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Geologic and Environmental Services

5500 Shellmound Street, Emeryville, CA 94608

91 MAY 15 AM 10:48

TRANSMITTAL LETTER

FROM: Tom Fojut

DATE: May 13, 1991

TO: Lowell Miller
Alameda County Department
of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621-1426

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

SUBJECT: Shell Service Stations
WIC #204-0072-0502
2160 Otis Drive
Alameda, CA 94501

WIC #204-0072-0403
1601 Webster Street
Alameda, CA 94501

JOB: 81-429-01
81-434-01

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 _____

Quarterly status reports for the subject sites

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

PLEASE: X Keep this material
_____ Return within 2 weeks
_____ Acknowledge receipt

MESSAGE: Please call if you have any questions.

cc: Lester Feldman, California Regional Water Quality Control Board - San Francisco Bay Region, 2101 Webster Street, Suite 500, Oakland, CA 94612

Kurt Miller, Shell Oil Company, P.O. Box 4023, Concord, California 94524

May 14, 1991

Mr. Lowell Miller
Alameda County Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621-1426

Re: Shell Service Station
WIC #204-0072-0502
2160 Otis Drive
Alameda, California 94501
WA Job #81-429-01

Dear Mr. Miller:

This letter describes Weiss Associates' (WA) second quarter 1991 activities at the Shell service station referenced above (Figure 1). This status report satisfies the quarterly reporting requirements outlined in our March 19, 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 to date in the second quarter 1991, and
- Proposed work for the third quarter 1991.

WA recommended ground water sampling frequency modifications for this site which are on hold pending approval of the Alameda County Department of Environmental Health.¹

¹WA, February 26, 1991, Quarterly status report letter to Lowell Miller, Alameda County Department of Environmental Health, 10 pages and 4 attachments.

Mr. Lowell Miller
May 14, 1991

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SECOND QUARTER 1991 ACTIVITIES

During this quarter, WA:

- Collected ground water samples from the three site wells,
- Measured ground water depths and determined ground water elevations and the flow direction, and
- Analyzed the ground water samples and tabulated the analytic results.

These activities are described below.

Ground Water Sampling

WA collected ground water samples from all three monitoring wells on April 9, 1991, as part of the quarterly ground water monitoring program at Shell Service Station WIC #204-0072-0502 in Alameda, California. Ground water samples from monitoring well MW-2 contained benzene above the California Department of Health Services (DHS) maximum contaminant level (MCL) for drinking water. The total 1,2-dichloroethene (1,2-DCE) concentration in the sample from well MW-2 exceeded the individual DHS MCLs for drinking water for cis-1,2-dichloroethene (c-1,2-DCE) and trans-1,2-dichloroethene (t-1,2-DCE).

Sampling Personnel: WA Environmental Technician Paul Cardoza

Monitoring Wells Sampled: MW-1, MW-2, and S-1

Method of Purging Wells: Dedicated PVC bailers

Volume of Water Purged Prior to Sampling:

- Wells were purged of four well-casing volumes, about 22 to 34 gallons each.

Mr. Lowell Miller
May 14, 1991

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Method of Collecting Ground Water Samples:

- | | <u>Wells</u> |
|--------------------------------------------------------------------------|--------------|
| • Drawn through the sampling ports on the sides of dedicated PVC bailers | MW-1 & MW-2 |
| • Decanted from the dedicated PVC bailer | S-1 |

Methods of Containing Ground Water Samples:

- 40 ml glass volatile organic analysis (VOA) vials, preserved with hydrochloric acid and packed in protective foam sleeves for total petroleum hydrocarbons as gasoline (TPH-G), benzene, ethylbenzene, toluene, and xylene (BETX), and volatile organic compound (VOC) analyses
- 1000 ml amber glass bottles, preserved with hydrochloric acid and packed in protective foam sleeves for total petroleum hydrocarbons as diesel (TPH-D) analysis

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

Water Samples Transported to:

- International Technology Analytical Services, Inc. (IT), San Jose, California, and were received on April 10, 1991

Quality Assurance/Quality Control:

- A travel blank was submitted for analysis.
- An equipment blank was not necessary because all bailers are dedicated to specific wells.

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 all wells on April 9, 1991. Ground water elevations increased about 0.5 ft from the previous quarter.

Mr. Lowell Miller
May 14, 1991

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- Ground water flows northeastward. During the past year, ground water has flowed northward.

Depth to water measurements and ground water elevations are presented in Table 1. Ground water elevation contours are plotted on Figure 2. Previous ground water elevation contour maps are included in Attachment C.

Chemical Analyses

The Ground Water Samples were Analyzed for:

| | <u>Wells</u> |
|-------------------------------------|--------------|
| • TPH-G by modified EPA Method 8015 | MW-1 & S-1 |
| • TPH-D by modified EPA Method 8015 | MW-2 |
| • BETX by EPA Method 8020 | MW-1 & S-1 |
| • VOCs by EPA Method 8240 | MW-2 |

The laboratory analyzed the samples on April 19 and 22, 1991. 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:

- Ground water samples from monitoring well MW-2 contained benzene above the DHS MCL for drinking water. The total 1,2-DCE concentration in the sample from well MW-2 exceeded the combined DHS MCLs for drinking water for c-1,2-DCE and t-1,2-DCE.
- Only benzene and total 1,2-dichloroethene were detected in samples from well MW-2.
- No hydrocarbons have been detected in samples from wells MW-1 and S-1 for three consecutive quarters.

Mr. Lowell Miller
May 14, 1991

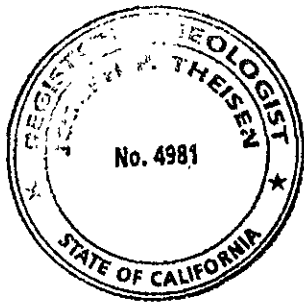
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ANTICIPATED WORK FOR THIRD QUARTER 1991

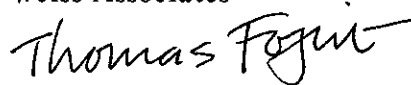
During the third quarter 1991, on behalf of Shell Oil, WA plans to:

- Continue quarterly monitoring of ground water at this site, and
- Prepare a quarterly status report presenting all data generated during the third quarter including water sampling results and analysis.

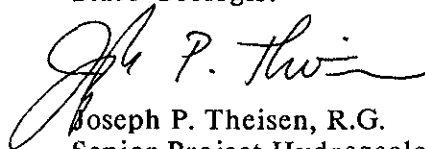
We trust that this submittal satisfies your requirements. Please contact Tom Fojut or Eric Anderson if you have any questions.



Sincerely,
Weiss Associates



Thomas J. Fojut
Staff Geologist



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

TJF/JPT:kaw

E:\ALL\SHELL\425\429QMAP1.WP

Attachments: Figures
 Tables
 A - Water Sample Collection Records
 B - Analytic Reports and Chain-of-Custody Form
 C - Previous Ground Water Elevation Contour Maps

FIGURES

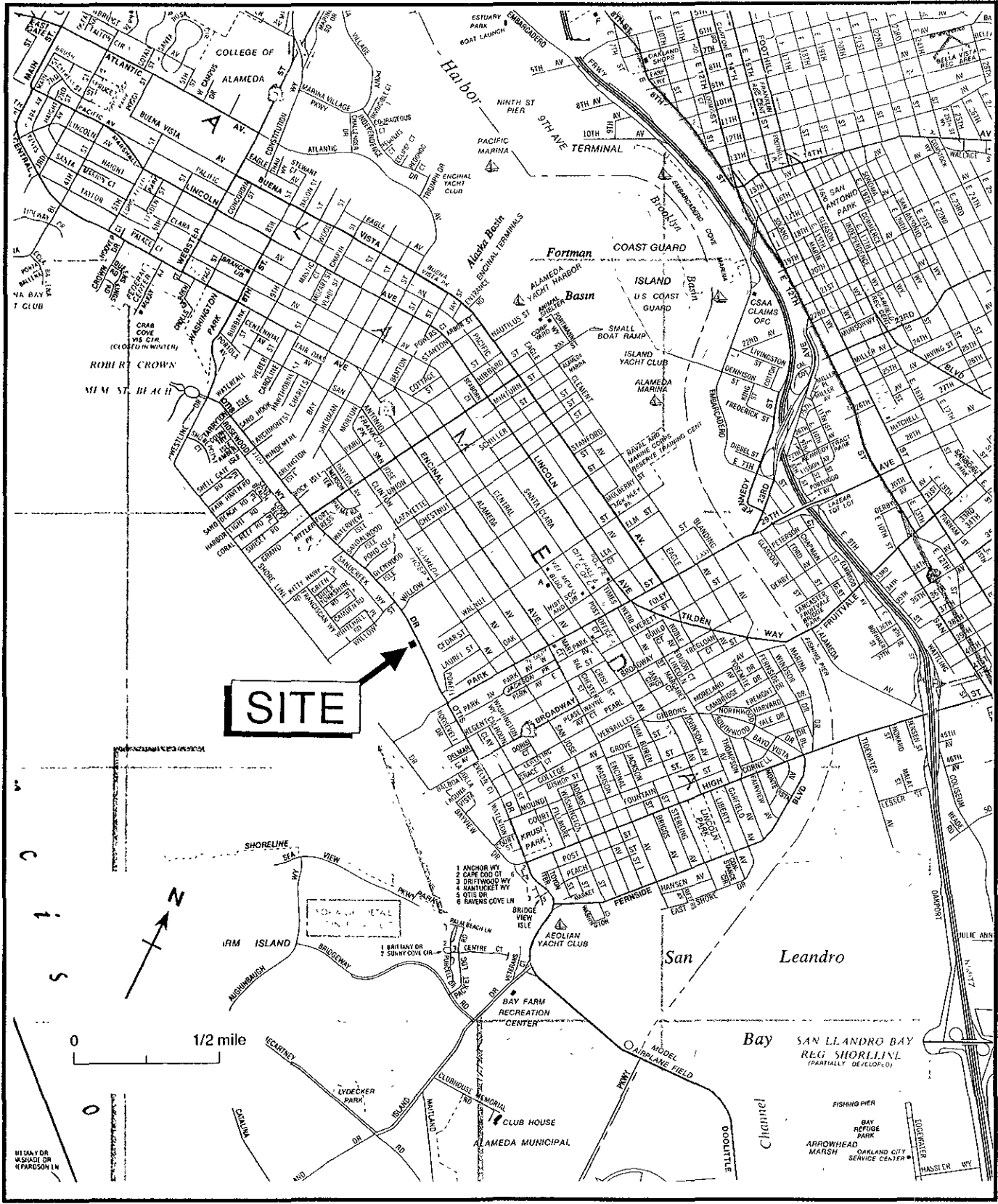
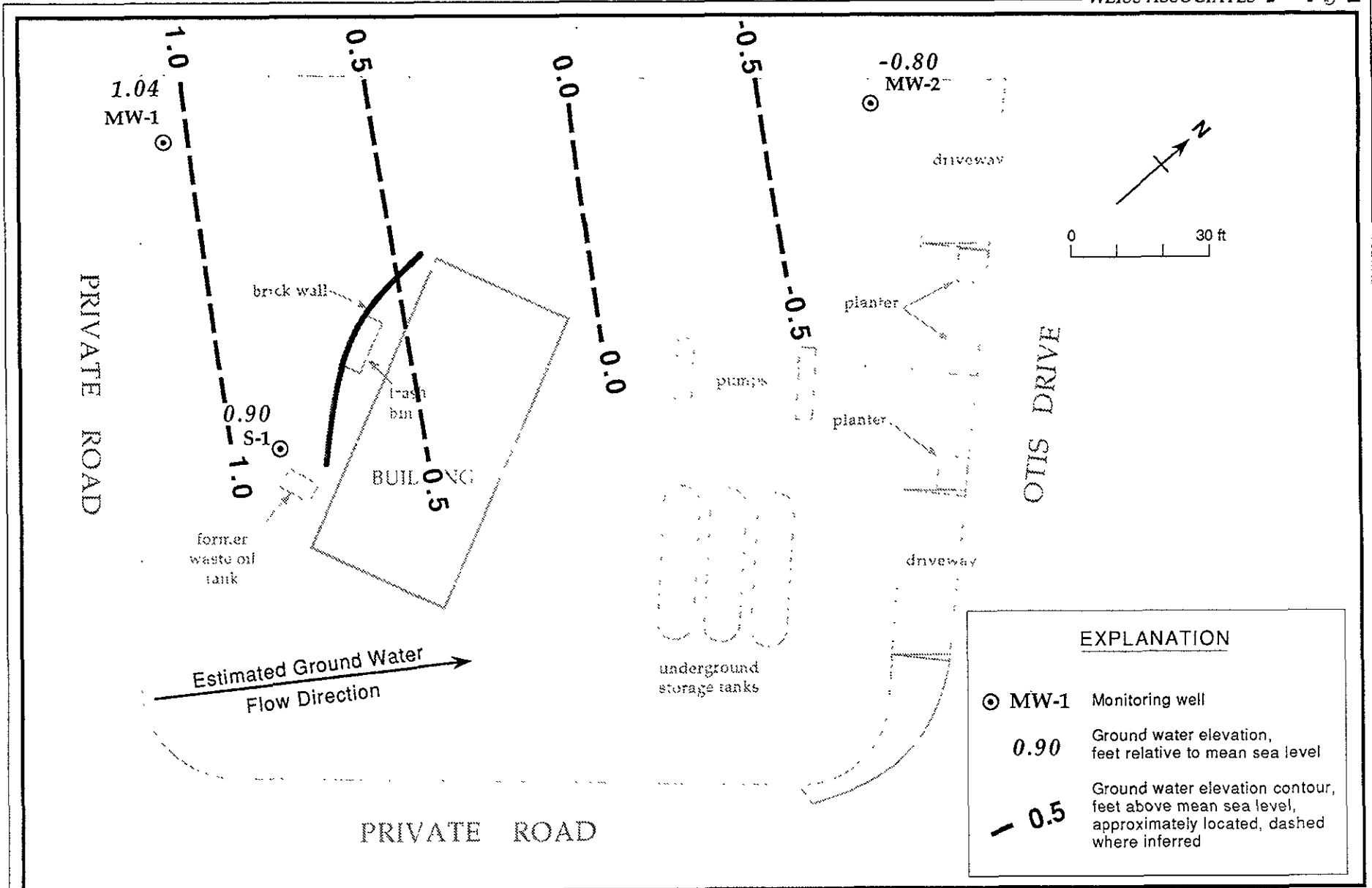


Figure 1. Site Location Map - Shell Service Station, WIC# 204-0072-0502, 2160 Otis Drive, Alameda, CA



| EXPLANATION | |
|-------------|---------------------------------------------------------------------------------------------------------|
| ⊙ MW-1 | Monitoring well |
| 0.90 | Ground water elevation, feet relative to mean sea level |
| - 0.5 | Ground water elevation contour, feet above mean sea level, approximately located, dashed where inferred |

Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - April 9, 1991 - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California

TABLES

Table 1. Ground Water Elevation Data - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California

| Well ID | Date | Top-of-Casing Elevation (ft above msl) | Depth to Water (ft) | Ground Water Elevation (ft relative to msl) |
|---------|----------|----------------------------------------|---------------------|---------------------------------------------|
| MW-1 | 04-11-90 | 6.00 | 5.23 | 0.77 |
| | 07-10-90 | | 5.40 | 0.60 |
| | 10-09-90 | | 5.61 | 0.39 |
| | 01-17-91 | | 5.66 | 0.34 |
| | 04-09-91 | | 4.96 | 1.04 |
| MW-2 | 04-11-90 | 3.29 | 4.51 | -1.22 |
| | 07-10-90 | | 4.61 | -1.32 |
| | 10-09-90 | | 4.74 | -1.45 |
| | 01-17-91 | | 4.73 | -1.44 |
| | 04-09-91 | | 4.09 | -0.80 |
| S-1 | 09-11-90 | 5.10 | 4.29 | 0.81 |
| | 04-11-90 | | 4.00 | 1.10 |
| | 07-10-90 | | 4.25 | 0.85 |
| | 10-09-90 | | 4.46 | 0.64 |
| | 01-17-91 | | 4.53 | 0.57 |
| | 04-09-91 | | 4.20 | 0.90 |

Table 2. Analytic Results for Ground Water - Shell Service Station WIC# 204-0072-0502, 2160 Otis Drive, Alameda, California

| Sample ID | Date Sampled | Depth to Water (ft) | Analytical Lab | TPH-G TPH-D B E T X | | | | | | TOG | VOCs | Metals/ Others |
|------------|-----------------------|---------------------|----------------|--------------------------|--------|---------|---------|--------------------|---------|------|---------------|----------------|
| | | | | parts per million (mg/L) | | | | | | | | |
| S-1 | 09/04/87 ^a | | IT | --- | --- | <0.005 | <0.005 | <0.005 | <0.005 | --- | b | --- |
| | 09/11/89 | 4.29 | IT | <0.050 | <0.10 | <0.0005 | <0.001 | <0.001 | <0.003 | <1.0 | <0.005-0.050 | c |
| | 04/11/90 | 4.00 | NET | <0.050 | <0.050 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <10 | d | --- |
| | 07/10/90 | 4.25 | NET | 0.090 | --- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <10 | <0.0004-0.010 | --- |
| | 10/09/90 | 4.46 | IT | <0.050 | --- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <5 | <0.0005 | --- |
| | 01/17/91 | 4.53 | IT | <0.050 | --- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | --- | --- | --- |
| | 04/09/91 | 4.20 | IT | <0.050 | --- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | --- | --- | --- |
| MW-1 | 04/11/90 | 5.23 | NET | <0.050 | <0.050 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <10 | <0.0004-0.010 | --- |
| | 07/10/90 | 5.40 | NET | 0.10 | --- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <10 | <0.0004-0.010 | --- |
| | 10/09/90 | 5.61 | IT | <0.050 | --- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <5 | <0.0005 | --- |
| | 01/17/91 | 5.66 | IT | <0.050 | --- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | --- | --- | --- |
| | 04/09/91 | 4.96 | IT | <0.050 | --- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | --- | --- | --- |
| MW-2 | 04/11/90 | 4.51 | NET | 0.20 ^e | 0.22 | 0.0027 | <0.0005 | 0.0005 | 0.0024 | <10 | f | --- |
| | 07/10/90 | 4.61 | NET | 0.57 ^e | 0.45 | 0.15 | <0.0005 | 0.0009 | 0.0031 | <10 | g | --- |
| | 10/09/90 | 4.74 | IT | 190 ^e | 0.051 | 55 | <0.0005 | <0.0005 | <0.0005 | <5 | h | --- |
| | 01/17/91 | 4.73 | IT | 0.35 ^e | <0.050 | 0.051 | <0.0005 | <0.0005 | <0.0005 | --- | i | --- |
| | 04/09/91 | 4.09 | IT | --- | <0.050 | 0.021 | <0.005 | <0.005 | <0.005 | --- | j | --- |
| Trip Blank | 07/10/90 | | NET | <0.050 | --- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | --- | --- | --- |
| | 10/09/90 | | IT | <0.050 | --- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | --- | --- | --- |
| | 01/17/91 | | IT | <0.050 | --- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | --- | --- | --- |
| | 04/09/91 | | IT | <0.050 | --- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | --- | --- | --- |
| DHS MCLs | | | | NE | NE | 0.001 | 0.680 | 0.100 ^k | 1.750 | NE | l | m |

-- Table 2 continued on next page --

Table 2. Analytic Results for Ground Water - Shell Service Station WIC# 204-0072-0502, 2160 Otis Drive, Alameda, California

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, 624, 8020, or 8240
E = Ethylbenzene by EPA Method 602, 624, 8020, or 8240
T = Toluene by EPA Method 602, 624, 8020, or 8240
X = Xylenes by EPA Method 602, 624, 8020, or 8240
TOG = Total non-polar oil and grease by American Public Health Association Standard Methods 503A&E
VOCs = Volatile and halogenated volatile organic compounds by EPA Method 601 or 624
--- = Not analyzed
ppm = parts per million
NE = Not established
DHS MCLs = California Department of Health Services Maximum Contaminant Levels
<n = Not detected at detection limit of n ppm

Analytical Laboratories:

IT = International Technology Analytical Services, San Jose, California
NET = National Environment Testing Pacific Inc., Santa Rosa, California

Notes:

a = Sampled by Pacific Environmental Group.
b = Unknown alcohol detected at 0.007 ppm; acetone at 0.27 ppm.
c = Metals detected by EPA Method 6010: chromium at 0.090 ppm; lead at 0.090 ppm; zinc at 0.10 ppm; no cadmium (<0.010 ppm). No chlorodiphenyl (PCB) (<0.00005 ppm) or semi-volatile organic compounds (<0.005-0.010 ppm) detected by EPA Method 625.
d = Chloroform detected at 0.0017 ppm.
e = Chromatographic pattern not typical for gasoline; according to the laboratory, the concentration is due mostly to lighter hydrocarbon compounds.
f = Chloroform detected at 0.0045 ppm; trans-1,2-dichloroethene (t-1,2-DCE) at 0.016 ppm; trichloroethene (TCE) at 0.0012 ppm.
g = Chloroform detected at 0.0017 ppm; 1,2-dichloroethane (1,2-DCA) at 0.00044 ppm; t-1,2-DCE at 0.011 ppm; TCE at 0.00093 ppm.
h = Chloroform detected at 0.015 ppm; cis-1,2-dichloroethene (c-1,2-DCE) at 0.046 ppm; t-1,2-DCE at 0.0067 ppm; tetrachloroethene (PCE) at 0.0016 ppm; TCE at 0.0013 ppm; vinyl chloride at 0.0025 ppm.
i = Chlorobenzene detected at 0.0005 ppm; chloroform at 0.0026 ppm; 1,2-DCA at 0.0005 ppm; c-1,2-DCE at 0.074 ppm; t-1,2-DCE at 0.012 ppm; PCE at 0.0006 ppm; TCE at 0.0012 ppm; vinyl chloride at 0.0030 ppm.
j = Total 1,2-DCE detected at 0.064 ppm.
k = DHS recommended action level for drinking water.
l = DHS MCL for chlorobenzene = 0.030 ppm; 1,2-DCA = 0.0005 ppm; chloroform = 0.10 ppm; TCE = 0.005 ppm; PCE = 0.005 ppm; vinyl chloride = 0.0005 ppm; t-1,2-DCE = 0.010 ppm; c-1,2-DCE = 0.006 ppm.
m = DHS MCL for chromium = 0.050 ppm; lead = 0.050 ppm; zinc = 5 ppm.

ATTACHMENT A
WATER SAMPLE COLLECTION RECORDS



WATER SAMPLING DATA

Well Name M11-1 Date 4/9/91 Time of Sampling 10:46
Job Name Shell-Alameda I Job Number 81-429-01 Initials PC
Sample Point Description M (M = Monitoring Well)
Location West corner of site

WELL DATA: Depth to Water 4.96 ft (static, pumping) Depth to Product — ft.
Product Thickness — Well Depth 16 ft (spec) Well Depth 16/10 ft (sounded) Well Diameter 4 in
Initial Height of Water in Casing 11.14 ft. = volume 7.27 gal.
4 Casing Volumes to be Evacuated. Total to be evacuated 29.08 gal.

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

Evacuation Time: Stop 9:57 10:04
Start 9:40 10:02
Total Evacuation Time 13
Total Evacuated Prior to Sampling 31 gal.
Evacuation Rate 2.38 gal. per minute

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

Depth to Water during Evacuation — ft. — time
Depth to Water at Sampling 5.59 ft. 10:48 time
Evacuated Dry? Yes After 25 gal. Time 9:51
80% Recovery = 7.19 (DTW)
% Recovery at Sample Time 94 Time 10:48

→ 4 casing volumes evacuated after allowing well to recover.

CHEMICAL DATA: Meter Brand/Number —

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

SAMPLE: Color Clear Odor None
Description of matter in sample: Small amount sand particles
Sampling Method: from 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 |
|------------|---------------|-------------------------|------------------|------------------|------------------|------------------------|----------------------|-------------------|-----------|
| <u>3</u> | <u>041-01</u> | <u>w/cw</u> | <u>40ml</u> | <u>N</u> | <u>4</u> | <u>HCL</u> | <u>EPA 8015/8020</u> | <u>N</u> | <u>IT</u> |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

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

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name MW-2 Date 4/9/91 Time of Sampling 11:39
 Job Name Shell Alameda Job Number 81-429-01 Initials PC
 Sample Point Description M (M = Monitoring Well)
 Location N. corner of site next to pay phones

WELL DATA: Depth to Water 4.09 ft (static pumping) Depth to Product — ft.
 Product Thickness — Well Depth 1700 ft (spec) Well Depth 1702 ft (sounded) Well Diameter 4 in
 Initial Height of Water in Casing 12.93 ft. = volume 8.44 gal.
4 Casing Volumes to be Evacuated. Total to be evacuated 33.76 gal.

EVACUATION METHOD: Pump # and type — Hose # and type —
 Bailer# and type 3" x 36" PVC Dedicated Y (Y/N)
 Other —

Evacuation Time: Stop 10:23 10:41 11:12
 Start 10:16 10:36 11:10
 Total Evacuation Time 1.3 min
 Total Evacuated Prior to Sampling 18 + 10 + 6 = 34 gal.
 Evacuation Rate 2.62 gal. per minute

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

Depth to Water during Evacuation — ft. — time
 Depth to Water at Sampling 5.03 ft. 11:41 time
 Evacuated Dry? Yes After 18 gal. Time 10:23
 80% Recovery = 6.68 (PTW)
 % Recovery at Sample Time 93 Time 11:41

→ 4 casing volumes evacuated after allowing well to recover

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

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

SAMPLE: Color Slightly Cloudy Odor None
 Description of matter in sample: None
 Sampling Method: from sample pore 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 | 041-02 | W/CY | 40ml | N | Y | HCL | EPA 8240 | N | IT |
| 2 | ↓ | W/BG-P | 1L | ↓ | ↓ | ↓ | EPA 8015 | ↓ | ↓ |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |

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

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name S-1 Date 4/9/91 Time of Sampling 12:08
 Job Name Shell Alameda E Job Number 81-429-01 Initials PC
 Sample Point Description _____ (M = Monitoring Well)

Location Behind building in driveway

WELL DATA: Depth to Water 4.20 ft (static, pumping) Depth to Product _____ ft.

Product Thickness _____ Well Depth 19 ft (spec) Well Depth 18.69 ft (sounded) Well Diameter 3 in

Initial Height of Water in Casing 14.49 ft. = volume 5.32 gal.

4 Casing Volumes to be Evacuated. Total to be evacuated 21.28 gal.

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

Bailer# and type 1 1/2" x 60" PVC Dedicated V (Y/N)

Other _____

Evacuation Time: Stop 4:25 9:59 10:31 11:06 11:54

Start 9:20 9:53 10:26 11:01 11:52

Total Evacuation Time 23

Total Evacuated Prior to Sampling 5.25 + 5.25 + 2.20 gal.

Evacuation Rate .96 gal. per minute

Depth to Water during Evacuation _____ ft. _____ time

Depth to Water at Sampling 5.67 ft. 12:10 time

Evacuated Dry? Yes After 5 gal. Time 9:25

80% Recovery = 7.10 (DTR)

% Recovery at Sample Time 40 Time 12:10

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

CHEMICAL DATA: Meter Brand/Number _____

Calibration: _____ 4.0 _____ 7.0 _____ 10.0

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

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

SAMPLE: Color light Tan Odor None

Description of matter in sample: Small silt type particles

Sampling Method: Decanted from end 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 |
|------------|---------------|-------------------------|------------------|------------------|------------------|------------------------|----------------------|-------------------|-----------|
| <u>3</u> | <u>041-51</u> | <u>w/cv</u> | <u>40 ml</u> | <u>N/A</u> | <u>Y</u> | <u>HCL</u> | <u>EPA 8015/8020</u> | <u>N</u> | <u>ET</u> |
| | | | | | | | | | |
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1 Sample Type Codes: W = Water, S = Soil, Describe Other
 Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other
 Cap Codes: PT = Plastic, Teflon lined;
 2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)
 5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name _____ Date 4/9/91 Time of Sampling 7:20
Job Name Snell-Akumela I Job Number 81-429-01 Initials PL
Sample Point Description _____ (M = Monitoring Well)
Location _____

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

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

Evacuation Time: Stop _____
Start _____
Total Evacuation Time _____
Total Evacuated Prior to Sampling _____ gal.
Evacuation Rate N/A 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/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

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

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

| SC/ μ mhos | pH | T°C | Time | Volume Evacuated (gal.) |
|----------------|-------|-------|-------|-------------------------|
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ |

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 |
|------------|---------------|-------------------------|------------------|------------------|------------------|------------------------|----------------------|-------------------|-----------|
| <u>3</u> | <u>041-21</u> | <u>w/cu</u> | <u>40ml</u> | <u>N</u> | <u>Y</u> | <u>HCC</u> | <u>EPA 8015/8020</u> | <u>N</u> | <u>ZT</u> |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |

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

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

ATTACHMENT B
ANALYTIC RESULTS AND CHAIN-OF-CUSTODY FORM

CERTIFICATE OF ANALYSIS

Shell Oil Company
Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608
Tom Fojut

Date: 04/24/91

Work Order: T1-04-146

P.O. Number: MOH 880-021 Vendor #I0002402

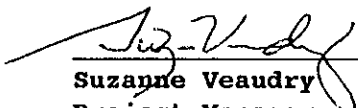
This is the Certificate of Analysis for the following samples:

Client Work ID: 81-429-01, 2160 Otis, Alameda
Date Received: 04/10/91
Number of Samples: 5
Sample Type: aqueous

TABLE OF CONTENTS FOR ANALYTICAL RESULTS

| <u>PAGES</u> | <u>LABORATORY #</u> | <u>SAMPLE IDENTIFICATION</u> |
|--------------|---------------------|------------------------------|
| 2 | T1-04-146-01 | 041-01 |
| 3 | T1-04-146-02 | 041-S1 |
| 4 | T1-04-146-03 | 041-21 |
| 6 | T1-04-146-04 | 041-02 |
| 12 | T1-04-146-05 | Quality Control |

Reviewed and Approved:



Suzanne Veaudry
Project Manager

American Council of Independent Laboratories
International Association of Environmental Testing Laboratories
American Association for Laboratory Accreditation

Company: Shell Oil Company

Date: 04/24/91

Client Work ID: 81-429-01, 2160 Otis, Alameda

Work Order: T1-04-146

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: 041-01

SAMPLE DATE: 04/09/91

LAB SAMPLE ID: T104146-01

SAMPLE MATRIX: aqueous

RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

| | <u>METHOD</u> | <u>EXTRACTION DATE</u> | <u>ANALYSIS DATE</u> |
|--------------------------|---------------|----------------------------|--------------------------|
| BTEX | 8020 | | 04/19/91 |
| Low Boiling Hydrocarbons | Mod.8015 | | 04/19/91 |

| <u>PARAMETER</u> | <u>DETECTION LIMIT</u> | <u>DETECTED</u> |
|----------------------------------------------------|----------------------------|-----------------|
| Low Boiling Hydrocarbons calculated as Gasoline | 0.05 | None |
| BTEX | | |
| Benzene | 0.0005 | None |
| Toluene | 0.0005 | None |
| Ethylbenzene | 0.0005 | None |
| Xylenes (total) | 0.0005 | None |

Company: Shell Oil Company
 Date: 04/24/91
 Client Work ID: 81-429-01, 2160 Otis, Alameda

IT ANALYTICAL SERVICES
 SAN JOSE, CA

Work Order: T1-04-146

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: 041-S1
 SAMPLE DATE: 04/09/91
 LAB SAMPLE ID: T104146-02
 SAMPLE MATRIX: aqueous
 RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

| | <u>METHOD</u> | <u>EXTRACTION DATE</u> | <u>ANALYSIS DATE</u> |
|--------------------------|---------------|----------------------------|--------------------------|
| BTEX | 8020 | | 04/19/91 |
| Low Boiling Hydrocarbons | Mod.8015 | | 04/19/91 |

| <u>PARAMETER</u> | <u>DETECTION LIMIT</u> | <u>DETECTED</u> |
|----------------------------------------------------|----------------------------|-----------------|
| Low Boiling Hydrocarbons calculated as Gasoline | 0.05 | None |
| BTEX | | |
| Benzene | 0.0005 | None |
| Toluene | 0.0005 | None |
| Ethylbenzene | 0.0005 | None |
| Xylenes (total) | 0.0005 | None |

Company: Shell Oil Company

Date: 04/24/91

Client Work ID: 81-429-01, 2160 Otis, Alameda

Work Order: T1-04-146

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: 041-21

SAMPLE DATE: 04/09/91

LAB SAMPLE ID: T104146-03

SAMPLE MATRIX: aqueous

RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

| | <u>METHOD</u> | <u>EXTRACTION DATE</u> | <u>ANALYSIS DATE</u> |
|--------------------------|---------------|----------------------------|--------------------------|
| BTEX | 8020 | | 04/19/91 |
| Low Boiling Hydrocarbons | Mod.8015 | | 04/19/91 |

| <u>PARAMETER</u> | <u>DETECTION LIMIT</u> | <u>DETECTED</u> |
|----------------------------------------------------|----------------------------|-----------------|
| Low Boiling Hydrocarbons calculated as Gasoline | 0.05 | None |
| BTEX | | |
| Benzene | 0.0005 | None |
| Toluene | 0.0005 | None |
| Ethylbenzene | 0.0005 | None |
| Xylenes (total) | 0.0005 | None |

Company: Shell Oil Company
Date: 04/24/91
Client Work ID: 81-429-01, 2160 Otis, Alameda

Work Order: T1-04-146

TEST NAME: Vol. Organics EPA 624/8240

SAMPLE ID: 041-02
SAMPLE DATE: 04/09/91
LAB SAMPLE ID: T104146-04
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2
EXTRACTION DATE: N/A
ANALYSIS DATE: 04/22/91

RESULTS in Milligrams per Liter:

| PARAMETER | DETECTION | | PARAMETER | DETECTION | |
|----------------------------|-----------|----------|---------------------------|-----------|----------|
| | LIMIT | DETECTED | | LIMIT | DETECTED |
| Chloromethane | 0.010 | None | cis-1,3-Dichloropropene | 0.005 | None |
| Bromomethane | 0.010 | None | Trichloroethene | 0.005 | None |
| Vinyl Chloride | 0.010 | None | Chlorodibromomethane | 0.005 | None |
| Chloroethane | 0.010 | None | 1,1,2-Trichloroethane | 0.005 | None |
| Dichloromethane | 0.005 | None | Benzene | 0.005 | 0.021 |
| Acetone | 0.020 | None | trans-1,3-Dichloropropene | 0.005 | None |
| Carbon Disulfide | 0.005 | None | Bromoform | 0.005 | None |
| 1,1-Dichloroethene | 0.005 | None | 4-Methyl-2-Pentanone | 0.010 | None |
| 1,1-Dichloroethane | 0.005 | None | 2-Hexanone | 0.010 | None |
| 1,2-Dichloroethene (total) | 0.005 | 0.064 | Tetrachloroethene | 0.005 | None |
| Chloroform | 0.005 | None | 1,1,2,2-Tetrachloroethane | 0.005 | None |
| 1,2-Dichloroethane | 0.005 | None | Toluene | 0.005 | None |
| 2-Butanone | 0.010 | None | Chlorobenzene | 0.005 | None |
| 1,1,1-Trichloroethane | 0.005 | None | Ethylbenzene | 0.005 | None |
| Carbon Tetrachloride | 0.005 | None | Styrene | 0.005 | None |
| Vinyl Acetate | 0.010 | None | Xylenes (total) | 0.005 | None |
| Bromodichloromethane | 0.005 | None | Acrolein | 0.010 | None |
| 1,2-Dichloropropane | 0.005 | None | Acrylonitrile | 0.010 | None |

| SURROGATES | LIMITS | % REC |
|-----------------------|--------|-------|
| 1,2-Dichloroethane-d4 | 76-114 | 98. |
| Toluene-d8 | 88-110 | 92. |
| 4-Bromofluorobenzene | 86-115 | 92. |

Company: Shell Oil Company

Date: 04/24/91

Client Work ID: 81-429-01, 2160 Otis, Alameda

Work Order: T1-04-146

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: 041-02

SAMPLE DATE: 04/09/91

LAB SAMPLE ID: T104146-04

SAMPLE MATRIX: aqueous

RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

| | <u>METHOD</u> | <u>EXTRACTION DATE</u> | <u>ANALYSIS DATE</u> |
|---------------------------|---------------|----------------------------|--------------------------|
| High Boiling Hydrocarbons | Mod.8015 | 04/17/91 | 04/19/91 |

| <u>PARAMETER</u> | <u>DETECTION LIMIT</u> | <u>DETECTED</u> |
|---------------------------------------------------|----------------------------|-----------------|
| High Boiling Hydrocarbons calculated as Diesel | 0.05 | None |

Company: Shell Oil Company

Date: 04/24/91

Client Work ID: 81-429-01, 2160 Otis, Alameda

Work Order: T1-04-146

TEST NAME: Spike and Spike Duplicates

SAMPLE ID: Quality Control

SAMPLE DATE: not spec

LAB SAMPLE ID: T104146-05A

EXTRACTION DATE: 04/17/91

ANALYSIS DATE: 04/19/91

ANALYSIS METHOD: Mod. 8015

QUALITY CONTROL REPORT

Laboratory Spike(LS) and Laboratory Spike Duplicate(LSD) Analyses

RESULTS in Micrograms per Liter

| PARAMETER | Sample Amt | Spike Amt | LS Result | LSD Result | LS %Rec | LSD %Rec | RPD |
|------------|---------------|--------------|--------------|---------------|------------|-------------|-----|
| Diesel | None | 2500 | 2239. | 1827. | 90. | 73. | 21. |
| SURROGATES | | | | | LS %Rec | LSD %Rec | |
| nC32 | | | | | 47. | 44. | |

Company: Shell Oil Company

Date: 04/24/91

Client Work ID: 81-429-01, 2160 Otis, Alameda

Work Order: T1-04-146

TEST NAME: Spike and Spike Duplicates

SAMPLE ID: Quality Control

SAMPLE DATE: not spec

LAB SAMPLE ID: T104146-05B

EXTRACTION DATE:

ANALYSIS DATE: 04/18/91

ANALYSIS METHOD: Mod. 8015

QUALITY CONTROL REPORT

Laboratory Spike(LS) and Laboratory Spike Duplicate(LSD) Analyses

RESULTS in Micrograms per Liter

| PARAMETER | Sample Amt | Spike Amt | LS Result | LSD Result | LS %Rec | LSD %Rec | RPD |
|---------------------|---------------|--------------|--------------|---------------|------------|-------------|-----|
| Gasoline | N/A | 500. | 449. | N/A | 90. | N/A | N/A |
| SURROGATES | | | | | LS %Rec | LSD %Rec | |
| 1-3-Dichlorobenzene | | | | | 103. | N/A | |

Company: Shell Oil Company

Date: 04/24/91

Client Work ID: 81-429-01, 2160 Otis, Alameda

Work Order: T1-04-146

TEST NAME: Spike and Spike Duplicates

SAMPLE ID: Quality Control

SAMPLE DATE: not spec

LAB SAMPLE ID: T104146-05C

EXTRACTION DATE:

ANALYSIS DATE: 04/18/91

ANALYSIS METHOD: Mod. 8015

QUALITY CONTROL REPORT

Laboratory Spike(LS) and Laboratory Spike Duplicate(LSD) Analyses

RESULTS in Micrograms per Liter

| PARAMETER | Sample Amt | Spike Amt | LS Result | LSD Result | LS %Rec | LSD %Rec | RPD |
|---------------------|---------------|--------------|--------------|---------------|------------|-------------|-----|
| Gasoline | N/A | 500. | 494. | N/A | 99. | N/A | N/A |
| SURROGATES | | | | | LS %Rec | LSD %Rec | |
| 1-3-Dichlorobenzene | | | | | 108. | N/A | |

Company: Shell Oil Company

Date: 04/24/91

Client Work ID: 81-429-01, 2160 Otis, Alameda

Work Order: T1-04-146

TEST NAME: Spike and Spike Duplicates

SAMPLE ID: Quality Control

SAMPLE DATE: not spec

LAB SAMPLE ID: T104146-05A

EXTRACTION DATE:

ANALYSIS DATE: 04/19/91

ANALYSIS METHOD: Mod. 8015

QUALITY CONTROL REPORT

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Analyses

RESULTS in Micrograms per Liter

| PARAMETER | Sample Amt | Spike Amt | MS Result | MSD Result | MS %Rec | MSD %Rec | RPD |
|---------------------|---------------|--------------|--------------|---------------|------------|-------------|-----|
| Gasoline | ND<50. | 500. | 412. | 360. | 82. | 72. | 13. |
| SURROGATES | | | | | MS %Rec | MSD %Rec | |
| 1,3-Dichlorobenzene | | | | | 100. | 104. | |

Company: Shell Oil Company

Date: 04/24/91

Client Work ID: 81-429-01, 2160 Otis, Alameda

Work Order: T1-04-146

TEST NAME: Spike and Spike Duplicates

SAMPLE ID: Quality Control

SAMPLE DATE: not spec

LAB SAMPLE ID: T104146-05B

EXTRACTION DATE:

ANALYSIS DATE: 04/18/91

ANALYSIS METHOD: Mod. 8015

QUALITY CONTROL REPORT

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Analyses

RESULTS in Micrograms per Liter

| PARAMETER | Sample Amt | Spike Amt | MS Result | MSD Result | MS %Rec | MSD %Rec | RPD |
|---------------------|---------------|--------------|--------------|---------------|------------|-------------|-----|
| Gasoline | ND<50. | 500. | 408. | 454. | 82. | 91. | 10. |
| SURROGATES | | | | | MS %Rec | MSD %Rec | |
| 1,3-Dichlorobenzene | | | | | 105. | 106. | |

Company: Shell Oil Company

Date: 04/24/91

Client Work ID: 81-429-01, 2160 Otis, Alameda

Work Order: T1-04-146

TEST NAME: Spike and Spike Duplicates

SAMPLE ID: Quality Control

SAMPLE DATE: not spec

LAB SAMPLE ID: T104146-05C

EXTRACTION DATE:

ANALYSIS DATE: 04/18/91

ANALYSIS METHOD: 624/8240

QUALITY CONTROL REPORT

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Analyses

RESULTS in Micrograms per Liter

| PARAMETER | Sample Amt | Spike Amt | MS Result | MSD Result | MS %Rec | MSD %Rec | RPD |
|--------------------|------------|-----------|-----------|------------|---------|----------|-----|
| 1,1-Dichloroethene | None | 50. | 39.2 | 78. | 40.8 | 82. | 5. |
| Trichloroethene | None | 50. | 45.3 | 91. | 47.1 | 94. | 3. |
| Benzene | None | 50. | 46.1 | 92. | 47.8 | 96. | 4. |
| Toluene | None | 50. | 42.7 | 86. | 43.8 | 88. | 2. |
| Chlorobenzene | None | 50. | 42.9 | 86. | 43.7 | 96. | 11. |

| SURROGATES | MS %Rec | MSD %Rec |
|-----------------------|---------|----------|
| 1,2-Dichloroethane-d4 | 102. | 103. |
| Toluene-d8 | 94. | 94. |
| P-Bromofluorobenzene | 86. | 88. |

Company: Shell Oil Company

Date: 04/24/91

Client Work ID: 81-429-01, 2160 Otis, Alameda

Work Order: T1-04-146

TEST CODE 624 TEST NAME Vol. Organics EPA 624/8240

The method of analysis for volatile organics is taken from EPA Methods 624 and 8240. Water samples and low-level soil samples are analyzed directly using the purge and trap technique. Medium-level soil samples are extracted with methanol and a portion of the extract is analyzed using the purge and trap technique. Final detection is by gas chromatography-mass spectrometry.

TEST CODE TPHN TEST NAME TPH High Boiling by 8015

The method of analysis for high boiling hydrocarbons is taken from the LUFT field manual. Samples are extracted with solvent and examined by gas chromatography using a flame ionization detector. Results in soils are corrected for moisture content and are reported on a dry soil basis unless otherwise noted.

TEST CODE TPHVB TEST NAME TPH Gas, BTEX by 8015/8020

The method of analysis for low boiling hydrocarbons is taken from EPA Methods modified 8015, 8020 and 5030. The sample is examined using the purge and trap technique. Final detection is by gas chromatography using a flame ionization detector in series with a photoionization detector. The result for total low boiling hydrocarbons is calculated as gasoline. Results in soils are corrected for moisture content and are reported on a dry soil basis unless otherwise noted.

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

Shell Service Station Address:
2160 OTIS DRIVE
ALAMEDA CA
 Shell Contact: KURT MILLER
 WIC #: 204-0012-0502
 AFE#:

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

TOM FAJUT
 Project ID: 81-429-01

CHAIN-OF-CUSTODY RECORD AND ANALYTIC INSTRUCTIONS

Sampled by: Paul Cardona Laboratory Name: IT Corp.

- 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.

| No. of Containers | Sample ID | Container Type | Sample Date | Vol ² | Fil ³ | Ref ⁴ | Preservative (specify) | Analyze for | Analytic Method | Turn ⁵ | COMMENTS |
|-------------------|-----------|----------------|-------------|------------------|------------------|------------------|------------------------|----------------------------|-----------------|-------------------|----------|
| 3 | 041-01 | w/cu | 4/9/91 | 40ml | N | Y | HCL | TPH-G/BETA | EPA 8015/8020 | N | |
| ↓ | 041-51 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | |
| ↓ | 041-21 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | |
| 3 | 041-02 | w/cu | 4/9/91 | 40ml | N | Y | | Volatile Organic Compounds | EPA 8240 | | |
| 2 | ↓ | w/PT-PV | ↓ | 1L | ↓ | ↓ | ↓ | TPH-D | EPA 8015 | ↓ | |

1 Paul Cardona 4/9/91 16:35
 Released by (Signature), Date
 1 Weiss Associates
 Affiliation
 2 Manitha 4/9/91 16:35
 Received by (Signature), Date
 2 Weiss Assoc.
 Affiliation

3 Manitha 4/10/91
 Released by (Signature), Date
 3 Weiss Assoc. 13:23
 Affiliation
 4 IT CORP 13:23
 Shipping Carrier, Method, Date
 4 IT CORP
 Affiliation

5 _____
 Released by (Signature), Date
 5 _____
 Affiliation
 6 _____
 Received by Lab Personnel, Date
 6 _____
 Affiliation, Telephone
 x _____
 Seal intact?

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:

ATTACHMENT C
PREVIOUS GROUND WATER ELEVATION CONTOUR MAPS

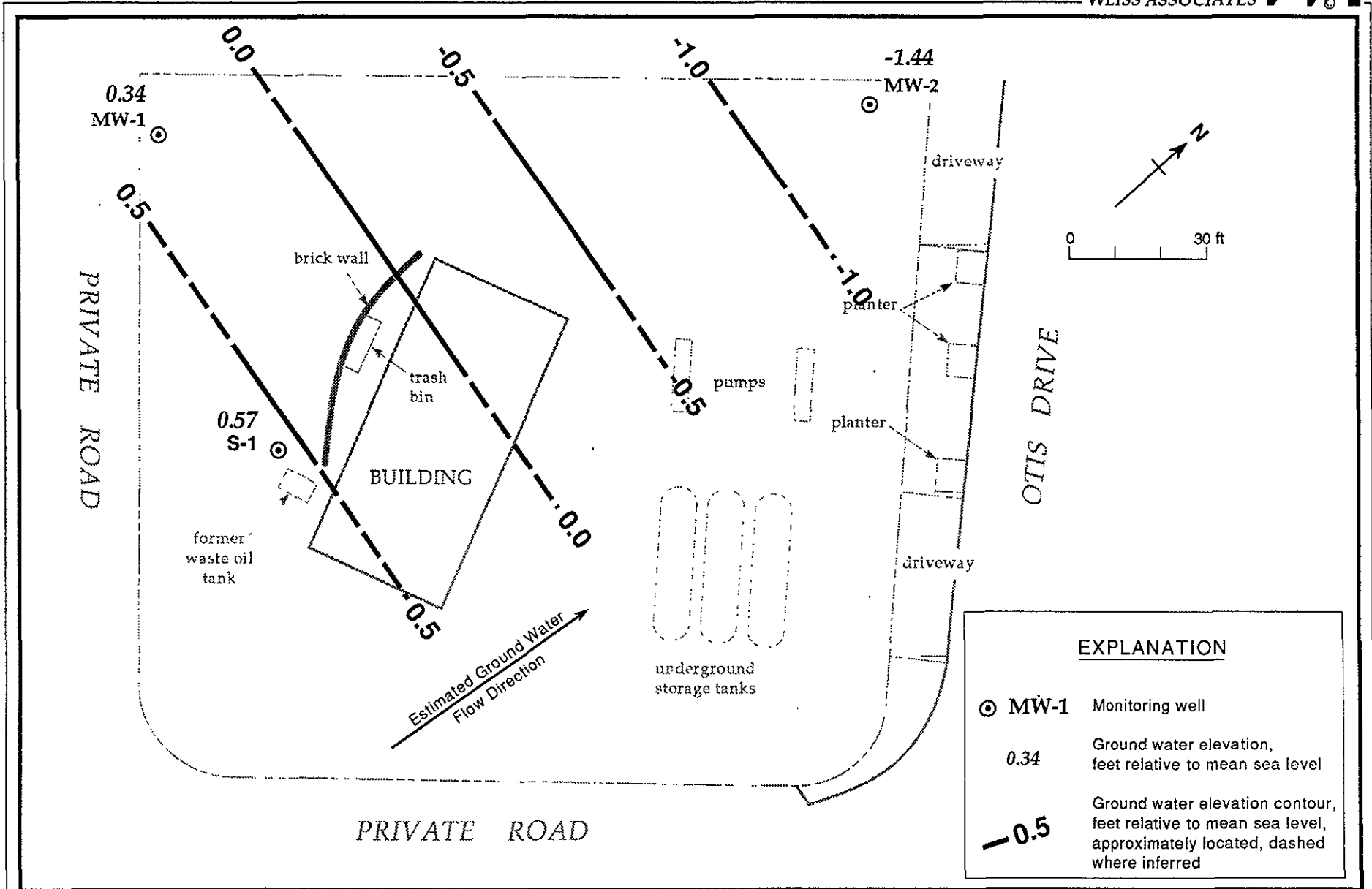


Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - January 17, 1991 - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California

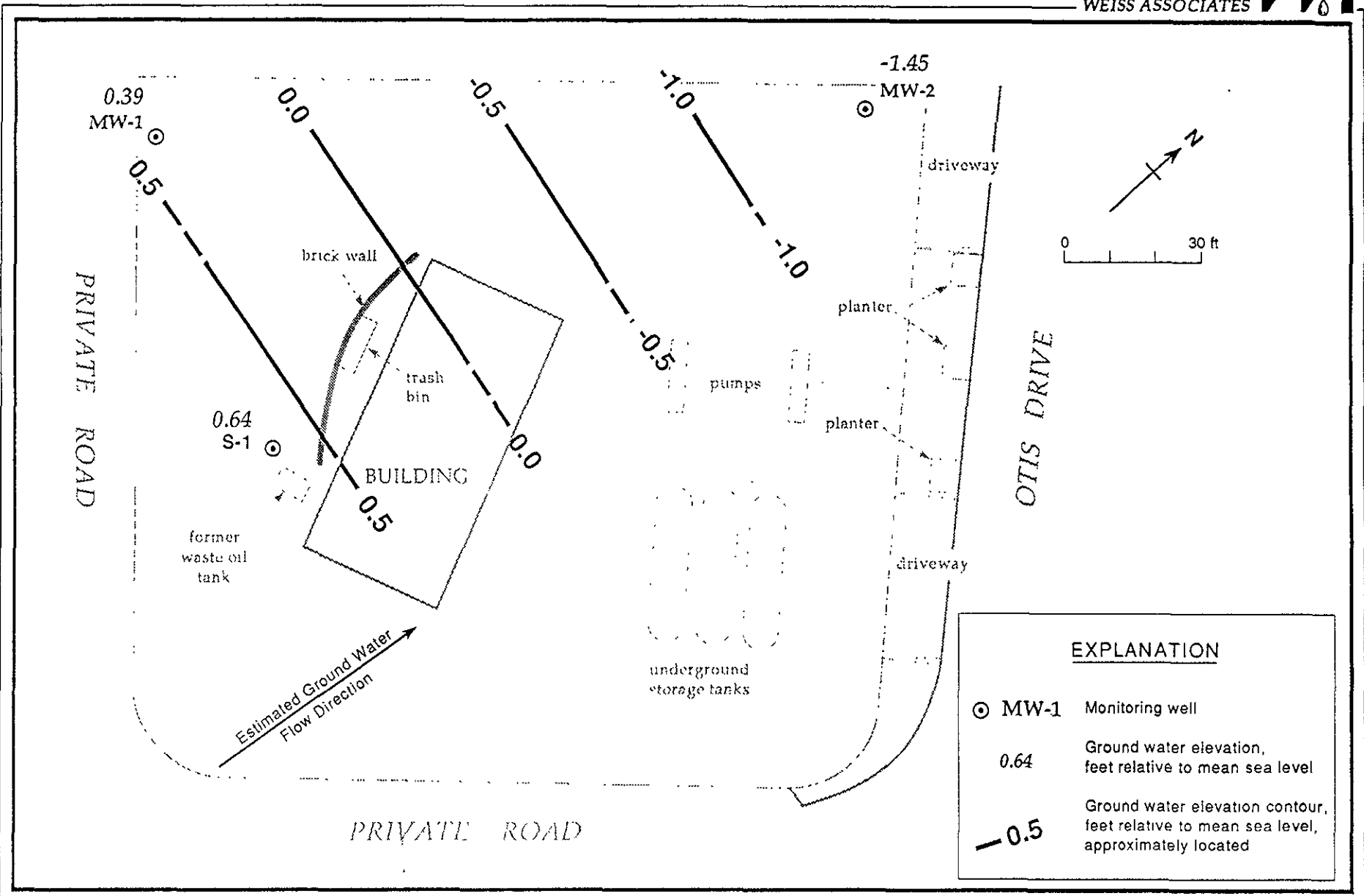


Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - October 9, 1990 - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California

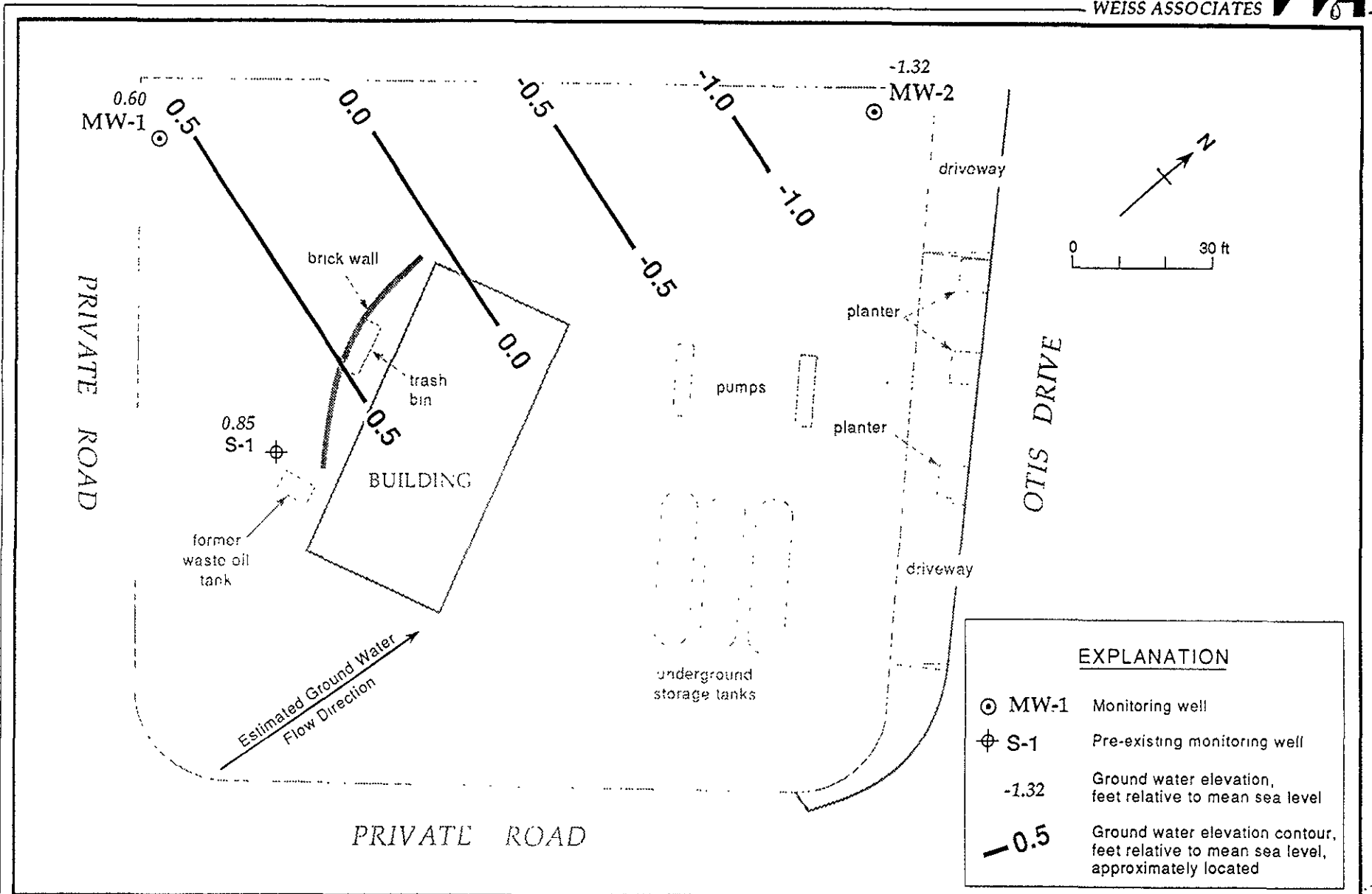


Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - July 10, 1990 - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California

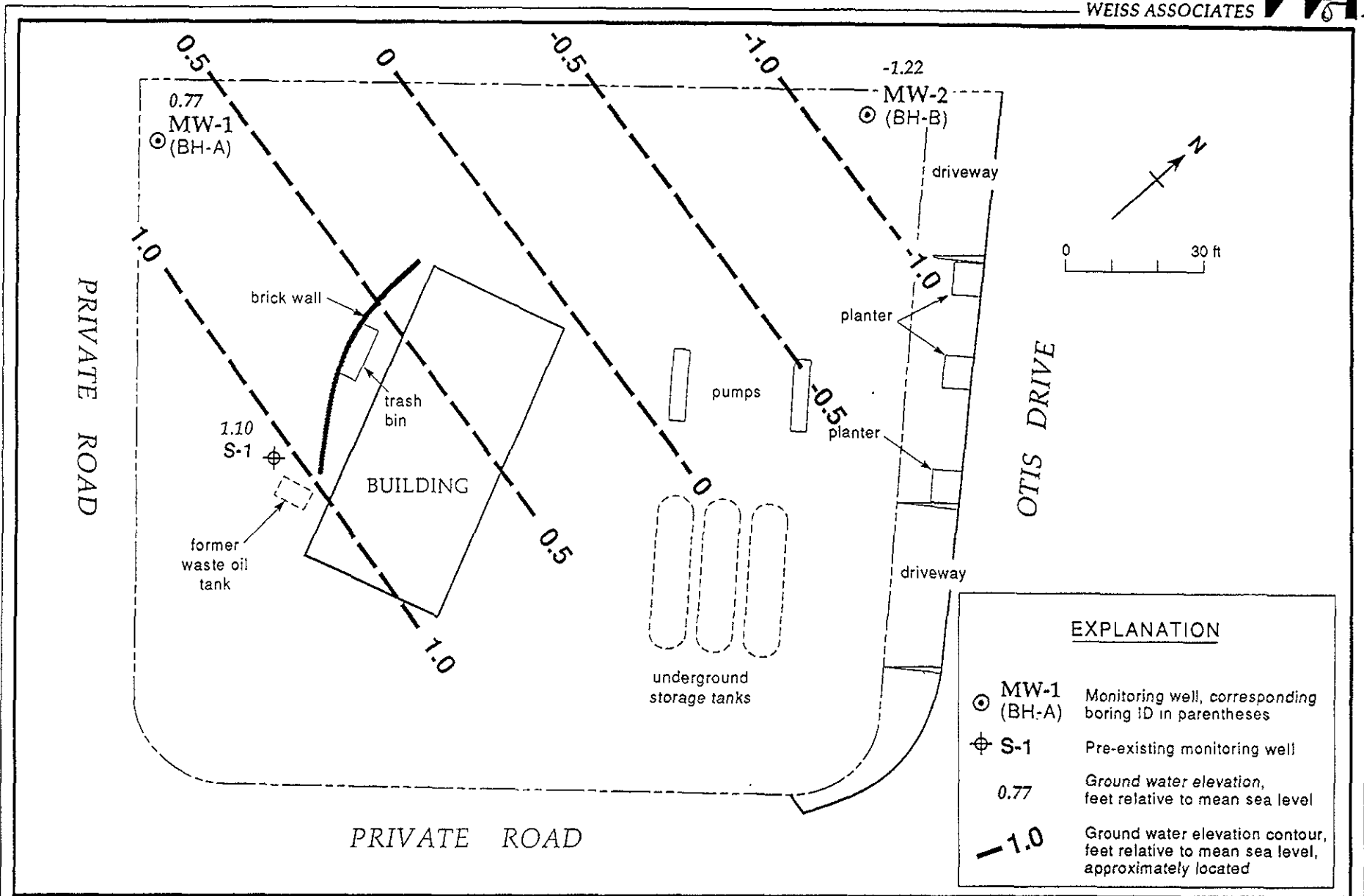


Figure 2. Ground Water Elevation Contours - April 4, 1990 - Shell Service Station WIC #204-007-205, 2160 Otis Drive, Alameda, California