



May 20, 1992

Tom Peacock
Alameda County Department of
Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Re: Shell Service Station
WIC #204-5508-3301
6039 College Avenue
Oakland, California
WA Job #81-618-01

Dear Mr. Peacock

This letter describes recently completed and anticipated activities at the Shell service station referenced above (Figure 1). This status report satisfies the quarterly reporting requirements 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 first quarter 1992 and proposed work for the second quarter 1992.

First Quarter 1992 Activities:

- EMCON Associates (EMCON) of San Jose, California measured depths to ground water from the ~~five site wells~~ and collected ground water samples from ~~four of the five site wells~~. EMCON purged approximately ~~0.25 gallons of floating hydrocarbons from MW-4~~ and did not sample the well (Table 1). EMCON's report describing these activities and analytic results for ground water is included as Attachment A.
- Weiss Associates (WA) used EMCON's ground water elevation calculations to prepare a ground water elevation contour map (Figure 2).

Tom Peacock
May 20, 1992

2

Anticipated Second Quarter 1992 Activities:

WA will submit a report presenting the results of second quarter 1992 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results and a ground water elevation contour map.

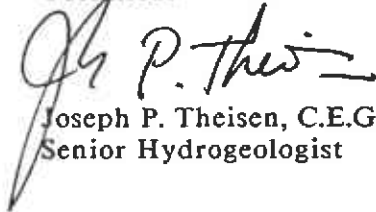
Please call if you have any questions.



Sincerely,
Weiss Associates



J. Michael Asport
Technical Assistant



Joseph P. Theisen, C.E.G.
Senior Hydrogeologist

JMA/JPT:jma

E:\ALL\SHELL\600\618QMAP2.WP

Attachments: Figures
A - EMCON's Ground Water Monitoring Report

cc: Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, CA 94520
Tom Callaghan, San Francisco Bay Regional Water Quality Control Board, 2101 Webster Street, Oakland, CA 94612

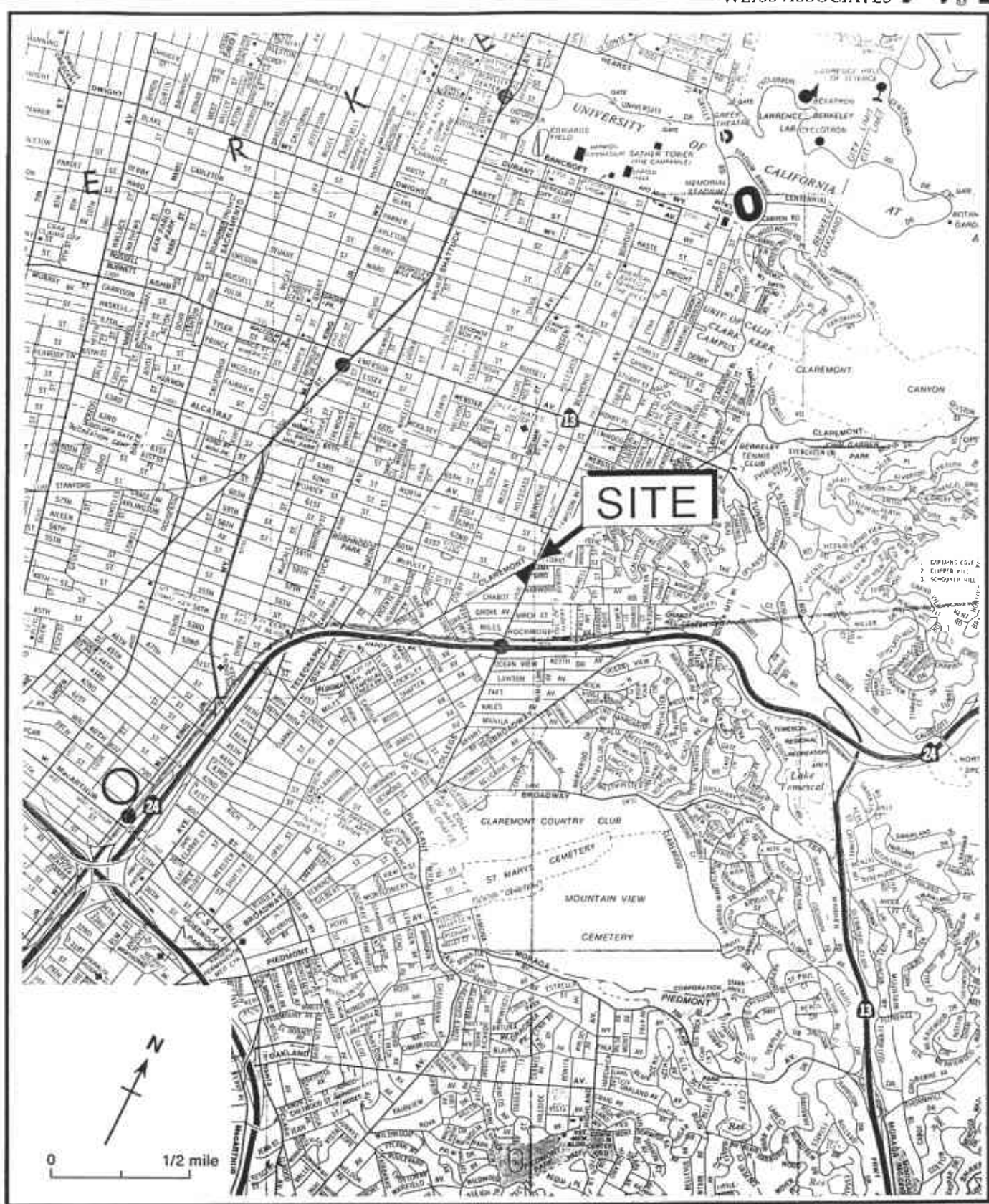


Figure 1. Site Location Map - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

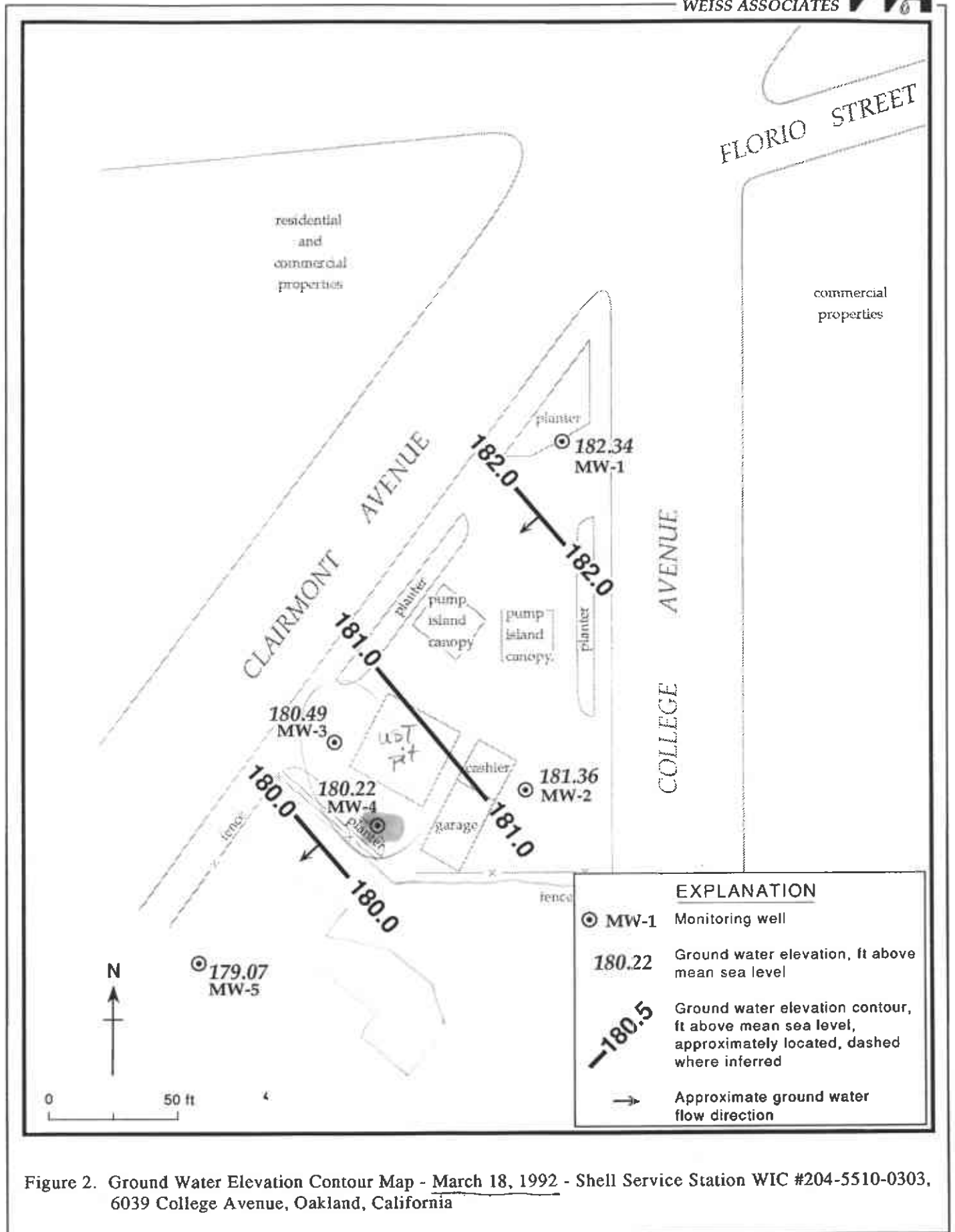


Figure 2. Ground Water Elevation Contour Map - March 18, 1992 - Shell Service Station WIC #204-5510-0303, 6039 College Avenue, Oakland, California

Table 1. Floating Hydrocarbon Removal - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

| Well | Date | Floating Hydrocarbon Thickness (ft) | Vol. of Floating Hydrocarbon Removed (gal) | Cumulative Volume of Hydrocarbons Removed (gal) |
|-------------------|-----------------------|-------------------------------------|--|---|
| MW-1 | 03/18/92 | --- | --- | --- |
| MW-2 | 03/18/92 | --- | --- | --- |
| MW-3 | 03/18/92 | --- | --- | --- |
| MW-4 ^a | 01/15/92 ^b | --- | 0.52 | 0.52 |
| | 02/15/92 ^b | --- | 0.52 | 1.04 |
| | 03/18/92 | 0.24 | --- | 1.04 |
| | 04/29/92 | --- | 0.25 | 1.29 |
| MW-5 | 03/18/92 | --- | --- | --- |

a = Petrotrap passive floating hydrocarbon skimmer installed in well

b = Date approximate. Actual date of floating hydrocarbon removal unavailable.

ATTACHMENT A
GROUND WATER MONITORING REPORT AND ANALYTIC REPORT



EMCON
ASSOCIATES

Consultants in Wastes
Management and
Environmental Control

April 2, 1992
Project: G67-39.01
WIC#: 204-5508-3301

Mr. David Elias
Weiss Associates
5500 Shellmound Street
Emeryville, California 94608-2411

Re: First quarter 1992 ground-water monitoring report, Shell Oil
Company, 6039 College Avenue, Oakland, California

Dear Mr. Elias:

This letter presents the results of the first quarter 1992 ground-water monitoring event for the Shell Oil Company (Shell) service station located at 6039 College Avenue, Oakland, California. The first quarter monitoring event was conducted on March 18, 1992. The site is monitored quarterly.

GROUND-WATER LEVEL SURVEY

A water-level survey preceded the purging and sampling of the monitoring wells. The wells included in the survey are identified in figure 1 [supplied by Harding Lawson Associates (HLA)]. During the survey, monitoring wells MW-1 through MW-5 were measured for depth to water, floating product thickness, and total depth. Depth to water and floating product thickness were measured to the nearest 0.01 foot with an oil/water interface probe. Total depth was measured to the nearest 0.1 foot. Results of the first quarter water-level survey, and available data from four previous surveys, are summarized in table 1.

Well MW-4 contains a product skimmer. The skimmer was removed and inspected for product; 100 milliliters of product were drained from the skimmer. Before the skimmer was placed back in the well, the well was checked for floating product. Floating product, 0.24 foot thick, was observed in well MW-4.

SAMPLING AND ANALYSIS

Ground-water samples were collected from wells MW-1, MW-2, MW-3, and MW-5 on March 18, 1992. Well MW-4 contained floating product and was not sampled during first quarter monitoring. Prior to sample collection, the wells were purged with a polyvinyl chloride (PVC) bailer. During the purging operation, ground water was monitored for pH,

G673901A.DOC



electrical conductivity, and temperature as a function of volume of water removed. Purging continued until these parameters were stable and a minimum of three casing volumes of ground water were removed. Well MW-1 was evacuated to dryness before three casing volumes were removed. The well was allowed to recharge for up to 24 hours. Samples were collected after the well had recharged to a level sufficient for sample collection. Field measurements from first quarter monitoring, and available data from four previous monitoring events, are summarized in table 1. Purge water from the monitoring wells was contained in 55-gallon drums. The drums were identified with Shell-approved labels and secured for on-site storage.

Ground water samples were collected with a Teflon® bailer, labeled, placed on ice, and transported to a Shell-approved and state-certified analytical laboratory for analysis. Shell chain-of-custody documents accompanied all samples to the laboratory.

All equipment that was placed down a well or that came in contact with ground water was steam cleaned on site with steaming hot deionized water prior to use at each well.

Quality control (QC) samples for first quarter monitoring included a trip blank (TB). All water samples collected during first quarter monitoring were analyzed for total petroleum hydrocarbons (TPH) as gasoline, and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Additional samples collected from wells MW-1, MW-3, and MW-5, and the trip blank, were analyzed for TPH as diesel. Samples from well MW-3 were also analyzed for TPH as motor oil.

ANALYTICAL RESULTS

Analytical results for the first quarter 1992 monitoring event, and available results from four previous monitoring events, are summarized in table 2. The original certified analytical report and a copy of the final chain-of-custody document are attached.

The historical chemical data provided by HLA contains numerous conversion errors in the method detection limits. As a result, all non-detected values from the HLA database have been reported as "ND" only.

Mr. David Elias
April 2, 1992
Page 3

Project G67-39.01
WIC# 204-5508-3301

If you have any questions, please call.

Very truly yours,

EMCON Associates



David Larsen
Environmental Sampling Coordinator



Orrin Childs
Environmental Sampling Supervisor

DL/OC:dl

Attachments: Table 1 - Monitoring well field measurement data
Table 2 - Summary of analytical results
Figure 1 - Site map
Certified analytical report
Chain-of-custody document

Table 1
Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station: 6039 College Avenue
Oakland, California
WIC #: 204-5508-3301

Date: 04/02/92
Project Number: G67-39.01

| Well Desig- nation | Water Level Field Date | TOC Elevation (ft-MSL) | Depth to Water (feet) | Ground- water Elevation (ft-MSL) | Total Well Depth (feet) | Floating Product Thickness (feet) | Water Sample Field Date | pH (std. units) | Electrical Conductivity (micromhos/cm) | Temperature (degrees F) | Turbidity (NTU) |
|--------------------------|---------------------------------|------------------------------|--------------------------------|---|----------------------------------|--|----------------------------------|------------------------|--|--------------------------------|------------------------|
| MW-1 | 11/27/90 | 195.89 | 20.39* | 175.50 | NR | NR | 11/27/90 | NR | NR | NR | NR |
| MW-1 | 03/08/91 | 195.89 | 16.85* | 179.04 | NR | NR | 03/08/91 | NR | NR | NR | NR |
| MW-1 | 06/03/91 | 195.89 | 17.82* | 178.07 | NR | NR | 06/03/91 | NR | NR | NR | NR |
| MW-1 | 08/30/91 | 195.89 | 19.87* | 176.02 | NR | NR | 08/30/91 | NR | NR | NR | NR |
| MW-1 | 03/18/92 | 195.89 | 13.55* | 182.34 | 24.5 | ND | 03/18/92 | 6.79 | 795 | 65.2 | >200 |
| MW-2 | 11/27/90 | 194.27 | 19.44* | 174.83 | NR | NR | 11/27/90 | NR | NR | NR | NR |
| MW-2 | 03/08/91 | 194.27 | 15.96* | 178.31 | NR | NR | 03/08/91 | NR | NR | NR | NR |
| MW-2 | 06/03/91 | 194.27 | 17.00* | 177.27 | NR | NR | 06/03/91 | NR | NR | NR | NR |
| MW-2 | 08/30/91 | 194.27 | 18.95* | 175.32 | NR | NR | 08/30/91 | NR | NR | NR | NR |
| MW-2 | 03/18/92 | 194.27 | 12.91* | 181.36 | 24.4 | ND | 03/18/92 | 6.39 | 554 | 65.5 | 184.2 |
| MW-3 | 11/27/90 | 192.52 | 18.27* | 174.25 | NR | NR | 11/27/90 | NR | NR | NR | NR |
| MW-3 | 03/08/91 | 192.52 | 14.86* | 177.66 | NR | NR | 03/08/91 | NR | NR | NR | NR |
| MW-3 | 06/03/91 | 192.52 | 15.84* | 176.68 | NR | NR | 06/03/91 | NR | NR | NR | NR |
| MW-3 | 08/30/91 | 192.52 | 17.79* | 174.73 | NR | NR | 08/30/91 | NR | NR | NR | NR |
| MW-3 | 03/18/92 | 192.52 | 12.03* | 180.49 | 23.8 | ND | 03/18/92 | 6.54 | 712 | 64.1 | >200 |
| MW-4 | 11/27/90 | 193.37 | 19.16* | 174.21 | NR | NR | 11/27/90 | NR | NR | NR | NR |
| MW-4 | 03/08/91 | 193.37 | 15.77* | 177.60 | NR | NR | 03/08/91 | NR | NR | NR | NR |
| MW-4 | 06/03/91 | 193.37 | 16.77* | 176.60 | NR | NR | 06/03/91 | NR | NR | NR | NR |
| MW-4 | 08/30/91 | 193.37 | 18.71* | 174.66 | NR | NR | 08/30/91 | NR | NR | NR | NR |
| MW-4 | 03/18/92 | 193.37 | 13.15* | 180.22 | NR | 0.24 | 03/18/92 | FP | FP | FP | FP |

TOC = top of casing

ft-MSL = elevation in feet, relative to mean sea level

std. units = standard pH units

micromhos/cm = micromhos per centimeter

degrees F = degrees Fahrenheit

NTU = nephelometric turbidity units

* = Wells not surveyed relative to MSL; reference point is a temporary benchmark of 195.00 feet on the northwest corner of the kiosk

NR = not reported; data not available

ND = none detected

FP = floating product; well contained floating product and was not sampled

Table 1
Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station: 6039 College Avenue
Oakland, California
WIC #: 204-5508-3301

Date: 04/02/92
Project Number: G67-39.01

| Well Design- nation | Water Level Field Date | TOC Elevation (ft-MSL) | Depth to Water (feet) | Ground- water Elevation (ft-MSL) | Total Well Depth (feet) | Floating Product Thickness (feet) | Water Sample Field Date | pH (std. units) | Electrical Conductivity (micromhos/cm) | Temperature (degrees F) | Turbidity (NTU) |
|---------------------------|---------------------------------|----------------------------------|------------------------------------|---|--------------------------------------|--|----------------------------------|----------------------------|--|------------------------------------|----------------------------|
| MW-5 | 08/30/91 | 190.35 | 16.74* | 173.61 | NR | NR | 08/30/91 | NR | NR | NR | NR |
| MW-5 | 03/18/92 | 190.35 | 11.28* | 179.07 | 28.5 | ND | 03/18/92 | 6.45 | 535 | 66.0 | >200 |

TOC = top of casing

ft-MSL = elevation in feet, relative to mean sea level

std. units = standard pH units

micromhos/cm = micromhos per centimeter

degrees F = degrees Fahrenheit

NTU = nephelometric turbidity units

* = Wells not surveyed relative to MSL; reference point is a temporary benchmark of 195.00 feet on the northwest corner of the kiosk

NR = not reported; data not available

ND = none detected

Table 2
 Summary of Analytical Results
 First Quarter 1992
 milligrams per liter (mg/l) or parts per million (ppm)

Shell Station: 6039 College Avenue
 Oakland, California
 WIC #: 204-5508-3301

Date: 04/02/92
 Project Number: G67-39.01

| Sample Designation | Water Sample Field Date | TPH-g (mg/l) | Benzene (mg/l) | Toluene (mg/l) | Ethyl-benzene (mg/l) | Total Xylenes (mg/l) | TPH-d (mg/l) | TPH-mo (mg/l) |
|--------------------|-------------------------|-----------------|--------------------------|-------------------|-------------------------|-------------------------|-----------------|------------------|
| MW-1 | 11/27/90 | NA | NA | NA | NA | NA | NA | NA |
| MW-1 | 03/08/91 | ND | ND | ND | ND | ND | 0.05 | ND |
| MW-1 | 06/03/91 | ND | ND | ND | ND | ND | ND | ND |
| MW-1 | 08/30/91 | ND | ND | ND | ND | ND | 0.52 | ND |
| MW-1 | 03/18/92 | <0.03 | <0.0003 | <0.0003 | <0.0003 | <0.0003 | <0.05 | NA |
| MW-2 | 11/27/90 | ND | ND | ND | ND | ND | ND | ND |
| MW-2 | 03/08/91 | ND | ND | ND | ND | ND | ND | ND |
| MW-2 | 06/03/91 | ND | ND | ND | ND | ND | ND | ND |
| MW-2 | 08/30/91 | ND | ND | ND | ND | ND | ND | ND |
| MW-2 | 03/18/92 | <0.03 | <0.0003 | <0.0003 | <0.0003 | <0.0003 | NA | NA |
| MW-3 | 11/27/90 | 0.54 | 0.018 | 0.0015 | 0.0087 | 0.0025 | 0.24 | 0.46 |
| MW-3 | 03/08/91 | 3.4 | 0.63 ^{G-30} | 0.033 | 0.27 | 0.018 | 2.1 | ND |
| MW-3 | 06/03/91 | 1.7 | 0.26 | 0.013 | 0.098 | 0.024 | 0.69# | ND |
| MW-3 | 08/30/91 | 0.87 | 0.044 | 0.0061 | 0.01 | 0.0029 | 0.37+ | 0.5 |
| MW-3 | 03/18/92 | 6.1 | 0.62 ^{G-20 p/b} | 0.028 | 0.22 | 0.038 | 1.9 | 20. |
| MW-4 | 11/27/90 | 0.47 | 0.064 | 0.0012 | 0.0008 | 0.0027 | 2.4 | 1.0 |
| MW-4 | 03/08/91 | 1.1 | 0.33 | 0.0035 | 0.088 | 0.0058 | 2.6 | 15. |
| MW-4 | 06/03/91 | 0.67& | 0.24 | 0.0023 | 0.0016 | 0.0023 | 1.1+ | ND |
| MW-4 | 08/30/91 | 0.57 | 0.064 | 0.0018 | 0.0009 | 0.0009 | 0.28+ | 2.0 |
| MW-4 | 03/18/92 | FP | FP | FP | FP | FP | FP | FP |

TPH-g = total petroleum hydrocarbons as gasoline
 TPH-d = total petroleum hydrocarbons as diesel
 TPH-mo = total petroleum hydrocarbons as motor oil
 NA = not analyzed
 ND = none detected
 # = compounds appear to be the less volatile constituents of gasoline
 + = results include compounds apparently due to gasoline as well as those due to diesel
 & = compounds detected within the gasoline range are not characteristic of the standard gasoline chromatographic pattern
 FP = floating product; well contained floating product and was not sampled

Table 2
 Summary of Analytical Results
 First Quarter 1992
 milligrams per liter (mg/l) or parts per million (ppm)

Shell Station: 6039 College Avenue
 Oakland, California
 WIC #: 204-5508-3301

Date: 04/02/92
 Project Number: G67-39.01

| Sample Designation | Water Sample Field Date | TPH-g | Benzene | Toluene | Ethyl-benzene | Total Xylenes | TPH-d | TPH-mo |
|--------------------|-------------------------|--------|---------|---------|---------------|---------------|--------|--------|
| | | (mg/l) | (mg/l) | (mg/l) | (mg/l) | (mg/l) | (mg/l) | (mg/l) |
| MW-5 | 08/30/91 | ND | ND | ND | ND | ND | 0.08+ | ND |
| MW-5 | 03/18/92 | <0.03 | <0.0003 | <0.0003 | <0.0003 | <0.0003 | <0.05 | NA |
| TB | 11/27/90 | ND | ND | ND | ND | ND | NA | NA |
| TB | 03/08/91 | ND | ND | ND | ND | ND | NA | NA |
| TB | 06/03/91 | ND | ND | ND | ND | ND | NA | NA |
| TB | 08/30/91 | ND | ND | ND | ND | ND | NA | NA |
| TB | 03/18/92 | <0.03 | <0.0003 | <0.0003 | <0.0003 | <0.0003 | <0.05 | NA |

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

TPH-mo = total petroleum hydrocarbons as motor oil

ND = none detected

+ = results include compounds apparently due to gasoline as well as those due to diesel

NA = not analyzed



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Dave Larsen

Project: 6039 College Ave., Shell

Enclosed are the results from 5 water samples received at Sequoia Analytical on March 19, 1992. The requested analyses are listed below:

| | | | |
|---------|-------------------|---------|---|
| 2033325 | Water, MW-2 | 3/18/92 | EPA 5030/8015/8020 |
| 2033326 | Water, MW-5 | 3/18/92 | EPA 3510/8015 EPA 5030/8015/8020 |
| 2033327 | Water, MW-1 | 3/18/92 | EPA 3510/8015 EPA 5030/8015/8020 |
| 2033328 | Water, MW-3 | 3/18/92 | EPA 3510/8015 EPA 3510/8015 as Motor Oil EPA 5030/8015/8020 |
| 2033329 | Water, Trip Blank | 3/18/92 | EPA 3510/8015 EPA 5030/8015/8020 |

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

for 
Maile A. Springer
Project Manager

EMCON ASSOCIATES

MAR 31 1992

RECEIVED



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

| | | |
|------------------------|---|------------------------|
| Emcon Associates | Client Project ID: 6039 College Ave., Shell | Sampled: Mar 18, 1992 |
| 1938 Junction Ave. | Matrix Descript: Water | Received: Mar 19, 1992 |
| San Jose, CA 95131 | Analysis Method: EPA 5030/8015/8020 | Analyzed: Mar 20, 1992 |
| Attention: Dave Larsen | First Sample #: 203-3325 | Reported: Mar 28, 1992 |

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

| Sample Number | Sample Description | Low/Medium B.P. Hydrocarbons | | | Ethyl Benzene | Xylenes |
|---------------|--------------------|------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | | $\mu\text{g/L}$ (ppb) | $\mu\text{g/L}$ (ppb) | $\mu\text{g/L}$ (ppb) | $\mu\text{g/L}$ (ppb) | $\mu\text{g/L}$ (ppb) |
| 203-3325 | MW-2 | N.D. | N.D. | N.D. | N.D. | N.D. |
| 203-3326 | MW-5 | N.D. | N.D. | N.D. | N.D. | N.D. |
| 203-3327 | MW-1 | N.D. | N.D. | N.D. | N.D. | N.D. |
| 203-3329 | Trip Blank | N.D. | N.D. | N.D. | N.D. | N.D. |

| | | | | | |
|-------------------|----|------|------|------|------|
| Detection Limits: | 30 | 0.30 | 0.30 | 0.30 | 0.30 |
|-------------------|----|------|------|------|------|

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

for 
Maile A. Springer
Project Manager

2033325.EEE <1>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

| | | |
|------------------------|---|------------------------|
| Emcon Associates | Client Project ID: 6039 College Ave., Shell | Sampled: Mar 18, 1992 |
| 1938 Junction Ave. | Matrix Descript: Water | Received: Mar 19, 1992 |
| San Jose, CA 95131 | Analysis Method: EPA 5030/8015/8020 | Analyzed: Mar 20, 1992 |
| Attention: Dave Larsen | First Sample #: 203-3328 | Reported: Mar 28, 1992 |

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

| Sample Number | Sample Description | Low/Medium B.P. | Benzene | Toluene | Ethyl | Xylenes |
|---------------|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | Hydrocarbons | | | Benzene | |
| | | $\mu\text{g/L}$ (ppb) | $\mu\text{g/L}$ (ppb) | $\mu\text{g/L}$ (ppb) | $\mu\text{g/L}$ (ppb) | $\mu\text{g/L}$ (ppb) |
| 203-3328 | MW-3 | 6,100 | 620 | 28 | 220 | 38 |

| | | | | | |
|--------------------------|--------------|-----------|-----------|-----------|-----------|
| Detection Limits: | 1,500 | 15 | 15 | 15 | 15 |
|--------------------------|--------------|-----------|-----------|-----------|-----------|

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard. Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Andrea J. Sulcher

for Maile A. Springer
Project Manager

2033325.EEE <2>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

| | | |
|------------------------|---|-------------------------|
| Emcon Associates | Client Project ID: 6039 College Ave., Shell | Sampled: Mar 18, 1992 |
| 1938 Junction Ave. | Matrix Descript: Water | Received: Mar 19, 1992 |
| San Jose, CA 95131 | Analysis Method: EPA 3510/8015 | Extracted: Mar 23, 1992 |
| Attention: Dave Larsen | First Sample #: 203-3328 | Analyzed: Mar 25, 1992 |
| | | Reported: Mar 28, 1992 |

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015) AS MOTOR OIL

| Sample Number | Sample Description | High B.P. Hydrocarbons $\mu\text{g/L}$ (ppb) |
|---------------|--------------------|--|
| 203-3328 | MW-3 | 20,000 |

Detection Limits:

100

High Boiling Point Hydrocarbons are quantitated against a motor oil standard.
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

for Maile A. Springer
Project Manager

2033325.EEE <3>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

| | | |
|--|---|--|
| Emcon Associates 1938 Junction Ave. San Jose, CA 95131 Attention: Dave Larsen | Client Project ID: 6039 College Ave., Shell Matrix Descript: Water Analysis Method: EPA 3510/8015 First Sample #: 203-3326 | Sampled: Mar 18, 1992 Received: Mar 19, 1992 Extracted: Mar 23, 1992 Analyzed: 3/24-25/92 Reported: Mar 28, 1992 |
|--|---|--|

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

| Sample Number | Sample Description | High B.P. Hydrocarbons $\mu\text{g/L}$ (ppb) |
|---------------|--------------------|--|
| 203-3326 | MW-5 | N.D. |
| 203-3327 | MW-1 | N.D. |
| 203-3328 | MW-3 | 1,900 |
| 203-3329 | Trip Blank | N.D. |

Detection Limits:

50

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile A. Springer
Maile A. Springer
Project Manager

2033325.EEE <2>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Dave Larsen

Client Project ID: 6039 College Ave., Shell

QC Sample Group: 2033325 - 27

Reported: Mar 28, 1992

QUALITY CONTROL DATA REPORT

| ANALYTE | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|---------|---------|---------|---------------|---------|
|---------|---------|---------|---------------|---------|

| | | | | |
|------------------|--------------|--------------|--------------|--------------|
| Method: | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 |
| Analyst: | M.Nipp | M.Nipp | M.Nipp | M.Nipp |
| Reporting Units: | µg/L | µg/L | µg/L | µg/L |
| Date Analyzed: | Mar 20, 1992 | Mar 20, 1992 | Mar 20, 1992 | Mar 20, 1992 |
| QC Sample #: | GBLK032092 | GBLK032092 | GBLK032092 | GBLK032092 |

| | | | | |
|------------------------------------|------|------|------|------|
| Sample Conc.: | N.D. | N.D. | N.D. | N.D. |
| Spike Conc. Added: | 10 | 10 | 10 | 30 |
| Conc. Matrix Spike: | 9.4 | 9.4 | 9.3 | 28 |
| Matrix Spike % Recovery: | 94 | 94 | 93 | 93 |
| Conc. Matrix Spike Dup.: | 9.2 | 9.3 | 9.0 | 27 |
| Matrix Spike Duplicate % Recovery: | 92 | 93 | 90 | 90 |
| Relative % Difference: | 2.2 | 1.1 | 3.3 | 3.6 |

SEQUOIA ANALYTICAL

Andrea J. Sulcher
for Maile A. Springer
Project Manager

| | |
|------------------------|--|
| % Recovery: | $\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$ |
| Relative % Difference: | $\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$ |

2033325.EEE <4>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Dave Larsen

Client Project ID: 6039 College Ave., Shell

QC Sample Group: 2033328 - 29

Reported: Mar 28, 1992

QUALITY CONTROL DATA REPORT

| ANALYTE | Benzene | Toluene | Ethyl-Benzene | Xylenes |
|---------|---------|---------|---------------|---------|
|---------|---------|---------|---------------|---------|

| | | | | |
|------------------|--------------|--------------|--------------|--------------|
| Method: | EPA 8020 | EPA 8020 | EPA 8020 | EPA 8020 |
| Analyst: | M.Nipp | M.Nipp | M.Nipp | M.Nipp |
| Reporting Units: | µg/L | µg/L | µg/L | µg/L |
| Date Analyzed: | Mar 20, 1992 | Mar 20, 1992 | Mar 20, 1992 | Mar 20, 1992 |
| QC Sample #: | GBLK032092 | GBLK032092 | GBLK032092 | GBLK032092 |

| | | | | |
|------------------------------------|------|------|------|------|
| Sample Conc.: | N.D. | N.D. | N.D. | N.D. |
| Spike Conc. Added: | 10 | 10 | 10 | 30 |
| Conc. Matrix Spike: | 10 | 10 | 10 | 30 |
| Matrix Spike % Recovery: | 100 | 100 | 100 | 100 |
| Conc. Matrix Spike Dup.: | 9.8 | 9.9 | 9.8 | 30 |
| Matrix Spike Duplicate % Recovery: | 98 | 99 | 98 | 100 |
| Relative % Difference: | 2.0 | 1.0 | 2.0 | 0.0 |

44

SEQUOIA ANALYTICAL

for *Andrea S. Sulcher*
Maile A. Springer
Project Manager

| | |
|------------------------|--|
| % Recovery: | $\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$ |
| Relative % Difference: | $\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$ |

2033325.EEE <5>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
Attention: Dave Larsen

Client Project ID: 6039 College Ave., Shell

QC Sample Group: 2033326 - 29

Reported: Mar 28, 1992

QUALITY CONTROL DATA REPORT

| | |
|----------------|--------|
| ANALYTE | Diesel |
|----------------|--------|

Method: EPA 8015
 Analyst: R.Lee
 Reporting Units: $\mu\text{g/L}$
 Date Analyzed: Mar 24, 1992
 QC Sample #: DBLK032392

Sample Conc.: N.D.

Spike Conc. Added: 300

Conc. Matrix Spike: 240

Matrix Spike % Recovery: 80

Conc. Matrix Spike Dup.: 230

Matrix Spike Duplicate % Recovery: 77

Relative % Difference: 4.0

SEQUOIA ANALYTICAL

Maile A. Springer
 Maile A. Springer
 Project Manager

| | |
|------------------------|--|
| % Recovery: | $\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$ |
| Relative % Difference: | $\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$ |

Site Address: 6079 College Avenue
Oakland, CA

COP
Analysis Required

LAB: Segeioia

WIC#: 204-5508-3301

Shell Engineer: Kurt Miller
Phone No. (510) 685-3853
Fax #: 685-3853

Consultant Name & Address: EMCON Assoc.
1938 Junction Ave.
San Jose, CA 95131

Consultant Contact: David Larsen
Phone No. (408) 453-2269
Fax #: 453-2269

Comments: 91 BTEX = 3VOAs (HCl)
TPH-D and/or MO = 2 Liters (NP)

Sampled By: Chris Chawo
Printed Name: Chris Chawo

| Sample ID | Date | Soil | Water | Air | No. of conls. |
|-----------------|---------|------|-------|-----|---------------|
| MW-2 | 3-18-92 | | X | | 3 |
| MW-5 | | | | | 5 |
| MW-1 | | | | | 5 |
| MW-3 | | | | | 5 |
| MW-4 | | | | | 5 |
| TB | | | | | 5 |

| | | | | | |
|-------------------------|----------------------------|---------------------|------------------------------|-------------------|-----------------|
| TPH (EPA 8015 Mod. Gas) | TPH (EPA 8015 Mod. Diesel) | BTEX (EPA 8020/602) | Volatile Organics (EPA 8240) | Test for Disposal | TPH - Motor Oil |
|-------------------------|----------------------------|---------------------|------------------------------|-------------------|-----------------|

CHECK ONE (1) BOX ONLY

| | | | | |
|------------------------|-------------------------------------|------|---|--|
| Quarterly Monitoring | <input checked="" type="checkbox"/> | 5461 | 24 hours | <input type="checkbox"/> |
| Site Investigation | <input type="checkbox"/> | 5441 | 48 hours | <input type="checkbox"/> |
| Soil for disposal | <input type="checkbox"/> | 5442 | 15 days | <input checked="" type="checkbox"/> (Normal) |
| Water for disposal | <input type="checkbox"/> | 5443 | Other | <input type="checkbox"/> |
| Air Sample - Sys O&M | <input type="checkbox"/> | 5452 | NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT. | |
| Water Sample - Sys O&M | <input type="checkbox"/> | 5453 | | |
| Other | <input type="checkbox"/> | | | |

| Container Size | Preparation Used | Composite Y/N | MATERIAL DESCRIPTION | SAMPLE CONDITION, COMMENTS |
|----------------|------------------|---------------|------------------------------|----------------------------|
| 40 ml | HCl | No | | 2033328 |
| | | | | 26 |
| | | | | 27 |
| | | | | 28 |
| | | | Floating Product, NO sample. | |
| | | | | 29 |

Relinquished By (signature): Chris Chawo
Relinquished By (signature): D Larsen
Relinquished By (signature): Patrick Wilk

Printed name: Chris Chawo
Printed name: D Larsen
Printed name: Patrick Wilk

Date: 3-19-92
Time: 9:30
Date: 3-19-92
Time: 11:30
Date: 3-19-92
Time: 1:30

Received (signature): D Larsen
Received (signature): Patrick Wilk
Received (signature): [Signature]

Printed name: D Larsen
Printed name: Patrick Wilk
Printed name: NGUYEN

Date: 3-19-92
Time: 9:30
Date:
Time:
Date: 3/19
Time: P3

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS