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

January 18, 1991

Mr. Lawrence Seto
Alameda County Department of
Environmental Health
Division of Hazardous Materials
80 Swan Way
Oakland, CA 94621-1426

Re: Shell Service Station
WIC #204-6852-0703
1285 Bancroft Avenue
San Leandro, California
WA Job #81-423-01

Dear Mr. Seto:

This letter describes Weiss Associates' (WA) fourth quarter 1990 activities at the Shell service station referenced above (Figure 1). This status report satisfies the quarterly reporting requirements outlined in our February 23, 1990 workplan, and prescribed by California Administrative Code Title 23 Waters, Chapter 3, Subchapter 16, Article 5, Section 265.d. Included below are:

- Descriptions and results of activities performed in the fourth quarter 1990, and
- Proposed work for the first quarter 1991.

FOURTH QUARTER 1990 ACTIVITIES

During this quarter, WA:

- Collected ground water samples from one site well,
- Measured the ground water depth and determined the ground water elevation, and
- Analyzed the ground water samples and tabulated the analytic results.

These activities are described below.

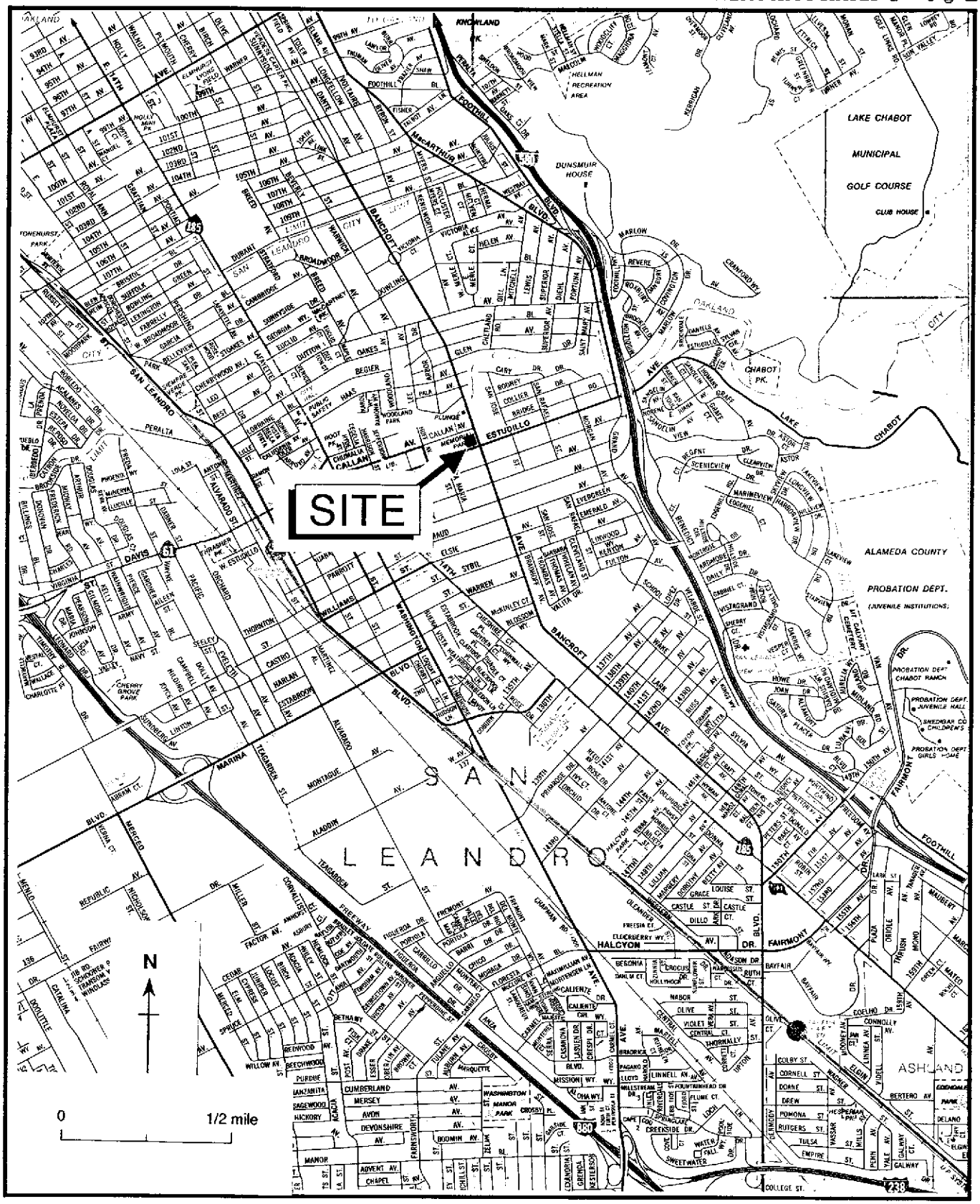

Figure 1. Site Location Map - Shell Service Station WIC #204685207, 1285 Bancroft Avenue, San Leandro, California

3/16/90

Ground Water Sampling

WA collected ground water samples from one monitoring well on December 18, 1990, as part of the quarterly ground water monitoring program at Shell Service Station WIC #204-6852-0703 at 1285 Bancroft Avenue in San Leandro, California.

Sampling Personnel: WA Environmental Technician Paul Cardoza

Monitoring Well Sampled: MW-1 (Figure 2)

Method of Purging Well:

- Dedicated PVC bailer

Volume of Water Purged Prior to Sampling:

- Well was purged of four well-casing volumes, a total of 37 gallons.

Method of Collecting Ground Water Samples:

- Drawn through the sampling port on the side of the dedicated PVC bailer

Methods of Containing Ground Water Samples:

- 40 ml glass volatile organic analysis (VOA) vials, packed in protective foam sleeves for total petroleum hydrocarbons as gasoline (TPH-G), benzene, ethylbenzene, toluene, and xylene (BETX), and halogenated volatile organic compound (HVOC) analyses.

- 1000 ml amber glass bottles for total petroleum hydrocarbons as diesel (TPH-D) analysis.

- 1000 ml amber glass bottles preserved with sulfuric acid for total oil and grease (TOG) analysis.

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

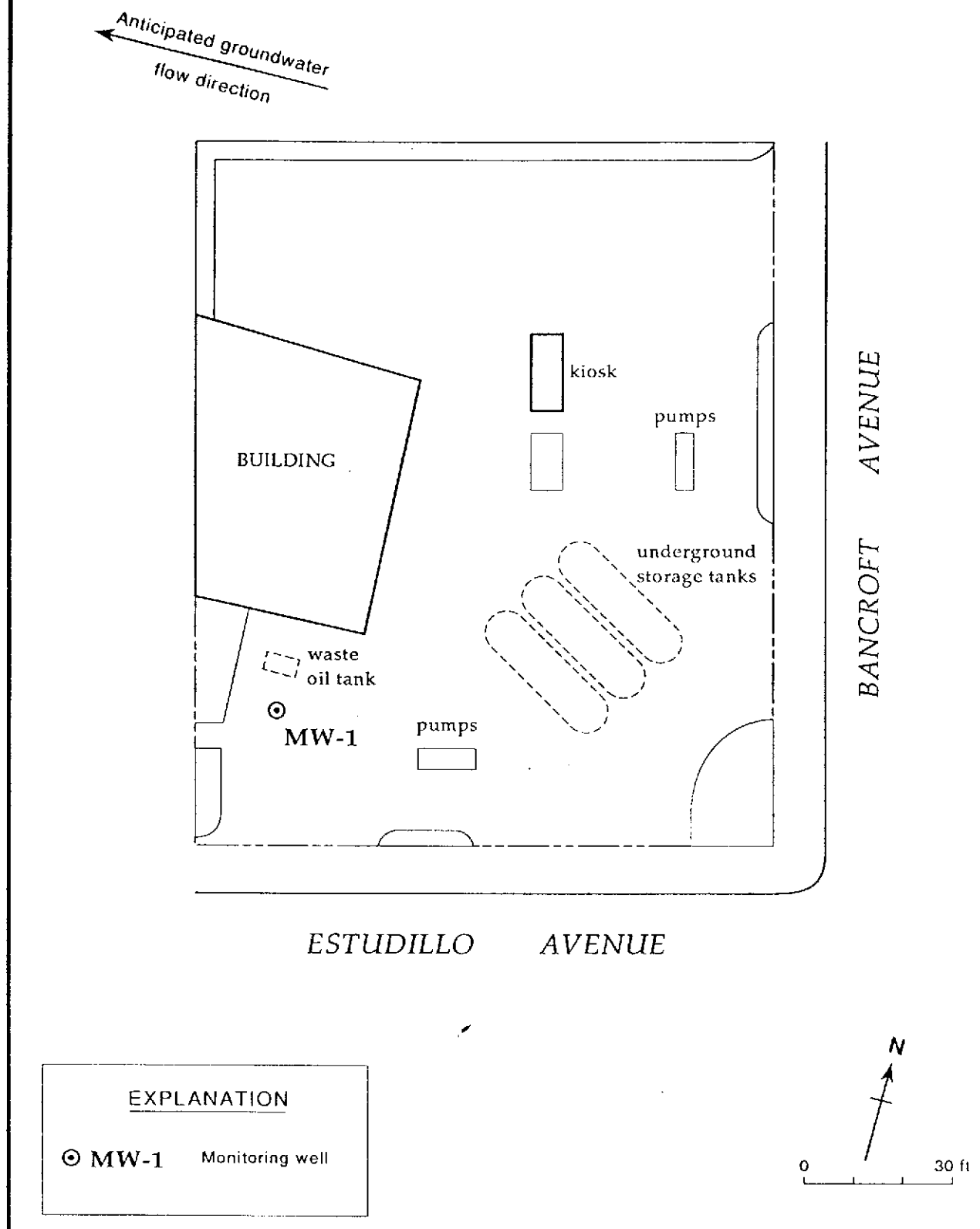

Figure 2. Monitoring Well Location - Shell Service Station WIC #204-685-207, 1285 Bancroft Avenue, San Leandro, California

Water Samples Transported to:

- National Environmental Testing (NET) Pacific Inc., Santa Rosa, California, and were received on December 19, 1990

Quality Assurance/Quality Control:

- A travel blank was submitted for analysis.
- An equipment blank was not necessary because the bailer is dedicated to MW-1.

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

Ground Water Elevations and Flow Direction

- The depth to water was measured in MW-1 on December 18, 1990. The ground water elevation decreased 0.52 ft to the lowest level since monitoring began.
- Based upon the topographic gradient, ground water probably flows westward.

Depth to water measurements and ground water elevations are presented in Table 1.

TABLE 1. Ground Water Elevation Data, Active Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-1	03/13/90	66.29	42.65	23.64
	06/12/90		43.14	23.15
	09/13/90		44.71	21.58
	12/18/90		45.23	21.06

Chemical Analyses

The Ground Water Samples were Analyzed for:

- TPH-G by modified EPA Method 8015,
- TPH-D by modified EPA Method 8015,
- BETX by EPA Method 602,
- TOG by American Public Health Association Standard Method 503E, and
- HVOCs by EPA Method 601.

The laboratory analyzed the samples on December 20, 21, and 27, 1990. The results are presented in Table 2 and the analytic reports are included in Attachment B.

Discussion of Analytic Results of Ground Water for this Quarter:

- No TPH-D or tetrachloroethylene was detected for the first time.
- No BETX were detected for the second consecutive quarter except for 0.0035 ppm xylenes from the last sampling.
- TPH-G and chloroform concentrations are consistent with previous results.

ANTICIPATED WORK FOR FIRST QUARTER 1991

During the first quarter 1991, on behalf of Shell Oil, WA plans to:

- Continue quarterly monitoring of ground water at this site, and
- Prepare a quarterly status report presenting all data generated during the previous quarter including water sampling results and analysis,
- Evaluate the site for sampling frequency and/or analytic parameter reduction.

TABLE 2. Analytic Results for Ground Water - Shell Service Station WIC #204-6852-0703, Bancroft Avenue, San Leandro, California

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X	TOG	PCE	CHLOR	Other HVOCs
			<--------				mg/ℓ (ppm)					-------->
MW-1	03/08/90	42.65	0.51	0.13	<0.0005	0.0015	0.0011	0.0087	<10	0.035	0.0063	ND
	06/12/90	43.14	0.39	0.34	<0.0005	0.0023	<0.0005	0.0055	<10	0.0019	0.063	ND
	09/13/90	44.71	0.10	0.16	<0.0005	<0.0005	<0.0005	<0.0005	<10	0.026	0.0090	ND
	12/18/90	45.23	0.48	<0.05	<0.0005	<0.0005	<0.0005	0.0035	<10	---	0.0053	ND
Trip Blank	03/08/90		<0.050	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---	---
	06/12/90		<0.050	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---	---
	12/18/90		<0.050	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---	---
Bailer Blank	03/08/90		<0.050	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---	---
DHS MCLs			NE	NE	0.001	0.68	.10*	1.75	NE	0.005	0.10	V

Abbreviations:

TPH-G = Total Petroleum Hydrocarbons as Gasoline by Modified EPA Method 8015
TPH-D = Total Petroleum Hydrocarbons as Diesel by Modified EPA Method 8015
B = Benzene by EPA Method 602
E = Ethylbenzene by EPA Method 602
T = Toluene by EPA Method 602
X = Xylenes by EPA Method 602
TOG = Total hydrocarbon (non-polar) oil and grease by American Public Health Association Standard Methods 503A&E
PCE = Tetrachloroethylene by EPA Method 601
CHLOR = Chloroform by EPA Method 601
HVOCs = Halogenated Volatile Organic Compounds by EPA Method 601
--- = Not analyzed
<n = Not detected at detection limit of n ppm
DHS MCLs = California Department of Health Services Maximum Contaminant Levels
ppm = parts per million
NE = Not established by DHS
ND = Not detected above detection limits between 0.0004 and 0.010
V = Varies with compound

Analytical Laboratory:

National Environmental Testing (NET) Pacific, Inc., Santa Rosa, California

Note:

* = DHS recommended action level for drinking water, MCL not established

We trust that this submittal satisfies your requirements. Please contact Tom Fojut or Eric Anderson if you have any questions.

Sincerely,
Weiss Associates

Thomas Fojut

Thomas J. Fojut
Staff Geologist

Joseph P. Theisen, R.G.
Senior Project Hydrogeologist

REGISTERED GEOLOGIST
JOSEPH P. THEISEN
No. 4001
STATE OF CALIFORNIA

TJF/JPT:jg

E:\ALL\SHELL\400\423QMJA1.WP

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

ATTACHMENT A

WATER SAMPLE COLLECTION RECORDS

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name MW-1 Date 12/18/90 Time of Sampling 14:10
Job Name Shell-San Leandro II Job Number 81-423-01 Initials PC
Sample Point Description M (M = Monitoring Well)
Location SW area of site

WELL DATA: Depth to Water 45.23 ft (static, pumping) Depth to Product — ft.
Product Thickness — Well Depth 59.23 ft (spec) Well Depth 59.21 ft (sounded) Well Diameter 4 in
Initial Height of Water in Casing 13.98 ft. = volume 9.13 gal.
4 Casing Volumes to be Evacuated. Total to be evacuated 36.52 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —
Bailer# and type 4" PVC Dedicated Y (Y/N)
Other —

Evacuation Time: Stop — 13:31 —
Start 12:51 — —
Total Evacation Time 40 min
Total Evacuated Prior to Sampling 37 gal.
Evacuation Rate .93 gal. per minute
Depth to Water during Evacuation — ft. — time
Depth to Water at Sampling 45.21 ft. 14:33 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: Silty fine sand
Sampling Method: Sample port on side of dedicated bailer
Sample Port: Rate — gpm Totalizer — gal.
Time —

# of Cont.	Sample ID	Cont. Type[1]	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analytic Method	Turn[5]	LAB
3	120-01	w/cv	40ml	N	Y	None	EPA 8015/602	N	NET
3	120-01	w/cv	40ml	N	Y	None	EPA 601	N	NET
3	120-01	w/cv	1L	N	Y	H_2SO_4	EPA 8015	N	NET
3	120-01	w/cv	1L	N	Y	None	EPA 503E	N	NET

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:

Travel Blanks

WEISS ASSOCIATES

WATER SAMPLING DATA

Well Name ~~MW-7R~~ Date 12/18/90 Time of Sampling 14:24

Job Name Shell-Sanleandro II Job Number 81-423-01 Initials PC

Sample Point Description ~~MW-7R~~ PC (M = Monitoring Well)

Location

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

Product Thickness _____ Well Depth ____ ft (spec) Well Depth _____ ft(sounded) Well Diameter ____ in

Initial Height of Water in Casing _____ ft. = volume _____ gal.

_____ Casing Volumes to be Evacuated. Total to be evacuated _____ gal.

EVACUATION METHOD: Pump # and type _____ Hose # and type _____

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

Other _____

Evacuation Time: Stop _____ _____ _____

Start _____ _____ _____

Total 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
3	120-21	w/cv	40ml	N	Y	None	EPA 8015/602	N	NET

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

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

ATTACHMENT B

ANALYTIC RESULTS AND CHAIN-OF-CUSTODY FORM

NET NATIONAL ENVIRONMENTAL TESTING, INC.®

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Tom Fojut
Weiss Associates
5500 Shell Mound Rd.
Emeryville, CA 94524

Date: 01-04-91
NET Client Acct. No: 18.09
NET Pacific Log No: 5406
Received: 12-20-90 0800

Client Reference Information

SHELL, 1285 Bancroft Avenue, San Leandro; Project: 81-423-01

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

Ref: *SHELL, 1285 Bancroft Avenue, San Leandro; Project: 81-423-01*

SAMPLE DESCRIPTION: 120-01 12-18-90
LAB Job No: (-71154)

Parameter	Method	Reporting Limit	Results	Units
Oil & Grease(Total)	EPA9070	5	ND	mg/L
Oil & Grease(Non-Polar)	SM5520B/F	10	ND	mg/L
METHOD 601				
DATE ANALYZED			12-27-90	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	5.3	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ND	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	ND	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene Chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	ND	ug/L
1,1,1-Trichloroethane		0.4	ND	ug/L
1,1,2-Trichloroethane		0.4	ND	ug/L
Trichloroethene		0.4	ND	ug/L
Trichlorofluoromethane		0.4	ND	ug/L
Vinyl chloride		2.0	ND	ug/L

Ref: SHELL, 1285 Bancroft Avenue, San Leandro; Project: 81-423-01

SAMPLE DESCRIPTION: 120-01 12-18-90
LAB Job No: (-71154)

Parameter	Method	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS			--	
VOLATILE (WATER)			--	
DILUTION FACTOR *			1	
DATE ANALYZED			12-21-90	
METHOD GC FID/5030			--	
as Gasoline		0.05	0.48	mg/L
METHOD 602			--	
DILUTION FACTOR *			1	
DATE ANALYZED			12-21-90	
Benzene		0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	ND	ug/L
Xylenes, total		0.5	3.5	ug/L
PETROLEUM HYDROCARBONS			--	
EXTRACTABLE (WATER)			--	
DILUTION FACTOR *			1	
DATE EXTRACTED			12-20-90	
DATE ANALYZED			12-20-90	
METHOD GC FID/3510			--	
as Diesel		0.05	ND	mg/L
as Motor Oil		0.5	ND	mg/L

Ref: SHELL, 1285 Bancroft Avenue, San Leandro; Project: 81-423-01

SAMPLE DESCRIPTION: 120-1 12-18-90
LAB Job No: (-71155)

Parameter	Method	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS			--	
VOLATILE (WATER)			--	
DILUTION FACTOR *			1	
DATE ANALYZED			12-21-90	
METHOD GC FID/5030			--	
as Gasoline		0.05	ND	mg/L
METHOD 602			--	
DILUTION FACTOR *			1	
DATE ANALYZED			12-21-90	
Benzene		0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	ND	ug/L
Xylenes, total		0.5	ND	ug/L

NET

NET Pacific, Inc.

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 16th Edition, APHA, 1985.

WEISS ASSOCIATES
5500 Shellmound St., Emeryville, CA 94608
Phone: 415-547-5420 FAX: 415-547-5043

Shell Service Station Address: 1285 BANCROFT AV SAN LEANDRO, CA

Shell Contact: E PAUL HAYES
WIC #: 204-6852-0703
AFE #:

Please send analytic results and a copy of the signed chain of custody form to:

TOM FOJUT

Project ID: 81-423-01

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Lab Personnel:
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.

Sampled by: Paul Cardoza

Laboratory Name: NET

No. of Containers	Sample ID	Container Type[1]	Sample Date	Vol[2]	Fil[3]	Ref[4]	Preservative (specify)	Analyze for	Analytic Method	Turn[5]	COMMENTS
3	120-01	w/cv	12/18/90	40ml	N	Y	Acid	TPH-G/BETX	EPA 8015/602	N	
		w/cv		40ml			None	HVOCs	EPA 601		
		w/oG-PV		1L			None	TPH-D	EPA 8015		
		w/BG-PV		1L			H2SO4	TOG	EPA 503E		
	120-21	w/cv		40ml			None	TPH-G/BETX	EPA 8015/602		

1 Paul Cardoza 12/18/90 16:32
Released by (Signature), Date

1 Weiss Associates
Affiliation

2 [signature] 12/19/90 0930
Received by (Signature), Date

2 Weiss Assoc.
Affiliation

3 [signature] 12/19/90 12:40
Released by (Signature), Date

3 Weiss Assoc.
Affiliation

4 [signature]
Shipping Carrier, Method, Date

4 NET 12/19/90 12:40
Affiliation

5 via NCS [signature]
Released by (Signature), Date

5
Affiliation

6 [signature] 12/20/90 0800
Received by Lab Personnel, Date

6
Affiliation, Telephone

Seal intact? YES

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 (write out)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

→ Stored in secure, locked area overnight 12/18 → 12/19

F:\ALL\ADMIN\FORMS\COCSHELL.WP2

SHELL OIL CORPORATION

QUARTERLY REPORT TO

THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

Date of Report: December 17, 1990

Service Station WIC Number:	20468520703
Site Address (Number, Street):	1285 Bancroft Boulevard
City:	San Leandro
County:	Alameda

Actions in the past three months:

Collected ground water samples and submitted quarterly status report.

Actions planned for next three months:

Collect 1st quarter water amples and prepare report.

Soil Contamination defined? Y\N	N
Soil Clean-up in progress? Y\N	N
Free-product plume defined? Y\N	NA
Free-product cleanup in progress? Y\N	NA
Dissolved constituent plume defined? Y\N	N
Dissolved constituent cleanup in progress? Y\N	N

Contractor: Weiss Associates, Emeryville, California.
