KAPREALIAN ENGINEERING
INCORPORATED

KEI-P90-1103.P5R
December 1, 1994

Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, California 94583

Attention: Ms. Tina Berry

RE: Revised Work Plan/Proposal
Unocal Service Station #0752
800 Harrison Street
Oakland, California

Dear Ms. Berry:

INTRODUCTION

At your request, Kaprealian Engineering, Inc. (KEI) presents this revised **work plan/proposal for a pilot vapor extraction test** at the subject site. The purpose of this test is to determine whether vapor extraction is a feasible means of remediation.

BACKGROUND

The subject site contains a Unocal service station facility. Two underground gasoline storage tanks, one waste oil storage tank, and the product piping were removed from the site in November and December of 1990 during tank replacement activities. The fuel tank pit, waste oil tank pit, and one pump island were subsequently overexcavated in order to remove contaminated soil. Eight monitoring wells have been installed and 12 exploratory borings have been drilled at and in the vicinity of the site.

A site description, detailed background information including a summary of all of the soil and ground water subsurface investigation/remediation work conducted to date, site hydrogeologic conditions, and tables that summarize all of the soil and ground water sample analytical results are presented in KEI's report (KEI-P90-1103.R8) dated April 1, 1994. The results of the most recent quarter of monitoring and sampling of the monitoring wells are presented on MPDS Services, Inc's. Quarterly Data Report (MPDS-UN0752-03) dated August 2, 1994. Lastly, the analytical results of all of the soil samples collected during the drilling of the exploratory borings and monitoring wells and all of the ground water samples collected to date summarized in the attached Appendices A and B, respectively.

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: 510.602.5100 Fax: 510.687.0602

PROPOSED FIELD WORK - PILOT VAPOR EXTRACTION TEST

KEI proposes conducting a pilot vapor extraction test in order to assess the feasibility of remediation by vapor extraction. The pilot test is anticipated to be conducted over approximately a 48-hour period using well MW3 as the test well. The locations of all of the wells are shown on the attached Figure 1. The test system will consist of a vapor extraction well head attached to well MW3, two-inch diameter flexible tubing, vacuum gauge, regenerative blower, two vapor phase carbon canisters connected in series, and a flow meter, as shown on the attached Schematic Diagram, Figure 2. Hydrocarbon emissions will be abated by ducting the blower exhaust through two carbon canisters connected in series. The Bay Area Air Quality Management District will be notified prior to conducting the pilot vapor extraction test.

The vacuum on the influent side of the blower and the flow rates will be monitored throughout the test. The well heads at nearby monitoring wells will be specially fitted with well caps and quick disconnect fittings so that differential pressures can be monitored by the use of magnehelic gauges. The differential pressures will be monitored throughout the test in order to determine the influence of the applied vacuum through the screened zone in the wells.

?? this is only 48hrs

Influent and effluent air samples will be collected in Tedlar bags by the use of a vacuum sampling box. Influent samples will be collected on a minimum daily basis in order to determine the concentration of contaminants in the extracted air stream. One additional influent sample will be collected at approximately the middle of the test in order to determine the hydrocarbon concentration decay rate. Effluent air samples will be collected in order to verify the efficiency of the abatement system during the test as required by local air quality standards.

In addition, ground water samples will be collected from MW3, both prior to the pilot test and subsequent to the completion of the pilot test. The analytical results of the water samples will be used to determine the potential effectiveness of vapor extraction (and air sparging) on the ground water quality.

The air bag samples collected in Tedlar bags will be analyzed by Sequoia Analytical Laboratory in Concord, California, and will be accompanied by properly executed Chain of Custody documentation. The air and ground water samples will be analyzed for total petroleum hydrocarbons as gasoline, and for benzene, toluene, ethylbenzene, and xylenes constituents by EPA method 5030/modified 8015 and 8020, respectively.

CONCLUSIONS

Conclusions and further recommendations will be described in a technical report. The technical report will be submitted to the Alameda County Health Care Services Agency.

LIMITATIONS

Soil deposits and rock formations may vary in thickness, lithology, saturation, strength and other properties across any site. In addition, environmental changes, either naturally-occurring or artificially-induced, may cause changes in the extent and concentration of any contaminants. Our studies assume that the field and laboratory data generated will be reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.

The results of this proposed study will be based on the data obtained from the field and laboratory analyses obtained from a state certified laboratory. We will analyze all data generated using what we believe to be currently applicable engineering techniques and principles in the Northern California region. We make no warranty, either expressed or implied, regarding the above, including laboratory analyses, except that our services will be performed in accordance with generally accepted professional principles and practices existing for such work.

Should you have any questions regarding this work plan/proposal, please do not hesitate to call us at (510) 602-5100.

Sincerely,
Kaprealian Engineering Inc.

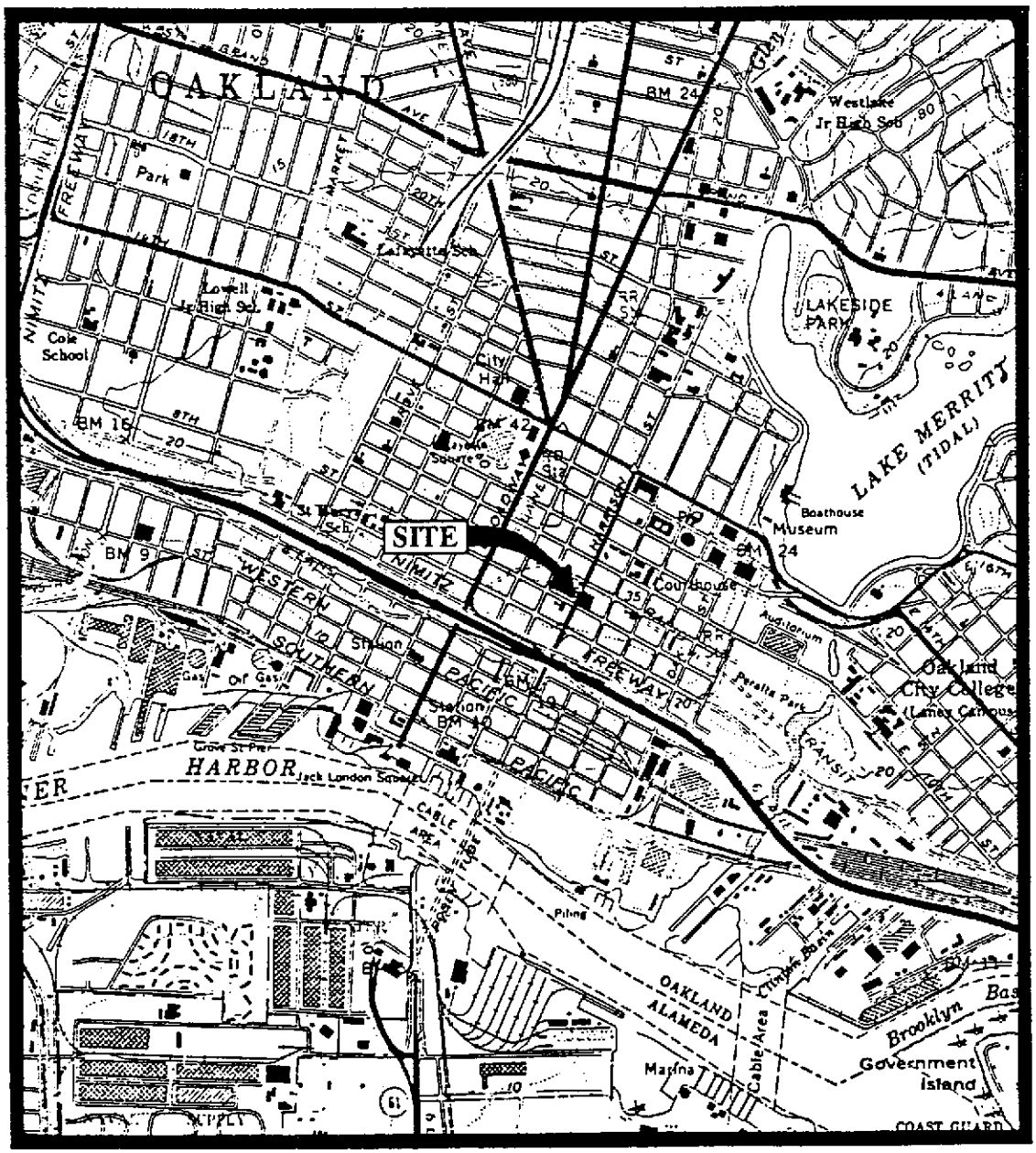

Joel G. Greger, C.E.G.
Senior Engineering Geologist

License No. EG 1633
Exp. Date 8/31/96

Robert H. Kezerian
Project Manager

/jad

Attachments: Location Map
Monitoring Well Location Map - Figure 1
Pilot Vapor Extraction Test System Schematic - Figure 2
Appendix A - Analytical Results of Soil Samples
Appendix B - Analytical Results of Ground Water Samples

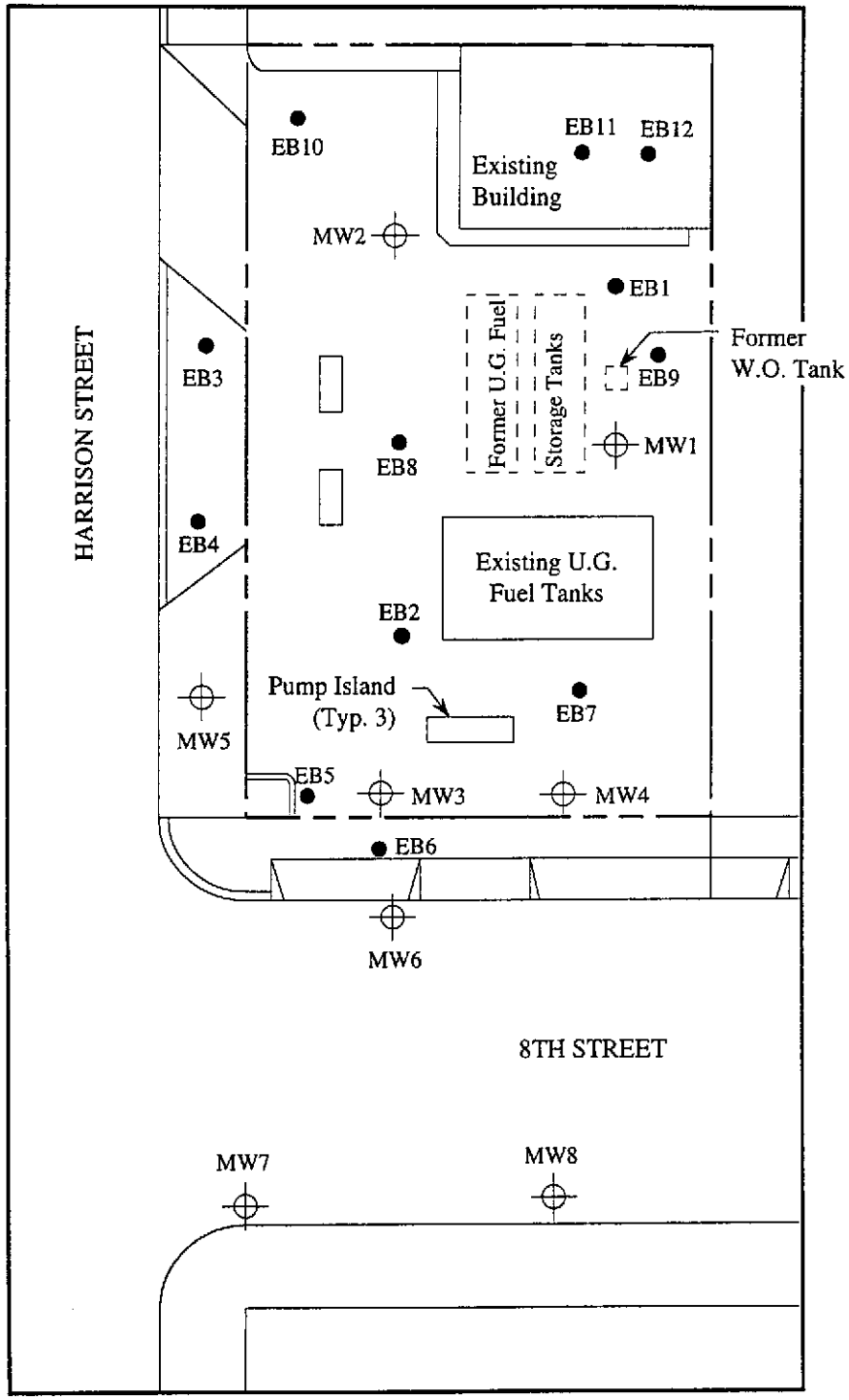



Base modified from 7.5 minute U.S.G.S. Oakland West Quadrangle
(photorevised 1980)

0 2000 4000

Approx. scale feet

| | | |
|---|---|---|
| KAPREALIAN ENGINEERING INCORPORATED | **UNOCAL SERVICE STATION #0752**<br>**800 HARRISON STREET**<br>**OAKLAND, CALIFORNIA** | **LOCATION MAP** |




N

LEGEND

- Monitoring well
- Exploratory boring

0 30 60

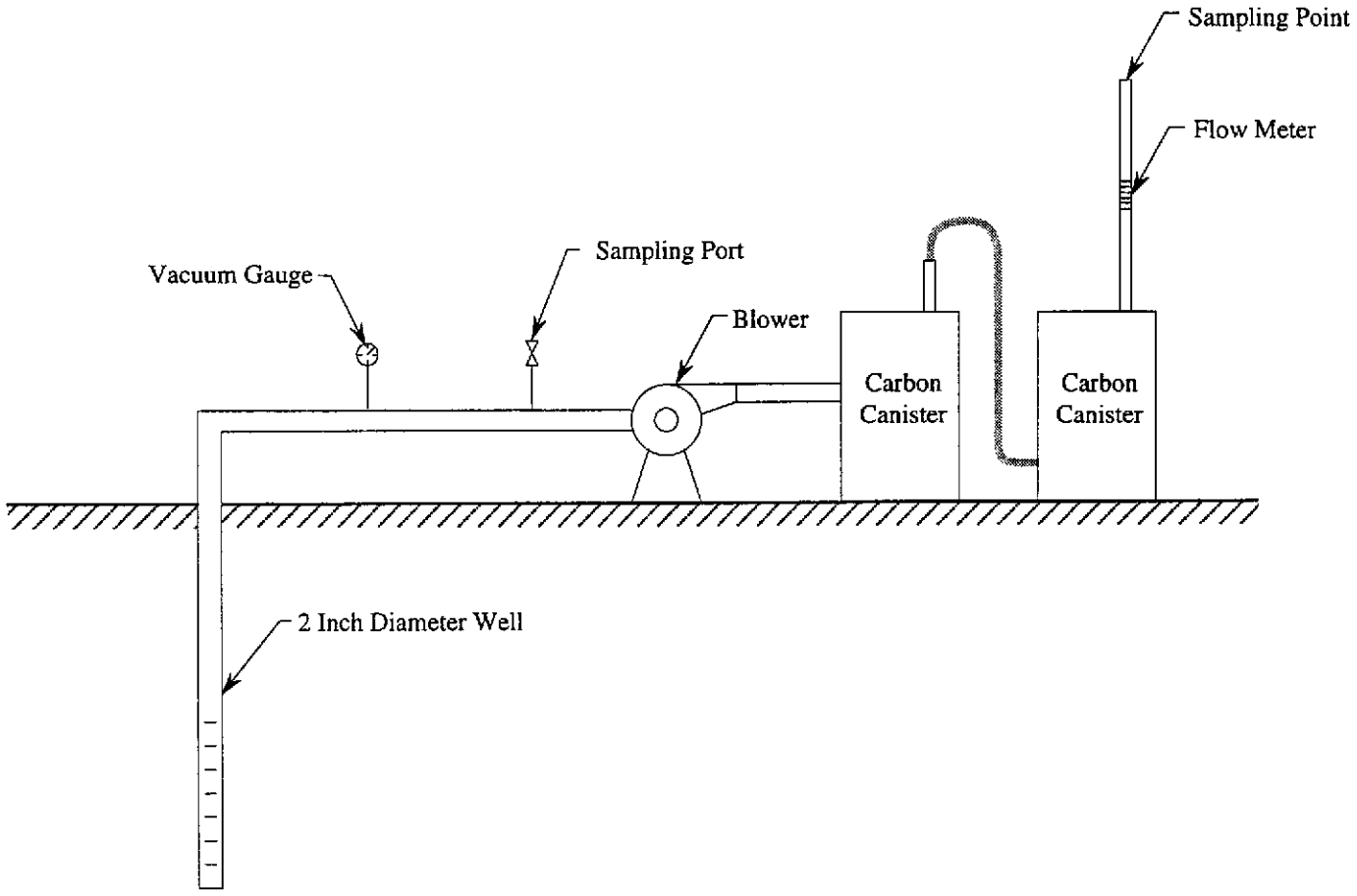
Approx. scale feet

**EXPLORATORY BORING AND MONITORING WELL LOCATION MAP**

KAPREALIAN ENGINEERING
INCORPORATED

**UNOCAL SERVICE STATION #0752**
**800 HARRISON STREET**
**OAKLAND, CA**

FIGURE
**1**




**PILOT VAPOR EXTRACTION TEST SCHEMATIC DIAGRAM**

KAPREALIAN ENGINEERING
INCORPORATED

**UNOCAL SERVICE STATION #0752**
**800 HARRISON STREET**
**OAKLAND, CALIFORNIA**

FIGURE
**2**

# APPENDIX A

KEI-P90-1103.R8
April 1, 1994

TABLE 1

SUMMARY OF LABORATORY ANALYSES
SOIL

| Date | Sample Number | TPH as Diesel | TPH as Gasoline | Benzene | Toluene | Ethyl-benzene | Xylenes |
|---|---|---|---|---|---|---|---|
| 5/29/91 | EB1(55) | -- | ND | ND | ND | ND | ND |
| | EB1(10) | -- | ND | ND | ND | ND | ND |
| | EB1(15) | -- | ND | 0.0087 | ND | ND | ND |
| | EB1(20) | -- | ND | ND | ND | ND | ND |
| | EB1(22) | -- | ND | ND | ND | ND | ND |
| | EB2(5.5) | -- | ND | ND | ND | ND | ND |
| | EB2(10) | -- | ND | ND | ND | ND | ND |
| | EB2(15) | -- | ND | ND | ND | ND | ND |
| | EB2(20) | -- | ND | ND | ND | ND | ND |
| | EB2(22.5) | -- | ND | ND | ND | ND | ND |
| 3/17/94 | EB3(5) | -- | ND | ND | ND | ND | ND |
| & | EB3(9.5) | -- | ND | ND | ND | ND | ND |
| 3/18/94 | EB3(14.5) | -- | ND | ND | ND | ND | ND |
| | EB3(19.5) | -- | ND | ND | ND | ND | ND |
| | EB4(5) | -- | ND | ND | ND | ND | ND |
| | EB4(9.5) | -- | ND | ND | ND | ND | ND |
| | EB4(14.5) | -- | ND | ND | ND | ND | ND |
| | EB4(19) | -- | ND | ND | ND | ND | ND |
| | EB5(5) | -- | ND | ND | ND | ND | ND |
| | EB5(10) | -- | ND | ND | ND | ND | ND |
| | EB5(15) | -- | ND | ND | ND | ND | ND |
| | EB5(19) | -- | 310* | 0.71 | 2.4 | 1.3 | 2.2 |
| | EB6(4.5) | -- | ND | ND | ND | ND | ND |
| | EB6(9.5) | -- | ND | ND | ND | ND | ND |
| | EB6(14.5) | -- | ND | ND | ND | ND | ND |
| | EB6(19.5) | -- | ND | ND | ND | ND | ND |
| | EB7(5) | -- | ND | ND | ND | ND | ND |
| | EB7(10) | -- | ND | ND | ND | ND | ND |
| | EB7(15) | -- | ND | ND | ND | ND | ND |
| | EB7(19) | -- | ND | ND | ND | ND | ND |
| | EB8(5) | -- | ND | ND | ND | ND | ND |
| | EB8(10) | -- | ND | ND | ND | ND | ND |
| | EB8(15) | -- | ND | ND | ND | ND | ND |
| | EB8(18.5) | -- | 21,000 | 7.0 | 78 | 26 | 140 |

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TABLE 1 (Continued)

SUMMARY OF LABORATORY ANALYSES
SOIL

| Date | Sample Number | TPH as Diesel | TPH as Gasoline | Benzene | Toluene | Ethyl-benzene | Xylenes |
|---|---|---|---|---|---|---|---|
| 3/17/94 | EB9(5.5) | ND | 1.6 | ND | 0.040 | ND | 0.99 |
| & | EB9(10) | ND | ND | ND | ND | ND | ND |
| 3/18/94 | EB9(15) | ND | ND | ND | ND | ND | ND |
| (Con't) | EB9(20) | ND | ND | ND | ND | ND | ND |
| | EB10(5) | -- | ND | ND | ND | ND | ND |
| | EB10(10) | -- | ND | ND | ND | ND | ND |
| | EB10(15) | -- | ND | ND | ND | ND | ND |
| | EB10(20) | -- | ND | ND | ND | ND | ND |
| | EB11(5) | ND | 1.8* | ND | 0.0091 | ND | 0.0088 |
| | EB11(6) | 19♦ | 3.6** | ND | ND | ND | ND |
| | EB11(10) | ND | ND | ND | ND | ND | ND |
| | EB12(5) | ND | ND | ND | ND | ND | ND |
| | EB12(10.5) | ND | ND | ND | ND | ND | ND |

**NOTE**: The soil samples were collected at the depths below grade indicated in the ( ) of the respective sample number.

* Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

** Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.

♦ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

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TABLE 2

SUMMARY OF LABORATORY ANALYSES
SOIL

| Date | Sample Number | TOG | TPH as Hydraulic Fluid | Tetrachloro-ethene* (µg/kg) | 1,1,1-tri-chloroethane* (µg/kg) |
|---|---|---|---|---|---|
| 3/17/94 | EB9(5.5) | ND | ND | ND | ND |
| & | EB9(10) | ND | ND | ND | ND |
| 3/18/94 | EB9(15) | ND | ND | ND | ND |
| | EB9(20) | ND | ND | ND | ND |
| | EB11(5) | 13,000 | 4,300 | 130 | 46 |
| | EB11(6) | 4,300 | 270 | ND | ND |
| | EB11(10) | 88 | ND | ND | ND |
| | EB12(5) | ND | ND | ND | ND |
| | EB12(10.5) | ND | ND | ND | ND |

**NOTE**: The soil samples were collected at the depths below grade indicated in the ( ) of the respective sample number.

* All EPA method 8010 constituents were non-detectable, except as indicated above.

ND = Non-detectable.

Results are in milligrams per kilogram (mg/kg), unless otherwise indicated.

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April 1, 1994

TABLE 6

SUMMARY OF LABORATORY ANALYSES
SOIL

| Date | Sample Number | TPH as Diesel | TPH as Gasoline | Benzene | Toluene | Ethyl-benzene | Xylenes |
|---|---|---|---|---|---|---|---|
| 5/23/91 | MW1(5)* | 2.2 | 1.1 | ND | ND | ND | 0.010 |
| & | MW1(10)* | 43 | 43 | ND | 0.0059 | 0.0074 | 0.43 |
| 5/30/91 | MW1(15)* | 120 | 250 | 0.80 | 0.73 | 0.91 | 2.9 |
| | MW1(20)* | ND | ND | ND | ND | ND | ND |
| | MW1(24)* | ND | ND | ND | ND | ND | 0.0073 |
| | MW2(5) | -- | ND | ND | ND | ND | 0.0054 |
| | MW2(10) | -- | ND | ND | ND | ND | ND |
| | MW2(15.5) | -- | ND | 0.015 | ND | 0.0064 | 0.025 |
| | MW2(20) | -- | ND | 0.0086 | ND | ND | ND |
| | MW2(22) | -- | ND | ND | ND | ND | ND |
| | MW3(5) | -- | ND | ND | ND | ND | ND |
| | MW3(10) | -- | ND | ND | ND | ND | ND |
| | MW3(15) | -- | ND | ND | ND | ND | ND |
| | MW3(20) | -- | ND | ND | ND | ND | ND |
| | MW3(23) | -- | 2.9 | 0.0079 | ND | 0.012 | 0.031 |
| 9/30/92 | MW4(5) | -- | ND | ND | ND | ND | ND |
| & | MW4(10) | -- | ND | ND | ND | ND | ND |
| 10/01/92 | MW4(15) | -- | ND | ND | ND | ND | ND |
| | MW4(20) | -- | ND | ND | ND | ND | ND |
| | MW4(22.5) | -- | 27♦ | ND | ND | ND | ND |
| | MW5(5) | -- | ND | ND | ND | ND | ND |
| | MW5(10) | -- | ND | ND | ND | ND | ND |
| | MW5(15) | -- | ND | ND | ND | ND | ND |
| | MW5(20) | -- | ND | ND | ND | ND | ND |
| | MW5(22) | -- | 1.1 | ND | 0.00600 | ND | 0.014 |

TABLE 6 (Continued)

SUMMARY OF LABORATORY ANALYSES
SOIL

| Date | Sample Number | TPH as Diesel | TPH as Gasoline | Benzene | Toluene | Ethyl-benzene | Xylenes |
|---|---|---|---|---|---|---|---|
| 9/30/92 & 10/01/92 | MW6(5) | -- | ND | ND | ND | ND | ND |
| | MW6(10) | -- | ND | ND | ND | ND | ND |
| | MW6(15) | -- | ND | ND | ND | ND | ND |
| | MW6(20) | -- | ND | ND | ND | ND | ND |
| | MW6(21.5) | -- | 170 | ND | 0.38 | 1.8 | 4.5 |
| 4/14/93 | MW7(5) | -- | ND | ND | ND | ND | ND |
| | MW7(10) | -- | ND | ND | ND | ND | ND |
| | MW7(15) | -- | ND | ND | ND | ND | ND |
| | MW7(21) | -- | ND | ND | ND | ND | ND |
| | MW8(5) | -- | ND | ND | ND | ND | ND |
| | MW8(10) | -- | ND | ND | ND | ND | ND |
| | MW8(15) | -- | ND | ND | ND | ND | ND |
| | MW8(20.5) | -- | ND | ND | ND | ND | ND |

NOTE: The soil samples were collected at the depths below grade indicated in the ( ) of the respective sample number.

* TOG and all EPA method 8010 constituents were non-detectable.

♦ Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.

ND = Non-detectable.

-- Indicates analysis was not performed.

Results are in milligrams per kilogram (mg/kg), unless otherwise indicated.

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TABLE 7

SUMMARY OF LABORATORY ANALYSES
SOIL

| Date | Sample | Cadmium | Chromium | Lead | Nickel | Zinc |
|---|---|---|---|---|---|---|
| 5/29/91 | MW1(5) | ND | 64 | 11 | 32 | 30 |
| | MW1(10) | ND | 48 | 7.1 | 24 | 27 |
| | MW1(15) | ND | 11 | 06.0 | 42 | 28 |
| | MW1(20) | ND | 32 | 4.2 | 36 | 23 |
| | MW1(24) | ND | 20 | 5.0 | 31 | 23 |

NOTE: The soil samples were collected at the depths below grade indicated in the ( ) of the respective sample number.

ND = Non-detectable.

Results are in milligrams per kilogram (mg/kg), unless otherwise indicated.

# APPENDIX B

## TABLE 2

SUMMARY OF LABORATORY ANALYSES
WATER

| Date | Well # | TPH as Diesel | TPH as Gasoline | Benzene | Toluene | Ethyl-benzene | Xylenes |
|---|---|---|---|---|---|---|---|
| 7/05/94 | MW1 | -- | 250 | 4.8 | 13 | 1.2 | 7.3 |
| | MW2 | -- | 160 | 16 | ND | 0.73 | 10 |
| | MW3 | -- | 25,000** | ND | ND | ND | ND |
| | MW4 | -- | 190** | ND | ND | ND | ND |
| | MW5 | -- | 2,200 | 97 | 8.4 | 37 | 36 |
| | MW6 | -- | ND | ND | ND | ND | ND |
| | MW7 | -- | ND | ND | ND | ND | ND |
| | MW8 | -- | 730 | 17 | ND | 1.6 | ND |
| 4/02/94 | MW1 | ND | ND | ND | ND | ND | ND |
| | MW2 | -- | ND | 0.65 | ND | ND | 0.99 |
| | MW3 | -- | 6,000 | 800 | 30 | 140 | 110 |
| | MW4 | -- | 89 | ND | ND | ND | ND |
| | MW5 | -- | 1,800 | 46 | 5.1 | 38 | 35 |
| | MW6 | -- | 5,300* | ND | ND | ND | ND |
| | MW7 | -- | 360 | 2.0 | ND | ND | 0.80 |
| | MW8 | -- | 150 | 1.2 | ND | ND | ND |
| 1/03/94 | MW1 | ND | ND | ND | ND | ND | ND |
| | MW2 | -- | 260 | 25 | ND | 5.5 | 26 |
| | MW3 | -- | 4,900 | 830 | 100 | 170 | 150 |
| | MW4 | -- | 210 | ND | ND | 0.76 | 1.6 |
| | MW5 | -- | 1,500 | 44 | ND | 42 | 46 |
| | MW6 | -- | 1,400 | 57 | ND | 8.5 | 11 |
| | MW7 | -- | ND | 0.93 | ND | 0.75 | 1.9 |
| | MW8 | -- | ND | ND | ND | ND | ND |
| 10/05/93 | MW1 | 57♦ | 92** | 1.5 | ND | ND | 0.72 |
| | MW2 | -- | 120 | 12 | ND | 2.1 | 12 |
| | MW3 | -- | 9,200 | 720 | 88 | 140 | 140 |
| | MW4 | -- | 130** | ND | ND | ND | ND |
| | MW5 | -- | 1,700 | 70 | 6.2 | 54 | 40 |
| | MW6 | -- | 1,400 | 34 | ND | 5.3 | 7.3 |
| | MW7 | -- | 360 | 10 | 1.2 | 0.91 | 0.99 |
| | MW8 | -- | 120** | 1.7 | ND | ND | ND |

## TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

| Date | Well # | TPH as Diesel | TPH as Gasoline | Benzene | Toluene | Ethyl-benzene | Xylenes |
|---|---|---|---|---|---|---|---|
| 7/23/93 | MW1 | ND | ND | 0.50 | 0.66 | ND | ND |
| | MW2 | -- | 66 | 1.8 | ND | 2.5 | 2.0 |
| | MW3 | -- | 4,400 | 660 | 26 | 160 | 82 |
| | MW4 | -- | 85* | ND | ND | ND | ND |
| | MW5 | -- | 2,000 | 122 | 8.0 | 68 | 47 |
| | MW6 | -- | 580 | 19 | 0.99 | 3.4 | 2.7 |
| | MW7 | -- | 790 | 23 | 3.3 | 28 | 5.4 |
| | MW8 | -- | 260 | 5.1 | ND | 0.60 | ND |
| 4/28/93 | MW1 | 470♦♦ | 920 | 3.1 | 2.3 | 1.2 | 9.7 |
| | MW2 | -- | 1,300 | 76 | 1.9 | 130 | 87 |
| | MW3 | -- | 2,600 | 220 | 7.6 | 41 | 27 |
| | MW4 | -- | ND | ND | ND | ND | ND |
| | MW5 | -- | 6,700 | 200 | 190 | 250 | 430 |
| | MW6 | -- | 1,200 | 54 | 1.5 | 11 | 5.3 |
| | MW7 | -- | 110 | 2.8 | 1.3 | 1.4 | 1.7 |
| | MW8 | -- | 450 | 18 | 1.8 | 1.8 | 1.4 |
| 12/21/92 | MW1 | ND | 95 | 0.69 | ND | ND | 1.0 |
| | MW2 | -- | 960 | 97 | 3.2 | 74 | 96 |
| | MW3 | -- | 8,500 | 1,500 | 150 | 310 | 330 |
| | MW4 | -- | 220* | ND | ND | 0.97 | 0.74 |
| | MW5 | -- | 1,700 | 51 | 4.7 | 83 | 34 |
| | MW6 | -- | 2,300 | 370 | 11 | 39 | 15 |
| 10/19/92 | MW4 | -- | 480 | 0.51 | 2.1 | 2.8 | 6.8 |
| | MW5 | -- | 2,700 | 61 | 5.0 | 100 | 61 |
| | MW6 | -- | 3,900 | 420 | 12 | 60 | 28 |
| 9/15/92 | MW1 | ND | 76 | 1.0 | ND | ND | ND |
| | MW2 | -- | 1,300 | 91 | 5.7 | 80 | 110 |
| | MW3 | -- | 10,000 | 1,900 | 330 | 400 | 580 |
| 6/30/92 | MW1 | 120 | ND | ND | ND | ND | ND |
| | MW2 | -- | 76 | 9.3 | 0.76 | 4.8 | 6.9 |
| | MW3 | -- | 8,900 | 1,900 | 210 | 430 | 550 |

## TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

| Date | Well # | TPH as Diesel | TPH as Gasoline | Benzene | Toluene | Ethyl-benzene | Xylenes |
|---|---|---|---|---|---|---|---|
| 4/02/92 | MW1 | 94 | ND | ND | ND | ND | ND |
| | MW2 | -- | 88 | 12 | 0.32 | 6.3 | 7.2 |
| | MW3 | -- | 8,000 | 1,400 | 200 | 300 | 310 |
| 12/30/91 | MW1 | ND | ND | ND | ND | ND | ND |
| | MW2 | -- | 91 | 16 | 0.89 | 11 | 1.9 |
| | MW3 | -- | 7,200 | 2,100 | 690 | 410 | 550 |
| 9/30/91 | MW1 | ND | ND | ND | ND | ND | ND |
| | MW2 | -- | 130 | 18 | 0.53 | 14 | 9.6 |
| | MW3 | -- | 6,800 | 1,400 | 130 | 290 | 240 |
| 6/05/91 | MW1 | ND | 47 | ND | ND | ND | ND |
| | MW2 | -- | 49 | ND | ND | ND | ND |
| | MW3 | -- | 5,800 | 1,200 | 40 | 140 | 97 |

♦ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a non-diesel mixture.

♦♦ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

* Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

** Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a non-gasoline mixture.

ND = Non-detectable.

-- Indicates analysis was not performed.

Results are in micrograms per liter (µg/L), unless otherwise indicated.

Note: Laboratory analyses data prior to January 3, 1994, were provided by Kaprealian Engineering, Inc.

## TABLE 3

SUMMARY OF LABORATORY ANALYSES
WATER

| Date | Well # | Chloroform | Tetrachloroethene | Trichloroethene |
|---|---|---|---|---|
| 4/02/94 | MW1 | 15 | 1.1 | 0.68 |
| 1/03/94 | MW1* | 16 | 1.4 | 0.93 |
| | MW4** | 9.0 | 1.0 | ND |
| | MW8♦ | 1.5 | 1.2 | ND |
| 10/05/93 | MW1 | 13 | 1.3 | 0.66 |
| 7/23/93 | MW1 | 16 | 1.3 | 0.91 |
| 4/28/93 | MW1♦♦ | 12 | 0.89 | 0.85 |
| 12/21/92 | MW1 | 12 | 1.4 | 0.83 |
| 9/15/92 | MW1 | 12 | 2.2 | 1.3 |
| 6/30/92 | MW1 | 9.5 | 2.2 | 1.3 |
| 4/02/92 | MW1 | 7.1 | 2.6 | 1.4 |
| 12/30/91 | MW1 | 6.4 | 2.1 | 0.9 |
| 9/30/91 | MW1 | -- | -- | -- |
| 6/04/91 | MW1 | 7.8 | 2.9 | 1.3 |

**TABLE 3 (Continued)**

SUMMARY OF LABORATORY ANALYSES
WATER

* A fuel fingerprint analysis was conducted on this sample. Sequoia Analytical Laboratory reported that total extractable petroleum hydrocarbons in this sample were not detected in high enough concentrations to compare with known standards and approximate their make-up.

** Methyl tert butyl ether (MTBE) was detected at a concentration of 240 µg/L.

♦ 1,2-dichloroethane was detected at a concentration of 4.0 µg/L, and MTBE was detected at a concentration of 51 µg/L.

♦♦ 1,2-dichloroethane was detected at a concentration of 1.1 µg/L.

ND = Non-detectable.

-- Indicates analysis was not performed.

Results are in micrograms per liter (µg/L), unless otherwise indicated.

Note: - All EPA method 8010 constituents were non-detectable, except as indicated above.

- Laboratory analyses data prior to January 3, 1994, were provided by Kaprealian Engineering, Inc.

**TABLE 4**

SUMMARY OF LABORATORY ANALYSES
WATER

| Date | Well # | TOG | Cadmium | Chromium | Lead | Nickel | Zinc |
|---|---|---|---|---|---|---|---|
| 4/02/92 | MW1 | ND | ND | 0.015 | 0.016 | ND | 0.020 |
| 12/30/91 | MW1 | ND | ND | 0.0078 | 0.0057 | ND | 0.046 |
| 9/30/91 | MW1 | ND | ND | 0.019 | ND | ND | 0.11 |
| 6/05/91 | MW1 | ND | ND | 0.0083 | 0.011 | 0.063 | 0.023 |

TOG = Total Oil & Grease.

ND = Non-detectable.

Results are in milligrams per liter (mg/L), unless otherwise indicated.

Note: Laboratory analyses data were provided by Kaprealian Engineering, Inc.