WEISS ASSOCIATES Consulting in Geology & Geohydrology
2938 McClure Street, Oakland, CA 94609 415-465-1100

MAY 25 '89 H.C.H.

24 May 1989

Gordon Davitt
Chevron USA
P.O. Box 5004
San Ramon, CA 94583-0804

Re: Operating Chevron Service Station #90076
4625 Foothill Boulevard
Oakland, California
WA Job #4-417-00

Dear Mr. Davitt:

At the request of Chevron USA, Weiss Associates (WA) collected ground water samples from four monitoring wells on 28 April 1989 at operating Chevron Service Station #90076 in Oakland, California (Figure 1). About 0.01 feet of floating product was detected in ground water well C-2 (Figure 2). Total purgeable petroleum hydrocarbons (TPPH) were detected in concentrations greater than 1,000 parts per billion (ppb) in ground water samples from wells C-2 and C-4. Benzene was detected in concentrations above the California Department of Health Services (DHS) recommended action level for drinking water in ground water samples in all four wells, ethylbenzene was above DHS action levels in well C-2, and toluene and xylene was above DHS action levels in wells C-2 and C-3.

GROUND WATER SAMPLING

WA environmental technicians Andy Rodgers and Tim Wickens collected ground water samples from monitoring wells C-1, C-2, C-3 and C-4 on 28 April 1989. Well C-2 contained about 0.01 ft free-floating product. Well C-3 was purged of at least four well-casing volumes of ground water using steam-cleaned PVC bailers. Wells C-1, C-2 and C-4 were bailed dry after about 3 to 20 gallons of water were purged and the wells sampled after the water level had recovered to 80% of its static water level. Each sample was decanted from a steam-cleaned Teflon sampling bailer into a 40 ml glass volatile organic analysis vial (VOA) with a Teflon septum, preserved with sodium bisulfate, and refrigerated for transport to Superior Analytical Laboratory, Inc. of San Francisco, California. To reduce the possibility of sample contamination during transport or storage, each sample was sealed within a plastic guard bottle containing granular activated carbon. This sampling methodology and sample handling

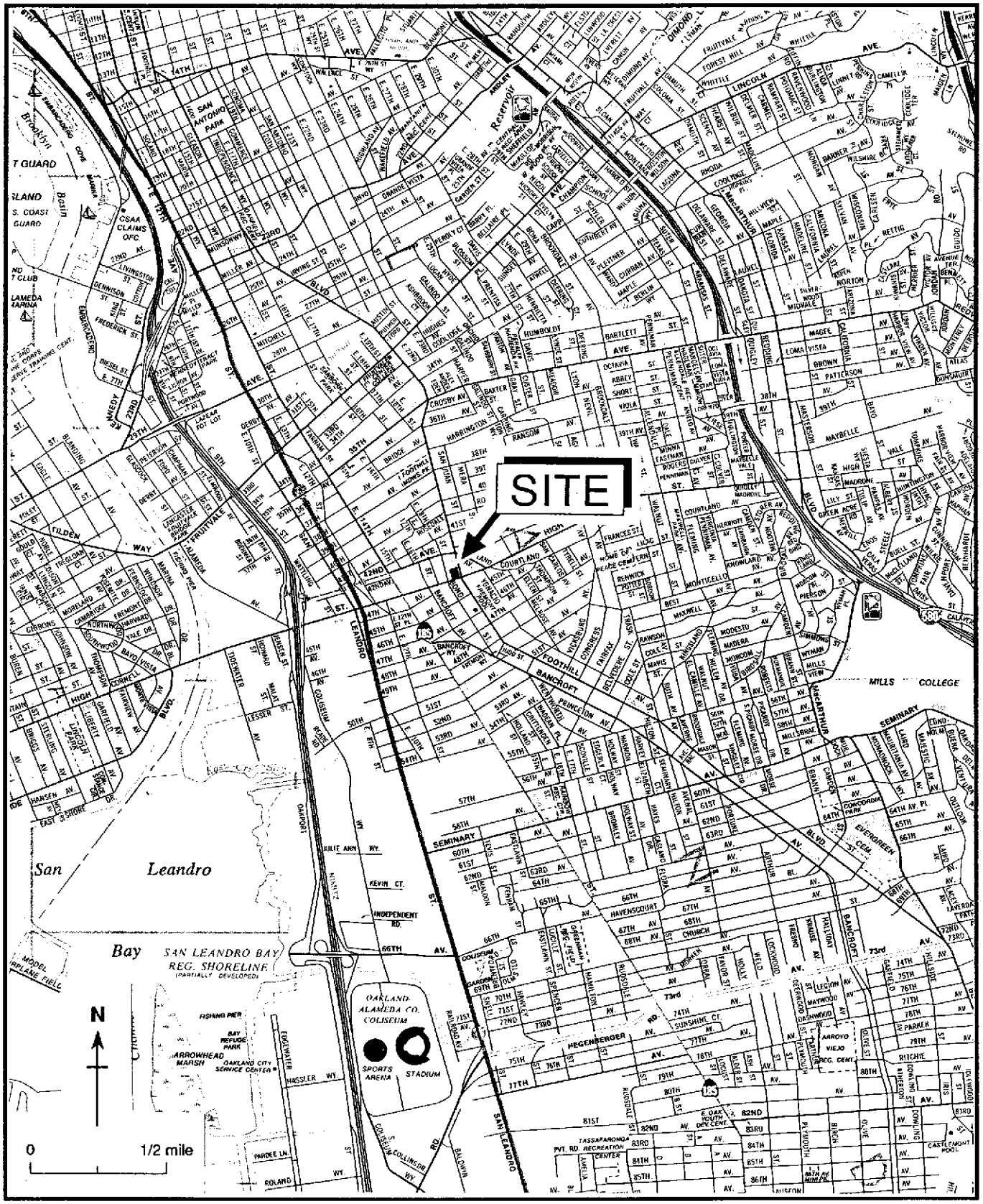


Figure 1. Site Location Map - Chevron Service Station #90076, Oakland, California

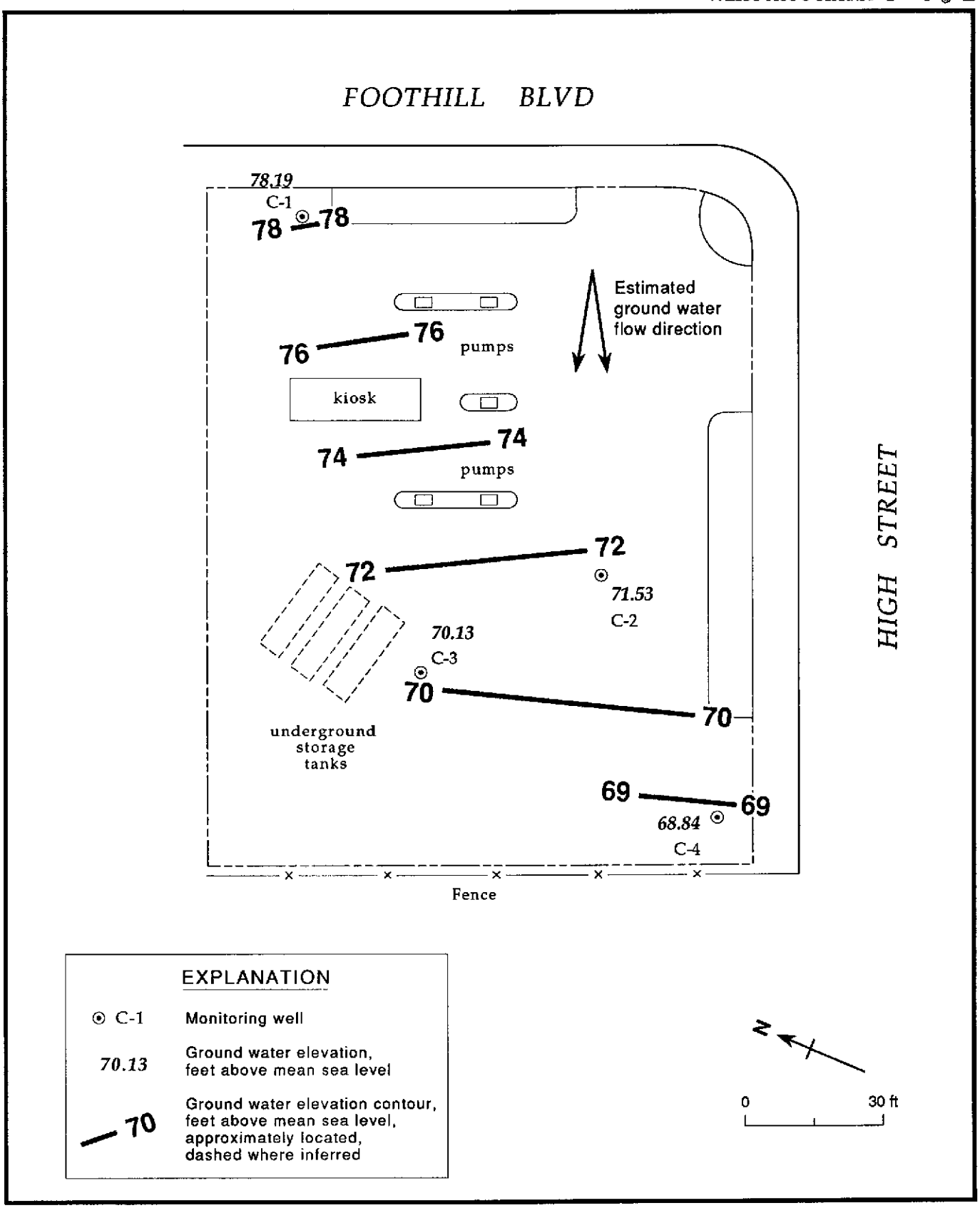


Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - April 28, 1989 - Chevron Service Station #90076, Oakland, California

protocol is consistent with generally accepted ground water sampling procedures. The water sample collection and chain of custody records are included as Attachments A and B, respectively.

A bailer blank and a travel blank were shipped with the ground water samples. The bailer blank was prepared by pouring distilled water into a steam-cleaned bailer before sample collection. The water was then decanted from the bailer into a 40 ml VOA, preserved, refrigerated and transported to the laboratory with the ground water samples. A travel blank of certified organic-free boiled distilled water, supplied by the laboratory, accompanied the samples to provide assurance that contamination was not introduced during sample bottle transport or sample storage.

GROUND WATER GRADIENT

Water levels for all monitoring wells were measured on 28 April 1989. Top of casing elevations determined by previous investigators were used to calculate the ground water gradient and flow direction. Ground water elevations are presented in Table 1 and ground water elevation contours are plotted on Figure 2. The gradient appears unusually steep, with a ground water elevation difference of about 10 ft across the site.

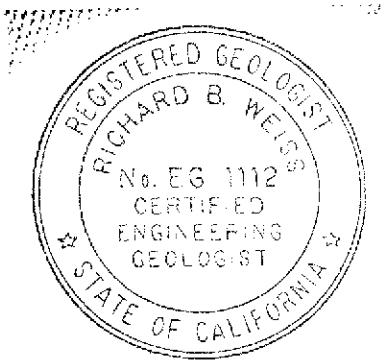
TABLE 1. Ground Water Elevation Data, 28 April 1989, Operating Chevron Service Station #90076, Oakland, California

Well ID	Date	Top-of-Casing Elevation (project datum)	Depth to Water (ft)	Ground Water Elevation (project datum)
C-1	1-12-89	98.24	23.25	74.99
	4-12-89		20.05	78.19
C-2	1-12-89	97.97	---	---
	4-12-89		26.44	71.53
C-3	1-12-89	98.13	29.48	68.65
	4-12-89		28.00	70.13
C-4	1-12-89	96.28	29.49	66.79
	4-12-89		27.44	68.84

CHEMICAL ANALYSES

The ground water samples were analyzed for total purgeable petroleum hydrocarbons (TPPH) by EPA Method 8015 and benzene, ethylbenzene, toluene and xylenes (BETX) by EPA Method 8020. The results of the water analysis are presented in Table 2 and the analytic reports are included as Attachment C. TPPH was detected in concentrations greater than 1,000 ppb in wells C-2 and C-4, benzene above DHS action levels in all four wells, ethylbenzene above DHS action levels in C-2, and toluene and xylenes above DHS action levels in wells C-2 and C-4.

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



Sincerely,
Weiss Associates

James W. Carmody
Project Geologist

Richard B. Weiss
Principal Hydrogeologist

JC/RBW/js

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

TABLE 2. Analytic Results for Ground Water, Operating Chevron Service Station #90076, Oakland, California

Sample ID	Sample Date	Analytic Method	Analytic Lab	TPPH	B	E	T	X
				<----------parts per billion---------->				
C-1	4/28/89	8015/8020	SUP	940	30	11	1.3	13
C-2	4/28/89*	8015/8020	SUP	120,000	30,000	3,000	22,000	17,000
C-3	4/28/89	8015/8020	SUP	<500	1.7	<0.5	<0.5	<0.5
C-4	4/28/89	8015/8020	SUP	20,000	6,300	230	550	1,500
Travel Blank	4/28/89	8015/8020	SUP	<500	<0.5	<0.5	<0.5	<0.5
DHS Action Levels	---	---	---	NE	0.7	620	100	680

Abbreviations:

TPPH = Total purgeable petroleum hydrocarbons
B = Benzene
E = Ethylbenzene
T = Toluene
X = Xylenes
* = Free-floating product in well
DHS Action Levels = Department of Health Services Recommended Action Levels for Drinking Water
NE = DHS action level for TPHC not established

Analytic Laboratory:

SUP = Superior Analytical Laboratory, Inc., San Francisco, California

Analytic Method:

8015 = Modified EPA Method 8015, Total Purgeable Petroleum Hydrocarbons
8020 = EPA Method 8020, Aromatic Volatile Hydrocarbons

ATTACHMENT A

WATER SAMPLE COLLECTION RECORDS

WEISS ASSOCIATES

WATER SAMPLING DATA Well Name C-1 Date 4-28-89 Time 16:20
Job Name/Number Chev. Oakland II 4-417-00 Initials ASR
Well X Spring ___ Surface ___ Other ___
Location Northern most entrance of site
WELL DATA: Well type M (Describe; M = monitoring well)
Depth to Water 20.05 ft (pump/stat) Maximum Drawdown Limit (MDL) — ft
Well depth 39.58 ft (sounded) Well depth — ft (spec)
Well diameter 3 in. TOC height above ground — ft Water elev. — ft

Volume Evacuated:	Pumped	Pumped	~~Bailed~~
Time: Stop			13:45
Start			13:00
Total hrs/min			:45

Total Evacuated 20 gal.
Evacuation Rate 0.44 gpm

Pump # and type — Bailer # and type 3' teflon #F
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/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
V_8" casing = 2.61 gal/ft

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

Initial height of water in casing = 19.53 ft; volume = 7.1 gal. x 4
Evacuation at drawdown limit = 3 x initial volume = — gal.
Evacuation at sampling point = 1 x initial volume = — gal.
Total to be evacuated = 29 gal.
Water Color: None Odor: None - strong at first purge
Description of sediment and/or foreign matter in sample: Fine white suspended particulates
Point of collection: End of 3' teflon bailer ~~#F~~ ASR #F
Depth to water during pumping — ft — time Sampling 26.62 ft 16:13 time 80% = 24' on
Pumped dry? Y 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). Towards bottom, a green sludge with black streaks was coming up out of bailer

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
(2) 489417-1	40	ml	C/V	N	$NaHSO_4$	R	TPH + BETX	SUB.
		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

WEISS ASSOCIATES

WATER SAMPLING DATA Well Name C-2 Date 4/28/89 Time 15:30
Job Name/Number Chevron Oakland II / 4-417-00 Initials JW
Well ✓ Spring ___ Surface ___ Other ___
Location South of east-most pump?
WELL DATA: Well type M (Describe; M = monitoring well)
Depth to Water 26.44 ft (pump/stat) Maximum Drawdown Limit (MDL) NA ft
Well depth 32.34 ft (sounded) Well depth 40 ft (spec)
Well diameter 3 in. TOC height above ground NA ft Water elev. NA ft

Volume Evacuated:	Pumped	Pumped	Bailed
Time: Stop	/	/	13:57
Start	/	/	13:37 JW 4/28/89
Total hrs/min			20 min

Total Evacuated 3 gal.
Evacuation Rate 0.15 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/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
V_8" casing = 2.61 gal/ft

Pump # and type ___ Bailer # and type Evac 3' teflon # E
Hose # and type ___ Sample: Same # E

Sampling Port: Rate ___ ~~gpm~~ ~~Volume~~ ___ gal.
Location/description ___

Initial height of water in casing = 5.90 ft; volume = 2.16 gal. x 4
Evacuation at drawdown limit = 3 x initial volume = ___ gal.
Evacuation at sampling point = 1 x initial volume = ___ gal.
Total to be evacuated = 8.7 gal.

Water Color: none Odor: slight odor
Description of sediment and/or foreign matter in sample: slight turbidity - fine white suspended silty turbidity
Point of collection: decanted from end of 3 teflon bailer # E
Depth to water during pumping ___ ft ___ time Sampling 27.51 ft 15:27 time
~~Pumped~~ Bailed dry? yes After 3 gal. Recovery rate 3.89 ft/hr
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
NA ~~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
(2) 04917-2	40 ml	C/V	N	H_2SO_4	R	TPH+BETX	Sup
	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

80% recovery = 27.62' 27.51' at 15:27 = 82% recovery after 1.5 hrs.

WEISS ASSOCIATES

WATER SAMPLING DATA Well Name C-3 Date 4-28-89 Time 15:35
Job Name/Number Chevron Oakland II 4-417-00 Initials ASR
Well X Spring ___ Surface ___ Other ___
Location Just south of tanks
WELL DATA: Well type ___ (Describe; M = monitoring well)
Depth to Water 28.00 ft (pump/stat) Maximum Drawdown Limit (MDL) — ft
Well depth 39.77 ft (sounded) Well depth — ft (spec)
Well diameter 2 in. TOC height above ground ___ ft Water elev. — ft

Volume Evacuated:	Pumped	Pumped	Bailed
Time: Stop			15:35
Start			14:32
Total hrs/min			:63

Total Evacuated 17 gal.
Evacuation Rate 0.27 gpm

Pump # and type — Bailer # and type 2' teflon #CC
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/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
V_8" casing = 2.61 gal/ft

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

Initial height of water in casing = 11.77 ft; volume = 6.3 gal. X 4
Evacuation at drawdown limit = 3 x initial volume = — gal.
Evacuation at sampling point = 1 x initial volume = — gal.
Total to be evacuated = 17 gal.
Water Color: Lt. Brown Odor: Very slight - if any
Description of sediment and/or foreign matter in sample: very silty clay rich
Sample reacted with preservative — much CO2
Point of collection: End of 2' Teflon bailer #CC
Depth to water during pumping — ft — time Sampling — ft — time
Pumped dry? N 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
(2) 489417-3	40	ml	C/V	N	N_2HSO_4	R	TPH + BETX	SUP
		ml						
		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

WEISS ASSOCIATES

WATER SAMPLING DATA Well Name C-4 Date 4/28/89 Time 15:12
Job Name/Number Chevron Oakland II / 4-417-00 Initials TW
Well ✓ Spring ___ Surface ___ Other ___
Location Southwest end of site
WELL DATA: Well type M (Describe; M = monitoring well)
Depth to Water 27.44 ft (pump/stat) Maximum Drawdown Limit (MDL) NA ft
Well depth 39.83 ft (sounded) Well depth 40 ft (spec)
Well diameter 3 in. TOC height above ground NA ft Water elev. NA ft

Volume Evacuated:	Pumped	Pumped	Bailed
Time: Stop	/	/	13:09
Start	/	/	12:20
Total hrs/min	/	/	49 min

Total Evacuated 12 gal.
Evacuation Rate 0.24 gpm

Pump # and type ___ Bailer # and type Evac: 3' teflon #S
Hose # and type ___ Sample: same #S

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

Initial height of water in casing = 12.39 ft; volume = 4.55 gal. x4
Evacuation at drawdown limit = 3 x initial volume = ___ gal.
Evacuation at sampling point = 1 x initial volume = ___ gal.
Total to be evacuated = 18.2 gal.

Water Color: none Odor: none
Description of sediment and/or foreign matter in sample: very slight turbidity - silt suspended

Point of collection: decanted from end of teflon bailer #S
Depth to water during pumping ___ ft ___ time Sampling 29.65 ft 15:10 time
Pumped dry? yes After 12 gal. Recovery rate 5.1 ft/hr
* ADDITIONAL COMMENTS, LOCATION SKETCH, ENVIRONMENTAL CONDITIONS, e.g., weather, van running nearby, problems with equipment or sampling, etc., pump on/off times, etc. (over)> slight odor

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
(2) 049417-4	40 ml	TPH/BTEX C/V 4/28/89	N	NaHSO4	R	TPH + BETX	Sup.
	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

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
V_8" casing = 2.61 gal/ft

80% recov = 29.92'
32.46' at 14:05
29.65' at 15:10
~81% recovery after 2.0 hrs.

TRIP BLANK

WEISS ASSOCIATES

WATER SAMPLING DATA Well Name — Date 4/28/89 Time —
Job Name/Number Chevron Oakland II / 4-417-00 Initials TW
Well ~~Spring~~ ___ Surface ___ Other ___
Location ___
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	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/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
V_8" casing = 2.61 gal/ft

Sampling Port: Rate ~~gpm Volume~~ gal.
Location/description ___

Initial height of water in casing = ~~ft; volume =~~ gal.
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
(2) 049417-21	40 ml	C/V	N	~~H2SO4~~ none TW 4/28/89	R	TPH+BETX	Sup.
	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

WEISS ASSOCIATES

2938 McClure St., Oakland, CA 94609 . 415-465-1100

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

SEND RESULTS TO: Jim Carmody

WA Personnel: Be sure to include copy of this form in the field sampling files

Project ID: 4-417-00

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Shuttle Inventory Number: NA

Shipping Seal No. NA

Sampled by: TW/ASL

Laboratory Name: Superior

NOTES TO LAB:
1) Specify analytic method and detection limit in report.
2) Notify us if there are any anomalous peaks on GC or other scans.
3) ANY QUESTIONS/CLARIFICATIONS: CALL US.

No. of Containers	Sample ID	Sampling Date	Sample/ Container Type[A]	Analyze/ Hold[B]	Turn-around[C]	Analyze For:	Analytic Method/ Detection Limit	Comments
2	049417-1	4/28/89	W/V	A	N	TPH + BETX	←	
	-2						←	
	-3						←	
	-4						←	
	-21	NA					←	

1 Released by (Signature), Date: 5-1-89

2 Received by (Signature), Date: 5-1-89

3 Released by (Signature), Date: 5-1-89

4 Shipping Carrier, Method, Date: Desire Fleet

5 Released by (Signature), Date:

6 Received by Lab Personnel, Date, Telephone: 5/1/89

X Seal intact?, Number

A Sample Type Codes: W = Water, S = Soil, O = Other (Specify), V = Voa bottle

B Analyze/Hold: A = Analyze; HOLD (spell out) = DO NOT ANALYZE UNLESS NECESSARY OR REQUESTED.

C N = Normal Turnaround, F = 1-Week Turnaround, R = 24-hour Turnaround

SUPERIOR ANALYTICAL LABORATORY, INC.
1385 FAIRFAX ST., STE D • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 50828
CLIENT: Weiss Associates
CLIENT JOB NO.: 4-417-00

DATE RECEIVED: 05/01/89
DATE REPORTED: 05/08/89

Lab Number	Customer Sample Identification	Date Sampled
50828-1	049417-1	04/30/89
50828-2	049417-2	04/30/89
50828-3	049417-3	04/30/89
50828-4	049417-4	04/30/89
50828-5	049417-21	04/30/89

Laboratory Number:	50828 1	50828 2	50828 3	50828 4	50828 5
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	940	120000	ND<500	20000	ND<500
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	30	30000	1.7	6300	ND<.5
TOLUENE:	1.3	22000	ND<.5	550	ND<.5
ETHYL BENZENE:	11	3000	ND<.5	230	ND<.5
XYLENES:	13	17000	ND<.5	1500	ND<.5

SUPERIOR ANALYTICAL LABORATORY, INC.
1385 FAIRFAX ST., STE D • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

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

QA/QC INFORMATION
SET: 50823

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 200mg/L; RPD Gasoline = 1.
MS/MSD Average Recovery = 84: Duplicate RPD = 11

8020/BTXE
Minimum Quantitation Limit in Water: 0.50ug/L
Daily Standard run at 20ug/L; RPD < 15.
MS/MSD Average Recovery = 100%: Duplicate RPD = 2.

Les Partridge, Ph.D.
Laboratory Manager

OUTSTANDING QUALITY AND SERVICE