



KAPREALIAN ENGINEERING, INC.
Consulting Engineers

P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

TRANSMITTAL PAGE

DATE: 7-24-90

ALAMEDA COUNTY HEALTH AGENCY
DIV. OF HAZARDOUS MAT'Ls

TO: RAVI ABULANANTHAM

FROM: DICK BRADISH

Number of Pages
(including cover): 23

SUBJECT: Unocal #5901, DUBLIN, 11976 DUBLIN BLVD

• Please find attached laboratory analyses and chain of custody documentation for the below listed samples collected at the above referenced site:

a) Water sample, W3, collected 7-19-90, from W.O. excavation.

b) Sidewalk soil samples, SWB(13), SWC(10) & SWD(14), collected 7/16/90

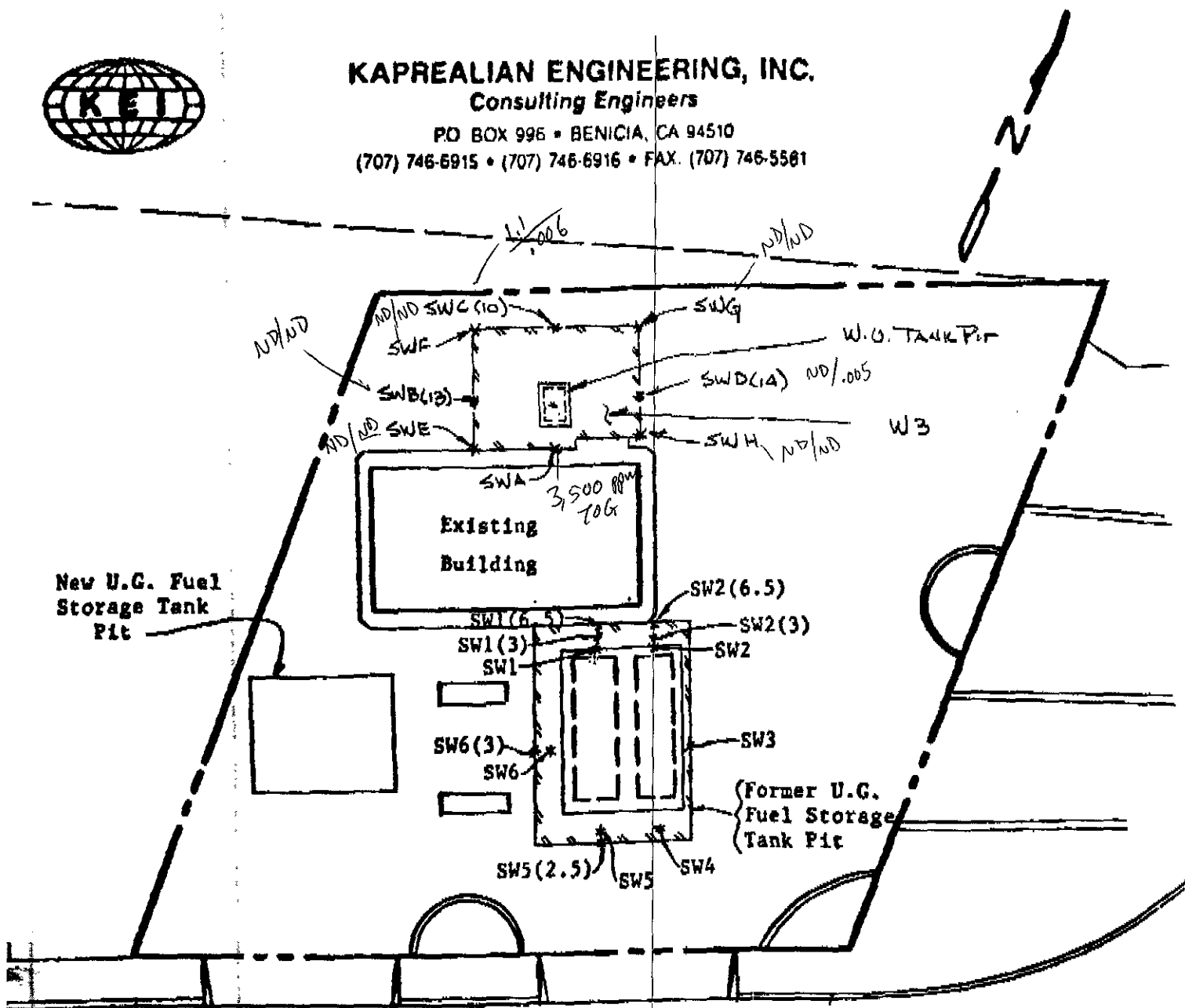
and c) Sidewalk soil samples, SWE, SWF, SWG & SWH, collected 7-20-90

• Laboratory analyses & chain of custody documentation for samples W01 & SWA have been previously submitted.



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DUBLIN BLVD.

SITE PLAN
Figure 1

0 30 60
Approx. Scale feet

LEGEND

- * Sample Point Location
-  Additional Area Excavated

TPMg
B

Unocal S/S #5901
11976 Dublin Blvd.
Dublin, CA



SEQUOIA ANALYTICAL

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

| | | |
|-----------------------------------|--|------------------------|
| Kaprealian Engineering, Inc. | Client Project ID: Unocal, Dublin, 11976 Dublin Ave. | Sampled: Jul 19, 1990 |
| P.O. Box 996 | Sample Descript.: Water, W3 | Received: Jul 19, 1990 |
| Benicia, CA 94610 | Analysis Method: EPA 5030/ 8015/8020 | Analyzed: Jul 20, 1990 |
| Attention: Mardo Kaprealian, P.E. | Lab Number: 007-3214 A-B | Reported: Jul 23, 1990 |

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

| Analyte | Detection Limit µg/L (ppb) | Sample Results µg/L (ppb) |
|---|-------------------------------|------------------------------|
| Low to Medium Boiling Point Hydrocarbons..... | 30 | N.D. |
| Benzene..... | 0.30 | N.D. |
| Toluene..... | 0.30 | N.D. |
| Ethyl Benzene..... | 0.30 | N.D. |
| Xylenes..... | 0.30 | N.D. |

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

Belinda C. Vega
Belinda C. Vega
Project Manager

| |
|---|
| Please Note: Amended report dated: 7/24/90 |
|---|



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| | | |
|--|--|--|
| Kaprelian Engineering, Inc. P.O. Box 896 Berinda, CA 94510 Attention: Mardo Kaprelian, P.E. | Client Project ID: Unocal, Dublin, 11978 Dublin Ave. Matrix Descript: Water Analysis Method: EPA 3510/8015 First Sample #: 007-3214 E | Sampled: Jul 18, 1990 Received: Jul 19, 1990 Extracted: Jul 19, 1990 Analyzed: Jul 20, 1990 Reported: Jul 23, 1990 |
|--|--|--|

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

| Sample Number | Sample Description | High B.P. Hydrocarbons µg/L (ppb) |
|---------------|--------------------|--------------------------------------|
| 0073214 E | w3 | 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

Belinda C. Vega
 Belinda C. Vega
 Project Manager

Please Note:
 Amended report dated: 7/24/90

73214.KEI <3>



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| | | |
|--|--|---|
| Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E. | Client Project ID: Unocal, Dublin, 11976 Dublin Ave. Sample Descript: Water, W3 Analysis Method: EPA 5030/8010 Lab Number: 007-9214 C-D | Sampled: Jul 19, 1990 Received: Jul 19, 1990 Analyzed: Jul 20, 1990 Reported: Jul 23, 1990 |
|--|--|---|

HALOGENATED VOLATILE ORGANICS (EPA 8010)

| Analyte | Detection Limit µg/L | Sample Results µg/L |
|--------------------------------|-------------------------|------------------------|
| Bromodichloromethane..... | 1.0 | N.D. |
| Bromoform..... | 1.0 | N.D. |
| Bromomethane..... | 1.0 | N.D. |
| Carbon tetrachloride..... | 1.0 | N.D. |
| Chlorobenzene..... | 1.0 | N.D. |
| Chloroethane..... | 5.0 | N.D. |
| 2-Chloroethylvinyl ether..... | 1.0 | N.D. |
| Chloroform..... | 0.50 | N.D. |
| Chloromethane..... | 0.50 | N.D. |
| Dibromochloromethane..... | 0.50 | N.D. |
| 1,2-Dichlorobenzene..... | 2.0 | N.D. |
| 1,3-Dichlorobenzene..... | 2.0 | N.D. |
| 1,4-Dichlorobenzene..... | 2.0 | N.D. |
| 1,1-Dichloroethane..... | 0.50 | N.D. |
| 1,2-Dichloroethane..... | 0.50 | N.D. |
| 1,1-Dichloroethene..... | 1.0 | N.D. |
| Total 1,2-Dichloroethene..... | 1.0 | N.D. |
| 1,2-Dichloropropane..... | 0.50 | N.D. |
| cis-1,3-Dichloropropene..... | 5.0 | N.D. |
| trans-1,3-Dichloropropene..... | 5.0 | N.D. |
| Methylene chloride..... | 2.0 | N.D. |
| 1,1,2,2-Tetrachloroethane..... | 0.50 | N.D. |
| Tetrachloroethene..... | 0.50 | N.D. |
| 1,1,1-Trichloroethane..... | 0.50 | N.D. |
| 1,1,2-Trichloroethane..... | 0.50 | N.D. |
| Trichloroethene..... | 0.50 | N.D. |
| Trichlorofluoromethane..... | 1.0 | N.D. |
| Vinyl chloride..... | 2.0 | N.D. |

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
 Belinda C. Vega
 Project Manager

Please Note:
 Amended report dated: 7/24/90

07-24-90 22:58 SEQUOIA ANALYTICAL

ID=415 364 9233



SEQUOIA ANALYTICAL

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| | | |
|---|---|--|
| Kaprealian Engineering, Inc. P.O. Box 996 Berkeley, CA 94710 Attention: Marco Kaprealian, P.E. | Client Project ID: Unocal, Dublin, 11976 Dublin Ave. Matrix Descript: Water Analysis Method: SM 503 A&E (Gravimetric) First Sample #: 007-3214 F | Sampled: Jul 19, 1990 Received: Jul 19, 1990 Extracted: Jul 20, 1990 Analyzed: Jul 23, 1990 Reported: Jul 23, 1990 |
|---|---|--|

TOTAL RECOVERABLE PETROLEUM OIL

| Sample Number | Sample Description | Oil & Grease mg/L (ppm) |
|---------------|--------------------|-------------------------|
| 0073214 F | w3 | N.D. |

| | |
|-------------------|-----|
| Detection Limits: | 5.0 |
|-------------------|-----|

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Belinda C. Vega
Project Manager

| |
|---|
| Please Note: Amended report dated: 7/24/90 |
|---|

JUL 24 '90 17:02

707 746 5581 PAGE.008



KAPREALIAN ENGINEERING, INC.
CHAIN OF CUSTODY

| SAMPLER | | SITE NAME & ADDRESS Unocal - Dublin 11976 Dublin Ave. | | | | | | ANALYSES REQUESTED T B T T 8 P T P 0 0 H X 4 6 1 G E D G 0 | | | | | TURN AROUND TIME: 24 HRS. | | |
|----------------------------------|------|---|------|------------------------------|------|---|--------------|--|---|--------------|---|---|------------------------------|--|--|
| WITNESSING AGENCY | | | | | | | | | | | | | REESES | | |
| SAMPLE NO. | DATE | TIME | SOIL | WATER | GRAN | COMP | CONT. | SAMPLING LOCATION | | | | | | | |
| 101 | 7/19 | 2:45 | | X | X | | 4400 2lit | WO-P.T. | X | X | X | X | X | Need results by tomorrow 7/20/90 by 5:00 p.m. | |
| Relinquished by: (Signature) | | Date/Time 7/19/90 | | Received by: (Signature) | | The following MUST BE completed by the laboratory accepting samples for analysis: | | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time 7/19 6:30 | | Received by: (Signature) | | 1. Have all samples received for analysis been stored in ice? <u>yes</u> | | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | 2. Will samples remain refrigerated until analyzed? <u>yes</u> | | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | 3. Did any samples received for analysis have head space? <u>no</u> | | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | 4. Were samples in appropriate containers and properly packaged? <u>yes</u> | | | | | | | | | |
| | | | | | | Signature | | Title Log in | | Date 7/19 | | | | | |

07-24-90 22:59 SEDUCIA ANALYTIC

ID=415 354 8233

P.08

07/24/90 18:18 707 746 5581 KAPREALIAN ENG. 008



SEQUOIA ANALYTICAL

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| | | |
|--|--|--------------------------------|
| Kaprealian Engineering, Inc. | Client Project ID: Unocal #5901, Dublin, 11976 Dublin Blvd. | Sampled: Jul 16, 1990 |
| P.O. Box 996 | Matrix Descript: Soil | Received: Jul 17, 1990 |
| Benicia, CA 94510 | Analysis Method: SM 503 D&E (Gravimetric) | Extracted: Jul 17, 1990 |
| Attention: Mardo Kaprealian, P.E. | First Sample #: 007-2513 | Analyzed: Jul 18, 1990 |
| | | Reported: Jul 18, 1990 |

TOTAL RECOVERABLE PETROLEUM OIL

| Sample Number | Sample Description | Oil & Grease mg/kg (ppm) |
|---------------|--------------------|--------------------------------|
| 007-2513 | SWB (13) | N.D. |
| 007-2514 | SWC (10) | N.D. |
| 007-2515 | SWD (14) | N.D. |

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

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
 Belinda C. Vega
 Project Manager



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

| SAMPLE <i>R.M. Pradeed</i> | | SITE NAME & ADDRESS <i>Unocal #5901 11976 Dublin Blvd Dublin</i> | | | | ANALYSES REQUESTED <i>TPH TPH-5-7-TH TPH-D BOD</i> | | | | TURN AROUND TIME: <i>24 HR</i> | REMARKS <i>RUN TOC ONLY INITIALLY. BALANCE OF TESTS MAY OR MAY NOT BE RUN BASED ON TOC RESULTS</i> | | |
|---|-----------------------------------|---|--|-------------------------------------|------|---|--------------|------------------------|-------------------------------------|-----------------------------------|---|-------------|-----|
| WITNESSING AGENCY | | | | | | | | | | | | | |
| SAMPLE ID NO. | DATE | TIME | SOIL | WATER | GRAB | COMP | NO. OF CONT. | SAMPLING LOCATION | TPH | TPH-5-7-TH | | TPH-D | BOD |
| <i>SWB(3)</i> | <i>7-16-90</i> | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | <i>1</i> | <i>W.O. TR PT-SIDE</i> | <input checked="" type="checkbox"/> | <i>007</i> | | <i>2513</i> | |
| <i>SWC(10)</i> | <i>"</i> | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | <i>1</i> | <i>" " " "</i> | <input checked="" type="checkbox"/> | <i>2</i> | <i>2514</i> | | |
| <i>SWD(14)</i> | <i>"</i> | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | <i>1</i> | <i>" " " "</i> | <input checked="" type="checkbox"/> | <i>2</i> | <i>2515</i> | | |
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| | | | | | | | | | | | | | |
| Relinquished by: (Signature) <i>R.M. Pradeed</i> | Date/Time <i>7/17/90 10:45</i> | Received by: (Signature) <i>Tom M. Pain</i> | The following MUST BE completed by the Laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? 2. Will samples remain refrigerated until analyzed? 3. Did any samples received for analysis have head space? 4. Were samples in appropriate containers and properly packaged? | | | | | | | | | | |
| Relinquished by: (Signature) <i>Tom M. Pain</i> | Date/Time <i>7/17/90 12:40</i> | Received by: (Signature) <i>K. Walter</i> | | | | | | | | | | | |
| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | | | | | | | | | | | |
| Relinquished by: (Signature) | Date/Time | Received by: (Signature) | | | | | | | | | | | |
| | | | Signature _____ Title _____ Date _____ | | | | | | | | | | |



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| | | |
|--|---|--|
| Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E. | Client Project ID: Unocal #5901, Dublin, 11976 Dublin Blvd. Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 007-2513 | Sampled: Jul 16, 1990 Received: relogged 7/18 Analyzed: Jul 19, 1990 Reported: Jul 19, 1990 |
|--|---|--|

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

| Sample Number | Sample Description | Low/Medium B.P. Hydrocarbons mg/kg (ppm) | Benzene mg/kg (ppm) | Toluene mg/kg (ppm) | Ethyl Benzene mg/kg (ppm) | Xylenes mg/kg (ppm) |
|---------------|--------------------|--|---------------------------|---------------------------|---------------------------------|---------------------------|
| 007-2513 | SWB (13) | N.D. | N.D. | 0.0095 | N.D. | N.D. |
| 007-2514 | SWC (10) | 1.1 | 0.0061 | 0.030 | 0.024 | 0.044 |
| 007-2515 | SWD (14) | N.D. | 0.0052 | 0.015 | N.D. | N.D. |

| | | | | | |
|--------------------------|------------|---------------|---------------|---------------|---------------|
| Detection Limits: | 1.0 | 0.0050 | 0.0050 | 0.0050 | 0.0050 |
|--------------------------|------------|---------------|---------------|---------------|---------------|

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

Belinda C. Vega

Belinda C. Vega
Project Manager



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| | | | |
|--|---|---|---|
| Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E. | Client Project ID: Matrix Descript: Analysis Method: First Sample #: | Unocal #5901, Dublin, 11976 Dublin Blvd. Soil EPA 3550/8015 007-2513 | Sampled: Jul 16, 1990 Received: relogged 7/18 Extracted: Jul 18, 1990 Analyzed: Jul 18, 1990 Reported: Jul 19, 1990 |
|--|---|---|---|

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

| Sample Number | Sample Description | High B.P. Hydrocarbons mg/kg (ppm) |
|---------------|--------------------|--|
| 007-2513 | SWB (13) | N.D. |
| 007-2514 | SWC (10) | N.D. |
| 007-2515 | SWD (14) | N.D. |

Detection Limits: 1.0

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

Belinda C. Vega
Belinda C. Vega
Project Manager

72513.KEL <3>



SEQUOIA ANALYTICAL

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| | | |
|--|--|--|
| Kaprealian Engineering, Inc. P.O. Box 998 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E. | Client Project ID: Unocal #5901, Dublin, 11976 Dublin Blvd. Sample Descript: Soil, SWB (13) Analysis Method: EPA 5030/8010 Lab Number: 007-2513 | Sampled: Jul 16, 1990 Received: relogged 7/18 Analyzed: Jul 19, 1990 Reported: Jul 19, 1990 |
|--|--|--|

HALOGENATED VOLATILE ORGANICS (EPA 8010)

| Analyte | Detection Limit µg/kg | Sample Results µg/kg |
|--------------------------------|--------------------------|-------------------------|
| Bromodichloromethane..... | 5.0 | N.D. |
| Bromoform..... | 5.0 | N.D. |
| Bromomethane..... | 5.0 | N.D. |
| Carbon tetrachloride..... | 5.0 | N.D. |
| Chlorobenzene..... | 5.0 | N.D. |
| Chloroethane..... | 25 | N.D. |
| 2-Chloroethylvinyl ether..... | 5.0 | N.D. |
| Chloroform..... | 5.0 | N.D. |
| Chloromethane..... | 5.0 | N.D. |
| Dibromochloromethane..... | 5.0 | N.D. |
| 1,2-Dichlorobenzene..... | 10 | N.D. |
| 1,3-Dichlorobenzene..... | 10 | N.D. |
| 1,4-Dichlorobenzene..... | 10 | N.D. |
| 1,1-Dichloroethane..... | 5.0 | N.D. |
| 1,2-Dichloroethane..... | 5.0 | N.D. |
| 1,1-Dichloroethane..... | 5.0 | N.D. |
| Total 1,2-Dichloroethane..... | 5.0 | N.D. |
| 1,2-Dichloropropane..... | 5.0 | N.D. |
| cis-1,3-Dichloropropene..... | 5.0 | N.D. |
| trans-1,3-Dichloropropene..... | 5.0 | N.D. |
| Methylene chloride..... | 10 | N.D. |
| 1,1,2,2-Tetrachloroethane..... | 5.0 | N.D. |
| Tetrachloroethene..... | 5.0 | N.D. |
| 1,1,1-Trichloroethane..... | 5.0 | N.D. |
| 1,1,2-Trichloroethane..... | 5.0 | N.D. |
| Trichloroethene..... | 5.0 | N.D. |
| Trichlorofluoromethane..... | 5.0 | N.D. |
| Vinyl chloride..... | 10 | N.D. |

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega

Belinda C. Vega
Project Manager

72513.KEI <4>



SEQUOIA ANALYTICAL

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Kaprealian Engineering, Inc.

P.O. Box 996

Benicia, CA 94510

Attention: Mardo Kaprealian, P.E.

Client Project ID:

Sample Descript:

Analysis Method:

Lab Number:

Unocal #5901, Dublin, 11976 Dublin Blvd.

Soil, SWC (10)

EPA 5030/8010

007-2514

Sampled: Jul 16, 1990

Received: relogged 7/18

Analyzed: Jul 19, 1990

Reported: Jul 19, 1990

HALOGENATED VOLATILE ORGANICS (EPA 8010)

| Analyte | Detection Limit µg/kg | Sample Results µg/kg |
|--------------------------------|--------------------------|-------------------------|
| Bromodichloromethane..... | 5.0 | N.D. |
| Bromoform..... | 5.0 | N.D. |
| Bromomethane..... | 5.0 | N.D. |
| Carbon tetrachloride..... | 5.0 | N.D. |
| Chlorobenzene..... | 5.0 | N.D. |
| Chloroethane..... | 25 | N.D. |
| 2-Chloroethylvinyl ether..... | 5.0 | N.D. |
| Chloroform..... | 5.0 | N.D. |
| Chloromethane..... | 5.0 | N.D. |
| Dibromochloromethane..... | 5.0 | N.D. |
| 1,2-Dichlorobenzene..... | 10 | N.D. |
| 1,3-Dichlorobenzene..... | 10 | N.D. |
| 1,4-Dichlorobenzene..... | 10 | N.D. |
| 1,1-Dichloroethane..... | 5.0 | N.D. |
| 1,2-Dichloroethane..... | 5.0 | N.D. |
| 1,1-Dichloroethene..... | 5.0 | N.D. |
| Total 1,2-Dichloroethene..... | 5.0 | N.D. |
| 1,2-Dichloropropane..... | 5.0 | N.D. |
| cis-1,3-Dichloropropene..... | 5.0 | N.D. |
| trans-1,3-Dichloropropene..... | 5.0 | N.D. |
| Methylene chloride..... | 10 | N.D. |
| 1,1,2,2-Tetrachloroethane..... | 5.0 | N.D. |
| Tetrachloroethene..... | 5.0 | N.D. |
| 1,1,1-Trichloroethane..... | 5.0 | N.D. |
| 1,1,2-Trichloroethane..... | 5.0 | N.D. |
| Trichloroethene..... | 5.0 | N.D. |
| Trichlorofluoromethane..... | 5.0 | N.D. |
| Vinyl chloride..... | 10 | N.D. |

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Project Manager

72513.KEI <5>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
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| | | |
|--|--|--|
| Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E. | Client Project ID: Unocal #5901, Dublin, 11976 Dublin Blvd. Sample Descript: Soil, SWD (14) Analysis Method: EPA 5030/8010 Lab Number: 007-2515 | Sampled: Jul 16, 1990 Received: relogged 7/18 Analyzed: Jul 19, 1990 Reported: Jul 19, 1990 |
|--|--|--|

HALOGENATED VOLATILE ORGANICS (EPA 8010)

| Analyte | Detection Limit µg/kg | Sample Results µg/kg |
|--------------------------------|--------------------------|-------------------------|
| Bromodichloromethane..... | 5.0 | N.D. |
| Bromoform..... | 5.0 | N.D. |
| Bromomethane..... | 5.0 | N.D. |
| Carbon tetrachloride..... | 5.0 | N.D. |
| Chlorobenzene..... | 5.0 | N.D. |
| Chloroethane..... | 25 | N.D. |
| 2-Chloroethylvinyl ether..... | 5.0 | N.D. |
| Chloroform..... | 5.0 | N.D. |
| Chloromethane..... | 5.0 | N.D. |
| Dibromochloromethane..... | 5.0 | N.D. |
| 1,2-Dichlorobenzene..... | 10 | N.D. |
| 1,3-Dichlorobenzene..... | 10 | N.D. |
| 1,4-Dichlorobenzene..... | 10 | N.D. |
| 1,1-Dichloroethane..... | 5.0 | N.D. |
| 1,2-Dichloroethane..... | 5.0 | N.D. |
| 1,1-Dichloroethane..... | 5.0 | N.D. |
| Total 1,2-Dichloroethane..... | 5.0 | N.D. |
| 1,2-Dichloropropane..... | 5.0 | N.D. |
| cis-1,3-Dichloropropene..... | 5.0 | N.D. |
| trans-1,3-Dichloropropene..... | 5.0 | N.D. |
| Methylene chloride..... | 10 | N.D. |
| 1,1,2,2-Tetrachloroethane..... | 5.0 | N.D. |
| Tetrachloroethane..... | 5.0 | N.D. |
| 1,1,1-Trichloroethane..... | 5.0 | N.D. |
| 1,1,2-Trichloroethane..... | 5.0 | N.D. |
| Trichloroethane..... | 5.0 | N.D. |
| Trichlorofluoromethane..... | 5.0 | N.D. |
| Vinyl chloride..... | 10 | N.D. |

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Project Manager

72513.KEI <6>



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

| SAMPLE <i>R.M. Bradish</i> | | SITE NAME & ADDRESS <i>Unocal #5901 11976 Dublin Blvd Dublin</i> | | | | | | ANALYSES REQUESTED | | | | TURN AROUND TIME: <u>24 Hr</u> |
|-------------------------------|----------------|---|-------------------------------------|-------------------------------------|------|--------------|--------------------------|-------------------------------------|------------|-------------|------|---|
| WITNESSING AGENCY | | | | | | | | | | | | REMARKS <i>RUN TOU ONLY INITIALLY. BALANCE OF TESTS MAY OR MAY NOT BE REQ'D BASED ON TOU RESULTS</i> |
| SAMPLE ID NO. | DATE | TIME | SOIL | WATER | GRAB | NO. OF CONT. | SAMPLING LOCATION | TOU | TPH-G | TPH-D | BRID | |
| <i>SWB(8)</i> | <i>7-16-90</i> | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | <i>1</i> | <i>W.O. TR Pt - SIDE</i> | <input checked="" type="checkbox"/> | <i>007</i> | <i>2513</i> | | |
| <i>SWC(10)</i> | <i>"</i> | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | <i>1</i> | <i>" " " "</i> | <input checked="" type="checkbox"/> | <i>2</i> | <i>2514</i> | | |
| <i>SWD(12)</i> | <i>"</i> | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | <i>1</i> | <i>" " " "</i> | <input checked="" type="checkbox"/> | <i>2</i> | <i>2515</i> | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | | | | | | | |
| <i>R.M. Bradish</i> | | <i>7/17/90 10:45</i> | | <i>Tom M'Fain</i> | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | | | | | | | |
| <i>Tom M'Fain</i> | | <i>7/17/90 12:40</i> | | <i>K. Walters 7/17/90</i> | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | | | | | | | |
| Relinquished by: (Signature) | | Date/Time | | Received by: (Signature) | | | | | | | | |

- The following MUST BE completed by the laboratory accepting samples for analysis:
1. Have all samples received for analysis been stored in ice?
 2. Will samples remain refrigerated until analyzed?
 3. Did any samples received for analysis have head space?
 4. Were samples in appropriate containers and properly packaged?
- Signature _____ Title _____ Date _____

24 190 17 07
 707 746 5581 PAGE 014



SEQUOIA ANALYTICAL

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

| | | |
|--|--|---|
| Kaprealian Engineering, Inc. P.O. Box 996 Beniole, CA 94510 Attention: Mardo Kaprealian, P.E. | Client Project ID: Unocal #5901, Dublin, 11976 Dublin Blvd. Matrix Descript: Sol Analysis Method: EPA 5030/8015/8020 First Sample #: 007-3525 | Sampled: Jul 16, 1990 Received: Jul 20, 1990 Analyzed: Jul 23, 1990 Reported: Jul 24, 1990 |
|--|--|---|

24

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

| Sample Number | Sample Description | Low/Medium B.P. Hydrocarbons mg/kg (ppm) | Benzene mg/kg (ppm) | Toluene mg/kg (ppm) | Ethyl Benzene mg/kg (ppm) | Xylenes mg/kg (ppm) |
|---------------|--------------------|---|------------------------|------------------------|------------------------------|------------------------|
| 007-3525 | SWE | N.D. | N.D. | 0.031 | N.D. | N.D. |
| 007-3526 | SWF | N.D. | N.D. | 0.029 | 0.0059 | 0.013 |
| 007-3527 | SWG | N.D. | N.D. | 0.028 | N.D. | N.D. |
| 007-3528 | SWH | N.D. | N.D. | 0.015 | N.D. | N.D. |

| | | | | | |
|-------------------|-----|--------|--------|--------|--------|
| Detection Limits: | 1.0 | 0.0050 | 0.0050 | 0.0050 | 0.0050 |
|-------------------|-----|--------|--------|--------|--------|

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

Belinda C. Vega
 Belinda C. Vega
 Project Manager

73526.KEL <1>



SEQUOIA ANALYTICAL

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Kaprealian Engineering, Inc.

P.O. Box 996

Benicia, CA 94510

Attention: Mardo Kaprealian, P.E.

Client Project ID:

Matrix Descript:

Analysis Method:

First Sample #:

Unocal #5901, Dublin, 11976 Dublin Blvd.

Soil

EPA 3550/8015

007-3525

Sampled:

Received:

Extracted:

Analyzed:

Reported:

Jul 18, 1990

Jul 20, 1990

Jul 20, 1990

Jul 23, 1990

Jul 24, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

| Sample Number | Sample Description | High B.P. Hydrocarbons mg/kg (ppm) |
|---------------|--------------------|--|
| 007-3525 | SWC | N.D. |
| 007-3526 | SWF | N.D. |
| 007-3527 | SWG | N.D. |
| 007-3528 | SWH | N.D. |

Detection Limits:

1.0

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

Belinda C. Vega

Belinda C. Vega
Project Manager

73525 KEI <2>



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| | | | | |
|--|---|--|---|--|
| Kaprealian Engineering, Inc. P.O. Box 898 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E. | Client Project ID: Matrix Descript: Analysis Method: First Sample #: | Unocal #5901, Dublin, 11976 Dublin Blvd. Soil SM 503 D&E (Gravimetric) 007-3525 | Sampled: Received: Extracted: Analyzed: Reported: | Jul 18, 1990 Jul 20, 1990 Jul 23, 1990 Jul 23, 1990 Jul 24, 1990 |
|--|---|--|---|--|

TOTAL RECOVERABLE PETROLEUM OIL

| Sample Number | Sample Description | Oil & Grease mg/kg (ppm) |
|---------------|--------------------|--------------------------------|
| 007-3525 | SWF | N.D. |
| 007-3526 | SWF | N.D. |
| 007-3527 | SWG | N.D. |
| 007-3528 | SWH | N.D. |

Detection Limits:

30

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

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Kaprealian Engineering, Inc.

P.O. Box 898

Benicia, CA 94510

Attention: Mardo Kaprealian, P.E.

Client Project ID:

Sample Descript:

Analysis Method:

Lab Number:

Unocal #5901, Dublin, 11976 Dublin Blvd.

Soil, SWE

EPA 5030/8010

007-3525

Sampled: Jul 16, 1990

Received: Jul 20, 1990

Analyzed: Jul 23, 1990

Reported: Jul 24, 1990

HALOGENATED VOLATILE ORGANICS (EPA 8010)

| Analyte | Detection Limit µg/kg | Sample Results µg/kg |
|--------------------------------|--------------------------|-------------------------|
| Bromodichloromethane..... | 5.0 | N.D. |
| Bromoform..... | 5.0 | N.D. |
| Bromomethane..... | 5.0 | N.D. |
| Carbon tetrachloride..... | 5.0 | N.D. |
| Chlorobenzene..... | 5.0 | N.D. |
| Chloroethane..... | 25 | N.D. |
| 2-Chloroethylvinyl ether..... | 5.0 | N.D. |
| Chloroform..... | 5.0 | N.D. |
| Chloromethane..... | 5.0 | N.D. |
| Dibromochloromethane..... | 5.0 | N.D. |
| 1,2-Dichlorobenzene..... | 10 | N.D. |
| 1,3-Dichlorobenzene..... | 10 | N.D. |
| 1,4-Dichlorobenzene..... | 10 | N.D. |
| 1,1-Dichloroethane..... | 5.0 | N.D. |
| 1,2-Dichloroethane..... | 5.0 | N.D. |
| 1,1-Dichloroethene..... | 5.0 | N.D. |
| Total 1,2-Dichloroethene..... | 5.0 | N.D. |
| 1,2-Dichloropropane..... | 5.0 | N.D. |
| cis-1,3-Dichloropropene..... | 5.0 | N.D. |
| trans-1,3-Dichloropropene..... | 5.0 | N.D. |
| Methylene chloride..... | 10 | N.D. |
| 1,1,2,2-Tetrachloroethane..... | 5.0 | N.D. |
| Tetrachloroethane..... | 5.0 | N.D. |
| 1,1,1-Trichloroethane..... | 5.0 | N.D. |
| 1,1,2-Trichloroethane..... | 5.0 | N.D. |
| Trichloroethane..... | 5.0 | N.D. |
| Trichlorofluoromethane..... | 5.0 | N.D. |
| Vinyl chloride..... | 10 | N.D. |

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

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| | | |
|--|---|---|
| Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E. | Client Project ID: Unocal #5001, Dublin, 11976 Dublin Blvd. Sample Descript: Soil, SWF Analysis Method: EPA 5030/8010 Lab Number: 007-3526 | Sampled: Jul 17, 1990 Received: Jul 20, 1990 Analyzed: Jul 23, 1990 Reported: Jul 24, 1990 |
|--|---|---|

HALOGENATED VOLATILE ORGANICS (EPA 8010)

| Analyte | Detection Limit µg/kg | Sample Results µg/kg |
|--------------------------------|--------------------------|-------------------------|
| Bromodichloromethane..... | 5.0 | N.D. |
| Bromoform..... | 5.0 | N.D. |
| Bromomethane..... | 5.0 | N.D. |
| Carbon tetrachloride..... | 5.0 | N.D. |
| Chlorobenzene..... | 5.0 | N.D. |
| Chloroethane..... | 25 | N.D. |
| 2-Chloroethylvinyl ether..... | 5.0 | N.D. |
| Chloroform..... | 5.0 | N.D. |
| Chloromethane..... | 5.0 | N.D. |
| Dibromochloromethane..... | 5.0 | N.D. |
| 1,2-Dichlorobenzene..... | 10 | N.D. |
| 1,3-Dichlorobenzene..... | 10 | N.D. |
| 1,4-Dichlorobenzene..... | 10 | N.D. |
| 1,1-Dichloroethane..... | 5.0 | N.D. |
| 1,2-Dichloroethane..... | 5.0 | N.D. |
| 1,1-Dichloroethene..... | 5.0 | N.D. |
| Total 1,2-Dichloroethene..... | 5.0 | N.D. |
| 1,2-Dichloropropane..... | 5.0 | N.D. |
| cis-1,3-Dichloropropane..... | 5.0 | N.D. |
| trans-1,3-Dichloropropane..... | 5.0 | N.D. |
| Methylene chloride..... | 10 | N.D. |
| 1,1,2,2-Tetrachloroethane..... | 5.0 | N.D. |
| Tetrachloroethene..... | 5.0 | N.D. |
| 1,1,1-Trichloroethane..... | 5.0 | N.D. |
| 1,1,2-Trichloroethane..... | 5.0 | N.D. |
| Trichloroethene..... | 5.0 | N.D. |
| Trichlorofluoromethane..... | 5.0 | N.D. |
| Vinyl chloride..... | 10 | N.D. |

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
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 Project Manager

73525.KEI <8>



SEQUOIA ANALYTICAL

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| | | | | |
|-----------------------------------|--------------------|--|-----------|--------------|
| Kaprealian Engineering, Inc. | Client Project ID: | Unocal #5601, Dublin, 11976 Dublin Blvd. | Sampled: | Jul 18, 1990 |
| P.O. Box 998 | Sample Descript: | Soil, SWG | Received: | Jul 20, 1990 |
| Benicia, CA 94510 | Analysis Method: | EPA 5030/8010 | Analyzed: | Jul 23, 1990 |
| Attention: Mardo Kaprealian, P.E. | Lab Number: | 007-3527 | Reported: | Jul 24, 1990 |

HALOGENATED VOLATILE ORGANICS (EPA 8010)

| Analyte | Detection Limit µg/kg | Sample Results µg/kg |
|--------------------------------|--------------------------|-------------------------|
| Bromodichloromethane..... | 5.0 | N.D. |
| Bromoform..... | 5.0 | N.D. |
| Bromomethane..... | 5.0 | N.D. |
| Carbon tetrachloride..... | 5.0 | N.D. |
| Chlorobenzene..... | 5.0 | N.D. |
| Chloroethane..... | 25 | N.D. |
| 2-Chloroethylvinyl ether..... | 5.0 | N.D. |
| Chloroform..... | 5.0 | N.D. |
| Chloromethane..... | 5.0 | N.D. |
| Dibromochloromethane..... | 5.0 | N.D. |
| 1,2-Dichlorobenzene..... | 10 | N.D. |
| 1,3-Dichlorobenzene..... | 10 | N.D. |
| 1,4-Dichlorobenzene..... | 10 | N.D. |
| 1,1-Dichloroethane..... | 5.0 | N.D. |
| 1,2-Dichloroethane..... | 5.0 | N.D. |
| 1,1-Dichloroethene..... | 5.0 | N.D. |
| Total 1,2-Dichloroethene..... | 5.0 | N.D. |
| 1,2-Dichloropropane..... | 5.0 | N.D. |
| cis-1,3-Dichloropropene..... | 5.0 | N.D. |
| trans-1,3-Dichloropropene..... | 5.0 | N.D. |
| Methylene chloride..... | 10 | N.D. |
| 1,1,2,2-Tetrachloroethane..... | 5.0 | N.D. |
| Tetrachloroethene..... | 5.0 | N.D. |
| 1,1,1-Trichloroethane..... | 5.0 | N.D. |
| 1,1,2-Trichloroethane..... | 5.0 | N.D. |
| Trichloroethene..... | 5.0 | N.D. |
| Trichlorofluoromethane..... | 5.0 | N.D. |
| Vinyl chloride..... | 10 | N.D. |

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
 Belinda C. Vega
 Project Manager

73525.KEI <6>



SEQUOIA ANALYTICAL

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| | | | | |
|-----------------------------------|--------------------|--|-----------|--------------|
| Kaprealian Engineering, Inc. | Client Project ID: | Unocal #5901, Dublin, 11975 Dublin Blvd. | Sampled: | Jul 19, 1990 |
| P.O. Box 998 | Sample Descript: | Soil, SWH | Received: | Jul 20, 1990 |
| Benicia, CA 94810 | Analysis Method: | EPA 5030/8010 | Analyzed: | Jul 23, 1990 |
| Attention: Mardo Kaprealian, P.E. | Lab Number: | 007-9528 | Reported: | Jul 24, 1990 |

HALOGENATED VOLATILE ORGANICS (EPA 8010)

| Analyte | Detection Limit µg/kg | Sample Results µg/kg |
|---------------------------|--------------------------|-------------------------|
| Bromodichloromethane | 5.0 | N.D. |
| Bromoform | 5.0 | N.D. |
| Bromomethane | 5.0 | N.D. |
| Carbon tetrachloride | 5.0 | N.D. |
| Chlorobenzene | 5.0 | N.D. |
| Chloroethane | 25 | N.D. |
| 2-Chloroethylvinyl ether | 5.0 | N.D. |
| Chloroform | 5.0 | N.D. |
| Chloromethane | 5.0 | N.D. |
| Dibromochloromethane | 5.0 | N.D. |
| 1,2-Dichlorobenzene | 10 | N.D. |
| 1,3-Dichlorobenzene | 10 | N.D. |
| 1,4-Dichlorobenzene | 10 | N.D. |
| 1,1-Dichloroethane | 5.0 | N.D. |
| 1,2-Dichloroethane | 5.0 | N.D. |
| 1,1-Dichloroethane | 5.0 | N.D. |
| Total 1,2-Dichloroethane | 5.0 | N.D. |
| 1,2-Dichloropropane | 5.0 | N.D. |
| cis-1,3-Dichloropropene | 5.0 | N.D. |
| trans-1,3-Dichloropropene | 5.0 | N.D. |
| Methylene chloride | 10 | N.D. |
| 1,1,2,2-Tetrachloroethane | 5.0 | N.D. |
| Tetrachloroethene | 5.0 | N.D. |
| 1,1,1-Trichloroethane | 5.0 | N.D. |
| 1,1,2-Trichloroethane | 5.0 | N.D. |
| Trichloroethane | 5.0 | N.D. |
| Trichlorofluoromethane | 5.0 | N.D. |
| Vinyl chloride | 10 | N.D. |

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega

Belinda C. Vega
Project Manager

73525 KEI <7>



KAPREALIAN ENGINEERING, INC.
CHAIN OF CUSTODY

07/24/90 18:29 707 746 5581 KAPREALIAN ENG. 022

| SAMPLE | | SITE NAME & ADDRESS | | | | | | | ANALYSES REQUESTED | | | | DATE AND TIME: | |
|-------------------|---------|---|------|-------|------|------|-------|--------|----------------------------------|-----------|-------|-----|----------------|---------|
| K.M. Bradish | | Unocal #5901 11976 Dublin Blvd Dublin, CA | | | | | | | TPH-G-RTN TPH-R TOG BOG | | | | 7/24/90 | |
| WITNESSING AGENCY | | | | | | | | | | | | | REMARKS | |
| SAMPLE NO. | DATE | TIME | SOIL | WATER | GRAB | COMP | CONT. | NO. OF | SAMPLING LOCATION | TPH-G-RTN | TPH-R | TOG | BOG | |
| SWE | 7-19-90 | | ✓ | ✓ | ✓ | ✓ | ✓ | 1 | W.O. TK Pit-SIDE | ✓ | ✓ | ✓ | ✓ | 0073525 |
| SWF | " | | ✓ | ✓ | ✓ | ✓ | ✓ | 1 | " " " " | ✓ | ✓ | ✓ | ✓ | 3526 |
| SWG | " | | ✓ | ✓ | ✓ | ✓ | ✓ | 1 | " " " " | ✓ | ✓ | ✓ | ✓ | 3527 |
| SWH | " | | ✓ | ✓ | ✓ | ✓ | ✓ | 1 | " " " " | ✓ | ✓ | ✓ | ✓ | 3528 |

| | | | |
|---|----------------------|---|--|
| Delivered by: (Signature) K.M. Bradish | Date/Time 7/20/90 | Received by: (Signature) Tom McLo... | The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? 2. Will samples remain refrigerated until analyzed? 3. Did any samples received for analysis have head space? 4. Were samples in appropriate containers and properly packaged? |
| Delivered by: (Signature) Tom McLo... | Date/Time | Received by: (Signature) | |
| Delivered by: (Signature) | Date/Time | Received by: (Signature) | |
| Delivered by: (Signature) | Date/Time | Received by: (Signature) | |
| | | K. Walter 7:00 9:30 am | Signature: <u>KES</u> Title: <u>RES</u> Date: <u>7/20/90</u> |

707 746 5581 PAGE 022