



Chevron U.S.A. Inc.

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Marketing Operations

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

December 15, 1989

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

Re: Former Chevron Facility #91026
3701 Broadway
Oakland, California 94611

Dear Mr. Shahid:

Enclosed are the results of the quarterly ground water sampling conducted by Weiss Associates at the above-referenced site. As indicated in the report, all water samples were analyzed for total purgeable petroleum hydrocarbons (TPPH) and aromatic hydrocarbons. Ground water samples from monitoring wells A, B-1, B-2, B-4, B-6, and B-7 contained benzene above the California Department of Health Services (DHS) maximum contaminant level (MCL) for drinking water. Ground water samples from monitoring wells B-1, B-2, and B-7 contained toluene above the DHS recommended action level for drinking water. Ground water samples from B-2 and B-7 contained ethylbenzene and xylenes above DHS MCLs. Monitoring wells B and B-3 contained free-floating hydrocarbons and were not sampled. A remediation system is being designed for the site. If you have any questions or comments, please contact Lisa Marinaro 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 Marinaro
Lisa Marinaro
Engineer

LAM/wa
Enclosure

cc: Don Dalke
Regional Water Quality Control Board
1111 Jackson Street
Oakland, California 94607

December 15, 1989

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

DEC 16 1989 H.C.H.

Re: Former Chevron Service Station #91026
3701 Broadway
Oakland, California
WA Job #4-418-01

Dear Ms. Marinaro:

Weiss Associates (WA) collected ground water samples from eight monitoring wells on November 9, 1989 as part of the quarterly ground water monitoring program at former Chevron Service Station #91026 in Oakland, California (Figure 1). Monitoring wells B and B-3 contained free-floating hydrocarbons and were not sampled. Monitoring well F was bailed dry and did not recover sufficiently to sample. Wells B-5 and C have been paved over so they could not be sampled this quarter. Ground water samples from monitoring wells A, B-1, B-2, B-4, B-6 and B-7 contained benzene above the California Department of Health Services (DHS) maximum contaminant level (MCL) for drinking water. Ground water samples from monitoring wells B-2 and B-7 contained ethylbenzene and xylenes above DHS MCLs. Ground water samples from monitoring wells B-1, B-2 and B-7 contained toluene above the DHS recommended action level for drinking water.

GROUND WATER SAMPLING

Personnel: Todd Pearson and Eric Anderson
WA Position: Environmental Technicians
Date of sampling: November 9, 1989

Monitoring/other wells sampled: A, B-1, B-2, B-4, B-6, B-7, EA-1 and EA-2

- Wells not sampled due to presence of free-floating hydrocarbons: B, B-3
- Wells with insufficient water to sample: F
- Wells not sampled due to inaccessibility: B-5, C

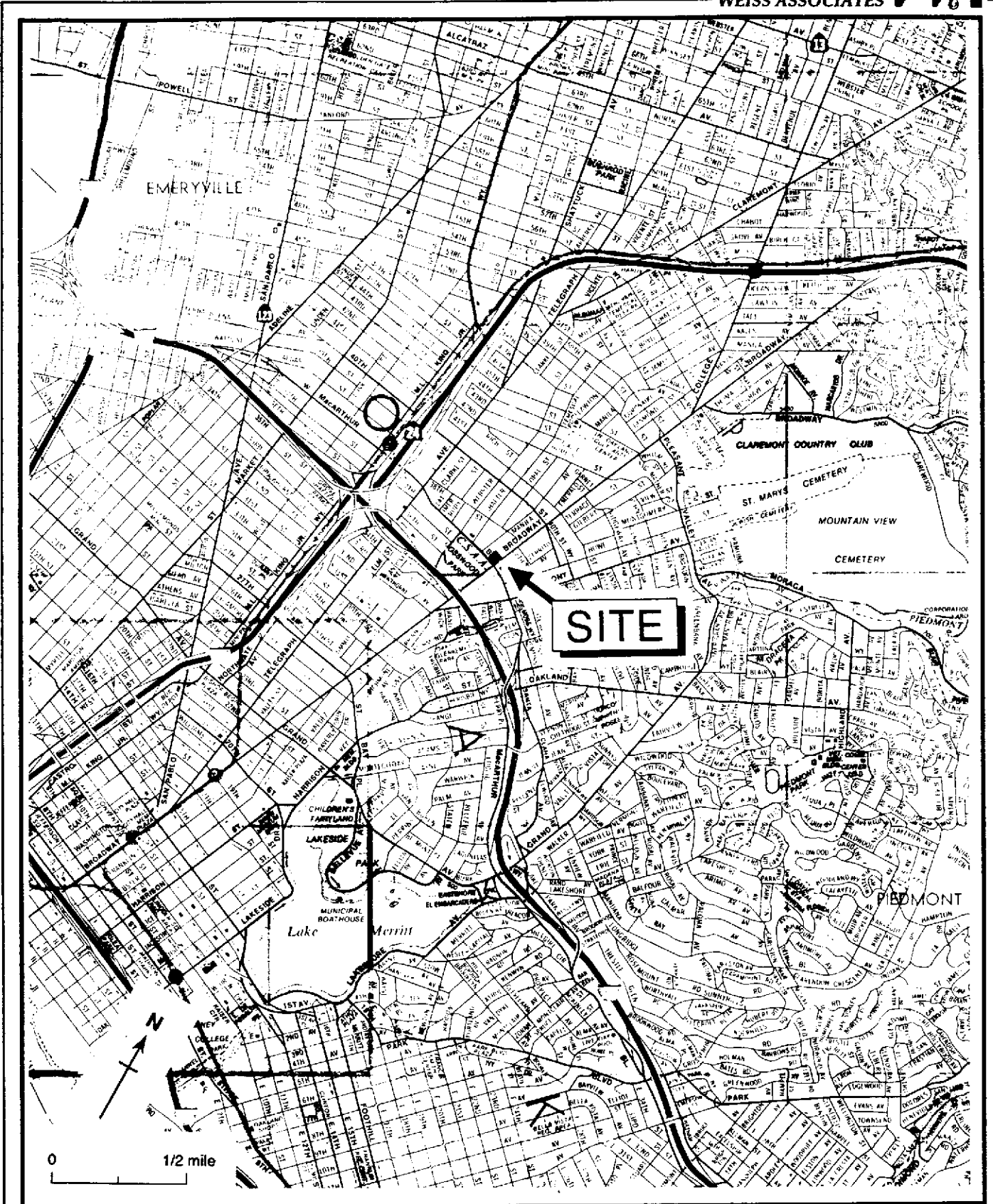


Figure 1. Site Location Map -Former Chevron Service Station #91026, 3701 Broadway, Oakland, California

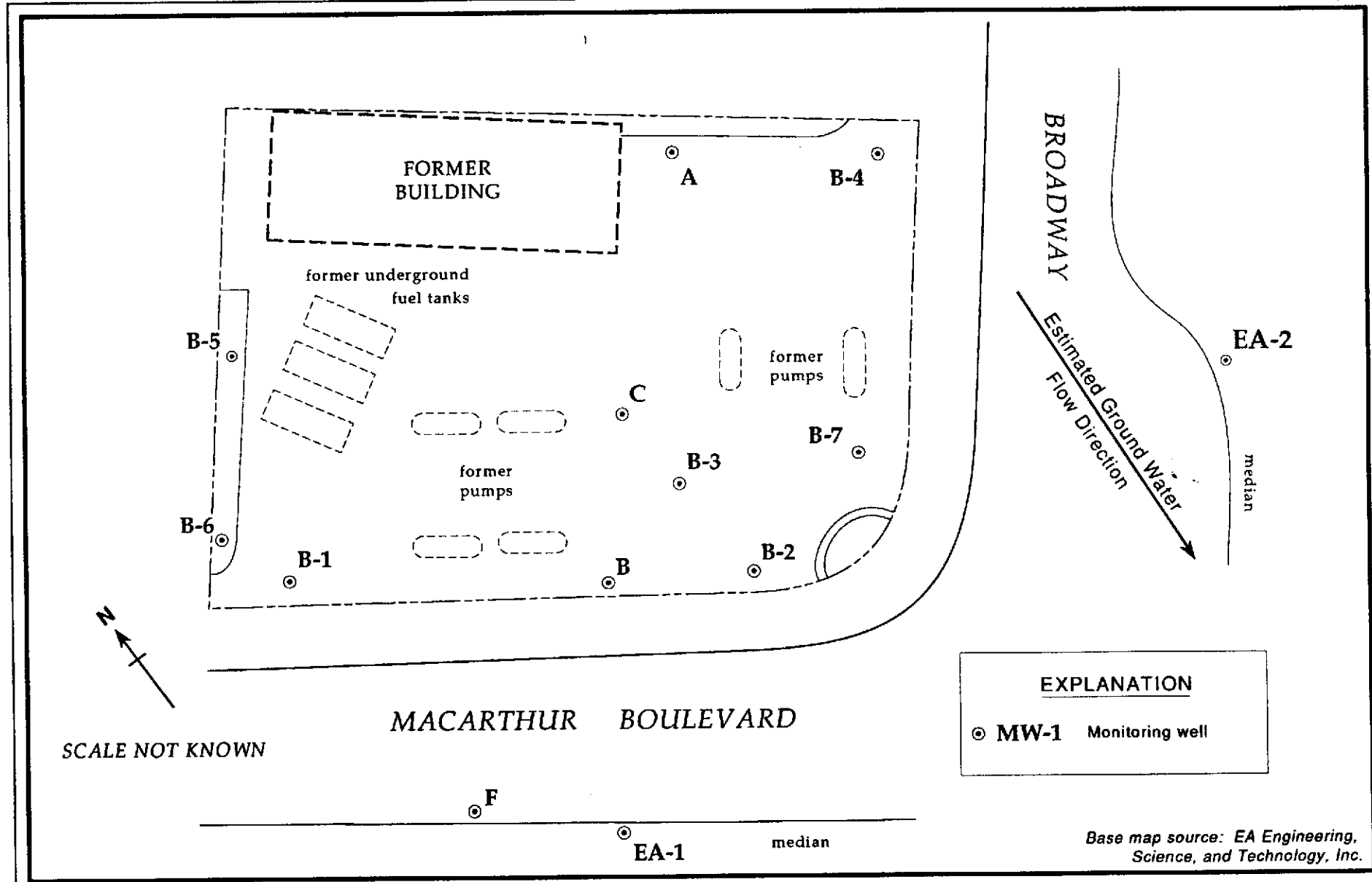


Figure 2. Monitoring Well Locations - Former Chevron Service Station #91026, 3701 Broadway, Oakland, California

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Method of purging wells:

- steam-cleaned PVC bailers
- steam-cleaned Teflon bailers
- dedicated Teflon bailers

Volume of water purged prior to sampling:

- Wells purged of about three well-casing volumes, approximately 0.75 to 30 gallons per well: A, B-1, B-2, B-4, EA-1, EA-2
- Wells purged dry; water level allowed to recover within 80% of static water level or allowed to recover for at least two hours prior to sampling: B-6, B-7

Method of ground water sample collection:

- Samples were decanted from steam-cleaned Teflon bailers.
- Samples were decanted from dedicated Teflon bailers.

Method of containing ground water samples:

- 40 ml glass, volatile organic analysis (VOA) vial, preserved with hydrochloric acid and sealed in a plastic guard bottle containing activated carbon pellets

All samples were placed in coolers and refrigerated for transport to the analytic laboratory.

Water samples were transported to:

- Superior Analytic Laboratory, Inc., Martinez, California

Date samples were received by Laboratory: November 10, 1989

Quality assurance/quality control:

- A travel blank was analyzed.

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

GROUND WATER GRADIENT

The ground water gradient, as inferred from regional topography, suggests southerly ground water flow. Top-of-casing elevations were not available, therefore a ground water elevation contour map was not drawn.

CHEMICAL ANALYSES

All ground water samples were analyzed for:

- Total purgeable petroleum hydrocarbons (TPPH) by modified EPA Method 8015
- Benzene, ethylbenzene, toluene and xylenes (BETX) by EPA Method 8020

Date samples were analyzed: November 16 and 17, 1989

Analytic results for this quarter show:

- Hydrocarbon concentrations in ground water samples from monitoring wells A and B-4 are generally higher than in previous samplings.
- Benzene concentrations in ground water samples from monitoring well B-1 are lower than in previous quarters.
- Hydrocarbon concentrations in ground water samples from monitoring wells B-6 and B-7 are lower than in previous samplings.
- Toluene was detected in ground water samples from monitoring well EA-2 for the first time.
- No hydrocarbons were detected in ground water samples from monitoring well EA-1.

Free-floating hydrocarbon thicknesses of 0.08 and 0.05 ft were observed in monitoring wells B and B-3, respectively, which is consistent with historical results. The results of the water analyses are presented in Table 1 and the analytic reports are included as Attachment C.

TABLE 1. Analytic Results for Ground Water - Chevron Service Station #91026, 3701 Broadway, Oakland, California

Sample ID	Date Sampled	Analytic Lab	Analytic Method	TPPH					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	
B	5-09-89 *	---	---	---	---	---	---	---	
	8-09-89 *	---	---	---	---	---	---	---	
	11-09-89 *	---	---	---	---	---	---	---	
F	5-09-89	SAL	8015/8020	<500	<0.5	<0.5	0.6	1.0	
	8-09-89 **	---	---	---	---	---	---	---	
	11-09-89 **	---	---	---	---	---	---	---	
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	
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	
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	
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	
B-3	5-10-89	SAL	8015/8020	70,000	12,000	1,400	9,500	8,900	
	5-10-89 *	---	---	---	---	---	---	---	
	11-09-89 *	---	---	---	---	---	---	---	
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	
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	

-- Table 1 continues next page--



TABLE 1. Analytic Results for Ground Water - Chevron Service Station #91026, 3701 Broadway, Oakland, California (continued)

Sample ID	Date Sampled	Analytic Lab	Analytic Method	TPPH				
				B	E	T	X	
				-----parts per billion (µg/L) ----->				
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
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
Bailer Blank	5-10-89	SAL	8015/8020	<500	<0.5	<0.5	<0.5	<0.5
DHS MCLs		---	---	NE	1	680	100 ^a	1,750

Abbreviations:

TPPH = Total Purgeable Petroleum Hydrocarbons
 B = Benzene
 E = Ethylbenzene
 T = Toluene
 X = Xylenes
 DHS MCLs = Department of Health Services
 Maximum Contaminant Level for Drinking Water
 <n = Not detected at detection limit of n parts per billion
 dup = Duplicate analysis
 NE = Not established by DHS
^a = DHS Recommended Action Level for Drinking Water
 * = Not sampled due to presence of free-floating hydrocarbons
 ** = Not sampled because of insufficient water in the well

Analytic Laboratory:

SAL = Superior Analytical Laboratories of San Francisco and Martinez, California

Analytic Methods:

8015 = Modified EPA Method 8015, TPPH
 8020 = EPA Method 8020, Purgeable Aromatic Hydrocarbons

Ms. Lisa Marinaro
December 15, 1989

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WEISS ASSOCIATES



We appreciate the opportunity to provide hydrogeologic consulting services to Chevron and trust that this report meets your needs. If you have any questions, please call Jim Carmody or Robert Kitay.



Sincerely,
Weiss Associates

Robert E. Kitay
Staff Geologist

Eric M. Nichols
Senior Water Resources Engineer

REK/EMN:kw

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

**ATTACHMENT A
WATER SAMPLE COLLECTION RECORDS**



WEISS ASSOCIATES

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WATER SAMPLING DATA Well Name A Date 11-9-89 Time 1145
 Job Name/Number Chev Oak III 4-418-01 Initials TP
 Well Spring Surface Other _____
 Location Bj office

WELL DATA: Well type 1 (Describe; M - monitoring well)
 Depth to Water 15.95 ft (pump/stat) Maximum Drawdown Limit (MDL) _____ ft
 Well depth 20.06 ft (sounded) Well depth 20.06 ft (spec)
 Well diameter 2 in. TOC height above ground _____ ft Water elev. _____ ft
 Volume Evacuated: Pumped bailed Pumped _____ Bailed _____

Time: Stop 1145 Start 1130
 Total hrs/min 15
 Total Evacuated 2 gal.
 Evacuation Rate 0.13 gpm
 Pump # and type _____ Bailer # and type 5/8" PVC Bailer # AM
 Hose # and type _____

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

Sampling Port: Rate _____ gpm Volume _____ gal.
 Location/description _____

Initial height of water in casing = 4.11 ft; volume = .66 gal. x 3
 Evacuation at drawdown limit = 3 x initial volume = _____ gal.
 Evacuation at sampling point = 1 x initial volume = _____ gal.
 Total to be evacuated = 2.0 gal.

Water Color: none Odor: none
 Description of sediment and/or foreign matter in sample: relatively clear, few particles of fine sand
 Point of collection: 2nd of Teflon bailed # AM
 Depth to water during pumping _____ ft _____ time Sampling 19.01 ft 1146 time
 Pumped dry? NO After _____ gal. Recovery rate _____

ADDITIONAL COMMENTS, LOCATION SKETCH, ENVIRONMENTAL CONDITIONS, e.g., weather, van running nearby, problems with equipment or sampling, etc., pump on/off times, etc. (over).

CHEMICAL DATA

Temperature _____ °C Thermometer # _____ Specific Conductance _____ umhos
 pH _____ Calibration 4.0, 7.0, 10.0 Calibration Temp. _____ °C

SAMPLES COLLECTED:

Sample ID No.	Bottle/Cap (Specify)	Filtered (size, u) (N = No)	Preservative (specify) (R = Refrigerated)	Analysis	Lab
(3) 119-A 40 ml	C/V	N	HCC R	Cassey	GTCL
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____

Bottles: P - Polyethylene; Pp - Polypropylene; C or B - Clear/Brown Glass; O - Other (describe)
 Additional Cap Codes: Py - Polyseal; V - VOA/Teflon septa; M - Metal

FREE PRODUCT, NO SAMPLE

WATER SAMPLING DATA Well Name B* Date 11-9-89 Time 10:41
 Job Name/Number Chem Out III 441801 Initials JP
 Well Spring Surface Other _____
 Location By McCrath

WELL DATA: Well type M (Describe; M - monitoring well)
 Depth to Water _____ ft (pump/stat) Maximum Drawdown Limit (MDL) _____ ft
 Well depth _____ ft (sounded) Well depth _____ ft (spec)
 Well diameter _____ in. TOC height above ground _____ ft Water elev. _____ ft
 Volume Evacuated: Pumped galled Pumped _____ Bailed _____

Time: Stop _____ Start _____
 Total hrs/min _____
 Total Evacuated _____ gal.
 Evacuation Rate _____ gpm
 Pump # and type _____ Bailer # and type _____
 Hose # and type _____

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

Sampling Port: Rate _____ gpm Volume _____ gal.
 Location/description _____

Initial height of water in casing - _____ ft; volume - _____ gal. x 3
 Evacuation at drawdown limit = 3 x initial volume - _____ gal.
 Evacuation at sampling point = 1 x initial volume - _____ gal.
 Total to be evacuated - _____ gal.

Water Color: Brown, oily water Odor: strong
 Description of sediment and/or foreign matter in sample: _____

Point of collection: End of Teflon
 Depth to water during pumping _____ ft time Sampling _____ ft time
 Pumped dry? _____ After _____ gal. Recovery rate _____

ADDITIONAL COMMENTS, LOCATION SKETCH, ENVIRONMENTAL CONDITIONS, e.g., weather, van running nearby, problems with equipment or sampling, etc., pump on/off times, etc. (over).

CHEMICAL DATA
 Temperature _____ °C Thermometer # _____ Specific Conductance _____ umhos
 pH _____ Calibration _____ 4.0, _____ 7.0, _____ 10.0 Calibration Temp. _____ °C

SAMPLES COLLECTED:

Sample ID No.	Bottle/Cap (Specify)	Filtered (size, u) (N - No)	Preservative (specify) (R - Refrigerated)	Analysis	Lab
(3) 119-B*	40 ml C/V	N	HCL	Gas-Bex	G-re 1
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Bottles: P - Polyethylene; Pp - Polypropylene; C or B - Clear/Brown Glass; O - Other (describe)

Additional Cap Codes: Py - Polyseal; V - VOA/Teflon septa; M - Metal

15.21 to product } interface probe @ 10:41 AM.
 15.29 to water }
 DR1 . . H. FAR



WATER SAMPLING DATA Well Name F Date 11/2/89 Time 1
 Job Name/Number C- Cabland III / 4-418-01 Initials EWA

Well 1 Spring Surface Other _____
 Location In 1st line of wetland north w. of Prudhoe

WELL DATA: Well type M (Describe; M = monitoring well)

Depth to Water 19.02 ft (pump/stat) Maximum Drawdown Limit (MDL) _____ ft

Well depth 19.52 ft (sounded) Well depth 19.63 ft (spec)

Well diameter 2 in. TOC height above ground _____ ft Water elev. _____ ft

Volume Evacuated: Pumped Pumped Bailed
 Time: Stop _____ 11:30
 Start _____ 11:32
 Total hrs/min _____ :02
 Total Evacuated .05 gal.
 Evacuation Rate .025 gpm !!

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

Pump # and type _____ Bailer # and type Tiffin bailer # AP
 Hose # and type _____

Sampling Port: Rate _____ gpm Volume _____ gal.
 Location/description _____

Initial height of water in casing = .80 ft; volume = .13 gal. x 3
 Evacuation at drawdown limit = 3 x initial volume = _____ gal.
 Evacuation at sampling point = 1 x initial volume = _____ gal.
 Total to be evacuated = .4 gal.

O.T.W
 19.18 =
 80% of
 initial vol

Water Color: Not enough water to sample Odor: _____
 Description of sediment and/or foreign matter in sample: _____

Point of collection: _____
 Depth to water during pumping _____ ft _____ time Sampling 19.26 ft 14:57 time
 Pumped dry? yes After .05 gal. Recovery rate .0005 gpm
 ADDITIONAL COMMENTS, LOCATION SKETCH, ENVIRONMENTAL CONDITIONS, e.g., weather,
 van running nearby, problems with equipment or sampling, etc., pump on/off
 times, etc. (over).

CHEMICAL DATA
 Temperature _____ °C Thermometer # _____ Specific Conductance _____ umhos
 pH _____ Calibration _____ 4.0, _____ 7.0, _____ 10.0 Calibration Temp. _____ °C

SAMPLES COLLECTED:

Sample ID No.	Bottle/ Cap (Specify)	Filtered (size, u) (N - No)	Preservative (specify) (R - Refrigerated)	Analysis	Lab
<u>119-F</u>	<u>40 ml C/V</u>	<u>N</u>	<u>HCl R</u>	<u>Gas + BETX</u>	<u>LET</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Bottles: P - Polyethylene; Pp - Polypropylene; C or B - Clear/Brown Glass;
 O - Other (describe)
 Additional Cap Codes: Py - Polyseal; V - VOA/Teflon septa; M - Metal

Sampled at 70% recovery 3:20 mins after evacuation
T. Obisont laster to Sample

WATER SAMPLING DATA Well Name EA-1 Date 11-9-89 Time 1300
 Job Name/Number Chem Oakland III 4-41801 Initials TR
 Well Spring Surface Other

Location Median on MacArthur
 WELL DATA: Well type M (Describe; M - monitoring well)
 Depth to Water 15.84 ft (pump/stat) Maximum Drawdown Limit (MDL) ft
 Well depth 30.19 ft (sounded) Well depth 30.27 ft (spec)
 Well diameter 4 in. TOC height above ground ft Water elev. ft
 Volume Evacuated: ~~Pumped~~ drilled Pumped Bailed

Time: Stop 1250
 Start 1230
 Total hrs/min 20
 Total Evacuated 30 gal.
 Evacuation Rate 1.5 gpm
 Pump # and type Bailer # and type 4" PVC AG
 Hose # and type

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 = 0.833 gal/ft
 V_{4.5"} casing = 0.826 gal/ft
 V_{6"} casing = 1.47 gal/ft
 V_{8"} casing = 2.61 gal/ft

Sampling Port: Rate gpm Volume gal.
 Location/description

Initial height of water in casing - 14.65 ft; volume - 9.56 gal x 3
 Evacuation at drawdown limit - 3 x initial volume - gal.
 Evacuation at sampling point - 1 x initial volume - gal.
 Total to be evacuated - 28.6 gal

Water Color: none Odor: none
 Description of sediment and/or foreign matter in sample: turbid, fine silt.

Point of collection: End of Yerton # Ah
 Depth to water during pumping ft time Sampling 15.80 ft 12:58 time
 Pumped dry? NU After gal. Recovery rate

ADDITIONAL COMMENTS, LOCATION SKETCH, ENVIRONMENTAL CONDITIONS, e.g., weather, van running nearby, problems with equipment or sampling, etc., pump on/off times, etc. (over).

CHEMICAL DATA
 Temperature °C Thermometer # Specific Conductance umhos
 pH Calibration 4.0, 7.0, 10.0 Calibration Temp. °C

SAMPLES COLLECTED:

Sample ID No.	Bottle/Cap (Specify)	Filtered (size, u) (N - No)	Preservative (specify) (R - Refrigerated)	Analysis	Lab
(3) 119-BA-1	40 ml C/P	N	ACL R	Gas/Betr	G-Te 1
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Bottles: P - Polyethylene; Pp - Polypropylene; C or B - Clear/Brown Glass; O - Other (describe)
 Additional Cap Codes: Py - Polyseal; V - VOA/Teflon septa; M - Metal



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WATER SAMPLING DATA Well Name EA-2 Date 11/9/89 Time 12:28
 Job Name/Number C - Oakland III / 4-418-01 Initials EWA
 Well Spring Surface Other

Location In median of Broadway north of Webster
 WELL DATA: Well type M (Describe; M - monitoring well)
 Depth to Water 17.41 ft (pump/stat) Maximum Drawdown Limit (MDL) — ft
 Well depth 30.23 ft (sounded) Well depth 90.11 ft (spec)
 Well diameter 4 in. TOC height above ground — ft Water elev. — ft

Volume Evacuated: Pumped Pumped Bailed
 Time: Stop — — 12:18
 Start — — 11:56
 Total hrs/min — — 22
 Total Evacuated 25 gal.
 Evacuation Rate 1.1 gpm
 Pump # and type — Bailer # and type 3" PVC # A
 Hose # and type —

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

Sampling Port: Rate — gpm Volume — gal.
 Location/description —

Initial height of water in casing = 12.82 ft; volume = 8.37 gal. x3
 Evacuation at drawdown limit = 3 x initial volume = — gal.
 Evacuation at sampling point = 1 x initial volume = — gal.
 Total to be evacuated = 25.1 gal.

Water Color: Grey-turbid Odor: none
 Description of sediment and/or foreign matter in sample: Moderate amount of suspended fines w/ a couple of bigger flakes floating around

Point of collection: End of teflon bailer # A5
 Depth to water during pumping — ft — time Sampling 23.31 ft 12:29 time
 Pumped dry? about After 25 gal. Recovery rate —

ADDITIONAL COMMENTS, LOCATION SKETCH, ENVIRONMENTAL CONDITIONS, e.g., weather, van running nearby, problems with equipment or sampling, etc., pump on/off times, etc. (over).

CHEMICAL DATA
 Temperature — °C Thermometer # — Specific Conductance — umhos
 pH — Calibration 4.0, 7.0, 10.0 Calibration Temp. — °C

SAMPLES COLLECTED:

Sample ID No.	Bottle/Cap (Specify)	Filtered (size, u) (N - No)	Preservative (specify) (R - Refrigerated)	Analysis	Lab
<u>119-EA2</u>	<u>40 ml C/V</u>	<u>N</u>	<u>HCl R</u>	<u>Gas + BETX</u>	<u>GTEL</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Bottles: P - Polyethylene; Pp - Polypropylene; C or B - Clear/Brown Glass; O - Other (describe)
 Additional Cap Codes: Py - Polyseal; V - VOA/Teflon septa; M - Metal

3



WATER SAMPLING DATA Well Name B-1 Date 11-9-84 Time 1035
 Job Name/Number Chem. Oak Initials PT
 Well Spring Surface Other
 Location SW corner of lot

WELL DATA: Well type M (Describe; M - monitoring well)
 Depth to Water 14.06 ft (pump/stat) Maximum Drawdown Limit (MDL) ft
 Well depth 15.57 ft (sounded) Well depth 15.20 ft (spec)
 Well diameter 2 in. TOC height above ground ft Water elev. ft
 Volume Evacuated: Pumped Not Pumped Pumped Bailed

Time: Stop 1035
 Start 1020
 Total hrs/min 15
 Total Evacuated .73 gal.
 Evacuation Rate .05 gpm
 Pump # and type Bailer # and type Cal. Tot.
 Hose # and type

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

Sampling Port: Rate gpm Volume gal.
 Location/description

Initial height of water in casing = 1.51 ft; volume = 124 gal. x 3
 Evacuation at drawdown limit = 3 x initial volume = gal.
 Evacuation at sampling point = 1 x initial volume = gal.
 Total to be evacuated = .73 gal.

Water Color: Grey Odor: Yes
 Description of sediment and/or foreign matter in sample: Turbid,

heavy sand/silt
 Point of collection: end of teflon bailer (dedicated)
 Depth to water during pumping ft time Sampling 15.15 ft / 1036 time
 Pumped dry? NO After gal. Recovery rate
 ADDITIONAL COMMENTS, LOCATION SKETCH, ENVIRONMENTAL CONDITIONS, e.g., weather, van-running nearby, problems with equipment or sampling, etc., pump on/off times, etc. (over).

CHEMICAL DATA
 Temperature °C Thermometer # Specific Conductance umhos
 pH Calibration 4.0, 7.0, 10.0 Calibration Temp. °C

SAMPLES COLLECTED:

Sample ID No.	Bottle/ Cap (Specify)	Filtered (size, u) (N - No)	Preservative (specify) (R - Refrigerated)	Analysis	Lab
(3) 119-B1 40 ml	<u>CPV</u>	<u>N</u>	<u>HCL 12</u>	<u>WATER</u>	<u>ETL</u>
ml					
ml					
ml					
ml					
ml					
ml					
ml					
ml					
ml					

Bottles: - Polyethylene; Pp - Polypropylene; C or B - Clear/Brown Glass; O - Other (describe)
 Additional Cap Codes: Py - Polyseal; V - VOA/Teflon septa; M - Metal



WATER SAMPLING DATA Well Name B-2 Date 11-9-89 Time 0935
 Job Name/Number Chev. Day III 4-418-01 Initials TP
 Well Spring Surface Other _____
 Location Corna McLanahan / Broadway

WELL DATA: Well type _____ (Describe; M - monitoring well)
 Depth to Water 16.95 ft (pump/stat) Maximum Drawdown Limit (MDL) _____ ft
 Well depth _____ ft (sounded) Well depth 19.05 ft (spec)
 Well diameter 2 in. TOC height above ground _____ ft Water elev. _____ ft
 Volume Evacuated: Pumped/bailed Pumped _____ Bailed _____

Time: Stop 0938 Start 0925
 Total hrs/min _____
 Total Evacuated _____ gal.
 Evacuation Rate 2 gpm

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

Pump # and type _____ Bailer # and type ded. Tel. bkr.
 Hose # and type _____

Sampling Port: Rate _____ gpm Volume _____ gal.
 Location/description _____

Initial height of water in casing = 21 ft; volume = 1.34 gal x 3
 Evacuation at drawdown limit = 3 x initial volume = _____ gal.
 Evacuation at sampling point = 1 x initial volume = _____ gal.
 Total to be evacuated = 1.02 gal

Water Color: none Odor: yes
 Description of sediment and/or foreign matter in sample: fine suspended sand/silt, non-cavitated, not turbid
 Point of collection: End of ded. bailer (Tel. bkr)

Depth to water during pumping _____ ft _____ time Sampling 18.42 ft 0930 time
 Pumped dry? NO After _____ gal. Recovery rate _____

ADDITIONAL COMMENTS, LOCATION SKETCH, ENVIRONMENTAL CONDITIONS, e.g., weather, van running nearby, problems with equipment or sampling, etc., pump on/off times, etc. (over).

CHEMICAL DATA

Temperature _____ °C Thermometer # _____ Specific Conductance _____ umhos
 pH _____ Calibration _____ 4.0, _____ 7.0, _____ 10.0 Calibration Temp. _____ °C

SAMPLES COLLECTED:

Sample ID No.	Bottle/Cap (Specify)	Filtered (size, u) (N - No)	Preservative (specify) (R - Refrigerated)	Analysis	Lab
(3) 119-B-2 40 ml	C/V	N	HCL R	TEST/TEL	G-TEL
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____
_____ ml	_____	_____	_____	_____	_____

Bottles: P - Polyethylene; Pp - Polypropylene; C or B - Clear/Brown Glass; O - Other (describe)

Additional Cap Codes: Py - Polyseal; V - VOA/Teflon septa; M - Metal

no product detected by interference probe

WATER SAMPLING DATA Well Name B-3 Date 11-9-84 Time _____
 Job Name/Number Chem. Data III 4-418-01 Initials TP
 Well Spring Surface Other

Location Center of lot
WELL DATA: Well type _____ (Describe; M - monitoring well)
 Depth to Water _____ ft (pump/stat) Maximum Drawdown Limit (MDL) _____ ft
 Well depth _____ ft (sounded) Well depth _____ ft (spec)
 Well diameter _____ in. TOC height above ground _____ ft Water elev. _____ ft
 Volume Evacuated: ~~Pumped~~ Bailed Pumped Bailed

Time: Stop _____
 Start _____
 Total hrs/min _____
 Total Evacuated _____ gal.
 Evacuation Rate _____ gpm
 Pump # and type _____ Bailer # and type _____
 Hose # and type _____

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

Sampling Port: Rate _____ gpm Volume _____ gal.
 Location/description _____

Initial height of water in casing = _____ ft; volume = _____ gal. x 3
 Evacuation at drawdown limit = 3 x initial volume = _____ gal.
 Evacuation at sampling point = 1 x initial volume = _____ gal.
 Total to be evacuated = _____ gal.

Water Color: _____ Odor: _____
 Description of sediment and/or foreign matter in sample: _____

Point of collection: _____
 Depth to water during pumping _____ ft _____ time Sampling _____ ft _____ time
 Pumped dry? _____ After _____ gal. Recovery rate _____
 ADDITIONAL COMMENTS, LOCATION SKETCH, ENVIRONMENTAL CONDITIONS, e.g., weather, van running nearby, problems with equipment or sampling, etc., pump on/off times, etc. (over).

CHEMICAL DATA
 Temperature _____ °C Thermometer # _____ Specific Conductance _____ umhos
 pH _____ Calibration 4.0, 7.0, 10.0 Calibration Temp. _____ °C

SAMPLES COLLECTED:

Sample ID No.	Bottle/Cap (Specify)	Filtered (size, u) (N = No)	Preservative (specify) (R = Refrigerated)	Analysis	Lab
<u>(3) 119-03</u>	<u>CV</u>	<u>N</u>	<u>HCC</u>	<u>R</u>	<u>COG-DEV</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Bottles: P - Polyethylene; Pp - Polypropylene; C or B - Clear/Brown Glass; O - Other (describe)

Additional Cap Codes: Py - Polyseal; V - VOA/Teflon septa; M - Metal

15.50' to product } w/ interface probe @ 10:10 A.M.
15.55' to water } 11:13



2

WATER SAMPLING DATA Well Name B-4 Date 11-9-89 Time 12:10
 Job Name/Number Chem. Oct III 4-418-01 Initials TP
 Well Spring Surface Other

Location NE corner of lot
WELL DATA: Well type M (Describe; M - monitoring well)
 Depth to Water 16.49 ft (pump/stat) Maximum Drawdown Limit (MDL) ft
 Well depth 19.51 ft (sounded) Well depth 19.37 ft (spec)
 Well diameter 2 in. TOC height above ground ft Water elev. ft

Volume Evacuated: Pumped Pumped Bailed
 Time: Stop 1:10 Start 12:05
 Total hrs/min 5
 Total Evacuated 1.5 gal.
 Evacuation Rate 3 gpm
 Pump # and type Bailer # and type Tef. # L
 Hose # and type

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

Sampling Port: Rate gpm Volume gal.
 Location/description

Initial height of water in casing = 2.52 ft; volume = 41 gal. x 3
 Evacuation at drawdown limit = 3 x initial volume = gal.
 Evacuation at sampling point = 1 x initial volume = gal.
 Total to be evacuated = 1.2 gal.

Water Color: None Odor: slight
 Description of sediment and/or foreign matter in sample: Turbid, wood-like sediment with fine sand/silt

Point of collection: End of Teflon # L
 Depth to water during pumping ft time Sampling 8.6 ft 12:12 time
 Pumped dry? NO After gal. Recovery rate
ADDITIONAL COMMENTS, LOCATION SKETCH, ENVIRONMENTAL CONDITIONS, e.g., weather, van running nearby, problems with equipment or sampling, etc., pump on/off times, etc. (over).

CHEMICAL DATA
 Temperature °C Thermometer # Specific Conductance umhos
 pH Calibration 4.0, 7.0, 10.0 Calibration Temp. °C

SAMPLES COLLECTED:

Sample ID No.	Bottle/Cap (Specify)	Filtered (size, u) (N - No)	Preservative (specify) (R - Refrigerated)	Analysis	Lab
(3) 119-B-4	40 ml CV	N	HCL R	Gas-Set x	G-Te 1

Bottles: P - Polyethylene; Pp - Polypropylene; C or B - Clear/Brown Glass; O - Other (describe)
 Additional Cap Codes: Py - Polyseal; V - VOA/Teflon septa; M - Metal

Used as F.P.B. per E.A. (used at Pub. Hlth. as F.A.B. - then stem closed thoroughly)



WATER SAMPLING DATA Well Name B-6 Date 11-9-89 Time 1510
 Job Name/Number Chev. Out III 4-418-01 Initials TP
 Well Spring Surface Other
 Location West Plaster

WELL DATA: Well type M (Describe; M - monitoring well)
 Depth to Water 13.85 ft (pump/stat) Maximum Drawdown Limit (MDL) 1 ft
 Well depth 19.66 ft (sounded) Well depth 19.35 ft (spec)
 Well diameter in. TOC height above ground ft Water elev. ft

Volume Evacuated: Pumped Bailed Pumped Bailed
 Time: Stop 1510
 Start 1000
 Total hrs/min 20
 Total Evacuated 20 gal.
 Evacuation Rate 2.0 gpm

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

Pump # and type Bailer # and type 4" PVC # AK
 Hose # and type

Sampling Port: Rate gpm Volume gal.
 Location/description

Initial height of water in casing = 5.81 ft; volume = 15.16 gal
 Evacuation at drawdown limit = 3 x initial volume = gal.
 Evacuation at sampling point = 1 x initial volume = gal.
 Total to be evacuated = 45.49 gal.

Water Color: none Odor:
 Description of sediment and/or foreign matter in sample: Yes Turbid, wood/soil particles, fine sand
 Point of collection: End of 2nd. Teflon bailer
 Depth to water during pumping ft time Sampling 14.01 ft 1512 time
 Pumped dry? Yes After 20 gal. Recovery rate

ADDITIONAL COMMENTS, LOCATION SKETCH, ENVIRONMENTAL CONDITIONS, e.g., weather, van running nearby, problems with equipment or sampling, etc., pump on/off times, etc. (over).

CHEMICAL DATA

Temperature °C Thermometer # Specific Conductance umhos
 pH Calibration 4.0, 7.0, 10.0 Calibration Temp. °C

SAMPLES COLLECTED:

Sample ID No.	Bottle/Cap (Specify)	Filtered (size, u) (N - No)	Preservative (specify) (R = Refrigerated)	Analysis	Lab
(3) 119-B6 40 ml	CPU	N	HCL R	Gas-velx	G-Tel
ml					
ml					
ml					
ml					
ml					
ml					
ml					
ml					

Bottles: P - Polyethylene; Pp - Polypropylene; C or B - Clear/Brown Glass; O - Other (describe)
 Additional Cap Codes: Py, - Polyseal; V - VOA/Teflon septa; M - Metal

recovery 15.04



WATER SAMPLING DATA Well Name B-7 Date 11-9-89 Time 1450
 Job Name/Number Chev. Oak III 4-418-01 Initials TP
 Well Spring Surface Other _____
 Location East part of lot

WELL DATA: Well type M (Describe; M = monitoring well)
 Depth to Water 16.64 ft (pump/stat) Maximum Drawdown Limit (MDL) _____ ft
 Well depth 19.50 ft (sounded) Well depth 19.33 ft (spec)
 Well diameter 6 in. TOC height above ground _____ ft Water elev. _____ ft
 Volume Evacuated: Pumped/bailed Pumped _____ Bailed _____

Time: Stop 1110 Start 1105
 Total hrs/min _____
 Total Evacuated _____ gal.
 Evacuation Rate _____ gpm
 Pump # and type _____ Bailer # and type 4" PVC # AN
 Hose # and type _____

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 = 0.633 gal/ft
 V_{4.5"} casing = 0.826 gal/ft
 V_{6"} casing = 1.47 gal/ft
 V_{8"} casing = 2.61 gal/ft

17.2
= 80%
recovery

Sampling Port: Rate _____ gpm Volume _____ gal.
 Location/description _____

Initial height of water in casing = 2.86 ft; volume = 4.20 gal. x 3
 Evacuation at drawdown limit = 3 x initial volume = _____ gal.
 Evacuation at sampling point = 1 x initial volume = _____ gal.
 Total to be evacuated = 12.6 gal.

Water Color: none Odor: none / slight
 Description of sediment and/or foreign matter in sample: turbid

Point of collection: End of tetlon # AN
 Depth to water during pumping _____ ft time Sampling 6.85 ft 1455 time
 Pumped dry? yes After 5 gal. Recovery rate _____

ADDITIONAL COMMENTS, LOCATION SKETCH, ENVIRONMENTAL CONDITIONS, e.g., weather, van running nearby, problems with equipment or sampling, etc., pump on/off times, etc. (over).

CHEMICAL DATA
 Temperature _____ °C Thermometer # _____ Specific Conductance _____ umhos
 pH _____ Calibration _____ 4.0, 7.0, 10.0 Calibration Temp _____ 20

SAMPLES COLLECTED:

Sample ID No.	Bottle/Cap (Specify)	Filtered (size, u) (N - No)	Preservative (specify) (R - Refrigerated)	Analysis	Lab
(3) 119-B-7 40	ml 4/10	N	ACL	R	Gas Detx G-Te l
_____	ml _____	_____	_____	_____	_____
_____	ml _____	_____	_____	_____	_____
_____	ml _____	_____	_____	_____	_____
_____	ml _____	_____	_____	_____	_____
_____	ml _____	_____	_____	_____	_____
_____	ml _____	_____	_____	_____	_____
_____	ml _____	_____	_____	_____	_____
_____	ml _____	_____	_____	_____	_____

Bottles: P - Polyethylene; Pp - Polypropylene; C or B - Clear/Brown Glass; O - Other (describe)
 Additional Cap Codes: Py - Polyseal; V - VOA/Teflon septa; M - Metal

no product detected by interfere probe

80241

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
 Consultant Weiss Associates Consultant Project Number 4-418-01
 Release Number _____
 Consultant Name Weiss Associates
 Address 298 McClure St, Oak, CA 94609
 Fax Number (415) 465-1265
 Project Contact (Name) Jim Carmody
 (Phone) (415) 465-1100

Chevron Contact (Name) _____
 (Phone) _____
 Laboratory Name G-Tel
 Contract Number 746CW C0244-9-X
 Samples Collected by (Name) Todd Pearson / Eric Anderson
 Collection Date 11-9-89
 Signature [Signature]

Sample Number	Lab Number	Number of Containers	Matrix S = Soil W = Water C = Charcoal	Type G = Grab C = Composite	Time	Sample Preservation	Iced	Analyses To Be Performed							Remarks		
								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			
119-A		3	W	G	1145	HCL	Y	✓				✓					
119-B-1		3	W	G	1035	HCL	Y	✓				✓					
119-B-2		3	W	G	0935	HCL	Y	✓				✓					
119-B-4		3	W	G	1210	HCL	Y	✓				✓					
119-B-6		3	W	G	1510	HCL	Y	✓				✓					
119-B-7		3	W	G	1450	HCL	Y	✓				✓					
EA-1		3	W	G	1300	HCL	Y	✓				✓					
EA-2		3	W	G	1228	HCL	Y	✓				✓					
119-21		2	W	G	0700	none	Y	✓				✓					

Relinquished By (Signature) <u>[Signature]</u> Lacked in Storage	Organization <u>WEISS</u>	Date/Time <u>11-9-89</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>WEISS</u>	Date/Time <u>11/10/89</u>	Turn Around Time (Circle Choice) 24 Hrs 48 Hrs 5 Days 10 Days
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>WEISS</u>	Date/Time <u>11/10/89</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>EXPRESS-IT</u>	Date/Time <u>11/10/89</u>	
Relinquished By (Signature) <u>[Signature]</u>	Organization <u>WEISS</u>	Date/Time _____	Received For Laboratory By (Signature) <u>[Signature]</u>	Organization _____	Date/Time <u>11/10/89</u>	

SUPERIOR ANALYTICAL LABORATORY INC.

825 ARNOLD, STE. 2 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 80241
CLIENT: Weiss Associates
CLIENT JOB NO.: 4-418-01

DATE RECEIVED: 11/10/89
DATE REPORTED: 11/17/89

Page 1 of 2

Lab Number	Customer Sample Identification	Date Analyzed	Date Sampled
80241- 1	119-A	11/16/89	11/09/89
80241- 2	119-B-1	11/16/89	11/09/89
80241- 3	119-B-2	11/16/89	11/09/89
80241- 4	119-B-4	11/17/89	11/09/89
80241- 5	119-B-6	11/16/89	11/09/89
80241- 6	119-B-7	11/17/89	11/09/89
80241- 7	EA-1	11/16/89	11/09/89
80241- 8	EA-2	11/16/89	11/09/89
80241- 9	119-21	11/16/89	11/09/89

Laboratory Number:	80241	80241	80241	80241	80241
	1	2	3	4	5

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	16000	17000	110000	14000	13000
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	690	340	32000	6000	70
TOLUENE:	10	140	5500	70	36
ETHYL BENZENE:	180	110	2800	530	36
XYLENES:	350	760	12000	300	440

Laboratory Number:	80241	80241	80241	80241
	6	7	8	9

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)			
OIL AND GREASE:	NA	NA	NA	NA
TPH/GASOLINE RANGE:	150000	ND<500	ND<500	ND<500
TPH/DIESEL RANGE:	NA	NA	NA	NA
BENZENE:	7000	ND<0.5	ND<0.5	ND<0.5
TOLUENE:	12000	ND<0.5	1	ND<0.5
ETHYL BENZENE:	1800	ND<0.5	ND<0.5	ND<0.5
XYLENES:	16000	ND<0.5	ND<0.5	ND<0.5

SAN FRANCISCO

MARTINEZ

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY INC.

825 ARNOLD, STE. 2 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

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
Diesel by Modified EPA SW-846 Method 8015
Gasoline by Purge and Trap: EPA Method 8015/5030
ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020

Page 2 of 2
QA/QC INFORMATION
SET: 80241

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:
Duplicate RPD NA
Minimum Detection Limit in Water: 5000ug/L

Modified EPA Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 1000ug/L
Daily Standard run at 200mg/L; RPD Diesel = NA
MS/MSD Average Recovery = NA: Duplicate RPD = NA

8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 500ug/L
Daily Standard run at 2mg/L; RPD Gasoline = 4%
MS/MSD Average Recovery = 97%: Duplicate RPD = 1%

8020/BTXE
Minimum Quantitation Limit in Water: 0.50ug/L
Daily Standard run at 20ug/L; RPD = <15%
MS/MSD Average Recovery = 90%: Duplicate RPD = <8%

Richard Srna, Ph.D.



Laboratory Manager

SAN FRANCISCO

MARTINEZ

OUTSTANDING QUALITY AND SERVICE