



76 Broadway
Sacramento, CA 95818
phone 916.558.7676
fax 916.558.7639

RO251

July 15, 2005

Mr. Don Hwang
Alameda County Health Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Alameda County
JUL 19 2005
Environmental Health

Re: Fee Title Owners
Fuel Leak Case No. RO0000251
76 Station #3538
411 West MacArthur
Oakland, CA

Dear Mr. Hwang:

In accordance with section 25297.15(a) of Chapter 6.7 of the Health and Safety Code, I, Thomas H. Kosel, certify that the following is a complete list of current fee title owners and their mailing addresses for the above site.

Arthur Yu and Kevin Ma
398 West MacArthur Boulevard
Oakland, CA 94609
510-658-0611

Per your letter dated 5/18/05, attached are the following reports.

Soil Sampling Report, dated 7/31/89
Stockpiled Soil Sampling, dated 7/31/89
Stockpiled Soil Sampling, dated 7/31/89
Stockpiled Soil Sampling, dated 8/7/89

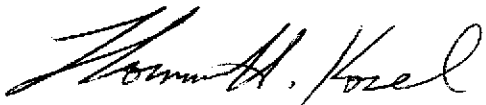
Mr. Don Hwang
Alameda County Health Agency
July 15, 2005

Re: Fuel Leak Case No. RO0000251
76 Station #3538
411 West MacArthur
Oakland, CA

Page 2 of 2

I declare, under penalty of perjury, that to the best of my knowledge the information contained in this letter and the attached reports is true and correct. If you have any questions or need additional information, please call me at (916) 558-7666.

Sincerely,



Thomas H. Kosel
Site Manger, Risk Management and Remediation
ConocoPhillips
76 Broadway
Sacramento, CA 95818

thk

Attachments

cc: Roger Batra, TRC



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(707) 746-6915

KEI-J89-0703.R1

July 31, 1989

Unocal Corporation
2175 N. California Blvd., Suite 650
Walnut Creek, CA 94569

Attention: Mr. Rick Sisk

RE: Soil Sampling Report
Unocal Service Station #3538
411 W. MacArthur Blvd.
Oakland, California

Alameda County
JUL 19 2005
Environmental Health

Dear Mr. Sisk:

This report summarizes the soil sampling performed by Kaprealian Engineering, Inc. (KEI) at the referenced site. All work was performed in compliance with the guidelines established by the Regional Water Quality Control Board (RWQCB), and the Alameda County Health Agency.

The scope of the work performed by KEI consisted of the following:

Coordination with regulatory agencies.

Collection of samples of native soil from sidewalls of the tank pit.

Collection of composite samples of soil excavated from the waste oil tank pit and stockpiled on-site.

Delivery of samples, including proper Chain of Custody documentation, to a certified analytical laboratory.

Technical review of field data and laboratory analyses, and preparation of this report.

SITE DESCRIPTION AND BACKGROUND

The subject site is presently used as a gasoline station. Site vicinity and site descriptions are shown on the attached sketch. No leaks or previous subsurface work performed at the site are known to KEI.

FIELD ACTIVITIES

KEI's initial field work was conducted on July 12, 1989. On this date, two underground fuel storage tanks and one 550 gallon waste oil tank were removed from the site. The fuel tanks consisted of one 10,000 gallon super unleaded tank, and one 12,000 gallon regular unleaded gasoline tank. The fuel tanks were made of fiberglass and other than damage incurred during removal, no apparent cracks or holes were observed in the tanks. The waste oil tank was made of steel and had four small holes up to 1/2" diameter. Mr. Dennis Byrne of the Alameda County Health Agency was present during tank removal and sampling.

Water was encountered in the fuel tank pit at a depth of 10.5 feet, thus prohibiting the collection of any soil samples from immediately beneath the tanks. Four soil samples, labeled SW1, SW3, SW4 and SW4(2), were collected from the sidewalls of the fuel tank pit approximately six inches above the water table. One sample, labeled WO1, was collected of native soil from beneath the waste oil tank at a depth of 8.5 feet. The undisturbed samples were collected from bulk material excavated by backhoe. The samples were placed in clean, 2" diameter brass tubes, sealed with aluminum foil, plastic caps and tape, and stored in a cooled ice chest for delivery to a certified laboratory. Sample point locations are as shown on the attached Site Plan.

Also on July 12, 1989, three composite soil samples, labeled Comp A, Comp B and Comp C, were collected from approximately 150 cubic yards of soil stockpiled on site. The soil was generated during fuel tank excavation and removal. Stockpiled soil sampling is addressed in KEI's report (KEI-J89-0703.R2) dated July 31, 1989.

KEI returned to the site on July 17, 1989 to complete the fuel tank pit sidewall sampling. Two soil samples, labeled SW1(4) and SW2, were collected from the tank pit sidewalls approximately 6" above the water table. Soil sample SW1(4) was taken at the same location as sample SW1 following lateral excavation of the tank pit sidewall to remove as much contaminated soil as possible. Soil sample SW2 was taken from the previously unsampled west sidewall. Both undisturbed samples were collected from bulk material excavated by backhoe. Samples were handled as described above. Sample point locations are also shown on the attached Site Plan.

Also on July 17, 1989, four samples of native soil were collected from the pipe trenches at depths ranging from 5.5 to 10 feet. The undisturbed soil samples, labeled P1, P2, P3 and P4, were

collected as described above from bulk material excavated by backhoe. After soil sampling, the pipe trenches were excavated to the sample depths, except the area represented by sample P4, where soil was excavated to one foot below ground water. Sample point locations are also as shown on the attached Site Plan.

On July 18, 1989, after soil excavation was completed, approximately 1,500 gallons of ground water were pumped from the fuel tank pit. Since the water did not recharge by July 21, 1989, no water sample was taken.

SUBSURFACE CONDITIONS

The subsurface soils exposed in the excavation consisted primarily of silty clay to a depth of 8.5 feet, with sandy, gravelly clay from 8.5 to 10 feet, and clay below.

ANALYTICAL RESULTS

All soil samples were analyzed by Sequoia Analytical Laboratory in Redwood City, California and were accompanied by properly executed Chain of Custody documentation. All soil samples, except the waste oil stockpile, Comp WOA, were analyzed for total petroleum hydrocarbon (TPH) as gasoline using EPA method 5030 or 3810 in conjunction with modified 8015, and benzene, toluene, xylenes and ethylbenzene (BTX&E) using EPA method 8020. In addition, sample W01 (from the waste oil tank pit) was analyzed for TPH as diesel using EPA method 3550 in conjunction with modified 8015, total oil and grease (TOG) by EPA 413.1, purgeable halocarbons by EPA 8010, and semi-volatile organics by EPA 8270.

Soil sample analyses from the fuel tank pit indicate levels of TPH as gasoline ranging from non-detectable to 11 ppm, except sample SW1, which showed 3,100 ppm. TPH as gasoline levels were non-detectable for all pipe trench samples, except P4, which showed 170 ppm. Sample W01, taken from the waste oil tank pit, had 36 ppm TOG, while TPH as diesel, TPH as gasoline, BTX&E, all 8010 constituents, and all 8270 constituents were non-detectable.

Composite stockpile soil sample Comp WOA showed non-detectable levels of both TPH as diesel and TOG. The analytical results are summarized in Table 1. Copies of the laboratory analyses and the Chain of Custody documentation are attached to this report.

KEI-J89-0703.R1
July 31, 1989
Page 4

DISCUSSION AND RECOMMENDATIONS

Based on the analytical results, the stockpile represented by sample Comp WOA may be disposed of at an approved Class III landfill.

In accordance with the guidelines established by the RWQCB, further work is necessary at the site because of the level of contamination found in the soil samples. To comply with the requirements of the RWQCB and the Alameda County Health Agency, KEI recommends the installation of four monitoring wells at the site to begin to define the extent of the soil contamination, to determine the ground water flow direction, and to determine if the ground water has been impacted. KEI's proposal for this work is attached for your review and consideration.

A copy of this report should be sent to Mr. Dennis Byrne of the Alameda County Health Agency, and to the RWQCB, San Francisco Bay Region.

LIMITATIONS

The results of this study are based on the data obtained from the field work and laboratory analyses. We have analyzed this data 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, except that our services have been performed in accordance with generally accepted professional principles and practices existing for such work.

KEI-J89-0703.R1
July 31, 1989
Page 5

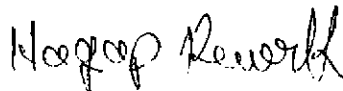
Should you have any questions regarding this report, please feel free to call me at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.



Richard M. Bradish
Staff Engineer



Hagop Kevork
Civil Engineer



Mardo Kaprealian
President

Attachments: Table 1
Site Plan
Laboratory Analyses
Chain of Custody documentation
Proposal

KEI-J89-0702.R1
July 31, 1989

TABLE 1

SUMMARY OF LABORATORY ANALYSES

(Results in ppm)
(Samples collected on July 12 & 17, 1989)

<u>Sample</u>	<u>Depth (feet)</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethyl-benzene</u>
SW1	10	---	3,100	12	300	730	110
SW1(4)	10	---	ND	ND	ND	ND	ND
SW2	10	---	1.1	0.10	ND	0.18	ND
SW3	10	---	5.7	0.26	ND	0.45	0.23
SW4	10	---	2.5	ND	ND	0.24	ND
SW4(2)	10	---	11	0.61	0.51	1.3	0.44
P1	6.5	---	ND	ND	ND	ND	ND
P2	6.5	---	ND	ND	ND	ND	ND
P3	5.5	---	ND	ND	ND	ND	ND
P4	10	---	170	0.71	12	47	6.8
WO1*	8.5	ND	ND	ND	ND	ND	ND
COMP WOA**	---	ND	---	---	---	---	---
Detection Limits		1.0	1.0	0.05	0.1	0.1	0.1

* TOG 36 ppm, and 8010 and 8270 constituents were non-detectable.

** TOG was non-detectable.

ND = Non-detectable.



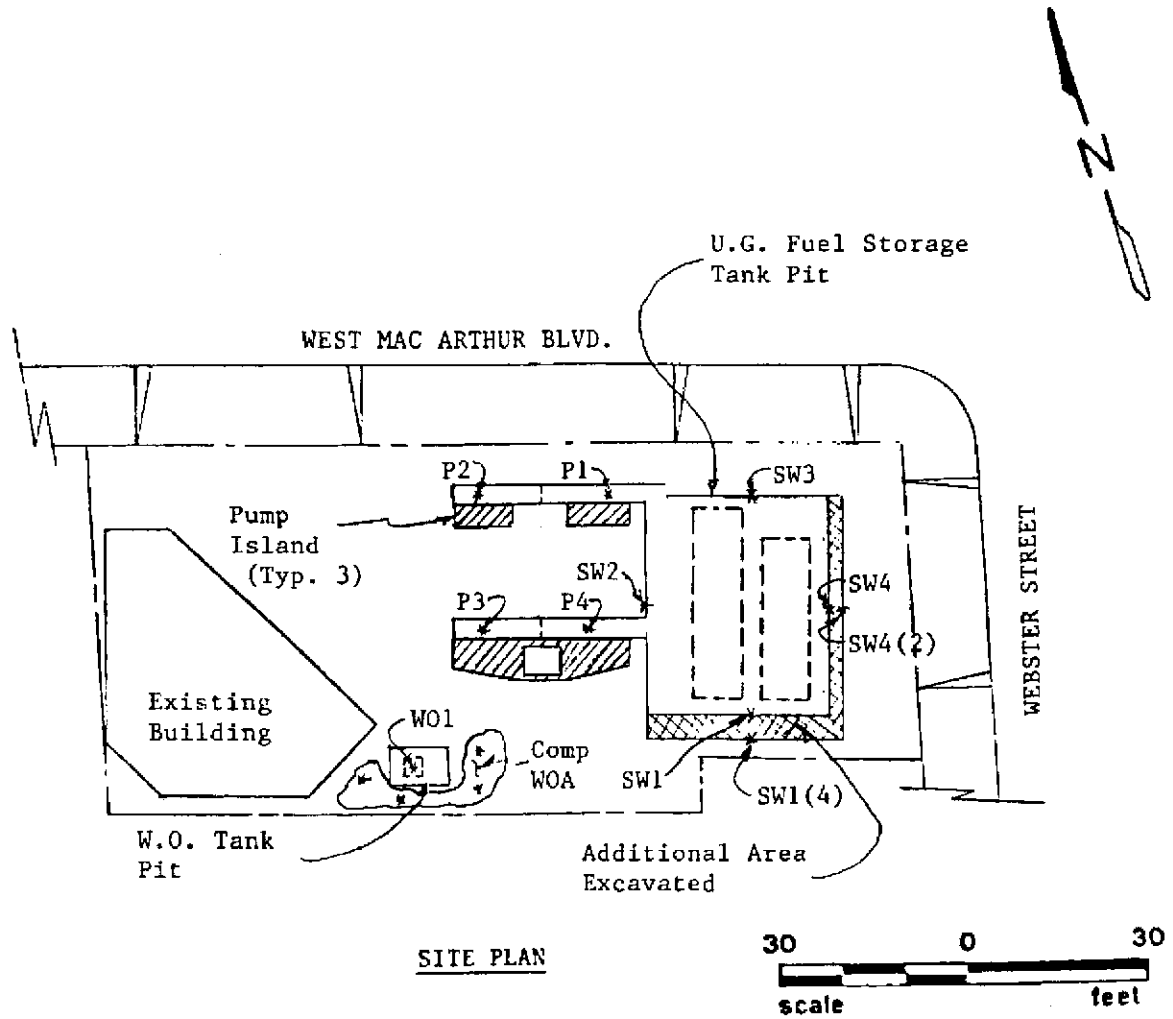
KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(707) 746-6915



* Sample Point Location

Unocal S/S #3538
411 W. MacArthur Blvd.
Oakland, California



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID: Unocal-Oakland, MacArthur & Webster	Sampled: Jul 12, 1989
P.O. Box 913	Matrix Descript: Soil	Received: Jul 13, 1989
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Jul 13, 1989
Attention: Mardo Kaprealian, P.E.	First Sample #: 907-1008	Reported: Jul 14, 1989

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)
907-1008	SW1	3,100	12	300	110	730
907-1009	SW4(2)	11	0.61	0.51	0.44	1.3
907-1010	SW3	5.7	0.26	N.D.	0.23	0.45
907-1011	SW4	2.5	N.D.	N.D.	N.D.	0.24

Detection Limits:	1.0	0.05	0.1	0.1	0.1
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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

Arthur G. Burton
Laboratory Director



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(415) 676-9100 (707) 746-6915

CHAIN OF CUSTODY

SAMPLER: HAGOP (Signature) DATE/TIME OF COLLECTION: 7-12-89 TURN AROUND TIME: 24 HR

SAMPLE DESCRIPTION AND PROJECT NUMBER:

Unocal - Oakland
MacArthur & Webster

SAMPLE #	ANALYSES	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/WATER
<u>SW1</u>	<u>TPH-G & BTXE</u>	<u>G</u>	<u>1</u>	<u>S</u>
<u>SW4(2)</u> SW2	<u>" "</u>	<u>G</u>	<u>1</u>	<u>S</u>
<u>SW3</u>	<u>" "</u>	<u>G</u>	<u>1</u>	<u>S</u>
<u>SW4</u>	<u>" "</u>	<u>G</u>	<u>1</u>	<u>S</u>

RELINQUISHED BY*	TIME/DATE	RECEIVED BY*	TIME/DATE
<u>1. Hagop Kevork</u>	<u>5:15</u> <u>7-12-89</u>	<u>Tom Bolan</u>	<u>5:15</u> <u>7-12-89</u>
<u>2. Tom Bolan</u>	<u>6:10</u> <u>7-12-89</u>	<u>Frank [unclear]</u>	<u>6:10</u> <u>7-12-89</u>
<u>3.</u>			

* STATE AFFILIATION NEXT TO SIGNATURE

REMARKS: _____

NOTE: IF REGULAR TURNAROUND, SOIL ANALYSES MUST BE COMPLETED WITHIN 14 CALENDAR DAYS OF SAMPLE COLLECTION. WATER ANALYSES MUST BE COMPLETED WITHIN 7 CALENDAR DAYS FOR BTX&E (UNLESS SAMPLE HAS BEEN PRESERVED), AND 14 CALENDAR DAYS FOR TPH AS GASOLINE; EXTRACT TPH AS DIESEL WITHIN 14 CALENDAR DAYS.



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID: Unocal, Oakland, MacArthur/Webster	Sampled: Jul 17, 1989
P.O. Box 913	Matrix Descript: Soil	Received: Jul 18, 1989
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Jul 19, 1989
Attention: Mardo Kaprealian, P.E.	First Sample #: 907-2018	Reported: Jul 19, 1989

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

Sample Number	Sample Description	Low/Medium B.P.	Benzene	Toluene	Ethyl Benzene	Xylenes
		Hydrocarbons				
		mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)
907-2018	SW1 (4)	N.D.	N.D.	N.D.	N.D.	N.D.
907-2019	SW2	1.1	0.10	N.D.	N.D.	0.18

Detection Limits:	1.0	0.05	0.1	0.1	0.1
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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

Arthur G. Burton
Arthur G. Burton
Laboratory Director



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID: Unocal, Oakland, MacArthur/Webster	Sampled: Jul 17, 1989
P.O. Box 913	Matrix Descript: Soil	Received: Jul 18, 1989
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Jul 19, 1989
Attention: Mardo Kaprealian, P.E.	First Sample #: 907-2020	Reported: Jul 19, 1989

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)
907-2020	P1	N.D.	N.D.	N.D.	N.D.	N.D.
907-2021	P2	N.D.	N.D.	N.D.	N.D.	N.D.
907-2022	P3	N.D.	N.D.	N.D.	N.D.	N.D.
907-2023	P4	170	0.71	12	6.8	47

Detection Limits:	1.0	0.05	0.1	0.1	0.1
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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

Arthur G. Burton
Arthur G. Burton
Laboratory Director



WAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(415) 676-9100 (707) 746-6915

CHAIN OF CUSTODY

SAMPLER: HAGOP DATE/TIME OF COLLECTION: 7-17-89 TURN AROUND TIME: 24 HRS
 (Signature)

SAMPLE DESCRIPTION AND PROJECT NUMBER: UNOCAL - OAKLAND - MACARTHUR / WEBSTER

<u>SAMPLE #</u>	<u>ANALYSES</u>	<u>GRAB OR COMP.</u>	<u>NUMBER OF CONTAINERS</u>	<u>SOIL/WATER</u>	
<u>SW1(4)</u>	<u>TPH-G/BTXE</u>	<u>G</u>	<u>1</u>	<u>S</u>	<u>9072018</u>
<u>SW2</u>	<u>TPH-G/BTXE</u>	<u>G</u>	<u>1</u>	<u>S</u>	<u>19</u>
<u>P1</u>	<u>TPH-G/BTXE</u>	<u>G</u>	<u>1</u>	<u>S</u>	<u>20</u>
<u>P2</u>	<u>TPH-G/BTXE</u>	<u>G</u>	<u>1</u>	<u>S</u>	<u>21</u>
<u>P3</u>	<u>TPH-G/BTXE</u>	<u>G</u>	<u>1</u>	<u>S</u>	<u>22</u>
<u>P4</u>	<u>TPH-G/BTXE</u>	<u>G</u>	<u>1</u>	<u>S</u>	<u>23</u>

<u>RELINQUISHED BY</u>	<u>TIME/DATE</u>	<u>RECEIVED BY</u>	<u>TIME/DATE</u>
<u>Hagop Kevork</u>	<u>1:03</u> <u>7-18-89</u>	<u>Tom Bolan</u>	<u>4:05</u> <u>7-18-</u>
<u>Tom Bolan</u>	<u>5:35</u> <u>7-18</u>	<u>Frank [Signature]</u>	<u>3:40 pm</u> <u>7-18-89</u>
<u>3.</u>			

* STATE AFFILIATION NEXT TO SIGNATURE

REMARKS: _____

NOTE: IF REGULAR TURNAROUND, SOIL ANALYSES MUST BE COMPLETED WITHIN 14 CALENDAR DAYS OF SAMPLE COLLECTION. WATER ANALYSES MUST BE COMPLETED WITHIN 7 CALENDAR DAYS FOR LTXE (UNLESS SAMPLE HAS BEEN PRESERVED), AND 14 CALENDAR DAYS FOR TPH AS GASOLINE; EXTRACT TPH AS DIESEL WITHIN 14 CALENDAR DAYS.



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


Kaprealian Engineering, Inc.	Client Project ID: Unocal-Oakland, MacArthur & Webster	Sampled: Jul 12, 1989
P.O. Box 913	Sample Descript.: Soil, WO1	Received: Jul 12, 1989
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Jul 13, 1989
Attention: Mardo Kaprealian, P.E.	Lab Number: 907-1004	Reported: Jul 14, 1989

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

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Low to Medium Boiling Point Hydrocarbons.....	1.0	N.D.
Benzene.....	0.05	N.D.
Toluene.....	0.1	N.D.
Ethyl Benzene.....	0.1	N.D.
Xylenes.....	0.1	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


Arthur G. Burton
Laboratory Director



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc. P.O. Box 913 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E.	Client Project ID: Unocal-Oakland, MacArthur & Webster Matrix Descript: Soil Analysis Method: EPA 3550/8015 First Sample #: 907-1004	Sampled: Jul 12, 1989 Received: Jul 12, 1989 Analyzed: Jul 14, 1989 Reported: Jul 14, 1989
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TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
907-1004	WO1	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

Arthur G. Burton
Laboratory Director

9071004.KEI <2>



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID:	Unocal-Oakland, MacArthur & Webster	Sampled:	Jul 12, 1989
P.O. Box 913	Matrix Descript:	Soil	Received:	Jul 12, 1989
Benicia, CA 94510	Analysis Method:	SM 413.1 (Gravimetric)	Analyzed:	Jul 14, 1989
Attention: Mardo Kaprealian, P.E.	First Sample #:	907-1004	Reported:	Jul 14, 1989

TOTAL RECOVERABLE OIL & GREASE

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
907-1004	WO1	36

Detection Limits: 30.0

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

SEQUOIA ANALYTICAL

Arthur G. Burton
Laboratory Director



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID: Unocal-Oakland, MacArthur & Webster	Sampled: Jul 12, 1989
P.O. Box 913	Sample Descript: Soil, WO1	Received: Jul 12, 1989
Benicia, CA 94510	Analysis Method: EPA 5030/8010	Analyzed: Jul 13, 1989
Attention: Mardo Kaprealian, P.E.	Lab Number: 907-1004	Reported: Jul 14, 1989

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.....	25.0	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.....	10.0	N.D.
1,3-Dichlorobenzene.....	10.0	N.D.
1,4-Dichlorobenzene.....	10.0	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.....	10.0	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.....	10.0	N.D.

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

SEQUOIA ANALYTICAL

Arthur G. Burton
Laboratory Director



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID: Unocal-Oakland, MacArthur & Webster	Sampled: Jul 12, 1989
P.O. Box 913	Sample Descript: Soil, WO1	Received: Jul 12, 1989
Benicia, CA 94510	Analysis Method: EPA 8270	Extracted: Jul 12, 1989
Attention: Mardo Kaprealian, P.E.	Lab Number: 907-1004	Analyzed: Jul 13, 1989
		Reported: Jul 14, 1989

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene.....	100.0	N.D.
Acenaphthylene.....	100.0	N.D.
Aniline.....	100.0	N.D.
Anthracene.....	100.0	N.D.
Benzidine.....	2,500.0	N.D.
Benzoic Acid.....	500.0	N.D.
Benzo(a)anthracene.....	100.0	N.D.
Benzo(b)fluoranthene.....	100.0	N.D.
Benzo(k)fluoranthene.....	100.0	N.D.
Benzo(g,h,i)perylene.....	100.0	N.D.
Benzo(a)pyrene.....	100.0	N.D.
Benzyl alcohol.....	100.0	N.D.
Bis(2-chloroethoxy)methane.....	100.0	N.D.
Bis(2-chloroethyl)ether.....	100.0	N.D.
Bis(2-chloroisopropyl)ether.....	100.0	N.D.
Bis(2-ethylhexyl)phthalate.....	500.0	N.D.
4-Bromophenyl ether.....	100.0	N.D.
Butyl benzyl phthalate.....	100.0	N.D.
4-Chloroaniline.....	100.0	N.D.
2-Chloronaphthalene.....	100.0	N.D.
4-Chloro-3-methylphenol.....	100.0	N.D.
2-Chlorophenol.....	100.0	N.D.
4-Chlorophenyl phenyl ether.....	100.0	N.D.
Chrysene.....	100.0	N.D.
Dibenz(a,h)anthracene.....	100.0	N.D.
Dibenzofuran.....	100.0	N.D.
Di-N-butyl phthalate.....	500.0	N.D.
1,3-Dichlorobenzene.....	100.0	N.D.
1,4-Dichlorobenzene.....	100.0	N.D.
1,2-Dichlorobenzene.....	100.0	N.D.
3,3-Dichlorobenzidine.....	500.0	N.D.
2,4-Dichlorophenol.....	100.0	N.D.
Diethyl phthalate.....	100.0	N.D.
2,4-Dimethylphenol.....	100.0	N.D.
Dimethyl phthalate.....	100.0	N.D.
4,6-Dinitro-2-methylphenol.....	500.0	N.D.
2,4-Dinitrophenol.....	500.0	N.D.



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID: Unocal-Oakland, MacArthur & Webster	Sampled: Jul 12, 1989
P.O. Box 913	Sample Descript: Soil, WO1	Received: Jul 12, 1989
Benicia, CA 94510	Analysis Method: EPA 8270	Extracted: Jul 12, 1989
Attention: Mardo Kaprealian, P.E.	Lab Number: 907-1004	Analyzed: Jul 13, 1989
		Reported: Jul 14, 1989

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene.....	100.0	N.D.
2,6-Dinitrotoluene.....	100.0	N.D.
Di-N-octyl phthalate.....	100.0	N.D.
Fluoranthene.....	100.0	N.D.
Fluorene.....	100.0	N.D.
Hexachlorobenzene.....	100.0	N.D.
Hexachlorobutadiene.....	100.0	N.D.
Hexachlorocyclopentadiene.....	100.0	N.D.
Hexachloroethane.....	100.0	N.D.
Indeno(1,2,3-cd)pyrene.....	100.0	N.D.
Isophorone.....	100.0	N.D.
2-Methylnaphthalene.....	100.0	N.D.
2-Methylphenol.....	100.0	N.D.
4-Methylphenol.....	100.0	N.D.
Naphthalene.....	100.0	N.D.
2-Nitroaniline.....	100.0	N.D.
3-Nitroaniline.....	100.0	N.D.
4-Nitroaniline.....	100.0	N.D.
Nitrobenzene.....	100.0	N.D.
2-Nitrophenol.....	100.0	N.D.
4-Nitrophenol.....	500.0	N.D.
N-Nitrosodiphenylamine.....	100.0	N.D.
N-Nitroso-di-N-propylamine.....	100.0	N.D.
Pentachlorophenol.....	500.0	N.D.
Phenathrene.....	100.0	N.D.
Phenol.....	100.0	N.D.
Pyrene.....	100.0	N.D.
1,2,4-Trichlorobenzene.....	100.0	N.D.
2,4,5-Trichlorophenol.....	100.0	N.D.
2,4,6-Trichlorophenol.....	100.0	N.D.

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

SEQUOIA ANALYTICAL


Arthur G. Burton
Laboratory Director



SEQUOIA ANALYTICAL

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


Kaprealian Engineering, Inc.	Client Project ID: Unocal-Oakland, MacArthur & Webster	Sampled: Jul 12, 1989
P.O. Box 913	Sample Descript: Soil, WO1	Received: Jul 12, 1989
Benicia, CA 94510	Analysis Method: EPA 8270 & "Open Scan"	Extracted: Jul 12, 1989
Attention: Mardo Kaprealian, P.E.	Lab Number: 907-1004	Analyzed: Jul 13, 1989
		Reported: Jul 14, 1989

SEMI-VOLATILE ORGANICS by GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Detection Limit $\mu\text{g}/\text{kg}$	Sample Results $\mu\text{g}/\text{kg}$
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No additional peaks > 250 $\mu\text{g}/\text{kg}$ were identified by the Mass Spectral Library.

SEQUOIA ANALYTICAL


Arthur G. Burton
Laboratory Director

Please Note:
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA/NIH library. Positive identification or specification between isomers cannot be made without retention time standards.

9071004.KEI <7>



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(415) 675-9100 (707) 746-6915

CHAIN OF CUSTODY

SAMPLER: HAGOP DATE/TIME OF COLLECTION: 7-12-89 TURN AROUND TIME: 24 HR
 (Signature)

SAMPLE DESCRIPTION AND PROJECT NUMBER: Unocal - Oakland
MacArthur & Webster

SAMPLE #	ANALYSES	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/WATER
<u>W01</u>	<u>TPH-G & BTX&E; TPH-D;</u>	<u>G</u>	<u>1</u>	<u>S</u>
	<u>TOG (413.1); 8010</u>		<u>9071004</u>	
	<u>0270 For CREOSOTE</u>			
	<u>PCB, PNA & PCP</u>			

RELINQUISHED BY*	TIME/DATE	RECEIVED BY*	TIME/DATE
<u>1. Hagop Kewiff</u>	<u>5:15</u> <u>7-12-89</u>	<u>Tom Boken</u>	<u>5:15</u> <u>7-12-89</u>
<u>2. Tom Boken</u>	<u>6:10</u> <u>7-12-89</u>	<u>Frank [unclear]</u>	<u>6:10pm</u> <u>7-12-89</u>
<u>3.</u>			

* STATE AFFILIATION NEXT TO SIGNATURE

REMARKS: _____

NOTE: IF REGULAR TURNAROUND, SOIL ANALYSES MUST BE COMPLETED WITHIN 14 CALENDAR DAYS OF SAMPLE COLLECTION. WATER ANALYSES MUST BE COMPLETED WITHIN 7 CALENDAR DAYS FOR BTX&E (UNLESS SAMPLE HAS BEEN PRESERVED), AND 14 CALENDAR DAYS FOR TPH AS GASOLINE; EXTRACT TPH AS DIESEL WITHIN 14 CALENDAR DAYS.



SEQUOIA ANALYTICAL

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

Kapreallan Engineering, Inc.	Client Project ID: Unocal, Oakland, MacArthur/Webster	Sampled: Jul 12, 1989
P.O. Box 913	Matrix Descript: Soil	Received: Jul 13, 1989
Benicia, CA 94510	Analysis Method: EPA 3550/8015	Analyzed: Jul 20, 1989
Attention: Mardo Kapreallan, P.E.	First Sample #: 907-1003 A-B	Reported: Jul 21, 1989

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
9071003 A0B	Composite WOA	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

Arthur G. Burton
Laboratory Director

9071003.KEI <1>



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID: Unocal, Oakland, MacArthur/Webster	Sampled: Jul 12, 1989
P.O. Box 913	Matrix Descript: Soil	Received: Jul 12, 1989
Benicia, CA 94510	Analysis Method: SM 413.1 (Gravimetric)	Extracted: Jul 17, 1989
Attention: Mardo Kaprealian, P.E.	First Sample #: 907-1003 A-B	Analyzed: Jul 17, 1989
		Reported: Jul 21, 1989

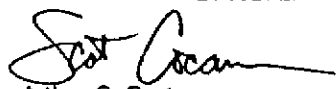
TOTAL RECOVERABLE OIL & GREASE

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
9071003 A-B	Composite WOA	N.D.

Detection Limits:	30.0
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Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Arthur G. Burton
Laboratory Director

9071003.KEI <2>



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(415) 676-9100 (707) 746-6915

CHAIN OF CUSTODY

SAMPLER: HAGOP (Signature) DATE/TIME OF COLLECTION: 7-12-89 TURN AROUND TIME: 5 DAYS

SAMPLE DESCRIPTION AND PROJECT NUMBER:

Unusual - Oakland
MacArthur & Webster

<u>SAMPLE #</u>	<u>ANALYSES</u>	<u>GRAB OR COMP.</u>	<u>NUMBER OF CONTAINERS</u>	<u>SOIL/ WATER</u>
<u>Comp. Vol.</u>	<u>TPH-D; TOG(413.1)</u>	<u>C</u>	<u>2</u>	<u>S</u>

<u>RELINQUISHED BY*</u>	<u>TIME/DATE</u>	<u>RECEIVED BY*</u>	<u>TIME/DATE</u>
<u>1. Hagop Kework</u>	<u>5:15</u> <u>7-12-89</u>	<u>Tom Baker</u>	<u>5:15</u> <u>7-12-89</u>
<u>2. Tom Baker</u>	<u>6:00</u> <u>7-12-89</u>	<u>Frank Minard</u>	<u>6:10 pm</u> <u>7-12-89</u>
<u>3.</u>			

* STATE AFFILIATION NEXT TO SIGNATURE

REMARKS: _____

NOTE: IF REGULAR TURNAROUND, SOIL ANALYSES MUST BE COMPLETED WITHIN 14 CALENDAR DAYS OF SAMPLE COLLECTION. WATER ANALYSES MUST BE COMPLETED WITHIN 7 CALENDAR DAYS FOR BTX&E (UNLESS SAMPLE HAS BEEN PRESERVED), AND 14 CALENDAR DAYS FOR TPH AS GASOLINE; EXTRACT TPH AS DIESEL WITHIN 14 CALENDAR DAYS.



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(707) 746-6915

KEI-J89-0703.R2

July 31, 1989

Unocal Corporation
2175 N. California Blvd., Suite 650
Walnut Creek, CA 94569

Attention: Mr. Rick Sisk

RE: Stockpiled Soil Sampling for
Unocal Service Station #3538
411 W. MacArthur Blvd.
Oakland, California

Dear Mr. Sisk:

This letter report summarizes the results of the stockpiled soil sampling and laboratory analyses for the referenced site. The soil analyses were conducted to comply with the County Health Department requirements for proper disposal of contaminated soil.

On July 12, 1989, soil samples from approximately 150 cubic yards of stockpiled soil at the referenced site were collected to determine proper disposal of the stockpile. Three composite soil samples (designated as Comp A, Comp B and Comp C) were taken. Each composite sample consisted of four individual grab samples taken at various locations and depths ranging from one to two feet. The samples were collected in 2" diameter, clean brass tubes, which were then sealed with aluminum foil, plastic caps and tape, and placed in a cooled ice chest for subsequent delivery to a certified laboratory for analysis. All samples were analyzed at Sequoia Analytical Laboratory in Redwood City, California, and were accompanied by properly executed Chain of Custody documentation. Sample locations are as shown on the attached Site Plan.

The composite samples were analyzed to determine concentrations of total petroleum hydrocarbons (TPH) as gasoline using EPA method 5030 or 3810 in conjunction with modified 8015, and benzene, toluene, xylenes and ethylbenzene (BTX&E) using EPA methods 5030 and 8020. The results of the soil analyses showed concentrations of TPH as gasoline ranging from 1.4 to 14 ppm. Analytical results are summarized in Table 1. Copies of the laboratory analyses, and the Chain of Custody documentation are attached to this report.

KEI-J89-0703.R2

July 31, 1989

Page 2

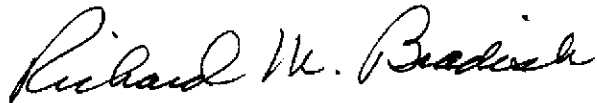
Based on TPH levels in the stockpiled soil of less than 100 ppm, the soil can be disposed of at an approved Class III disposal site (based on Regional Water Quality Control Board guidelines).

A copy of this report should be sent to Mr. Dennis Byrne of the Alameda County Health Agency, and to the Regional Water Quality Control Board (RWQCB), San Francisco Bay Region.

Should you have any questions on this report, please do not hesitate to contact me at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.

A handwritten signature in cursive script that reads "Richard M. Bradish".

Richard M. Bradish
Staff Engineer

Attachments: Table 1
Site Plan
Laboratory Results
Chain of Custody documentation

KEI-J89-0703.R2
July 31, 1989

TABLE 1

SUMMARY OF LABORATORY ANALYSES

(Results in ppm)
(Samples collected on July 12, 1989)

<u>Sample</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethylbenzene</u>
Comp A	1.4	ND	ND	ND	ND
Comp B	5.6	ND	ND	0.28	ND
Comp C	14	ND	0.14	0.81	ND
Detection Limits	1.0	0.05	0.1	0.1	0.1

ND = Non-detectable.



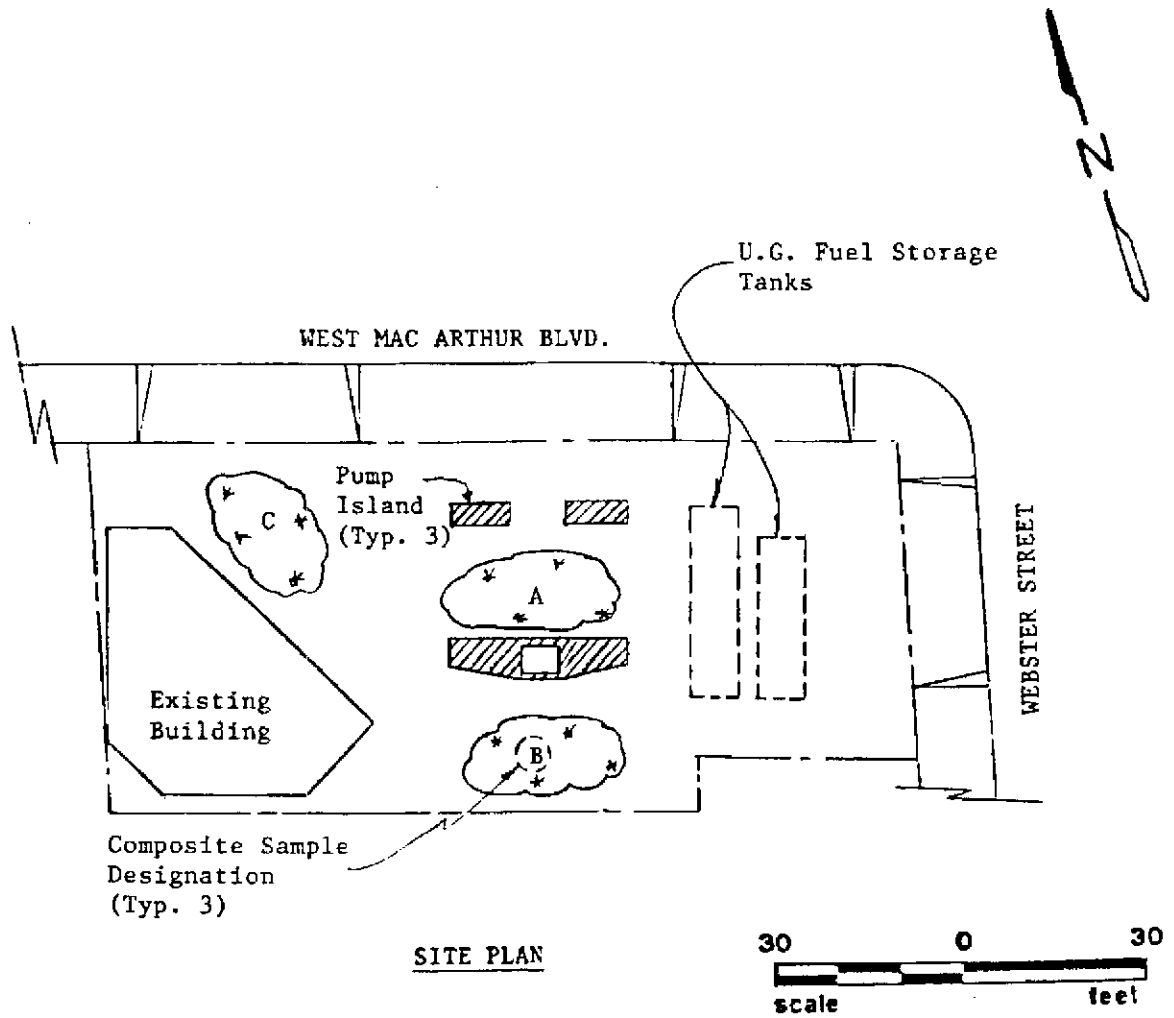
KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA CA 94510

(707) 746-6915



* Sample Point Location

Unocal S/S #3538
411 W. MacArthur Blvd.
Oakland, California



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc. P.O. Box 913 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E.	Client Project ID: Unocal-Oakland, MacArthur & Webster Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 907-1005 A - B	Sampled: Jul 12, 1989 Received: Jul 13, 1989 Analyzed: Jul 13, 1989 Reported: Jul 14, 1989
--	--	---

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)
907-1005	Comp A	1.4	N.D.	N.D.	N.D.	N.D.
907-1006	Comp B	5.6	N.D.	N.D.	N.D.	0.28
907-1007	Comp C	14	N.D.	0.14	N.D.	0.81

Detection Limits:	1.0	0.05	0.1	0.1	0.1
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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


Arthur G. Burton
Laboratory Director

9071005.KEI <1>



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(415) 676-9100 (707) 746-6915

CHAIN OF CUSTODY

SAMPLER: R.M. Brackish DATE/TIME OF COLLECTION: 7-12-89 TURN AROUND TIME: 24 HR
 (Signature)

SAMPLE DESCRIPTION AND PROJECT NUMBER: Unocal - Oakland
MacArthur & Webster

SAMPLE #	ANALYSES	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/WATER
Comp A	TPH-G & BTXE	C	2	S
" B	" "	C	2	S
" C	" "	C	2	S

RELINQUISHED BY*	TIME/DATE	RECEIVED BY*	TIME/DATE
1. Margaret Revork	5:15 7-12-89	Tom Boken	5:15 7-12-89
2. Tom Boken	6:10 7-12-89	David Nimm	6:10pm 7-12-89
3.			

* STATE AFFILIATION NEXT TO SIGNATURE

REMARKS: _____

NOTE: IF REGULAR TURNAROUND, SOIL ANALYSES MUST BE COMPLETED WITHIN 14 CALENDAR DAYS OF SAMPLE COLLECTION. WATER ANALYSES MUST BE COMPLETED WITHIN 7 CALENDAR DAYS FOR BTX&E (UNLESS SAMPLE HAS BEEN PRESERVED), AND 14 CALENDAR DAYS FOR TPH AS GASOLINE; EXTRACT TPH AS DIESEL WITHIN 14 CALENDAR DAYS.



KAPREALIAN ENGINEERING, INC.

Consulting Engineers
P. O. BOX 913
BENICIA, CA 94510
(707) 746-6915

KEI-J89-0703.R3
July 31, 1989

Unocal Corporation
2175 N. California Blvd., Suite 650
Walnut Creek, CA 94569

Attention: Mr. Rick Sisk

RE: Stockpiled Soil Sampling for
Unocal Service Station #3538
411 W. MacArthur Blvd.
Oakland, California

Dear Mr. Sisk:

This letter report summarizes the results of the stockpiled soil sampling and laboratory analyses for the referenced site. The soil analyses were conducted to comply with the County Health Department requirements for proper disposal of contaminated soil.

On July 18, 1989, soil samples from approximately 450 cubic yards of stockpiled soil at the referenced site were collected to determine proper disposal of the stockpile. Nine composite soil samples (designated as Comp D, Comp E, Comp F, Comp G, Comp H, Comp I, Comp J, Comp K and Comp L) were taken. Each composite sample consisted of four individual grab samples taken at various locations and depths ranging from one to two feet. The samples were collected in 2" diameter, clean brass tubes, which were then sealed with aluminum foil, plastic caps and tape, and placed in a cooled ice chest for subsequent delivery to a certified laboratory for analysis. All samples were analyzed at Sequoia Analytical Laboratory in Redwood City, California, and were accompanied by properly executed Chain of Custody documentation. Sample locations are as shown on the attached Site Plan.

The composite samples were analyzed to determine concentrations of total petroleum hydrocarbons (TPH) as gasoline using EPA method 5030 or 3810 in conjunction with modified 8015, TPH as diesel using EPA method 3550 in conjunction with modified 8015, and benzene, toluene, xylenes and ethylbenzene (BTX&E) using EPA methods 5030 and 8020. The results of the soil analyses showed concentrations of TPH as gasoline ranging from 11 to 100 ppm. Analytical results are summarized in Table 1. Copies of the laboratory analyses, and the Chain of Custody documentation are attached to this report.

KEI-J89-0703.R3
July 31, 1989
Page 2

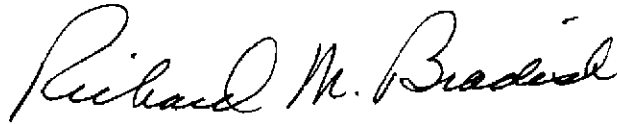
Based on TPH levels in the stockpiled soil represented by samples Comp D through Comp K inclusive of less than 100 ppm, the soil can be disposed of at an approved Class III disposal site (based on Regional Water Quality Control Board guidelines). The soil represented by sample Comp L should be retained on-site for aeration and resampling prior to disposal.

A copy of this report should be sent to Mr. Dennis Byrne of the Alameda County Health, and to the Regional Water Quality Control Board (RWQCB), San Francisco Bay Region.

Should you have any questions on this report, please do not hesitate to contact me at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.



Richard M. Bradish
Staff Engineer

Attachments: Table 1
Site Plan
Laboratory Results
Chain of Custody documentation

KEI-J89-0703.R3
July 31, 1989

TABLE 1

SUMMARY OF LABORATORY ANALYSES

(Results in ppm)
(Samples collected on July 18, 1989)

<u>Sample</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethylbenzene</u>
Comp D	39	0.072	0.8	6.0	0.65
Comp E	11	ND	0.34	1.8	0.23
Comp F	23	0.057	1.0	3.3	0.45
Comp G	35	ND	1.2	4.9	0.6
Comp H	63	ND	1.7	6.6	0.80
Comp I	35	ND	0.89	4.6	0.58
Comp J	59	ND	1.8	10	1.2
Comp K	14	ND	ND	0.68	ND
Comp L	100	0.16	4.3	18	2.6
Detection Limits	1.0	0.05	0.1	0.1	0.1

ND = Non-detectable.



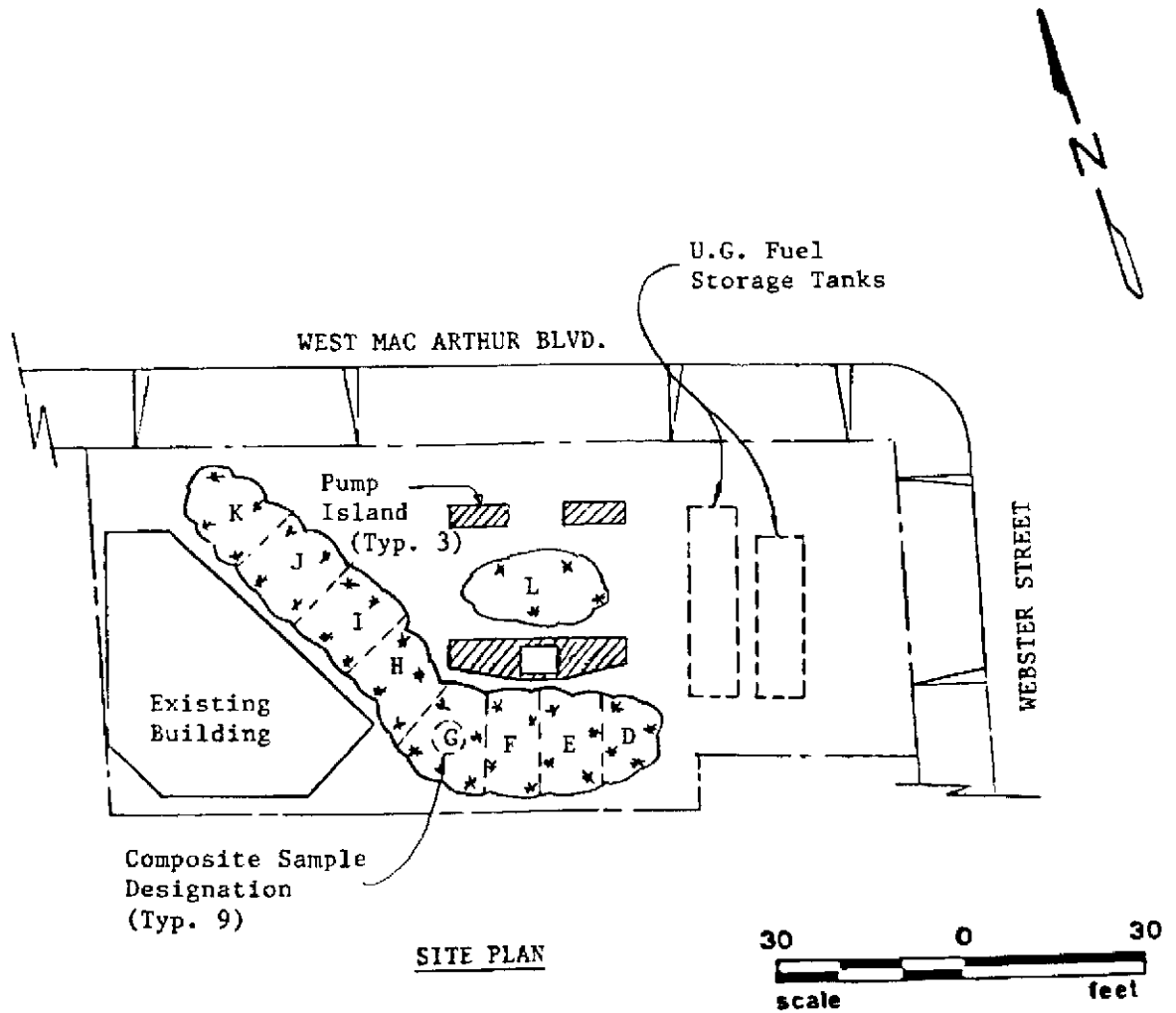
KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(707) 746-6915



* Sample Point Location

Unocal S/S #3538
411 W. MacArthur Blvd.
Oakland, California



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID: Unocal, Oakland	Sampled: Jul 18, 1989
P.O. Box 913	Matrix Descript: Soil	Received: Jul 18, 1989
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Jul 19, 1989
Attention: Mardo Kaprealian, P.E.	First Sample #: 907-2009 A-B	Reported: Jul 20, 1989

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)
9072009 A-B	Composite D	39	0.072	0.80	0.65	6.0
9072010 A-B	Composite E	11	N.D.	0.34	0.23	1.8
9072011 A-B	Composite F	23	0.057	1.0	0.45	3.3
9072012 A-B	Composite G	35	N.D.	1.2	0.60	4.9
9072013 A-B	Composite H	63	N.D.	1.7	0.80	6.6
9072014 A-B	Composite I	35	N.D.	0.89	0.58	4.6
9072015 A-B	Composite J	59	N.D.	1.8	1.2	10
9072016 A-B	Composite K	14	N.D.	N.D.	N.D.	0.68
9072017 A-B	Composite L	100	0.16	4.3	2.6	18

Detection Limits:	1.0	0.05	0.1	0.1	0.1
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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

Arthur G. Burton
Laboratory Director



K&E ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(415) 676-9100 (707) 746-5915

CHAIN OF CUSTODY

SAMPLER: [Signature]
(Signature)

DATE/TIME OF COLLECTION: 7/18/89

TURN AROUND TIME: 24 Hrs

SAMPLE DESCRIPTION AND PROJECT NUMBER:

Mucol. Oakland -
Metall. Master

SAMPLE #	ANALYSES	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/WATER	
Comp D	TPH & BTX	g	2	S	9070009
Comp E	TPH & BTX	g	2	S	10
Comp F	TPH & BTX	g	2	S	11
Comp G	TPH & BTX	g	2	S	12
Comp H	TPH & BTX	g	2	S	13
Comp I	TPH & BTX	g	2	S	14
Comp J	TPH & BTX	g	2	S	15
Comp K	TPH & BTX	g	2	S	16

RELINQUISHED BY	TIME/DATE	RECEIVED BY*	TIME/DATE
1. <u>[Signature]</u>	7-18/89 4:02	Tom Bogan	7-18 4:03
2. <u>[Signature]</u>	7-18 5:35	David Howell	7-18 5:35
3.			

* STATE AFFILIATION NEXT TO SIGNATURE

REMARKS:

NOTE: IF REGULAR TURNAROUND, SOIL ANALYSES MUST BE COMPLETED WITHIN 14 CALENDAR DAYS OF SAMPLE COLLECTION. WATER ANALYSES MUST BE COMPLETED WITHIN 7 CALENDAR DAYS FOR BTX (UNLESS SAMPLE HAS BEEN PRESERVED), AND 14 CALENDAR DAYS FOR TPH AS GASOLINE; EXTRACT TPH AS DIESEL WITHIN 14 CALENDAR DAYS.



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(415) 676-9100 (707) 746-6915

CHAIN OF CUSTODY

SAMPLER: [Signature]
(Signature)

DATE/TIME OF COLLECTION: 7/18/89

TURN AROUND TIME: 24 Hrs.

SAMPLE DESCRIPTION AND PROJECT NUMBER:

Unocel - Oakland
Alc filters ; Webster

SAMPLE #	ANALYSES	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/WATER
<u>Camp L</u>	<u>TPH & ; BTX&E</u>	<u>G</u>	<u>2</u>	<u>S</u>

17

RELINQUISHED BY* TIME/DATE

1. [Signature] 7/18/89
4:03

2. Tom Bolan 7-18
5:35

3.

RECEIVED BY* TIME/DATE

Tom Bolan 4:03
7:18

Debra Stewart 5:35pm
7-18

* STATE AFFILIATION NEXT TO SIGNATURE

REMARKS:

NOTE: IF REGULAR TURNAROUND, SOIL ANALYSES MUST BE COMPLETED WITHIN 14 CALENDAR DAYS OF SAMPLE COLLECTION. WATER ANALYSES MUST BE COMPLETED WITHIN 7 CALENDAR DAYS FOR BTX&E (UNLESS SAMPLE HAS BEEN PRESERVED), AND 14 CALENDAR DAYS FOR TPH AS GASOLINE; EXTRACT TPH AS DIESEL WITHIN 14 CALENDAR DAYS.



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(707) 746-6915

KEI-J89-0703.R4

August 7, 1989

Unocal Corporation
2175 N. California Blvd., Suite 650
Walnut Creek, CA 94569

Attention: Mr. Rick Sisk

RE: Stockpiled Soil Sampling for
Unocal Service Station #3538
411 W. MacArthur Blvd.
Oakland, California

Dear Mr. Sisk:

This letter report summarizes the results of the stockpiled soil sampling and laboratory analyses for the referenced site. The soil analyses were conducted to comply with the County Health Department requirements for proper disposal of contaminated soil.

On July 28, 1989, a soil sample from approximately 50 cubic yards of stockpiled soil at the referenced site was collected to determine proper disposal of the stockpile. This stockpile was previously sampled on July 18, 1989 (labeled as L), and the result was 100 ppm TPH (see KEI's report KEI-J89-0703.R3 dated July 31, 1989). The stockpile was aerated on-site. One composite soil sample (designated as Comp L[R]) was taken. The composite sample consisted of four individual grab samples taken at various locations and depths ranging from one to two feet. The sample was collected in 2" diameter, clean brass tubes, which were then sealed with aluminum foil, plastic caps and tape, and placed in a cooled ice chest for subsequent delivery to a certified laboratory for analysis. The sample was analyzed at Sequoia Analytical Laboratory in Redwood City, California, and was accompanied by properly executed Chain of Custody documentation. The sample location is as shown on the attached Site Plan.

The composite sample (Comp L[R]) was analyzed to determine concentrations of total petroleum hydrocarbons (TPH) as gasoline using EPA method 5030 or 3810 in conjunction with modified 8015, benzene, toluene, xylenes and ethylbenzene (BTX&E) using EPA methods 5030 and 8020. The results of the soil analyses showed a concentration of TPH as gasoline at 1.9 ppm. BTX&E were non-detectable. Analytical results are summarized in Table 1. Copies of the laboratory analyses, and the Chain of Custody documentation are attached to this report.

KEI-J89-0703.R4
August 7, 1989
Page 2

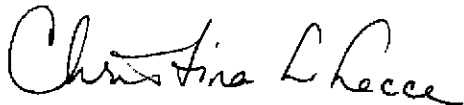
Based on the TPH level in the stockpiled soil of less than 5 ppm, the soil can be disposed of at an approved Class III disposal site (based on Regional Water Quality Control Board guidelines).

A copy of this report should be sent to Mr. Dennis Byrne of the Alameda County Health Department, and to the Regional Water Quality Control Board (RWQCB), San Francisco Bay Region.

Should you have any questions on this report, please do not hesitate to contact me at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.



Christina L. Lecce

Attachments: Table 1
Site Plan
Laboratory Results
Chain of Custody documentation

KEI-J89-0703.R4
August 7, 1989

TABLE 1

SUMMARY OF LABORATORY ANALYSES

(Results in ppm)
(Sample collected on July 28, 1989)

<u>Sample</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethylbenzene</u>
Comp L(R)	1.9	ND	ND	ND	ND

ND = Non-detectable.



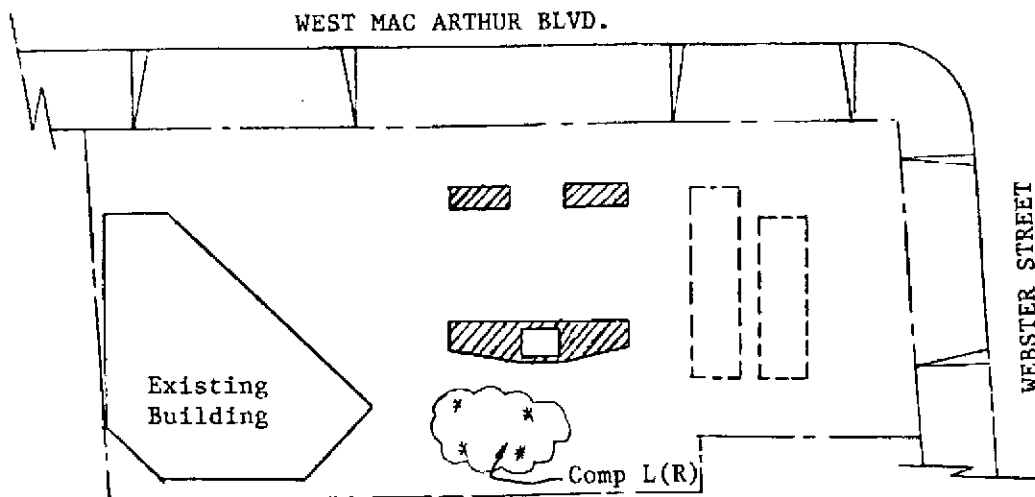
KAPREALIAN ENGINEERING, INC.

Consulting Engineers

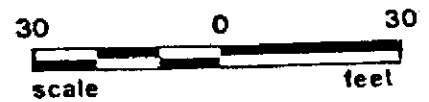
P. O. BOX 913

BENICIA, CA 94510

(707) 746-6915



SITE PLAN



Unocal S/S #3538
411 W. MacArthur Blvd.
Oakland, California



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID: Unocal, Oakland, MacArthur/Webster	Sampled: Jul 28, 1989
P.O. Box 913	Sample Descript.: Soil, Composite L (R)	Received: Jul 28, 1989
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Jul 31, 1989
Attention: Mardo Kaprealian, P.E.	Lab Number: 907-3860 A-B	Reported: Aug 1, 1989

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

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Low to Medium Boiling Point Hydrocarbons	1.0	1.9
Benzene	0.05	N.D.
Toluene	0.1	N.D.
Ethyl Benzene	0.1	N.D.
Xylenes	0.1	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


Arthur G. Burton
Laboratory Director



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA CA 94510

(415) 676-9100 (707) 746-6915

CHAIN OF CUSTODY

SAMPLER: HAGOP DATE/TIME OF COLLECTION: 7-28-89 TURN AROUND TIME: 24 HRS
(Signature)

SAMPLE DESCRIPTION AND PROJECT NUMBER: UNOCAL - OAKLAND - MACARTHUR & WEBSTER

SAMPLE #	ANALYSES	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/WATER
<u>COMPL(R)</u>	<u>TPH-G/BTXE</u>	<u>C</u>	<u>2</u>	<u>S</u>

RELINQUISHED BY*	TIME/DATE	RECEIVED BY*	TIME/DATE
<u>Haggop Kewok</u>	<u>9:20 7-31-89</u>	<u>Tom M'Lean</u>	<u>9:20 7/31/89</u>
<u>Tom M'Lean</u>	<u>10:53 7/31/89</u>	<u>[Signature]</u>	<u>10:50 AM 7/31/89</u>
3.			

* STATE AFFILIATION NEXT TO SIGNATURE

REMARKS: _____

NOTE: IF REGULAR TURNAROUND, SOIL ANALYSES MUST BE COMPLETED WITHIN 14 CALENDAR DAYS OF SAMPLE COLLECTION. WATER ANALYSES MUST BE COMPLETED WITHIN 7 CALENDAR DAYS FOR BTX&E (UNLESS SAMPLE HAS BEEN PRESERVED), AND 14 CALENDAR DAYS FOR TPH AS GASOLINE; EXTRACT TPH AS DIESEL WITHIN 14 CALENDAR DAYS.