Mobil Oil Corporation

3800 WEST ALAMEDA AVENUE, SUITE 700
BURBANK, CALIFORNIA 91505-4331

June 1, 1989

Mr. George Warren
City of Emeryville
Fire Department
6303 Hollis Street
Emeryville, CA 94608

MOBIL OIL CORPORATION
S/S #10-LTV
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

Dear Mr. Warren:

Enclosed for your review and approval is the soil sampling report, dated May 24, 1989, for subject location.

Also enclosed for your information is the proposed work plan for the installation of three additional monitoring wells to define the extent of groundwater contamination. Once we receive approval of the plan, work will begin. If approval is not required, we will proceed immediately with the installation of the wells.

If you have any questions, please feel free to contact me at (818) 953-2519.

Sincerely,

David M. Noe

D. M. Noe, P.E.
Environmental Advisor

DMN:st
attachments

cc: Ms. Dyan White - w/ attachments
Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street, Room 6000
Oakland, CA 94607

Mr. Dennis Byrne - w/ attachments
Alameda County Health Department
470 27th Street, Room 324
Oakland, CA 94612

Mr. Bill Hollis - w/ attachments
BP Oil Company
Aetna Building, Suite 360
2868 Prospect Park Drive
Rancho Cordova, CA 95670-6020
S. Pao
R. J. Edwards

5/5

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P. O. BOX 913
BENICIA, CA 94510
(415) 676 · 9100 (707) 746 · 6915

KEI-J89-0410.R1
May 10, 1989

ENVIRONMENTAL AFFAIRS
OPERATIONS DEPARTMENT
MAY 19 1989

Mobil Oil Corporation
P.O. Box 127
Richmond, CA 94804

Attention: Mr. Steve Pao

RE: Soil Sampling Report
Mobil Service Station #10-LTV
1700 Powell Street
Emeryville, California

Dear Mr. Pao:

This report summarizes the results of 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 in our investigation consisted of the following:

Coordination with the regulatory agencies

Collection of samples of native soil from beneath the waste oil tank; both the old and the new tank pit sidewalls.

Delivery of soil samples with proper Chain of Custody documentation to a certified analytical laboratory

Technical review of laboratory analyses and preparation of this report

SITE HISTORY AND DESCRIPTION

The subject site is presently used as a gasoline station. Site vicinity and site descriptions are shown on the attached sketch.

KEI's field investigation was conducted on April 24, 1989. One 550 gallon underground waste oil tank was removed from the site. Tank removal and soil sampling were performed in the presence of Mr. George Warren of the City of Emeryville Fire Department. The tank was made of steel and no apparent holes or cracks were observed in the tank.

One soil sample, labeled WO-1, was collected from the native soil beneath the tank at a depth of seven feet. One additional sampled, labeled WO-2, was collected from the tank pit sidewall at a depth of nine feet, approximately six inches above ground water. 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 and plastic caps, and stored in a cooled ice chest for delivery to a certified laboratory. Sample point locations are as indicated on the attached Site Plan.

KEI returned to the site on April 27, 1989 to collect soil samples from the new waste oil tank pit. Four soil samples, labeled NWO-1 through NWO-4 inclusive, were collected from the native soil taken from the sidewalls of the excavation approximately six inches above ground water. The undisturbed sample were collected from bulk material excavated by backhoe. The samples were collected and handled as described above. The samples were collected in the presence of Mr. Dennis Byrne of the Alameda County Health Agency, and Mr. George Warren of the City of Emeryville Fire Department. New tank pit sample point locations are also shown on the attached Site Plan.

SUBSURFACE CONDITIONS

Subsurface soils exposed in the excavation consisted primarily of clayey sand and silty clay fill material. Several very large concrete blocks were present in the sidewalls and bottoms of both excavation.Excavated soil was stockpiled on site.

ANALYTICAL RESULTS

The samples were analyzed by Sequoia Analytical Laboratory in Redwood City, California and were accompanied by properly executed Chain of Custody documentation. Samples WO-1 and WO-2 were analyzed for total petroleum hydrocarbon (TPH) as gasoline and diesel by EPA methods 5030 or 3810 and 3550 in conjunction with modified 8015, benzene, toluene, xylenes and ethylbenzene (BTX&E) by EPA methods 5030 and 8020, purgeable halocarbons by EPA method 8010, and total oil and grease (TOG) by method 413.1. Samples NWO-1 through NWO-4 were analyzed for total petroleum hydrocarbon (TPH) as diesel by EPA method 3550 in conjunction

with modified 8015 and total oil and grease (TOG) by EPA method 413.1. The laboratory analyses for samples collected from the existing waste oil tank pit showed low to non-detectable levels of all constituents except TOG, which was 64 ppm for WO-2 and 340 ppm for WO-1. Sample NWO-4, collected from the new waste oil tank excavation, showed TPH as diesel and TOG levels of 370 ppm and 10,000 ppm, respectively. Analyses for NWO-1, NWO-2 and NWO-3 showed non-detectable levels of all constituents. Based on the above results, soil from the common wall, represented by NWO-4, was excavated and stockpiled on-site. The results are summarized in Table 1. Copies of the laboratory analyses and Chain of Custody documentation are attached to this report.

DISTRIBUTION

A copy of this report should be sent to Mr. George Warren of the City of Emeryville Fire Department, 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 and laboratory investigations. 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.

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

Sincerely,

Kaprealian Engineering, Inc.

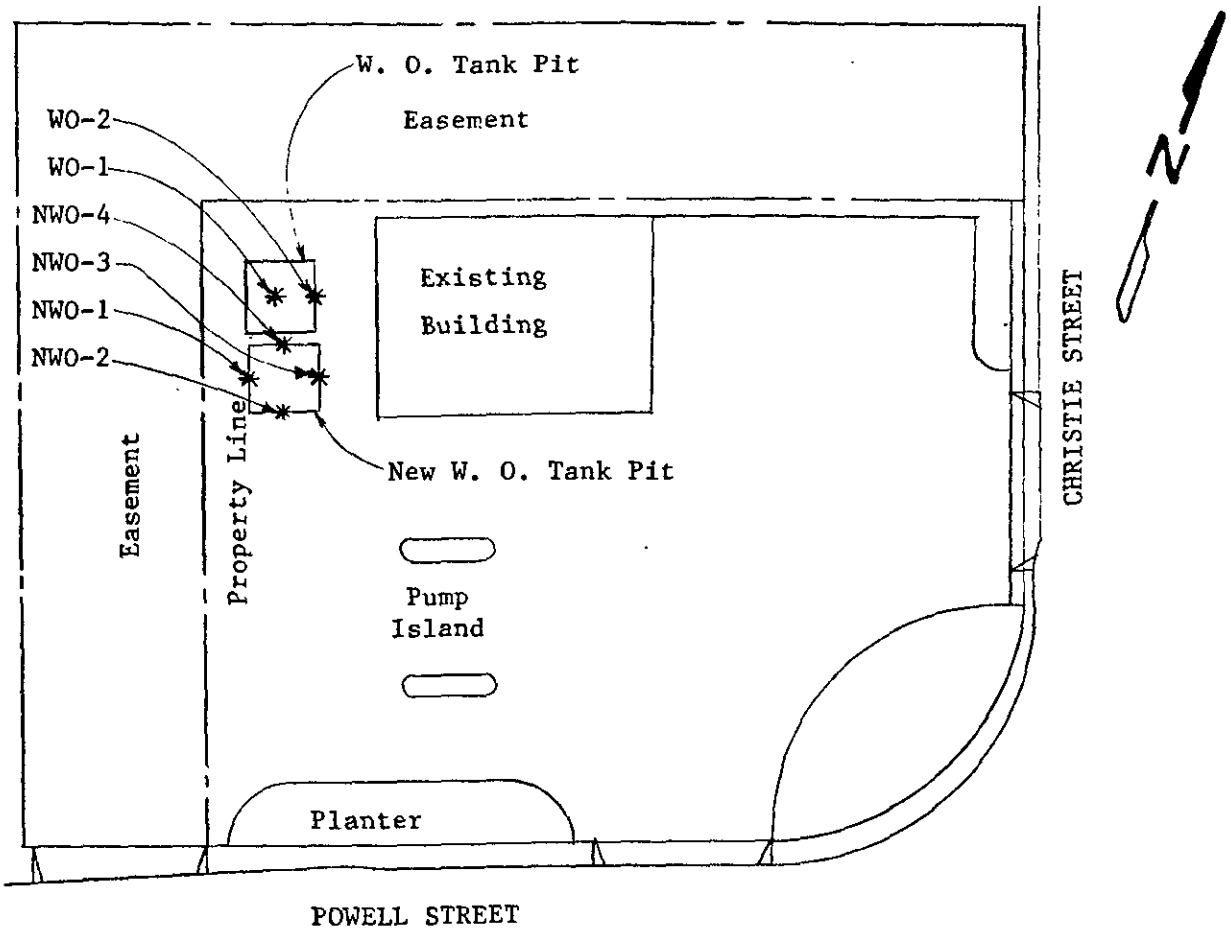
Doug Lee
Geologist

Mardo Kaprealian
President

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

cc: David Noe ✓

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P. O. BOX 913
BENICIA, CA 94510
(415) 676 - 9100 (707) 746 - 6915



SITE PLAN

Mobil Service Station #10-LTV
1700 Powell Street
Emeryville, California

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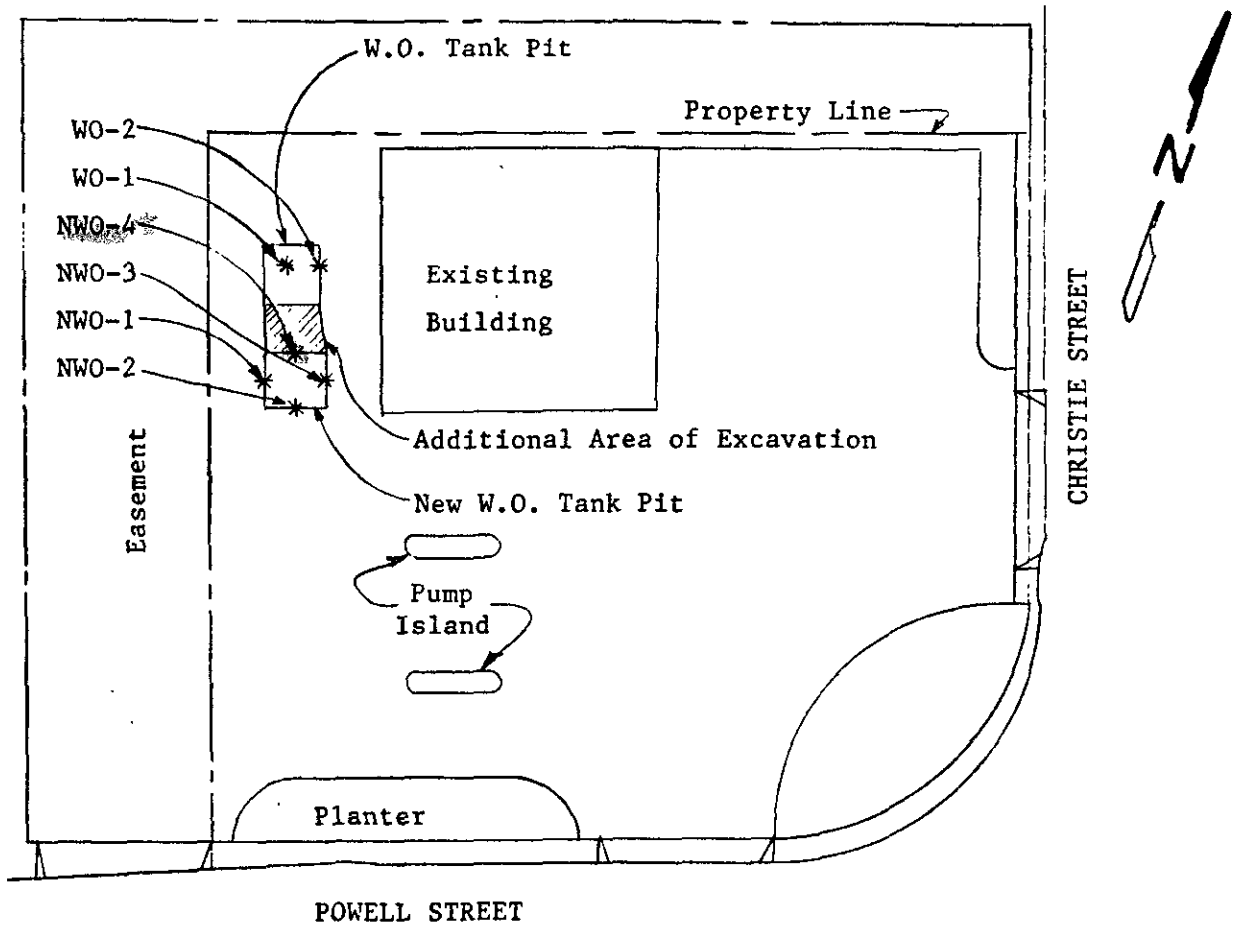
(415) 676 · 9100 (707) 746 · 6915



SITE PLAN

30 0 30 60
scale feet

* Soil Sample Location

Mobil Service Station #10-LTV
1700 Powell Street
Emeryville, California

KEI-J89-0410.R1
May 10, 1989

TABLE 1

SUMMARY OF LABORATORY ANALYSES

(Results in ppm)
(Samples collected on April 24, 1989)

Sample	Depth (feet)	TOG	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
WO-1*	7	340	27	9.6	ND	ND	ND	ND
WO-2*	9	64	ND	ND	ND	ND	ND	ND
NWO-1	9	ND	ND	---	---	---	---	---
NWO-2	9	ND	ND	---	---	---	---	---
NWO-3	9	ND	ND	---	---	---	---	---
NWO-4	9	10,000	370	---	---	---	---	---
Detection Limits		30.0	1.0	1.0	0.05	0.1	0.1	0.1

* All 8010 constituents for both samples were non-detectable.

ND = Non-detectable.

SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID:	Mobil, Emeryville, Powell/Christie	Sampled:	Apr 24, 1989
P.O. Box 913	Matrix Descript:	Soil	Received:	Apr 24, 1989
Benicia, CA 94510	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Apr 25, 1989
Attention: Mardo Kaprealian, P.E.	First Sample #:	904-2423	Reported:	Apr 26, 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)
904-2423	WO-1	9.6	N.D.	N.D.	N.D.	N.D.
904-2424	WO-2	N.D.	N.D.	N.D.	N.D.	N.D.
Detection Limits:		**1.0**	**0.05**	**0.1**	**0.1**	**0.1**

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

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Kaprealian Engineering, Inc.	Client Project ID:	Mobil, Emeryville, Powell/Christie	Sampled:	Apr 24, 1989
P.O. Box 913	Matrix Descript:	Soil	Received:	Apr 24, 1989
Benicia, CA 94510	Analysis Method:	EPA 3550/8015	Analyzed:	Apr 25, 1989
Attention: Mardo Kaprealian, P.E.	First Sample #:	904-2423	Reported:	Apr 26, 1989

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
904-2423	WO-1	27
904-2424	WO-2	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.

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Arthur G. Burton
Laboratory Director

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680 Chesapeake Drive • Redwood City, CA 94063
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Kaprealian Engineering, Inc.	Client Project ID:	Mobil, Emeryville, Powell/Christie	Sampled:	Apr 24, 1989
P.O. Box 913	Matrix Descript:	Soil	Received:	Apr 24, 1989
Benicia, CA 94510	Analysis Method:	EPA 413.1 (Gravimetric)	Extracted:	Apr 25, 1989
Attention: Mardo Kaprealian, P.E.	First Sample #:	904-2423	Analyzed:	Apr 25, 1989
			Reported:	Apr 26, 1989

TOTAL RECOVERABLE OIL & GREASE

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
904-2423	WO-1	340
904-2424	WO-2	64

Detection Limits:	**30.0**

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

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Arthur G. Burton
Laboratory Director

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(415) 364-9600 • FAX (415) 364-9233

Kaprealian Engineering, Inc.	Client Project ID:	Mobil, Emeryville, Powell/Christie\	Sampled:	Apr 24, 1989
P.O. Box 913	Sample Descript:	Soil, WO-1	Received:	Apr 24, 1989
Benicia, CA 94510	Analysis Method:	EPA 5030/8010	Analyzed:	Apr 25, 1989
Attention: Mardo Kaprealian, P.E.	Lab Number:	904-2423	Reported:	Apr 26, 1989

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	20.0	N.D.
Bromoform	20.0	N.D.
Bromomethane	20.0	N.D.
Carbon tetrachloride	20.0	N.D.
Chlorobenzene	20.0	N.D.
Chloroethane	100.0	N.D.
2-Chloroethylvinyl ether	20.0	N.D.
Chloroform	20.0	N.D.
Chloromethane	20.0	N.D.
Dibromochloromethane	20.0	N.D.
1,2-Dichlorobenzene	40.0	N.D.
1,3-Dichlorobenzene	40.0	N.D.
1,4-Dichlorobenzene	40.0	N.D.
1,1-Dichloroethane	20.0	N.D.
1,2-Dichloroethane	20.0	N.D.
1,1-Dichloroethene	20.0	N.D.
trans-1,2-Dichloroethene	20.0	N.D.
1,2-Dichloropropane	20.0	N.D.
cis-1,3-Dichloropropene	20.0	N.D.
trans-1,3-Dichloropropene	20.0	N.D.
Methylene chloride	40.0	N.D.
1,1,2,2-Tetrachloroethane	20.0	N.D.
Tetrachloroethene	20.0	N.D.
1,1,1-Trichloroethane	20.0	N.D.
1,1,2-Trichloroethane	20.0	N.D.
Trichloroethene	20.0	N.D.
Trichlorofluoromethane	20.0	N.D.
Vinyl chloride	40.0	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.

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Arthur G. Burton
Laboratory Director

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(415) 364-9600 • FAX (415) 364-9233

Kapreallan Engineering, Inc.	Client Project ID:	Mobil, Emeryville, Powell/Christie	Sampled:	Apr 24, 1989
P.O. Box 913	Sample Descript:	Soil, WO-2	Received:	Apr 24, 1989
Benicia, CA 94510	Analysis Method:	EPA 5030/8010	Analyzed:	Apr 25, 1989
Attention: Mardo Kaprealian, P.E.	Lab Number:	904-2424	Reported:	Apr 26, 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.
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	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

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P. O. BOX 913
BENICIA, CA 94510
(415) 676 · 9100 (707) 746 · 6915

CHAIN OF CUSTODY

SAMPLER: _____ (Signature)

DATE/TIME OF COLLECTION: 4-24-89

TURN AROUND TIME: 24 hr.

SAMPLE DESCRIPTION AND PROJECT NUMBER: Mobil Emeryville / Powell & Christie

SAMPLE #	ANALYSES	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/ WATER
W.O.-1	TPH-D/BTXE/TPH-G/8010/TOG(413.1)	G	1	S
W.O.-2	TPH-G/BTXE/TPH-D/8010/TOG(413.1)	G	1	S

RELINQUISHED BY*	TIME/DATE	RECEIVED BY*	TIME/DATE
1. _____ (KEI)	3:45 / 4-24-89	William Stucka	4/24/89 1545
2. William Stucka	4/24/89 1720	_____	17:20 4/24/89
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.

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(415) 364-9600 • FAX (415) 364-9233

Kaprealian Engineering, Inc.	Client Project ID:	Mobil - Emeryille/Powell	Sampled:	Apr 27, 1989
P.O. Box 913	Matrix Descript:	Soil	Received:	Apr 27, 1989
Benicia, CA 94510	Analysis Method:	EPA 413.1 (Gravimetric)		
Attention: Mardo Kaprealian, P.E.	First Sample #:	904-3032	Analyzed:	Apr 28, 1989
			Reported:	Apr 29, 1989

TOTAL RECOVERABLE OIL & GREASE

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
904-3032	NWO-1	N.D.
904-3033	NWO-2	N.D.
904-3034	NWO-3	N.D.
904-3035	NWO-4	10,000

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

Please Note:
Amended Report on 5/2/89.

SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID:	Mobil - Emeryville/Powell	Sampled:	Apr 27, 1989
P.O. Box 913	Matrix Descript:	Soil	Received:	Apr 27, 1989
Benicia, CA 94510	Analysis Method:	EPA 3550/8015	Analyzed:	Apr 28, 1989
Attention: Mardo Kaprealian, P.E.	First Sample #:	904-3032	Reported:	Apr 29, 1989

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
904-3032	NWO-1	N.D.
904-3033	NWO-2	N.D.
904-3034	NWO-3	N.D.
904-3035	NWO-4	370

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

Please Note:
Amended Report on 5/2/89.

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(415) 676 · 9100 (707) 746 · 6915

CHAIN OF CUSTODY

SAMPLER: [signature] (Signature)

DATE/TIME OF COLLECTION: 4-27-89

TURN AROUND TIME: 24 hr

SAMPLE DESCRIPTION AND PROJECT NUMBER: Mobil / Emeryville / Powell

SAMPLE #	ANALYSES	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/ WATER
NW-1	TPH-D / TOG (413.1)	G	1	S
NW-2	TPH-D / TOG (413.1)	G	1	S
NW-3	TPH-D / TOG (413.1)	G	1	S
NW-4	TPH-D / TOG (413.1)	G	1	S

RELINQUISHED BY*	TIME/DATE	RECEIVED BY*	TIME/DATE
1. [signature] (KEI)	5:03 4/27/89	[signature]	1703 4/27/89
2.		[signature]	1905 4/27/89
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.