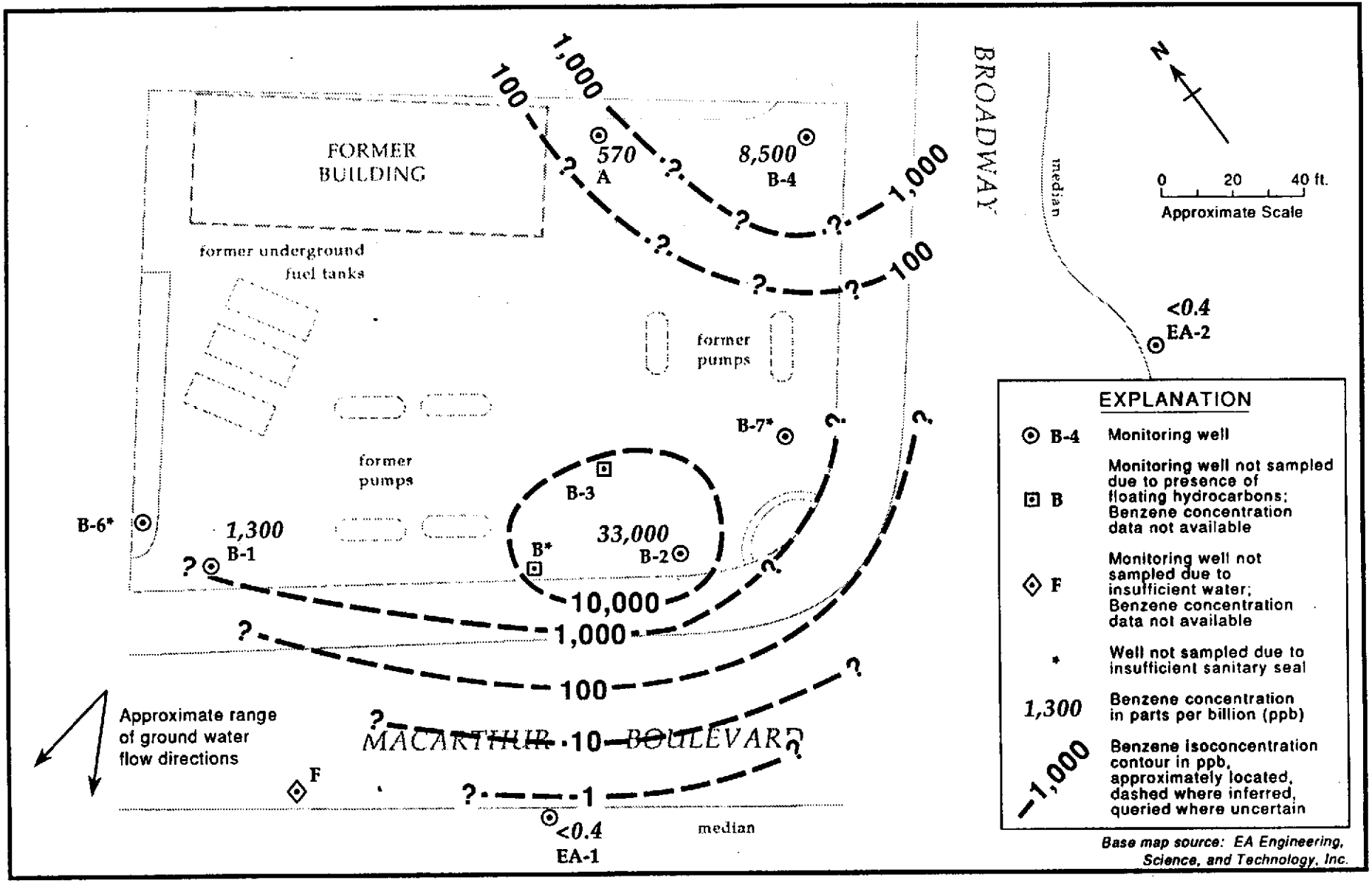

Figure 4. Benzene Isoconcentration Contours - November 13, 1990 - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California

12/26/90

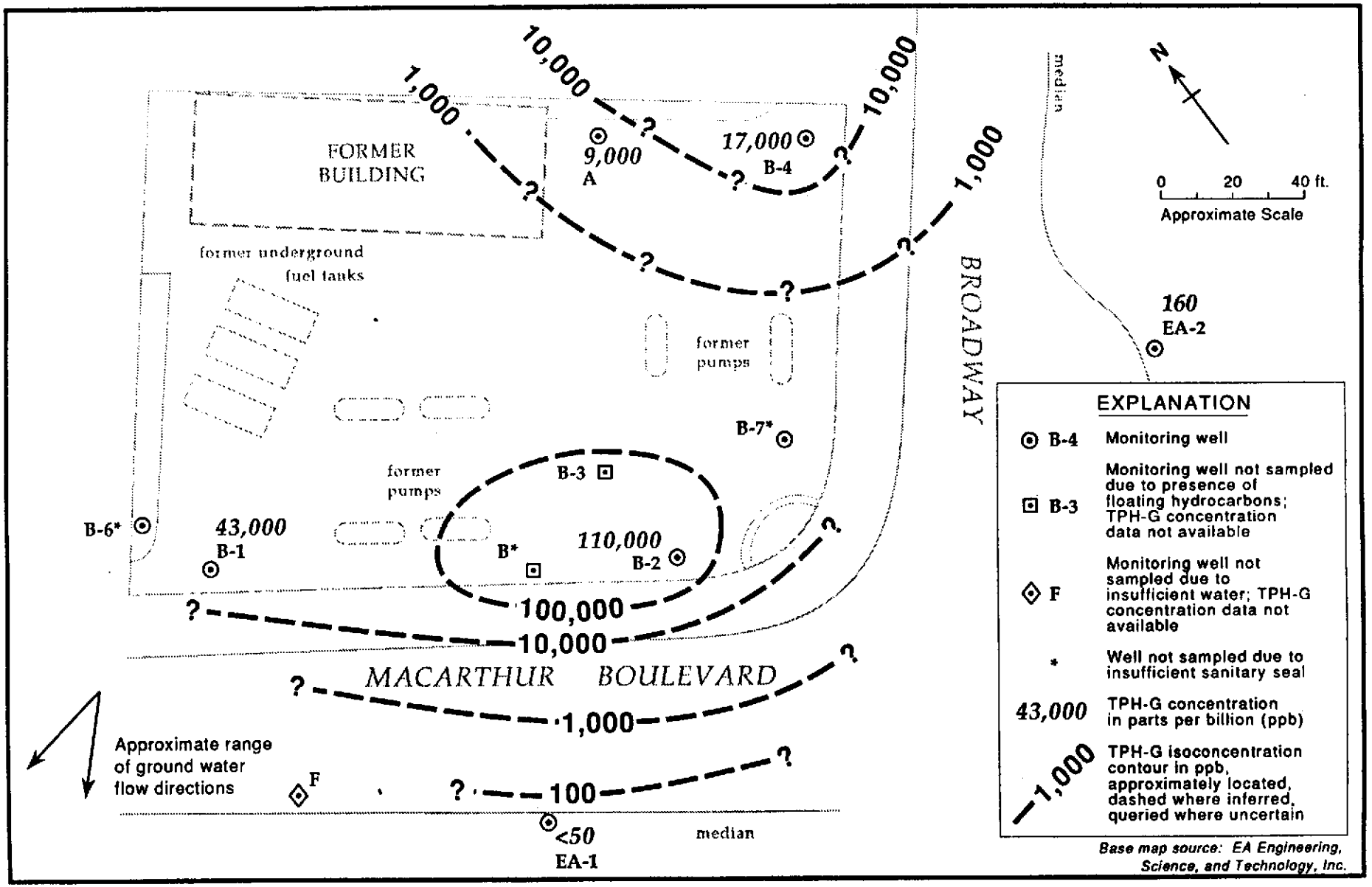

Figure 3. Total Petroleum Hydrocarbon as Gasoline (TPH-G) Isoconcentration Contours - November 13, 1990 - Former Chevron Service Station #9-1026, 3701 Broadway, Oakland, California

12/26/90

GROUND WATER SAMPLING

Sampling personnel: WA Senior Environmental Technician Robert Hoffman and Staff Geologist Tom Fojut

Monitoring/other wells sampled: A, B-1, B-2, B-4, EA-1 and EA-2

- Wells not sampled due to presence of floating hydrocarbons: B-3
- Wells with insufficient water to sample: F
- Wells B, B-6 and B-7 will no longer be sampled because the wells have insufficient sanitary seals which may allow surface water to enter the wells.

Method of purging wells:

- Steam-cleaned Teflon bailer: B-1
- Dedicated PVC bailers: A, B-2, B-4, EA-1, EA-2

Volume of water purged prior to sampling:

- Wells that were purged of about three well-casing volumes, about 0.4 to 28 gallons each: A, B-1, B-2, B-4, EA-1, EA-2

Method of ground water sample collection:

- Decanted from steam-cleaned Teflon bailer: B-1
- Drawn through sampling port on side of dedicated PVC bailer: EA-1, EA-2
- Decanted from dedicated PVC bailer: A, B-2, B-4

Method of containing ground water samples:

- 40 ml glass, volatile organic analysis (VOA) vials, preserved with hydrochloric acid and packed in protective foam sleeves

All samples were refrigerated and transported under chain-of-custody to the analytical laboratory.

Water samples transported to:

- Clayton Environmental Consultants, Pleasanton, California and received on November 14, 1990.

Quality assurance/quality control:

- A travel blank was submitted for analysis.

Water sample collection records and chain-of-custody forms are included as Attachments A and B, respectively.

GROUND WATER ELEVATIONS

Water levels were measured in all wells on November 13, 1990.

Direction of ground water flow: ~~northwestward~~ to southwestward

Depth to water measurements and historical ground water elevations are presented in Table 1. Ground water elevation contours are plotted on Figure 2.

- The ground water flow direction is consistent with previous results. —D ?
- Ground water elevations have decreased an average of 0.6 ft since last quarter.

CHEMICAL ANALYSES

The ground water samples were analyzed for:

- Total petroleum hydrocarbons as gasoline (TPH-G) by modified EPA Method 8015
- Benzene, ethylbenzene, toluene and xylenes (BETX) by EPA Method 8020

The laboratory analyzed the samples on November 14 and 15, 1990. The results are presented in Table 2 and the analytic reports are included as Attachment C. Isoconcentration contour maps of TPH-G and benzene in ground water are included as Figures 3 and 4, respectively.

Discussion of ground water analytic results for this quarter:

- Ground water samples from monitoring wells A, B-1, B-2 and B-4 contain benzene above the DHS MCL for drinking water.

- Toluene concentrations in samples from wells B-1, B-2 and B-4 are above the DHS recommended action level for drinking water, and ethylbenzene, toluene and xylene concentrations in samples from well B-2 are above DHS MCLs for drinking water.

We appreciate the opportunity to provide hydrogeologic consulting services to Chevron and trust that this report meets your needs. Please contact Mariette Shin or Jim Carmody if you have any questions.

REGISTERED GEOLOGIST
JAMES W. CARMODY
No. 4072
STATE OF CALIFORNIA

Sincerely,
Weiss Associates

Mariette M. Shin
Staff Geologist

James W. Carmody, R.G.
Senior Project Hydrogeologist

MMS/JWC:jg

E:\ALL\CHEV\400\418QMDE0.WP

Attachments:
A - Water Sample Collection Records
B - Chain-of-Custody Form
C - Analytic Reports

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-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
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
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
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
EA-2	05/10/89	75.24[a]	15.95		60.29
	08/09/89		17.45		58.79
	11/09/89		17.41		58.83
	02/08/90		16.57		59.67
	05/10/90		17.12		59.12
	08/09/90		17.20		59.04
	11/13/90		17.88		58.36

-- 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

[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] Water level not measured

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
B	05/10/89	73.39[a]	13.97	.20	59.58[b]
	08/09/89		15.69	.20	57.86[b]
	11/09/89		15.29	.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
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
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
B-3	05/10/89	74.12[a]	13.92		60.20
	08/09/89		15.38		58.74
	11/09/89		15.55	.05	58.61[b]
	02/08/90		14.68	.003	59.44[b]
	05/10/90		15.15	.02	58.99[b]
	08/09/90		15.27	.005	58.85[b]
	11/13/90		16.04	.06	58.03[b]

-- Table 1 continues on next page --

ATTACHMENT A

WATER SAMPLE COLLECTION RECORDS

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name A Date 11-13-90 Time of Sampling 3:10
Job Name CHEV OAKLAND III Job Number 4-418-01 Initials TF
Sample Point Description M (M = Monitoring Well)
Location NEAR BUILDING

WELL DATA: Depth to Water 16.48 ft (static) pumping @ 9:48am Depth to Product — ft.
Product Thickness — Well Depth 20.03 ft (spec) Well Depth — ft(sounded) Well Diameter 2 in
Initial Height of Water in Casing 3.6 ft. = volume 0.59 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 1.77 gal.

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

Evacuation Time: Stop 12:12 2:24 3:06
Start 12:05 2:20 3:02
Total Evacation Time 1gal 0.5gal 0.5gal 15 min
Total Evacuated Prior to Sampling 2 gal.
Evacuation Rate 0.13 gal. per minute
Depth to Water during Evacuation — ft. — time
Depth to Water at Sampling 19.81 ft. 3:10 time
Evacuated Dry? Y After 1 gal. Time 12:12
80% Recovery = —
% Recovery at Sample Time — Time —
WAITED UNTIL 3 VOLUMES PURGED

Formulas/Conversions
r = well radius in ft.
h = ht of water col in ft.
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft^3
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

CHEMICAL DATA: Meter Brand/Number —
Calibration: — 4.0 — 7.0 — 10.0

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

SAMPLE: Color CLEAR Odor STRONG
Description of matter in sample: SOME SMALL PARTICLES
Sampling Method: DECANT FROM DED 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	110-A	W/CV	40ml	N	Y	HCl	8015/8020	N	GTEL

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:

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name B-1 Date 11-13-90 Time of Sampling 15:45
Job Name CHEV OAKLAND TIL Job Number 4-418-01 Initials TF
Sample Point Description M (M = Monitoring Well)
Location LOT CORNER ON MACARTHUR

WELL DATA: Depth to Water 14.38 ft (static, pumping) @ 9:06 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 0.82 ft. = volume 0.13 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated ~~0.39~~ gal.

EVACUATION METHOD: Pump # and type — Hose # and type —
Bailer# and type TEFLON Dedicated N (Y/N)
Other WA STOCK E

Evacuation Time: Stop 12:58 2:29 3:33
Start 12:53 2:26 3:30
Total Evacation Time ~~0.3 gal~~ 0.1 gal ← 16 min
Total Evacuated Prior to Sampling 0.4 gal.
Evacuation Rate 0.025 gal. per minute
Depth to Water during Evacuation — ft. — time
Depth to Water at Sampling 15.57 ft. 15:45 time
Evacuated Dry? Y After ~~0.2~~ gal. Time 12:58
80% Recovery = —
% Recovery at Sample Time — Time —
WAITED UNTIL 3 WELL VOLUMES PURGED

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

CHEMICAL DATA: Meter Brand/Number —
Calibration: — 4.0 — 7.0 — 10.0

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

SAMPLE: Color DK BROWN Odor STRONG-
Description of matter in sample: HEAVY SILT - OIL SHEEN VISIBLE
Sampling Method: DECANT FROM 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	110-1	w/cv	40ml	N	Y	HCl	8015/8020	N	GTEL

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:

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name B-2 Date 11-13-90 Time of Sampling 16:10
Job Name CHEV OAKLAND II Job Number 4-418-01 Initials TF
Sample Point Description NEAR CORNER M (M = Monitoring Well)
Location ↓ BROADWAY & MACARTHUR

WELL DATA: Depth to Water 16.70 ft (static, pumping) @ 10:07 am 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 2.3 ft. = volume 0.37 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 1.11 gal.

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

Evacuation Time: Stop 11:35 12:39 2:35 16:03
Start 11:30 12:37 2:32 16:00
Total Evacuation Time 0.5 hr 0.2 hr 0.2 hr ← 13 min
Total Evacuated Prior to Sampling 0.4 gal.
Evacuation Rate 0.03 gal. per minute

Depth to Water during Evacuation — ft. — time
Depth to Water at Sampling 18.80 ft. 16:10 time
Evacuated Dry? Y After 0.5 gal. Time 11:35
80% Recovery = —
% Recovery at Sample Time — Time —

WAITED TO PURGE 3 WELL VOLUMES

CHEMICAL DATA: Meter Brand/Number —
Calibration: — 4.0 — 7.0 — 10.0

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

Formulas/Conversions
r = well radius in ft.
h = ht of water col in ft.
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft^3
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

SAMPLE: Color CLEAR - LT BROWN Odor STRONG
Description of matter in sample: SOME SILT + OBVIOUS SHEEN
Sampling Method: DECANT FROM DED 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	110-2	W/CV	40ml	N	Y	HCl	8015/8020	N	GTEL

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:

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name B-3 Date 11-13-90 Time of Sampling BAILED AT 4:15
Job Name CHEV OAKLAND II Job Number 4-418-01 Initials TF
Sample Point Description M (M = Monitoring Well)
Location MIDDLE OF LOT

WELL DATA: Depth to Water ____ ft (static, pumping) Depth to Product ____ ft.
Product Thickness 0.75 Well Depth 18.9 ft (spec) Well Depth ____ ft(sounded) Well Diameter 2 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 FREE PROD Dedicated N (Y/N)
Other ____

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

Formulas/Conversions
r = well radius in ft.
h = ht of water col in ft.
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft^3
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

CHEMICAL DATA: Meter Brand/Number ____
Calibration: ____ 4.0 ____ 7.0 ____ 10.0

Measured:	SC/µmhos	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

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:

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name B-4 Date 11-13-90 Time of Sampling 2:45
Job Name CHEV OAKLAND III Job Number 4-418-01 Initials TF
Sample Point Description M (M = Monitoring Well)
Location LOT CORNER ON BROADWAY

WELL DATA: Depth to Water 17.42 ft (static/pumping) @ 10:02 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 1.95 ft. = volume 0.31 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 0.93 gal.

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

Evacuation Time: Stop 11:55 12:44 2:41
Start 11:50 12:40 2:37
Total Evacuation Time 0.5 gal 0.3 gal ← 13 min
Total Evacuated Prior to Sampling 1 gal.
Evacuation Rate .08 gal. per minute
Depth to Water during Evacuation — ft. — time
Depth to Water at Sampling 18.79 ft. 2:45 time
Evacuated Dry? Y After 0.5 gal. Time 11:55
80% Recovery = —
% Recovery at Sample Time — Time —
WAITED TO PURGE 3 WELL CASING VOLUMES

Formulas/Conversions
r = well radius in ft.
h = ht of water col in ft.
vol. in cyl. = $\pi r^2 h$
7.48 gal/ft^3
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

CHEMICAL DATA: Meter Brand/Number —
Calibration: — 4.0 — 7.0 — 10.0

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

SAMPLE: Color CLEAR Odor STRONG
Description of matter in sample: SUSP SILT - SOME LARGE PARTICLES
Sampling Method: DECANT FROM DED 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	110-4	G w/cV	40ml	N	Y	HCl	8015/8020	N	GTEL

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:

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name EA-1 Date 11/13/90 Time of Sampling 09:42

Job Name CHEV. OAK III Job Number 4-418-01 Initials RH

Sample Point Description M (M = Monitoring Well)

Location CENTER ISLAND ON McARTHUR

WELL DATA: Depth to Water 16.34 ft (~~static~~, pumping) Depth to Product N/A ft.

Product Thickness N/A Well Depth 30.2 ft (spec) Well Depth 30.42 ft (sounded) Well Diameter 4 in

Initial Height of Water in Casing 14.08 ft. = volume 9.19 gal.

3 Casing Volumes to be Evacuated. Total to be evacuated 27.58 gal.

EVACUATION METHOD: Pump # and type N/A Hose # and type N/A

Bailer# and type Teflon Dedicated Y (Y/N)

Other SIDE SAMPLER.

Evacuation Time: Stop 09:41

Start 09:27

Total Evacation Time 14

Total Evacuated Prior to Sampling 28 gal.

Evacuation Rate 2 gal. per minute

Depth to Water during Evacuation N/A ft. — time

Depth to Water at Sampling 16.40 ft. 09:43 time

Evacuated Dry? NO After — gal. Time —

80% Recovery = N/A

% Recovery at Sample Time N/A Time —

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft^3

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

CHEMICAL DATA: Meter Brand/Number —

Calibration: ____ 4.0 ____ 7.0 ____ 10.0

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

SAMPLE: Color TAN Odor NONE

Description of matter in sample: SM. AMT. FINE TAN SILT.

Sampling Method: SIDE SAMPLE PORT

Sample Port: Rate N/A 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	119-EA1	W/V	40	N	Y	HCL	6AS + BETX	N	GTEL

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:

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name EA-2 Date 11/13/90 Time of Sampling 10:58

Job Name CHEV. OAK III Job Number 4-418-01 Initials RH

Sample Point Description M (M = Monitoring Well)

Location CHEVRON ISLE ON BROADWAY

WELL DATA: Depth to Water 17.88 ft (~~static~~ pumping) Depth to Product N/A ft.

Product Thickness N/A Well Depth 30.1 ft (spec) Well Depth 30.04 ft (sounded) Well Diameter 4 in

Initial Height of Water in Casing 12.22 ft. = volume 7.97 gal.

3 Casing Volumes to be Evacuated. Total to be evacuated 23.93 gal.

EVACUATION METHOD: Pump # and type N/A Hose # and type N/A

Bailer# and type Ded. 3' PVC Dedicated Yes (Y/N)

Other Side Sampler.

Evacuation Time: Stop 10:49

Start 10:34

Total Evacation Time 15

Total Evacuated Prior to Sampling 24 gal.

Evacuation Rate 1.6 gal. per minute

Depth to Water during Evacuation N/A ft. — time

Depth to Water at Sampling 27.45 ft. 10:51 time

Evacuated Dry? NO After — gal. Time —

80% Recovery = _____

% Recovery at Sample Time — Time —

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft^3

$V_{2"}$ 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

CHEMICAL DATA: Meter Brand/Number _____

Calibration: _____ 4.0 _____ 7.0 _____ 10.0

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

SAMPLE: Color TAN Odor NONE

Description of matter in sample: SM. AMT. TAN SILT

Sampling Method: SIDE SAMPLE 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	119-EA2	W/V	40	N	Y	HCL	GAS/BETX	N	G-Tech

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:

NOT ENOUGH WATER TO SAMPLE

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name F Date 11/13/90 Time of Sampling N/A

Job Name _____ Job Number _____ Initials RH

Sample Point Description _____ (M = Monitoring Well)

Location _____

WELL DATA: Depth to Water 9.11 ft (static? pumping) Depth to Product _____ ft.

Product Thickness _____ Well Depth _____ ft (spec) Well Depth 9.70 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 Evacation Time _____

Total Evacuated Prior to Sampling _____ gal.

Evacuation Rate _____ gal. per minute

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 _____

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft^3

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

CHEMICAL DATA: Meter Brand/Number _____

Calibration: _____ 4.0 _____ 7.0 _____ 10.0

Measured:	SC/µmhos	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

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:

F:\ALL\ADMIN\FORMS\WATSAMP.WP

ATTACHMENT B

CHAIN-OF-CUSTODY FORM

9011123 **Chain-of-Custody Record**

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

Chevron Facility Number: 91026 (Oakland III)
~~Consultant~~ LAB Release Number: [illegible]
Consultant Project Number: 4-418-01
Consultant Name: Weiss Associates
Address: 5500 Shellmound St, Emeryville, CA 94608
Fax Number: (415) - 547-5043
Project Contact (Name): Mariette Shin
(Phone): (415) 547-5420

Chevron Contact (Name): Lisa Marinaro
(Phone): (415) 842-9527
Laboratory Name: Clayton Env. Consultants
Contract Number: N 46 CWC 0244-9-X
Samples Collected by (Name): ROBERT HOFFMAN/TOM FOJUT
Collection Date: NOV 13, 1990
Signature: Tom Fojut

Analyses To Be Performed

Sample Number	Lab Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite	Time	Sample Preservation	Iced	Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline	Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline + Diesel	503 Oil and Grease	Arom. Volatiles - BTXE Soil: 8020/Wtr.: 602	Arom. Volatiles - BTXE Soil: 8240/Wtr.: 624 *	Total Lead DHS-Luft	EDB DHS-AB 1803	CUSTODY SEAL INTACT ON COOLER	APPROP CONT.	40 ml VIAL w/ HCL	Remarks
110-EA1	-01ABC	3	W	G	9:42a	HCl	Y	X				X			yes	yes	X	Head space free
110-EA2	-02	3	W	G	10:50a	HCl	Y	X				X			↓	↓	↓	↓
110-1	-03	3	W	G	3:45p	HCl	Y	X				X						
110-2	-04	3	W	G	4:10p	HCl	Y	X				X						
110-4	-05	3	W	G	2:45p	HCl	Y	X				X						
110-A	-06	3	W	G	3:10p	HCl	Y	X				X						
110-21	-07	2	W	G	2:30p	HCl	Y	X				X			↓	↓	↓	bubbles in VOAs

*Should be 8020 not 8240 per Mariette Shin 11/16/90 mg

* WHITE OUT USED ON THE C.O.C. BY CLIENT

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Tom Fojut	WEISS ASSOCIATES	11-14 9:05	AJ Rotard	Weiss Assoc	11-14-90 9:05
AJ Rotard	Weiss Assoc	11-14-90 13:35	M. Sprngman	Clayton	11-14-90 1:35 PM
M. Sprngman	Clayton	11-14-90 2:20 pm	Received For Laboratory By (Signature): Rebecca L Tuini Ciarello		11/14/90 2:20

Turn Around Time (Circle Choice)
24 Hrs
48 Hrs
5 Days
10 Days

↳ STORED IN LOCKED BLDG OVERNIGHT.

Western Operations

1252 Quarry Lane
Pleasanton, CA 94566
(415) 426-2600
Fax (415) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

November 16, 1990

Ms. Mariette Shin
WEISS ASSOCIATES
5500 Shellmound Street
Emeryville, CA 94608

Client Ref. 91026/4-418-01
Clayton Project No. 90111.29

Dear Ms. Shin:

Attached is our analytical laboratory report for the samples received on November 14, 1990. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Maryann Gambino, Client Services Supervisor, at (415) 426-2657.

Sincerely,

Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/tb
Attachments

Results of Analysis
for
Chevron USA Inc./ Weiss Associates

Client Reference: 91026/4-418-01
Clayton Project No. 90111.29

Sample Identification:	110-EA1	Date Sampled:	11/13/90
Lab Number:	9011129-01A	Date Received:	11/14/90
Sample Matrix/Media:	WATER	Date Prepared:	11/14/90
Preparation Method:	EPA 5030	Date Analyzed:	11/14/90
Analytical Method:	EPA 8015/602		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.4
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
Xylenes	1330-20-7	ND	0.4
Gasoline	-----	ND	50

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Chevron USA Inc./ Weiss Associates

Client Reference: 91026/4-418-01
Clayton Project No. 90111.29

Sample Identification:	110-EA2	Date Sampled:	11/13/90
Lab Number:	9011129-02A	Date Received:	11/14/90
Sample Matrix/Media:	WATER	Date Prepared:	11/14/90
Preparation Method:	EPA 5030	Date Analyzed:	11/14/90
Analytical Method:	EPA 8015/602		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.4
Toluene	108-88-3	1.0	0.3
Ethylbenzene	100-41-4	ND	0.3
Xylenes	1330-20-7	ND	0.4
Gasoline	-----	160	50

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Chevron USA Inc./ Weiss Associates

Client Reference: 91026/4-418-01
Clayton Project No. 90111.29

Sample Identification:	110-1	Date Sampled:	11/13/90
Lab Number:	9011129-03A	Date Received:	11/14/90
Sample Matrix/Media:	WATER	Date Prepared:	11/15/90
Preparation Method:	EPA 5030	Date Analyzed:	11/15/90
Analytical Method:	EPA 8015/602		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	1,300	4
Toluene	108-88-3	120	3
Ethylbenzene	100-41-4	74	3
Xylenes	1330-20-7	760	4
Gasoline	-----	43,000	500

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Chevron USA Inc./ Weiss Associates

Client Reference: 91026/4-418-01
Clayton Project No. 90111.29

Sample Identification:	110-2	Date Sampled:	11/13/90
Lab Number:	9011129-04A	Date Received:	11/14/90
Sample Matrix/Media:	WATER	Date Prepared:	11/15/90
Preparation Method:	EPA 5030	Date Analyzed:	11/15/90
Analytical Method:	EPA 8015/602		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	33,000	80
Toluene	108-88-3	4,300	60
Ethylbenzene	100-41-4	2,900	60
Xylenes	1330-20-7	13,000	80
Gasoline	-----	110,000	10,000

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Chevron USA Inc./ Weiss Associates

Client Reference: 91026/4-418-01
Clayton Project No. 90111.29

Sample Identification:	110-4	Date Sampled:	11/13/90
Lab Number:	9011129-05A	Date Received:	11/14/90
Sample Matrix/Media:	WATER	Date Prepared:	11/15/90
Preparation Method:	EPA 5030	Date Analyzed:	11/15/90
Analytical Method:	EPA 8015/602		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	8,500	8
Toluene	108-88-3	120	6
Ethylbenzene	100-41-4	500	6
Xylenes	1330-20-7	300	8
Gasoline	-----	17,000	1,000

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Chevron USA Inc./ Weiss Associates

Client Reference: 91026/4-418-01
Clayton Project No. 90111.29

Sample Identification:	110-A	Date Sampled:	11/13/90
Lab Number:	9011129-06A	Date Received:	11/14/90
Sample Matrix/Media:	WATER	Date Prepared:	11/15/90
Preparation Method:	EPA 5030	Date Analyzed:	11/15/90
Analytical Method:	EPA 8015/602		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	570	0.4
Toluene	108-88-3	3.1	0.3
Ethylbenzene	100-41-4	86	0.3
Xylenes	1330-20-7	170	0.4
Gasoline	-----	9,000	50

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Chevron USA Inc./ Weiss Associates

Client Reference: 91026/4-418-01
Clayton Project No. 90111.29

Sample Identification:	110-21	Date Sampled:	11/13/90
Lab Number:	9011129-07A	Date Received:	11/14/90
Sample Matrix/Media:	WATER	Date Prepared:	11/15/90
Preparation Method:	EPA 5030	Date Analyzed:	11/15/90
Analytical Method:	EPA 8015/602		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.4
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
Xylenes	1330-20-7	ND	0.4
Gasoline	-----	ND	50

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Chevron USA Inc./ Weiss Associates

Client Reference: 91026/4-418-01
Clayton Project No. 90111.29

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9011129-08A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	11/15/90
Preparation Method:	EPA 5030	Date Analyzed:	11/15/90
Analytical Method:	EPA 8015/602		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.4
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
Xylenes	1330-20-7	ND	0.4
Gasoline	-----	ND	50

ND Not detected at or above limit of detection
-- Information not available or not applicable

QUALITY ASSURANCE RESULTS SUMMARY

Sam Test Code; BTXG_S Instrument: HP 5890 PID/FID O.I.
Method/SOP No: EPA 5030/8020/8015 RUNDATE: 11/14/90
Initial Calib.Date3/15/90(PID),11/5/90(FID)
Analyst: JR

BLANK MEASUREMENTS

Compound	Instrument (ug/L)	Method (mg/kg)
Benzene	ND	ND
Toluene	ND	ND
Ethyl benzene	ND	ND
M+P XYLENES	ND	ND
O-XYLENE	ND	ND
Gasoline	ND	ND

QC MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Accuracy Control Limits: (% Recovery) Precision Control Limits: (RPD)
Soil: 70%-125% Soil: 20%

SampleID: MW-1 Units: UG/L
Lab #: 9011-188-01A Spike #: W-256
Matrix: Water Extraction Date: NA

Compound	Sample Result	Spiked value	Conc. MS	%Rec. MS	Conc. MSD	%Rec. MSD	RPD
Benzene	ND	10	10.289	102.9	10.309	103.1	0.194
Toluene	ND	10	10.223	102.2	10.205	102.1	0.176
Eth. benz	ND	10	9.779	97.8	9.779	97.8	0.000
M+PXylene	ND	20	20.099	100.5	19.946	99.7	0.764
O-Xylene	ND	10	9.778	97.8	9.761	97.6	0.174

QC SURROGATE DATA

Surrogate compound: 4-Bromofluorobenzene Source: Aldrich Lot 4123
Spike Value: 10 ug/L
%Recovery Control Limits Water: 50-150% Soil: 50-150%

Lab. No.	Sample Matrix	PID RESP	FID RESP	PID %REC	FID %REC
Inst.Blk.	WATER	0.806	1.2	107.9	96.0
10 BTEX	WATER	0.803	1.18	107.5	94.4
200 GAS	WATER	0.775	1.18	103.7	94.4
9011-118-01A	WATER	0.764	1.23	102.3	98.4
9011-118-01A MS	WATER	0.788	1.28	105.5	102.4
9011-118-01A MSD	WATER	0.771	1.23	103.2	98.4
9011-118-02A	WATER	0.779	1.29	104.3	103.2
9011-118-03A	WATER	0.785	1.32	105.1	105.6
9011-118-04A	WATER	0.773	1.25	103.5	100.0
9011-118-06A	WATER	1.48	5.67	198.1	453.6[a]
9011-118-05A	WATER	0.855	2.6	114.5	208.0[a]
9011-118-07A	WATER	0.825	1.51	110.4	120.8
9011-129-06A	WATER	2.41	5.95	322.6	476.0[a]
9011-129-01A	WATER	0.782	1.25	104.7	100.0

[a] Surrogate recovery above control limit due to gasoline level in sample.

9011-129-02A	WATER	0.798	1.38	106.8	110.4
9011-129-03A/10	WATER	0.823	1.94	110.2	155.2 a
BLANK	WATER	0.798	1.26	106.8	100.8
10 BTEX	WATER	0.802	1.28	107.4	102.4
200 GAS	WATER	0.784	1.33	105.0	106.4
9011-129-04A/200	WATER	0.793	1.33	106.2	106.4
9011-129-05A/100	WATER	0.789	1.29	105.6	103.2
9011-118-05A/5	WATER	0.836	1.48	111.9	118.4
9011-118-06A/5	WATER	0.947	1.93	126.8	154.4 a
9011-129-03A/50	WATER	0.823	1.78	110.2	142.4
9011-129-06A/10	WATER	0.942	1.92	126.1	153.6 a
9011-129-07A	WATER	0.783	1.25	104.8	100.0
9011-129-04A/1000	WATER	0.787	1.26	105.4	100.8
9011-129-05A/20	WATER	0.832	1.47	111.4	117.6
9011-118-05A/2	WATER	0.836	1.48	111.9	118.4
9011-118-06A/10	WATER	0.844	1.56	113.0	124.8

[a] Surrogate recovery above control limit due to gasoline level in sample.

WEISS ASSOCIATES
Geologic and Environmental Services
Fax: 415-547-5043 Phone: 415-547-5420
5500 Shellmound Street, Emeryville, CA 94608

TRANSMITTAL LETTER

FROM: Mariette Shin

DATE: December 28, 1990

TO: Lisa Backlund
Chevron USA
P.O. Box 5004
San Ramon, CA 94583-0804

VIA:
- X First Class Mail
- ____ Fax ____ pages
- ____ UPS (Surface)
- ____ Federal Express
- ____ Courier

SUBJECT: Former Chevron Service Station #9-1026
3701 Broadway
Oakland, California

JOB: 4-418-01

AS:
- ____ We discussed on the telephone on _____
- ____ You requested _____
- ____ We believe you may be interested
- X Is required

WE ARE SENDING:
- X Enclosed
- ____ Under Separate Cover Via _____

1. Quarterly ground water monitoring report for the subject site
2. Cover letter on Chevron letterhead
3. Chevron Site Status Report

FOR:
- ____ Your information
- X Your use
- ____ Your review & comments
- ____ Return to you

PLEASE:
- X Keep this material
- ____ Return by _____
- ____ Acknowledge receipt

MESSAGE: Please call if you have any questions.

CHEVRON SITE STATUS REPORT

SITE NUMBER 9-1026 DATE December 27, 1990

CONSULTANT Weiss Associates

This sheet must be attached to any reports submitted to Chevron. All status information must be updated. The status information will be used in Chevron's quarterly summary reports to the RWQCB.

1. Please indicate the status of the definition of soil, liquid hydrocarbon and dissolved hydrocarbon plumes.

INVESTIGATION STATUS:

SOIL: N LIQUID HYDROCARBON: I
DISSOLVED HYDROCARBON: I

Use the following letters to describe the status of the investigation:

STATUS CODE/DESCRIPTION	EXPLANATION
I = In progress	We are still in the process of defining the plume.
N = Not applicable	There has been no contamination of this nature found - i.e., there is no liquid hydrocarbon found
X = Definition complete	We have defined the plume - located the zero line

2. Please indicate the status of the remediation of soil, liquid hydrocarbon and dissolved hydrocarbon.

REMEDIATION STATUS:

SOIL: N LIQUID HYDROCARBON: T
DISSOLVED HYDROCARBON: D

Use the following letters to describe the status of the remediation:

STATUS CODE/DESCRIPTION	EXPLANATION
T = To be determined	This is the code used until it is determined whether or not remediation will be required
D = Design or permitting	The system is being designed or we are waiting for permits
I = In progress	The remediation system is operating
N = Not applicable	Remediation is not required
X = Remediation complete	Remediation has been completed

Prepared by Mariette Shin

E:\ALL\CHEV\SITESTAT