



KAPREALIAN ENGINEERING
INCORPORATED

KEI-J97-0301.R1

April 17, 1997

Tosco Marketing Company
Environmental Compliance Department
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

Attention: Ms. Tina Berry

— 277-2321

RE: Soil and Ground Water Sampling Report
Unocal Service Station #0018
6201 Claremont Avenue
Oakland, California

Dear Ms. Berry:

This report summarizes the soil and ground water sampling performed by Kaprealian Engineering, Inc. (KEI) at the referenced site. During the recent replacement of the underground storage tanks and product dispensers, all work was performed in compliance with the guidelines established by the Regional Water Quality Control Board (RWQCB) and the Alameda County Health Care Services (ACHCS) Agency.

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

Coordination with regulatory agencies

Collection of soil samples from beneath the underground fuel and waste storage tanks, and from beneath the product dispensers

not initial samples

Collection of one ground water sample from the fuel storage tank pit

Collection of soil samples from the stockpiled soil that had been excavated from the fuel and waste oil storage tank pits and from piping trenches

Delivery of soil and water samples, including proper Chain of Custody documentation, to a certified analytical laboratory

Technical review and preparation of this report

SITE DESCRIPTION AND BACKGROUND

The subject site contains a Unocal service station facility. A Location Map and a Site Plan are attached to this report. No previous environmental work performed at the site is known to KEI.

FIELD ACTIVITIES

KEI's initial field work was conducted on March 5, 1997, when two 12,000 gallon underground unleaded gasoline storage tanks and one 280 gallon waste oil storage tank were removed from the site. No apparent holes or cracks were observed in the fuel tanks. However, three holes of approximately 1/4-inch in diameter were observed on top of the waste oil tank. Tank removal soil sampling was performed in the presence of Ms. Madhulla Logan of the ACHCS. Mr. Herman E. Gomez of the City of Oakland Fire Services Agency was present during tank removal operations. Soil sampling in the fuel tank pit was scheduled to be performed on March 7, 1997, after completion of an additional 4 feet vertical excavation needed for new larger fuel tank installation.

One soil sample (labeled W01) was collected from beneath the waste oil tank at a depth of approximately 8 feet below grade. The undisturbed sample was collected from bulk material excavated by backhoe. The samples was placed in a clean, two-inch diameter brass tube, sealed with Teflon-lined plastic caps, and stored in a cooled ice chest for delivery to a state-certified laboratory. The soil sample point locations are shown on the attached Figure 1.

Because of the short distance of the product line trenches from the fuel tank pit to the product dispensers, Mr. Barney Chan did not request soil sampling from the product line trenches.

KEI returned to the site on March 7, 1997, in order to collect the required soil samples from the fuel tank pit that had been excavated to a depth of about 16 feet below grade. Ground water was encountered in the fuel tank pit at depths ranging from 15.5 feet to 16.5 feet below grade. Four soil samples, labeled A1, A2, B1, and B2, were collected from beneath the former fuel tanks at soil-water interface (approximately 16 feet below grade). Four soil samples, labeled D1 through D4, were collected from beneath the product dispensers at depths of approximately 2 feet below grade. These soil samples were also collected and handled as described above. Soil sample point locations are shown on the attached Figure 1. Because of the short distance of the product line trenches from the fuel tank pit to the product dispensers, Mr. Barney Chan did not request soil sampling from the product line trenches. In addition, one ground water sample, labeled Water 1, was collected from the fuel tank pit excavation by the use of a clean Teflon bailer. The water sample was decanted into three clean glass VOA vials that were then sealed with Teflon-lined screw caps, labeled and stored in a cooler, on ice, until delivery to a state-certified laboratory. Mr. Barney Chan of the ACHCS was present during sampling activities.

STOCKPILE MANAGEMENT

Approximately 500 tons of soil were excavated from the fuel tank pit and piping trenches and 16 tons of soil were excavated from the waste oil tank pit. Arrangements were made to transport and temporarily stockpile all excavated soil at Forward Landfill, Inc. located in Manteca, California (an approved Class II/III disposal facility), where subsequent soil samples were collected. Manley & Sons Trucking, Inc. of Sacramento, California, transported the soil to Forward Landfill.

On March 13, 1997, KEI collected three composite soil samples (designated as Comp A, Comp B, and Comp C) from the stockpiled soil that had been generated from the fuel tank pit and piping trench excavation. In addition, one composite soil sample (designated as Comp WOA) was collected from the stockpiled soil that had been generated from the waste oil tank pit excavation. Each composite soil sample consisted of four individual grab samples taken at various locations and at depths of about 2 feet into the stockpile. The individual soil samples were also collected and handled as previously described. Based on the analytical results of the stockpile samples, Forward Landfill subsequently disposed of the soil under Approval #575822 and #575922.

SUBSURFACE CONDITIONS

Subsurface soil observed in the excavations consisted primarily of clay and silty clay. Ground water was encountered in the fuel tank pit excavation at depths ranging from 15.5 to 16.5 feet below grade.

ANALYTICAL RESULTS

All samples were analyzed by Sequoia Analytical Laboratory in Walnut Creek, California, and were accompanied by properly executed Chain of Custody documentation. The samples from the fuel tank pit and dispenser islands were analyzed for total petroleum hydrocarbons (TPH) as gasoline by EPA method 5030/modified 8015, benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA method 8020, and MTBE. The sample from the waste oil tank pit was analyzed for TPH as gasoline, TPH as diesel by EPA method 3550/modified 8015, BTEX, total oil and grease (TOG) by Standard Method 5520E&F, EPA methods 8270 and 8010 constituents, and the metals cadmium, chromium, lead, nickel, and zinc.

The results of the soil analyses are summarized in Tables 1 and 2, and the results of the water analyses are summarized in Table 3. Copies of the laboratory analyses and the Chain of Custody documentation are attached to this report.

DISTRIBUTION

A copy of this report should be sent to Ms. Madhulla Logan of the ACHCS.

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 are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.

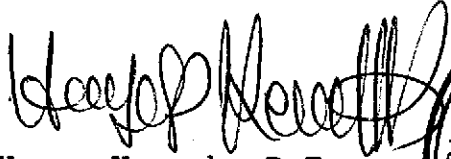
The results of this study are based on the data obtained from the field and laboratory analyses obtained from a state-certified laboratory. We have analyzed this data using what we believe to be currently applicable engineering techniques and principles in the Northern California region. We make no warranty,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

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Should you have any questions on this report, please call me at
(510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.



Hagop Kevork, P.E.
Senior Staff Engineer

License No. C55734
Exp. Date: 12/31/00



Sarkis A. Soghomonian
Project Engineer

/jad

Attachments: Tables 1, 2 & 3
Figure 1
Laboratory Analyses
Chain of Custody documentation

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TABLE 1

SUMMARY OF LABORATORY ANALYSES
 SOIL

<u>Date</u>	<u>Sample</u>	<u>Depth (feet)</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethylbenzene</u>	<u>Xylenes</u>	<u>TOG</u>	
3/05/97	W01	8	ND	ND	ND	ND	ND	ND	ND	
			<u>EPA Method 8010 Constituents (µg/kg)</u>	<u>EPA Method 8270 Constituents (µg/kg)</u>		<u>Cadmium</u>	<u>Chromium</u>	<u>Lead</u>	<u>Nickel</u>	<u>Zinc</u>

ND ND ND 33 3.7 38 45
No imbrical tank samples were collected. They over excavated & then took samples.

<u>Date</u>	<u>Sample</u>	<u>Depth (feet)</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethylbenzene</u>	<u>Xylenes</u>	<u>MTBE</u>
3/07/97	A1	16	ND	ND	ND	ND	ND	ND
	A2	16	2.6	ND	0.011	0.017	0.044	ND
	B1	16	ND	ND	ND	ND	ND	ND
	B2	16	ND	ND	ND	ND	0.0051	ND
	D1	2	1.4	0.012	0.10	0.030	0.32	1.4
	D2	2	ND	ND	ND	ND	ND	ND
	D3	2	ND	ND	ND	ND	ND	ND
	D4	2	ND	ND	ND	ND	ND	ND

Pump Island

ND = Non-detectable.

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

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TABLE 2

SUMMARY OF LABORATORY ANALYSES
 STOCKPILED SOIL AT FORWARD LANDFILL

<u>Date</u>	<u>Sample</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethylbenzene</u>	<u>Xylenes</u>	<u>Total Lead</u>
3/13/97	Comp A	22	ND	ND	0.012	ND	6.5
	Comp B	5.0	ND	0.0060	0.0060	0.022	17
	Comp C	2.0	ND	ND	ND	0.0090	15
3/17/97	Comp WOA	28	--	--	--	--	47

<u>Date</u>	<u>Sample</u>	<u>TPH as Diesel</u>	<u>TOG</u>	<u>EPA Method 8240 Constituents (µg/kg)</u>	<u>EPA Method 8270 Constituents (µg/kg)</u>	<u>Cadmium</u>	<u>Chromium</u>	<u>Nickel</u>	<u>Zinc</u>
3/17/97	Comp WOA	1,400	1,600	ND	ND	ND	36	31	55

ND = Non-detectable.

-- Indicates analysis was not performed.

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

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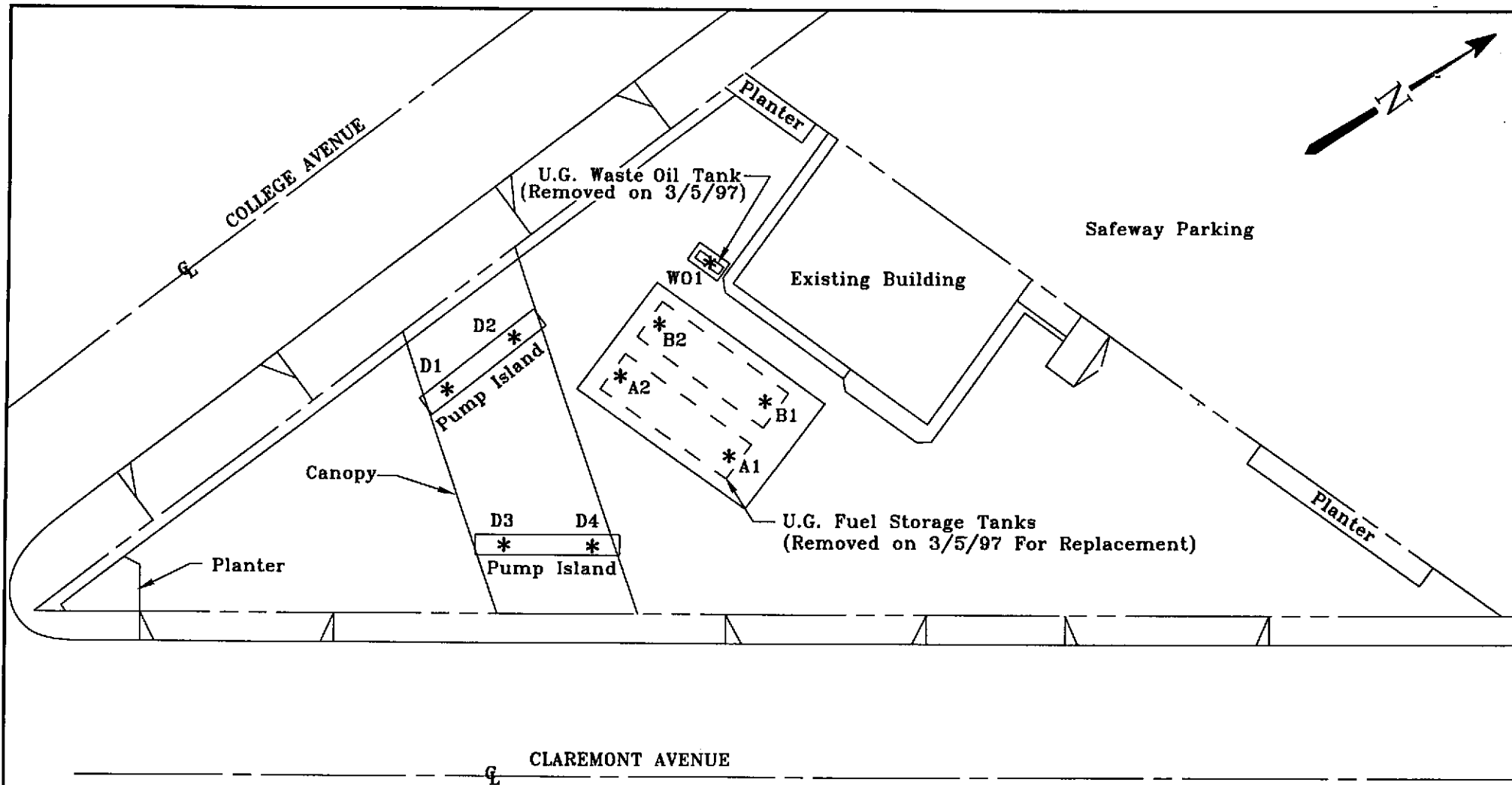
TABLE 3

SUMMARY OF LABORATORY ANALYSES
WATER

<u>Date</u>	<u>Sample</u>	<u>Depth to Water (feet)</u>	<u>MTBE</u>	<u>TPH as Gasoline</u>	<u>TPH as Benzene</u>	<u>Toluene</u>	<u>Ethyl- benzene</u>	<u>Xylenes</u>
3/07/97	Water 1	16	ND	6,100	54	38	300	2,500

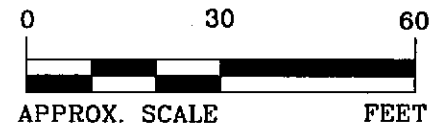
ND = Non-detectable.

Results are in micrograms per liter ($\mu\text{g/L}$), unless otherwise indicated.



LEGEND

* Soil sample point location



SOIL SAMPLE POINT LOCATION MAP



76 PRODUCTS S/S #0018
6201 CLAREMONT AVENUE
OAKLAND, CALIFORNIA

FIGURE
1



Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave. Oakland
Sample Matrix: Soil
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 703-0502

Sampled: Mar 7, 1997
Received: Mar 7, 1997
Reported: Mar 14, 1997

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 703-0502 A-1	Sample I.D. 703-0503 A-2	Sample I.D. 703-0504 B-1	Sample I.D. 703-0505 B-2	Sample I.D. 703-0506 D-1	Sample I.D. 703-0507 D-2
Purgeable Hydrocarbons	1.0	N.D.	2.6	N.D.	N.D.	1.4	N.D.
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	0.012	N.D.
Toluene	0.0050	N.D.	0.011	N.D.	N.D.	0.10	N.D.
Ethyl Benzene	0.0050	N.D.	0.017	N.D.	N.D.	0.030	N.D.
Total Xylenes	0.0050	N.D.	0.044	N.D.	0.0051	0.32	N.D.
Chromatogram Pattern:		--	Gasoline	--	--	Gasoline	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	3/12/97	3/12/97	3/12/97	3/12/97	3/12/97	3/12/97
Instrument Identification:	HP-4	HP-4	HP-4	HP-4	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	106	98	101	102	105	103

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Melissa A. Brewer
for
Alan B. Kemp
Project Manager





Kapreallan Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave. Oakland
Sample Matrix: Soil
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 703-0508

Sampled: Mar 7, 1997
Received: Mar 7, 1997
Reported: Mar 14, 1997

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 703-0508 D-3	Sample I.D. 703-0509 D-4
Purgeable Hydrocarbons	1.0	N.D.	N.D.
Benzene	0.0050	N.D.	N.D.
Toluene	0.0050	N.D.	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.
Total Xylenes	0.0050	N.D.	N.D.
Chromatogram Pattern:		--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Analyzed:	3/12/97	3/12/97
Instrument Identification:	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	103	102

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Melissa A. Brewer
for Alan B. Kemp
Project Manager





Kapreallan Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Dennis Royce	Client Project ID: Unocal #0018, 6201 Claremont Ave. Oakland Sample Matrix: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 703-0510	Sampled: Mar 7, 1997 Received: Mar 7, 1997 Reported: Mar 14, 1997
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TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 703-0510 Water 1
Purgeable Hydrocarbons	50	6,100
Benzene	0.50	54
Toluene	0.50	38
Ethyl Benzene	0.50	300
Total Xylenes	0.50	2,500
Chromatogram Pattern:		Gasoline

Quality Control Data

Report Limit Multiplication Factor:	20
Date Analyzed:	3/11/97
Instrument Identification:	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	89

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
 Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Melissa A. Brewer
 for Alan B. Kemp
 Project Manager





Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(415) 364-9600
(510) 988-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave. Oakland
Sample Descript: Soil
Analysis for: MTBE (Modified EPA 8020)
First Sample #: 703-0502

Sampled: Mar 7, 1997
Received: Mar 7, 1997
Analyzed: Mar 12, 1997
Reported: Mar 14, 1997

LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
703-0502	A-1	0.050	N.D.
703-0503	A-2	0.050	N.D.
703-0504	B-1	0.050	N.D.
703-0505	B-2	0.050	N.D.
703-0506	D-1	0.050	1.4
703-0507	D-2	0.050	N.D.
703-0508	D-3	0.050	N.D.
703-0509	D-4	0.050	N.D.

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

SEQUOIA ANALYTICAL, #1271

Melissa A. Brewer
for Alan B. Kemp
Project Manager





Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
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Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave. Oakland
Sample Descript: Water
Analysis for: MTBE (Modified EPA 8020)
First Sample #: 703-0510

Sampled: Mar 7, 1997
Received: Mar 7, 1997
Analyzed: Mar 11, 1997
Reported: Mar 14, 1997

LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
703-0510	Water 1	50	N.D.

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

SEQUOIA ANALYTICAL, #1271

Melissa A. Brewer
for
Alan B. Kemp
Project Manager

7030502.KEI <5>





Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave. Oakland
Matrix: Solid

QC Sample Group: 7030502-509

Reported: Mar 20, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D, Newcomb	D, Newcomb	D, Newcomb	D, Newcomb

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes
Batch#:	7030502	7030502	7030502	7030502
Date Prepared:	3/12/97	3/12/97	3/12/97	3/12/97
Date Analyzed:	3/12/97	3/12/97	3/12/97	3/12/97
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg
Matrix Spike % Recovery:	78	83	80	82
Matrix Spike Duplicate % Recovery:	73	78	78	79
Relative % Difference:	6.7	6.3	3.2	3.1

LCS Batch#:	4LCS031297	4LCS031297	4LCS031297	4LCS031297
Date Prepared:	3/12/97	3/12/97	3/12/97	3/12/97
Date Analyzed:	3/12/97	3/12/97	3/12/97	3/12/97
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
LCS % Recovery:	100	110	105	108

% Recovery Control Limits:	Benzene	Toluene	Ethyl Benzene	Xylenes
	60-140	60-140	60-140	60-140

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Melissa Brewer
for Alan B. Kemp
Project Manager





Kaprealan Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave. Oakland
Matrix: Liquid

QC Sample Group: 7030502-509

Reported: Mar 20, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D, Newcomb	D, Newcomb	D, Newcomb	D, Newcomb

MS/MSD Batch#:	7030449	7030449	7030449	7030449
Date Prepared:	3/11/97	3/11/97	3/11/97	3/11/97
Date Analyzed:	3/11/97	3/11/97	3/11/97	3/11/97
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	90	110	105	103
Matrix Spike Duplicate % Recovery:	90	110	100	102
Relative % Difference:	0.0	0.0	4.9	1.6

LCS Batch#:	2LCS031197	2LCS031197	2LCS031197	2LCS031197
Date Prepared:	3/11/97	3/11/97	3/11/97	3/11/97
Date Analyzed:	3/11/97	3/11/97	3/11/97	3/11/97
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	90	110	105	103

% Recovery Control Limits:	70-130	70-130	70-130	70-130
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Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Melissa A. Brewer
for Alan B. Kemp
Project Manager



UNOCAL 76

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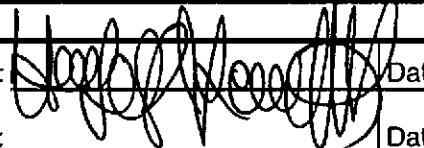
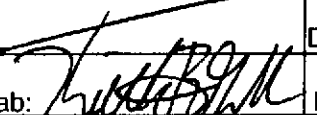
404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600

15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: KEI			Project Name: UNOCAL #0018 - OAKLAND		
Address: 2401 STANWELL DR. #400			UNOCAL Project Manager: TINA BERRY		
City: CONCORD	State: CA	Zip Code: 94520	AFE #:		
Telephone: 602-5100		FAX #: 687-0602	Site #, City, State: 6201 CLAREMONT AVE.		
Report To: KEI	Sampler: HAIG KEVORK		QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A		

Turnaround <input checked="" type="checkbox"/> 10 Work Days <input type="checkbox"/> 5 Work Days <input type="checkbox"/> 3 Work Days	Analyses Requested <input type="checkbox"/> Drinking Water <input type="checkbox"/> Waste Water <input checked="" type="checkbox"/> Other
Time: <input type="checkbox"/> 2 Work Days <input type="checkbox"/> 1 Work Day <input type="checkbox"/> 2-8 Hours	
CODE: <input type="checkbox"/> Misc. <input type="checkbox"/> Detect. <input type="checkbox"/> Eval. <input type="checkbox"/> Remed. <input type="checkbox"/> Demol. <input type="checkbox"/> Closure	

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	IPHIG	BTEX	MIBE	Comments
1. A1	3/7/97	SOIL	1	TUBE	7030502	✓	✓	✓	
2. A2			1		7030503	✓	✓	✓	
3. B1			1		7030504	✓	✓	✓	
4. B2			1		7030505	✓	✓	✓	
5. D1			1		7030506	✓	✓	✓	5 DAYS
6. D2			1		7030507	✓	✓	✓	↓
7. D3			1		7030508	✓	✓	✓	↓
8. D4			1		7030509	✓	✓	✓	↓
9. Water 1	↓	Water	3	VOA'S	7030510	✓	✓	✓	A-C
10.									

Relinquished By: 	Date: 3/7/97	Time: 1520	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: 	Date: 3/7/97	Time: 1520

Were Samples Received in Good Condition? Yes No Samples on Ice? Yes No Method of Shipment **Client** Page **1** of **1**

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client

Yellow - Laboratory

White - Laboratory



Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave.,
Matrix Descript: Solid
Analysis Method: SM 5520 B&F (Gravimetric)
First Sample #: 703-0309

Oakland
Sampled: Mar 5, 1997
Received: Mar 5, 1997
Extracted: Mar 10, 1997
Analyzed: Mar 10, 1997
Reported: Mar 12, 1997

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)	Detection Limit Multiplication Factor
703-0309	WO1	N.D.	1.0

Detection Limits:

50

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





Sequoia Analytical

680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233
 404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
 819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Kaprealian Engineering, Inc. Client Project ID: Unocal #0018, 6201 Claremont Ave., Sampled: Mar 5, 1997
 2401 Stanwell Dr., Ste. 400 Sample Matrix: Solid Oakland Received: Mar 5, 1997
 Concord, CA 94520 Analysis Method: EPA 5030/8015 Mod./8020 Reported: Mar 13, 1997
 Attention: Dennis Royce First Sample #: 703-0309

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 703-0309 WO1
Purgeable Hydrocarbons	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Total Xylenes	0.0050	N.D.

Chromatogram Pattern: ..

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Analyzed:	3/10/97
Instrument Identification:	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	120

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
 Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271


 Alan B. Kemp
 Project Manager





Kaprelian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave.,
Sample Matrix: Solid
Analysis Method: EPA 3550/8015 Mod.
First Sample #: 703-0309

Sampled: Mar 5, 1997
Received: Mar 5, 1997
Reported: Mar 13, 1997
Oakland

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 703-0309 WO1
Extractable Hydrocarbons	1.0	N.D.


Chromatogram Pattern: --

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Extracted:	3/7/97
Date Analyzed:	3/7/97
Instrument Identification:	HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave.,
Sample Descript: Soil, WO1
Analysis Method: EPA 5030/8010
Lab Number: 703-0309

Sampled: Mar 5, 1997
Received: Mar 5, 1997
Analyzed: Mar 10, 1997
Reported: Mar 13, 1997

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.....	10	N.D.
Carbon tetrachloride.....	5.0	N.D.
Chlorobenzene.....	5.0	N.D.
Chloroethane.....	10	N.D.
2-Chloroethylvinyl ether.....	10	N.D.
Chloroform.....	5.0	N.D.
Chloromethane.....	10	N.D.
Dibromochloromethane.....	5.0	N.D.
1,2-Dichlorobenzene.....	5.0	N.D.
1,3-Dichlorobenzene.....	5.0	N.D.
1,4-Dichlorobenzene.....	5.0	N.D.
1,1-Dichloroethane.....	5.0	N.D.
1,2-Dichloroethane.....	5.0	N.D.
1,1-Dichloroethene.....	5.0	N.D.
cis-1,2-Dichloroethene.....	5.0	N.D.
trans-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.....	50	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, #1271


Alan B. Kemp
Project Manager





Kaprealian Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Dennis Royce	Client Project ID: Unocal #0018, 6201 Claremont Ave., Sample Descript: Soil, WO1 Analysis Method: EPA 8270 Lab Number: 703-0309	Oakland	Sampled: Feb 4, 1990 Received: Mar 5, 1997 Extracted: Mar 7, 1997 Analyzed: Mar 12, 1997
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene.....	100	N.D.
Acenaphthylene.....	100	N.D.
Aniline.....	100	N.D.
Anthracene.....	100	N.D.
Benzidine.....	2,500	N.D.
Benzoic Acid.....	500	N.D.
Benzo(a)anthracene.....	100	N.D.
Benzo(b)fluoranthene.....	100	N.D.
Benzo(k)fluoranthene.....	100	N.D.
Benzo(g,h,i)perylene.....	100	N.D.
Benzo(a)pyrene.....	100	N.D.
Benzyl alcohol.....	100	N.D.
Bis(2-chloroethoxy)methane.....	100	N.D.
Bis(2-chloroethyl)ether.....	100	N.D.
Bis(2-chloroisopropyl)ether.....	100	N.D.
Bis(2-ethylhexyl)phthalate.....	500	N.D.
4-Bromophenyl phenyl ether.....	100	N.D.
Butyl benzyl phthalate.....	100	N.D.
4-Chloroaniline.....	100	N.D.
2-Chloronaphthalene.....	100	N.D.
4-Chloro-3-methylphenol.....	100	N.D.
2-Chlorophenol.....	100	N.D.
4-Chlorophenyl phenyl ether.....	100	N.D.
Chrysene.....	100	N.D.
Dibenz(a,h)anthracene.....	100	N.D.
Dibenzofuran.....	100	N.D.
Di-N-butyl phthalate.....	500	N.D.
1,3-Dichlorobenzene.....	100	N.D.
1,4-Dichlorobenzene.....	100	N.D.
1,2-Dichlorobenzene.....	100	N.D.
3,3-Dichlorobenzidine.....	500	N.D.
2,4-Dichlorophenol.....	100	N.D.
Diethyl phthalate.....	100	N.D.
2,4-Dimethylphenol.....	100	N.D.
Dimethyl phthalate.....	100	N.D.
4,6-Dinitro-2-methylphenol.....	500	N.D.
2,4-Dinitrophenol.....	500	N.D.
2,4-Dinitrotoluene.....	100	N.D.
2,6-Dinitrotoluene.....	100	N.D.
Di-N-octyl phthalate.....	100	N.D.





Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave.,
Sample Descript: Soil, WO1
Analysis Method: EPA 8270
Lab Number: 703-0309

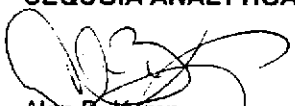
Sampled: Feb 4, 1990
Received: Mar 5, 1997
Extracted: Mar 7, 1997
Analyzed: Mar 12, 1997
Reported: Mar 13, 1997

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

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Fluoranthene.....	100	N.D.
Fluorene.....	100	N.D.
Hexachlorobenzene.....	100	N.D.
Hexachlorobutadiene.....	100	N.D.
Hexachlorocyclopentadiene.....	100	N.D.
Hexachloroethane.....	100	N.D.
Indeno(1,2,3-cd)pyrene.....	100	N.D.
Isophorone.....	100	N.D.
2-Methylnaphthalene.....	100	N.D.
2-Methylphenol.....	100	N.D.
4-Methylphenol.....	100	N.D.
Naphthalene.....	100	N.D.
2-Nitroaniline.....	500	N.D.
3-Nitroaniline.....	500	N.D.
4-Nitroaniline.....	500	N.D.
Nitrobenzene.....	100	N.D.
2-Nitrophenol.....	100	N.D.
4-Nitrophenol.....	500	N.D.
N-Nitrosodimethylamine.....	100	N.D.
N-Nitrosodiphenylamine.....	100	N.D.
N-Nitroso-di-N-propylamine.....	100	N.D.
Pentachlorophenol.....	500	N.D.
Phenanthrene.....	100	N.D.
Phenol.....	100	N.D.
Pyrene.....	100	N.D.
1,2,4-Trichlorobenzene.....	100	N.D.
2,4,5-Trichlorophenol.....	500	N.D.
2,4,6-Trichlorophenol.....	100	N.D.

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





Sequoia Analytical

680 Chesapeake Drive	Redwood City, CA 94063	(415) 364-9600	FAX (415) 364-9233
404 N. Wiget Lane	Walnut Creek, CA 94598	(510) 988-9600	FAX (510) 988-9673
819 Striker Avenue, Suite 8	Sacramento, CA 95834	(916) 921-9600	FAX (916) 921-0100

Kaprealian Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Dennis Royce	Client Project ID: Unocal #0018, 6201 Claremont Ave., Sample Descript: Soil, WO1 Lab Number: 703-0309	Oakland	Sampled: Mar 5, 1997 Received: Mar 5, 1997 Digested: Mar 6, 1997 Analyzed: Mar 10, 1997 Reported: Mar 13, 1997
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LUFT METALS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Cadmium.....	0.50	N.D.
Chromium.....	0.50	33
Lead.....	1.0	3.7
Nickel.....	1.0	38
Zinc.....	1.0	45

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager

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Kaprealan Engineering, Inc. Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
 2401 Stanwell Dr., Ste. 400 Matrix: Solid
 Concord, CA 94520
 Attention: Dennis Royce QC Sample Group: 703-0309 Reported: Mar 14, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Oil & Grease	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	SM 5520	EPA 8015
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	I. Dalvand	D. Sharma

MS/MSD						
Batch#:	7030309	7030309	7030309	7030309	BLK031097	7030207
Date Prepared:	3/10/97	3/10/97	3/10/97	3/10/97	3/10/97	3/7/97
Date Analyzed:	3/10/97	3/10/97	3/10/97	3/10/97	3/10/97	3/7/97
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	Manual	HP-3B
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	5000 mg/kg	10 mg/kg
Matrix Spike						
% Recovery:	50	48	50	48	81	80
Matrix Spike Duplicate						
% Recovery:	50	48	53	48	82	76
Relative % Difference:	0.0	0.0	4.9	0.0	1.2	5.1

LCS Batch#:	5LCS031097	5LCS031097	5LCS031097	5LCS031097	LCS031097	LCS030797
Date Prepared:	3/10/97	3/10/97	3/10/97	3/10/97	3/10/97	3/7/97
Date Analyzed:	3/10/97	3/10/97	3/10/97	3/10/97	3/10/97	3/7/97
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	Manual	HP-3B
LCS % Recovery:	105	95	105	100	80	82

% Recovery Control Limits:	60-140	60-140	60-140	60-140	60-140	60-140
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Please Note:
 The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
 Alan B. Kemp
 Project Manager





Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
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Redwood City, CA 94063
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Sacramento, CA 95834

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FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Matrix: Solid

QC Sample Group: 703-0309

Reported: Mar 13, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-benzene
Method:	EPA 8010	EPA 8010	EPA 8010
Analyst:	P. Horton	P. Horton	P. Horton

MS/MSD			
Batch#:	7030309	7030309	7030309
Date Prepared:	3/10/97	3/10/97	3/10/97
Date Analyzed:	3/10/97	3/10/97	3/10/97
Instrument I.D.#:	HP-7	HP-7	HP-7
Conc. Spiked:	100 µg/kg	100 µg/kg	100 µg/kg
Matrix Spike % Recovery:	70	42	72
Matrix Spike Duplicate % Recovery:	88	81	82
Relative % Difference:	23	63	13

LCS Batch#:	LCS031097	LCS031097	LCS031097
Date Prepared:	3/10/97	3/10/97	3/10/97
Date Analyzed:	3/10/97	3/10/97	3/10/97
Instrument I.D.#:	HP-7	HP-7	HP-7
LCS % Recovery:	113	101	96

% Recovery Control Limits:	60-140	60-140	60-140

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.





Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Matrix: Solid

QC Sample Group: 703-0309

Reported: Mar 13, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550	EPA 3550	EPA 3550
Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Analyst:	I. Dalvand	I. Dalvand	I. Dalvand	I. Dalvand	I. Dalvand	I. Dalvand

MS/MSD	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
Batch#:	7030207	7030207	7030207	7030207	7030207	7030207
Date Prepared:	3/7/97	3/7/97	3/7/97	3/7/97	3/7/97	3/7/97
Date Analyzed:	3/12/97	3/12/97	3/12/97	3/12/97	3/12/97	3/12/97
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
Conc. Spiked:	5000 µg/kg	5000 µg/kg	2500 µg/kg	2500 µg/kg	2500 µg/kg	5000 µg/kg
Matrix Spike % Recovery:	70	64	58	68	60	69
Matrix Spike Duplicate % Recovery:	100	94	80	98	90	103
Relative % Difference:	35	38	32	36	40	40
RPD Limit:	0-40	0-40	0-40	0-40	0-40	0-40

LCS Batch#:	LCS030797	LCS030797	LCS030797	LCS030797	LCS030797	LCS030797
Date Prepared:	3/7/97	3/7/97	3/7/97	3/7/97	3/7/97	3/7/97
Date Analyzed:	3/12/97	3/12/97	3/12/97	3/12/97	3/12/97	3/12/97
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
LCS % Recovery:	92	92	86	84	84	87

% Recovery Control Limits:	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
	26-90	25-102	28-104	41-126	38-107	26-103

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.





Kaprealian Engineering, Inc.
 2401 Stanwell Dr., Ste. 400
 Concord, CA 94520
 Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
 Matrix: Solid

QC Sample Group: 703-0309

Reported: Mar 13, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Acenaphthene	4-Nitrophenol	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550	EPA 3550
Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Analyst:	I. Dalvand	I. Dalvand	I. Dalvand	I. Dalvand	I. Dalvand

MS/MSD	Acenaphthene	4-Nitrophenol	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
Batch#:	7030207	7030207	7030207	7030207	7030207
Date Prepared:	3/7/97	3/7/97	3/7/97	3/7/97	3/7/97
Date Analyzed:	3/12/97	3/12/97	3/12/97	3/12/97	3/12/97
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
Conc. Spiked:	2500 µg/kg	5000 µg/kg	2500 µg/kg	5000 µg/kg	2500 µg/kg
Matrix Spike % Recovery:	62	57	68	55	80
Matrix Spike Duplicate % Recovery:	90	73	92	73	114
Relative % Difference:	37	25	30	28	35
RPD Limit:	0-29	0-40	0-31	0-43	0-24

LCS Batch#:	LCS030797	LCS030797	LCS030797	LCS030797	LCS030797
Date Prepared:	3/7/97	3/7/97	3/7/97	3/7/97	3/7/97
Date Analyzed:	3/12/97	3/12/97	3/12/97	3/12/97	3/12/97
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
LCS % Recovery:	82	77	80	77	92

% Recovery Control Limits:	Acenaphthene	4-Nitrophenol	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
	31-137	11-114	28-89	17-109	35-142

Please Note:
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SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
 Alan B. Kemp
 Project Manager





Sequoia Analytical

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Walnut Creek, CA 94598
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FAX (916) 921-0100

Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Matrix: Solid

QC Sample Group: 703-0309

Reported: Mar 13, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Cadmium	Chromium	Nickel	Lead	Zinc
Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Analyst:	J. Kelly	J. Kelly	J. Kelly	J. Kelly	J. Kelly

MS/MSD	Cadmium	Chromium	Nickel	Lead	Zinc
Batch#:	7030249	7030249	7030249	7030249	7030249
Date Prepared:	3/6/97	3/6/97	3/6/97	3/6/97	3/6/97
Date Analyzed:	3/10/97	3/10/97	3/10/97	3/10/97	3/10/97
Instrument I.D.#:	MV-4	MV-4	MV-4	MV-4	MV-4
Conc. Spiked:	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg
Matrix Spike % Recovery:	92	40	0	106	120
Matrix Spike Duplicate % Recovery:	90	80	60	106	140
Relative % Difference:	2.2	15	16	0.0	4.4

LCS Batch#:	LCS030697	LCS030697	LCS030697	LCS030697	LCS030697
Date Prepared:	3/6/97	3/6/97	3/6/97	3/6/97	3/6/97
Date Analyzed:	3/10/97	3/10/97	3/10/97	3/10/97	3/10/97
Instrument I.D.#:	MV-4	MV-4	MV-4	MV-4	MV-4
LCS % Recovery:	102	102	102	100	102

% Recovery Control Limits:	Cadmium	Chromium	Nickel	Lead	Zinc
	80-120	80-120	80-120	80-120	80-120

Please Note:

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SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager



Consultant Company: KEI		Project Name: UNOCAL # 0018 - OAKLAND	
Address: 2401 STANWELL DR. # 400		UNOCAL Project Manager: TINA BERRY	
City: CONCORD State: CA Zip Code: 94520	AFE #:		
Telephone: 602-5100 FAX #: 684-0602	Site #, City, State: 6201 CLAREMONT AVE.		
Report To: KEI	Sampler: HAIG KEVORK	QC Data: <input type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

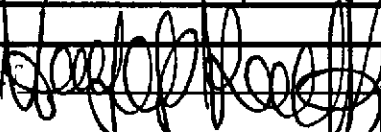
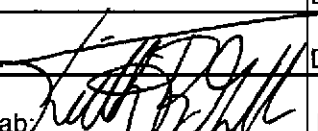
Turnaround Time: 10 Work Days 5 Work Days 3 Work Days
 2 Work Days 1 Work Day 2-8 Hours

CODE: Misc. Detect. Eval. Remed. Demol. Closure

Drinking Water
 Waste Water
 Other

Analyses Requested
 TPH-G
 BTEX
 TPH-D
 TOG
 EPA8010
 EPA8210
 Cd, Cr, Pb, Zn, Ni

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G	BTEX	TPH-D	TOG	EPA8010	EPA8210	Cd, Cr, Pb, Zn, Ni	Comments
1. W01	3/5/97	SOIL	1	TUBE	7030309	L	L	L	L	L	L	L	TOG 5 days
2.													
3.													
4.													
5.													
6.													
7.													
8.													
9.													
10.													

Relinquished By: 	Date: 3/5/97 Time: 1425	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:
Relinquished By:	Date:	Time:	Received By Lab: 	Date: 3/5/97 Time: 1425

Were Samples Received in Good Condition? Yes No
 Samples on Ice? Yes No
 Method of Shipment Client
 Page 1 of 1

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____
 2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client

Yellow - Laboratory

White - Laboratory



Kaprealian Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Dennis Royce	Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland Sample Matrix: Soil Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 703-1231	Sampled: Mar 17, 1997 Received: Mar 18, 1997 Reported: Mar 27, 1997
---	--	---

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 703-1231 Comp WOA
Purgeable Hydrocarbons	1.0	28

Chromatogram Pattern: Unidentified Hydrocarbons > C8

Quality Control Data

Report Limit Multiplication Factor:	10
Date Analyzed:	3/20/97
Instrument Identification:	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	108

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard. Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





Kaprealian Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Dennis Royce	Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland Sample Matrix: Soil Analysis Method: EPA 3550/8015 Mod. First Sample #: 703-1231	Sampled: Mar 13, 1997 Received: Mar 18, 1997 Reported: Mar 27, 1997
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TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 703-1231 Comp WOA
Extractable Hydrocarbons	1.0	1,400

Chromatogram Pattern: Diesel & Unidentified Hydrocarbons >C20

Quality Control Data

Report Limit Multiplication Factor:	20
Date Extracted:	3/19/97
Date Analyzed:	3/19/97
Instrument Identification:	HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Matrix Descript: Soil
Analysis Method: SM 5520 E&F (Gravimetric)
First Sample #: 703-1231

Sampled: Mar 13, 1997
Received: Mar 18, 1997
Extracted: Mar 21, 1997
Analyzed: Mar 21, 1997
Reported: Mar 27, 1997

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)	Detection Limit Multiplication Factor
703-1231	Comp WOA	1,600	1.0

Detection Limits:

50

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





Kapreallan Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Sample Descript: Soil, Comp WOA
Analysis Method: EPA 8240
Lab Number: 703-1231

Sampled: Mar 13, 1997
Received: Mar 18, 1997
Extracted: Mar 20, 1997
Analyzed: Mar 21, 1997
Reported: Mar 27, 1997

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acetone.....	500	N.D.
Benzene.....	100	N.D.
Bromodichloromethane.....	100	N.D.
Bromoform.....	100	N.D.
Bromomethane.....	100	N.D.
2-Butanone.....	500	N.D.
Carbon disulfide.....	100	N.D.
Carbon tetrachloride.....	100	N.D.
Chlorobenzene.....	100	N.D.
Chloroethane.....	100	N.D.
2-Chloroethyl vinyl ether.....	500	N.D.
Chloroform.....	100	N.D.
Chloromethane.....	100	N.D.
Dibromochloromethane.....	100	N.D.
1,1-Dichloroethane.....	100	N.D.
1,2-Dichloroethane.....	100	N.D.
1,1-Dichloroethene.....	100	N.D.
cis-1,2-Dichloroethene.....	100	N.D.
trans-1,2-Dichloroethene.....	100	N.D.
1,2-Dichloropropane.....	100	N.D.
cis-1,3-Dichloropropene.....	100	N.D.
trans-1,3-Dichloropropene.....	100	N.D.
Ethylbenzene.....	100	N.D.
2-Hexanone.....	500	N.D.
Methylene chloride.....	250	N.D.
4-Methyl-2-pentanone.....	500	N.D.
Styrene.....	100	N.D.
1,1,2,2-Tetrachloroethane.....	100	N.D.
Tetrachloroethene.....	100	N.D.
Toluene.....	100	N.D.
1,1,1-Trichloroethane.....	100	N.D.
1,1,2-Trichloroethane.....	100	N.D.
Trichloroethene.....	100	N.D.
Trichlorofluoromethane.....	100	N.D.

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





Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Sample Descript: Soil, Comp WOA
Analysis Method: EPA 8240
Lab Number: 703-1231

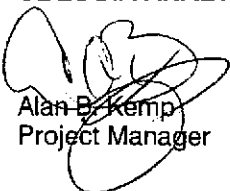
Sampled: Mar 13, 1997
Received: Mar 18, 1997
Extracted: Mar 20, 1997
Analyzed: Mar 21, 1997
Reported: Mar 27, 1997

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Vinyl acetate.....	250	N.D.
Vinyl chloride.....	100	N.D.
Total Xylenes	100	N.D.

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

SEQUOIA ANALYTICAL, #1210


Alan B. Kemp
Project Manager





Kaprealian Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Dennis Royce	Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland Sample Descript: Soil, Comp WOA Analysis Method: EPA 8270 Lab Number: 703-1231	Sampled: Mar 13, 1997 Received: Mar 18, 1997 Extracted: Mar 21, 1997 Analyzed: Mar 21, 1997 Reported: Mar 27, 1997
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SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene.....	10,000	N.D.
Acenaphthylene.....	10,000	N.D.
Aniline.....	10,000	N.D.
Anthracene.....	10,000	N.D.
Benzidine.....	250,000	N.D.
Benzoic Acid.....	50,000	N.D.
Benzo(a)anthracene.....	10,000	N.D.
Benzo(b)fluoranthene.....	10,000	N.D.
Benzo(k)fluoranthene.....	10,000	N.D.
Benzo(g,h,i)perylene.....	10,000	N.D.
Benzo(a)pyrene.....	10,000	N.D.
Benzyl alcohol.....	10,000	N.D.
Bis(2-chloroethoxy)methane.....	10,000	N.D.
Bis(2-chloroethyl)ether.....	10,000	N.D.
Bis(2-chloroisopropyl)ether.....	10,000	N.D.
Bis(2-ethylhexyl)phthalate.....	50,000	N.D.
4-Bromophenyl phenyl ether.....	10,000	N.D.
Butyl benzyl phthalate.....	10,000	N.D.
4-Chloroaniline.....	10,000	N.D.
2-Chloronaphthalene.....	10,000	N.D.
4-Chloro-3-methylphenol.....	10,000	N.D.
2-Chlorophenol.....	10,000	N.D.
4-Chlorophenyl phenyl ether.....	10,000	N.D.
Chrysene.....	10,000	N.D.
Dibenz(a,h)anthracene.....	10,000	N.D.
Dibenzofuran.....	10,000	N.D.
Di-N-butyl phthalate.....	50,000	N.D.
1,3-Dichlorobenzene.....	10,000	N.D.
1,4-Dichlorobenzene.....	10,000	N.D.
1,2-Dichlorobenzene.....	10,000	N.D.
3,3-Dichlorobenzidine.....	50,000	N.D.
2,4-Dichlorophenol.....	10,000	N.D.
Diethyl phthalate.....	10,000	N.D.
2,4-Dimethylphenol.....	10,000	N.D.
Dimethyl phthalate.....	10,000	N.D.
4,6-Dinitro-2-methylphenol.....	50,000	N.D.
2,4-Dinitrophenol.....	50,000	N.D.
2,4-Dinitrotoluene.....	10,000	N.D.
2,6-Dinitrotoluene.....	10,000	N.D.
Di-N-octyl phthalate.....	10,000	N.D.





Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Sample Descript: Soil, Comp WOA
Analysis Method: EPA 8270
Lab Number: 703-1231

Sampled: Mar 13, 1997
Received: Mar 18, 1997
Extracted: Mar 21, 1997
Analyzed: Mar 21, 1997
Reported: Mar 27, 1997

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

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Fluoranthene.....	10,000	N.D.
Fluorene.....	10,000	N.D.
Hexachlorobenzene.....	10,000	N.D.
Hexachlorobutadiene.....	10,000	N.D.
Hexachlorocyclopentadiene.....	10,000	N.D.
Hexachloroethane.....	10,000	N.D.
Indeno(1,2,3-cd)pyrene.....	10,000	N.D.
Isophorone.....	10,000	N.D.
2-Methylnaphthalene.....	10,000	N.D.
2-Methylphenol.....	10,000	N.D.
4-Methylphenol.....	10,000	N.D.
Naphthalene.....	10,000	N.D.
2-Nitroaniline.....	50,000	N.D.
3-Nitroaniline.....	50,000	N.D.
4-Nitroaniline.....	50,000	N.D.
Nitrobenzene.....	10,000	N.D.
2-Nitrophenol.....	10,000	N.D.
4-Nitrophenol.....	50,000	N.D.
N-Nitrosodimethylamine.....	10,000	N.D.
N-Nitrosodiphenylamine.....	10,000	N.D.
N-Nitroso-di-N-propylamine.....	10,000	N.D.
Pentachlorophenol.....	50,000	N.D.
Phenanthrene.....	10,000	N.D.
Phenol.....	10,000	N.D.
Pyrene.....	10,000	N.D.
1,2,4-Trichlorobenzene.....	10,000	N.D.
2,4,5-Trichlorophenol.....	50,000	N.D.
2,4,6-Trichlorophenol.....	10,000	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
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Redwood City, CA 94063
Walnut Creek, CA 94598
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(415) 364-9600
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FAX (510) 988-9673
FAX (916) 921-0100

Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Sample Descript: Soil, Comp WOA
Lab Number: 703-1231

Sampled: Mar 13, 1997
Received: Mar 18, 1997
Digested: Mar 20, 1997
Analyzed: Mar 21, 1997
Reported: Mar 27, 1997

LUFT METALS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Cadmium.....	0.50	N.D.
Chromium.....	0.50	36
Lead.....	1.0	47
Nickel.....	1.0	31
Zinc.....	1.0	55

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager

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Sequoia Analytical

680 Chesapeake Drive
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Kaprealan Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Matrix: Liquid

QC Sample Group: 703-1231

Reported: Mar 27, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	Oil & Grease
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015	SM 5520BF
Analyst:		0	0	0	D. Sharma	SM 5520

MS/MSD
Batch#:

0 0 0 7030987 BLK032197

Date Prepared:		1/0/00	1/0/00	1/0/00	3/19/97	3/21/97
Date Analyzed:	1/0/00	1/0/00	1/0/00	1/0/00	3/21/97	3/21/97
Instrument I.D.#:		0	0	0	HP-3B	Manual
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	10 mg/kg	5000 mg/kg

Matrix Spike
% Recovery:

- 96

Matrix Spike
Duplicate %
Recovery:

- 94

Relative %
Difference:

- 2.1

LCS Batch#:		0	0	0	LCS031997	LCS032197
Date Prepared:	1/0/00	1/0/00	1/0/00	1/0/00	3/19/97	3/21/97
Date Analyzed:	1/0/00	1/0/00	1/0/00	1/0/00	3/21/97	3/21/97
Instrument I.D.#:	0	0	0	0	HP-3B	Manual
LCS % Recovery:					82	96

% Recovery Control Limits:	60-140	60-140	60-140	60-140	60-140	60-140

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager





Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Matrix: Solid

QC Sample Group: 703-1231

Reported: Mar 28, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	Oil & Grease
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015	SM 5520BF
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	D. Sharma	SM 5520

MS/MSD Batch#:	7031223	7031223	7031223	7031223	7030987	BLK032197
Date Prepared:	3/20/97	3/20/97	3/20/97	3/20/97	3/19/97	3/21/97
Date Analyzed:	3/20/97	3/20/97	3/20/97	3/20/97	3/21/97	3/21/97
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3B	Manual
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	10 mg/kg	5000 mg/kg
Matrix Spike % Recovery:	80	83	93	92	-	96
Matrix Spike Duplicate % Recovery:	80	80	90	83	-	94
Relative % Difference:	0.0	3.1	2.7	9.5	-	2.1

LCS Batch#:	5LCS032097	5LCS032097	5LCS032097	5LCS032097	LCS031997	LCS032197
Date Prepared:	3/20/97	3/20/97	3/20/97	3/20/97	3/19/97	3/21/97
Date Analyzed:	3/20/97	3/20/97	3/20/97	3/20/97	3/21/97	3/21/97
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3B	Manual
LCS % Recovery:	90	85	90	85	82	96

% Recovery Control Limits:	60-140	60-140	60-140	60-140	60-140	60-140
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Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Matrix: Solid

QC Sample Group: 703-1231

Reported: Mar 27, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Analyst:	L. Duong	L. Duong	L. Duong	L. Duong	L. Duong

MS/MSD	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
Batch#:	970380301	970380301	970380301	970380301	970380301
Date Prepared:	3/18/97	3/18/97	3/18/97	3/18/97	3/18/97
Date Analyzed:	3/19/97	3/19/97	3/19/97	3/19/97	3/19/97
Instrument I.D.#:	F-2	F-2	F-2	F-2	F-2
Conc. Spiked:	2500 µg/kg	2500 µg/kg	2500 µg/kg	2500 µg/kg	2500 µg/kg
Matrix Spike % Recovery:	84	96	104	96	104
Matrix Spike Duplicate % Recovery:	84	92	104	96	100
Relative % Difference:	0.0	4.3	0.0	0.0	3.9

LCS Batch#:	VB0321MS	VB0321MS	VB0321MS	VB0321MS	VB0321MS
Date Prepared:	3/20/97	3/20/97	3/18/97	3/18/97	3/18/97
Date Analyzed:	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97
Instrument I.D.#:	F-2	F-2	F-2	F-2	F-2
LCS % Recovery:	88	100	112	108	108

% Recovery Control Limits:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
	65-135	60-140	60-140	60-140	60-140

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1210

Alan B. Kemp
Project Manager





Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Matrix: Solid

QC Sample Group: 703-1231

Reported: Mar 27, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550	EPA 3550	EPA 3550
Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Analyst:		0	0	0	0	0

MS/MSD	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
Batch#:	BLK032197	BLK032197	BLK032197	BLK032197	BLK032197	BLK032197
Date Prepared:	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97
Date Analyzed:	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
Conc. Spiked:	5000 µg/kg	5000 µg/kg	2500 µg/kg	2500 µg/kg	2500 µg/kg	5000 µg/kg
Matrix Spike % Recovery:	85	88	80	66	74	76
Matrix Spike Duplicate % Recovery:	88	92	82	70	76	80
Relative % Difference:	3.5	4.4	2.5	5.9	2.7	5.1
RPD Limit:	0-20	0-23	0-26	0-32	0-25	0-24

LCS Batch#:	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
LCS Batch#:	LCS032197	LCS032197	LCS032197	LCS032197	LCS032197	LCS032197
Date Prepared:	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97
Date Analyzed:	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
LCS % Recovery:	93	91	86	76	80	85

% Recovery Control Limits:	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
% Recovery Control Limits:	26-90	25-102	28-104	41-126	38-107	26-103

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Alari B. Kemp
Project Manager





Kaprealian Engineering, Inc. Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
 2401 Stanwell Dr., Ste. 400 Matrix: Solid
 Concord, CA 94520
 Attention: Dennis Royce QC Sample Group: 703-1231 Reported: Mar 27, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Acenaphthene	4-Nitrophenol	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550	EPA 3550
Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Analyst:	0	0	0	0	0

MS/MSD	Acenaphthene	4-Nitrophenol	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
Batch#:	BLK032197	BLK032197	BLK032197	BLK032197	BLK032197
Date Prepared:	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97
Date Analyzed:	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
Conc. Spiked:	2500 µg/kg	5000 µg/kg	2500 µg/kg	5000 µg/kg	2500 µg/kg
Matrix Spike % Recovery:	78	51	74	62	100
Matrix Spike Duplicate % Recovery:	82	49	76	59	112
Relative % Difference:	5.0	4.0	2.7	5.0	11
RPD Limit:	0-29	0-40	0-31	0-43	0-24

LCS Batch#:	LCS032197	LCS032197	LCS032197	LCS032197	LCS032197
Date Prepared:	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97
Date Analyzed:	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
LCS % Recovery:	84	57	80	69	106

% Recovery Control Limits:	Acenaphthene	4-Nitrophenol	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
	31-137	11-114	28-89	17-109	35-142

Please Note:
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SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
 Alan B. Kemp
 Project Manager





Kapreallan Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave., Oakland
Matrix: Solid

QC Sample Group: 703-1231

Reported: Mar 27, 1997

QUALITY CONTROL DATA REPORT

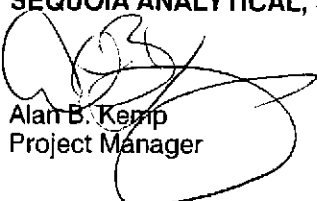
ANALYTE	Cadmium	Chromium	Lead	Nickel	Zinc
Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Analyst:	J. Kelly	J. Kelly	J. Kelly	J. Kelly	J. Kelly

MS/MSD					
Batch#:	7031197	7031197	7031197	7031197	7031197
Date Prepared:	3/20/97	3/20/97	3/20/97	3/20/97	3/20/97
Date Analyzed:	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97
Instrument I.D.#:	MV-4	MV-4	MV-4	MV-4	MV-4
Conc. Spiked:	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg
Matrix Spike % Recovery:	100	96	98	96	94
Matrix Spike Duplicate % Recovery:	104	100	98	100	96
Relative % Difference:	3.9	2.6	0.0	3.0	1.3

LCS Batch#:	LCS032097	LCS032097	LCS032097	LCS032097	LCS032097
Date Prepared:	3/20/97	3/20/97	3/20/97	3/20/97	3/20/97
Date Analyzed:	3/21/97	3/21/97	3/21/97	3/21/97	3/21/97
Instrument I.D.#:	MV-4	MV-4	MV-4	MV-4	MV-4
LCS % Recovery:	106	108	104	106	106

% Recovery Control Limits:	80-120	80-120	80-120	80-120	80-120
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SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.



UNOCAL 76

- 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600
- 18939 120th Ave., N.E., Suite 101 • Bothell, WA 98011 • (206) 481-9200
- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600
- East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600
- 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: Kaprealian Engineering, Inc.		Project Name: 76 PRODUCTS #0018-OAKLAND	
Address: 2401 Stanwell Drive, Suite 400		UNOCAL Project Manager: TINA BERRY	
City: Concord	State: California	Zip Code: 94520	AFE #:
Telephone: 510 602-5100		FAX #: 687-0602	
Report To: Dennis Royce		Site #, City, State: 6201 CLAREMONT AVE.	
Turnaround <input checked="" type="checkbox"/> 10 Work Days <input type="checkbox"/> 5 Work Days <input type="checkbox"/> 3 Work Days		QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	
Time: <input type="checkbox"/> 2 Work Days <input type="checkbox"/> 1 Work Day <input type="checkbox"/> 2-8 Hours		Sampler: HAIG KEVORK	

Drinking Water Waste Water Other
 Misc. Detect. Eval. Remed. Demol. Closure

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	Analyses Requested										Comments
						TPH-G	TPH-D	TOG	EPA 8240	EPA 8210	Ca, Cd, Pb	Ni, Zn				
1. COMPWOA	3/13/97	SOIL	4	TUBE		✓	✓	✓	✓	✓	✓	✓				7031231A
2.																
3.																
4.																
5.																
6.																
7.																
8.																
9.																
10.																

Relinquished By:	Date: 3/14/97	Time: 1140	Received By:	Date:	Time:
Relinquished By: _____	Date:	Time:	Received By: _____	Date:	Time:
Relinquished By: _____	Date:	Time:	Received By Lab:	Date: 3/14/97	Time: 1140

Were Samples Received in Good Condition? Yes No
 Samples on Ice? Yes No
 Method of Shipment Client
 Page 1 of 1

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____
 2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
 Yellow - Laboratory
 White - Laboratory



Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave. Oakland
Sample Matrix: Soil
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 703-0879

Sampled: Mar 13, 1997
Received: Mar 14, 1997
Reported: Mar 21, 1997

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 703-0879 Comp A	Sample I.D. 703-0880 Comp B	Sample I.D. 703-0881 Comp C
Purgeable Hydrocarbons	1.0	22	5.0	2.0
Benzene	0.0050	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	0.0060	N.D.
Ethyl Benzene	0.0050	0.012	0.0060	N.D.
Total Xylenes	0.0050	N.D.	0.022	0.0090

Chromatogram Pattern: Unidentified Hydrocarbons >C8 Unidentified Hydrocarbons >C8 Unidentified Hydrocarbons >C8

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Analyzed:	3/18/97	3/18/97	3/18/97
Instrument Identification:	HP-5	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	106	112	115

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager





Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave. Oakland
Sample Descript: Soil
Analysis for: Lead
First Sample #: 703-0879

Sampled: Mar 13, 1997
Received: Mar 14, 1997
Extracted: Mar 18, 1997
Analyzed: Mar 19, 1997
Reported: Mar 21, 1997

LABORATORY ANALYSIS FOR: Lead

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
703-0879	Comp A	1.0	6.5
703-0880	Comp B	1.0	17
703-0881	Comp C	1.0	15

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

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

7030879.KEI <2>





Kaprealan Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #0018, 6201 Claremont Ave. Oakland
Matrix: Solid

QC Sample Group: 7030879-881

Reported: Mar 27, 1997

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Lead
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 6010
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	J. Kelly

MS/MSD Batch#:	7030997	7030997	7030997	7030997	7031019
Date Prepared:	3/18/97	3/18/97	3/18/97	3/18/97	3/18/97
Date Analyzed:	3/18/97	3/18/97	3/18/97	3/18/97	3/19/97
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	MV-3
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	50 mg/kg
Matrix Spike % Recovery:	136	145	165	158	94
Matrix Spike Duplicate % Recovery:	144	153	173	166	116
Relative % Difference:	5.4	5.0	4.4	5.1	12

LCS Batch#:	5LCS031897	5LCS031897	5LCS031897	5LCS031897	LCS031897
Date Prepared:	3/18/97	3/18/97	3/18/97	3/18/97	3/18/97
Date Analyzed:	3/18/97	3/18/97	3/18/97	3/18/97	3/19/97
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	MV-3
LCS % Recovery:	85	90	100	95	112

% Recovery Control Limits:	60-140	60-140	60-140	60-140	80-120
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Please Note:

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SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager



Consultant Company: Kaprealian Engineering, Inc.		Project Name: 76 PRODUCTS # 0018-OAKLAND	
Address: 2401 Stanwell Drive, Suite 400		UNOCAL Project Manager: TINA BERRY	
City: Concord	State: California	Zip Code: 94520	AFE #:
Telephone: 510 602-5100		FAX #: 687-0602	
Report To: Dennis Royce		Site #, City, State: 6201 CLAREMONT AVE.	
Sampler: HAIG KEVORK		QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

Turnaround 10 Work Days 5 Work Days 3 Work Days
Time: 2 Work Days 1 Work Day 2-8 Hours
CODE: Misc. Detect. Eval. Remed. Demol. Closure

Drinking Water
 Waste Water
 Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G	BTEX	Total Pb	Other Analyses				Comments
1. Comp A	3/13/97	SOIL	4	TUBE	7030879	✓	✓	✓					
2. Comp B	↓	↓	4	↓	7030880	✓	✓	✓					
3. Comp C	↓	↓	4	↓	7030881	✓	✓	✓					
4.													
5.													
6.													
7.													
8.													
9.													
10.													

Relinquished By: <i>[Signature]</i>	Date: 3/14/97	Time: 1140	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: <i>[Signature]</i>	Date: 3/14/97	Time: 1140

Were Samples Received in Good Condition? Yes No
 Samples on Ice? Yes No
 Method of Shipment: **Client**
 Page **1** of **1**

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? Yes No If no, what analyses are still needed? _____
 2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
 Yellow - Laboratory
 White - Laboratory