



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(707) 746-6916 (707) 746-6916

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TRANSMITTAL PAGE

DATE: 12-4-89

Alameda County Health Agency

TO: Ariw Lewis

FROM: R. M. Berman

Number of Pages
(including cover): 11

SUBJECT: Unocal - Oakland (66th and San Leandro)

- Plo find attached laboratory analyses and chain of custody documentation for 6 fuel tank pit sidewall samples (labeled SW1-6WB incl), 3 waste oil tank pit samples (2 sidewalls labeled SWA & SWB, and 1 bottom sample labeled WO1), and one pipe trench sample labeled P1. All samples collected on Nov 29, 1989

If any problems occur in receiving, please call the number listed above.

immediately after tank removal.

- Also attached is a site plan indicated sample point locations.

- Pipe trench ^{Water} sampling scheduled 10³⁰ AM, Tues., 12/5/89.



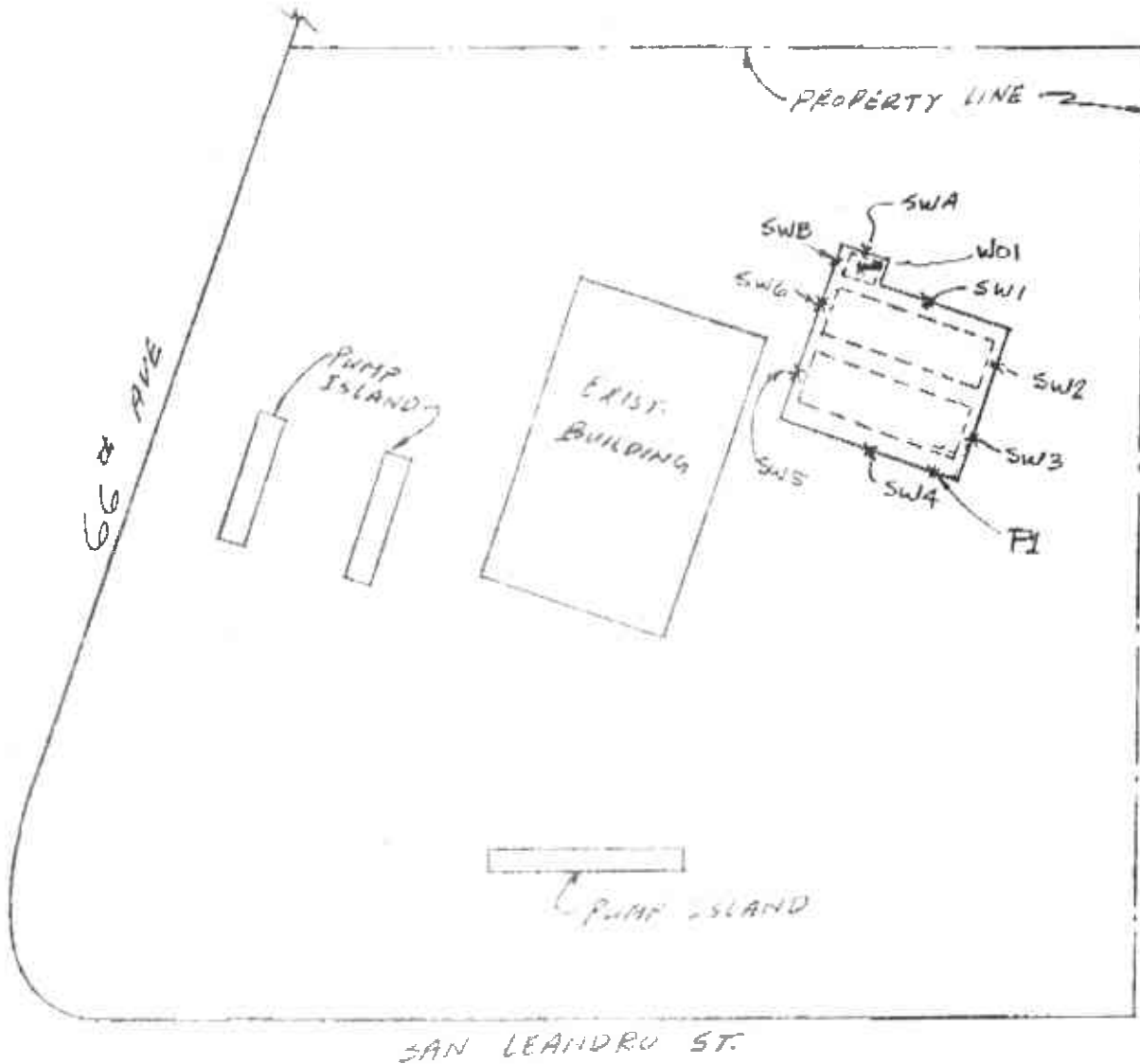
KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

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



SITE PLAN

* SOIL SAMPLE LOCATION.

UNCAL s/s # 3135
BUS- 66th AVE
OAKLAND, CALIF. -



SEQUOIA ANALYTICAL

660 Chesapeake Drive • Redwood City, CA 94063
(415) 354-9600 • FAX (415) 354-9233

Kaprealian Engineering, Inc.	Client Project ID:	Unpop. Oakland 5th, San Leandro	Sampled:	Nov 29, 1989
P.O. Box 913	Matrix Descript:	Soil	Received:	Nov 29, 1989
Benicia, CA 94510	Analysis Method:	EPA 8036/8015/8020	Analyzed:	Nov 30, 1989
Attention: Mardo Kaprealian, P.E.	First Sample #:	911-3711	Reported:	21/1

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)
911-3711	SW1	1.6	N.D.	N.D.	N.D.	N.D.
911-3712	SW2	3.8	N.D.	N.D.	N.D.	N.D.
911-3713	SW3	5.8	N.D.	N.D.	0.42	2.3
911-3714	SW4	32	1.2	N.D.	2.1	1.0
911-3715	SW5	4.2	0.30	N.D.	N.D.	0.11
911-3716	SW6	N.D.	N.D.	N.D.	N.D.	N.D.
911-3717	P1	15	0.036	N.D.	0.18	6.5

Detection Limits:	1.0	0.05	0.1	0.1	0.1
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Low to Medium Boiling Point Hydrocarbons are quantitated together as gas phase standards.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega

Belinda C. Vega
Project Manager



KAPREALIAN ENGINEERING, INC.
CHAIN OF CUSTODY

SAMPLE		SITE NAME & ADDRESS										ANALYSES REQUESTED		TURN AROUND TIME:	
Dick Bradish		Unocal - Oakland 66th & San Leandro												24 hrs	
ISSUING AGENCY Alameda County Hazard Agency															
SAMPLE JOB NO.	DATE	TIME	WET	MUD	GRAV	TEMP	DWT	NO	EE	SAMP. TAG LOCATION	TPH	BTX			REMARKS
SW1	11/29		X							First tank Substrate III					2113711
SW2	11/29		X												
SW3	11/29		X												
SW4	11/29		X												
SW5	11/29		X												
SW6	11/29		X												
PI	11/29		X							1st Plan in cell					

Relinquished by: (Signature) <i>L.M. Bradish</i>	Date/Time 11-29-89 1605	Received by: (Signature) <i>Ben Roman</i>	The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <u>YES</u> 2. Will samples remain refrigerated until analyzed? <u>YES</u> 3. Did any samples received for analysis have head space? <u>NO</u> 4. Were samples in appropriate containers and properly packaged? <u>YES</u>
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Signature <i>[Signature]</i>	Date/Time 11-29-89 5:56	Signature <i>[Signature]</i>	Signature <i>[Signature]</i> Title Date 11-29-89



SEQUOIA ANALYTICAL

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

Kaprelian Engineering, Inc.

P.O. Box 913

Benicia, CA 94510

Attention: Mardo Kaprelian, P.E.

Client Project ID

Matrix Description

Analysis Method

First Sample #

Well / Location / Date / Name

Soil

RR-5, 350000, 800'

411-3727

Sampled: Nov 26, 1989

Received: Nov 26, 1989

Analyzed: Nov 30, 1989

Reported: Dec 1, 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)
911-3725	SWA	ND	ND	ND	N.D.	N.D.
911-3726	SWB	ND	ND	ND	N.D.	N.D.
911-3727	WC	ND	ND	ND	N.D.	N.D.

Detection Limits:

100

100

100

0.1

0.1

Low to Medium Boiling Point hydrocarbons are analyzed by gas chromatography/mass spectrometry. Analytes reported as N.D. were not present above the detection limit.

SEQUOIA ANALYTICAL

Belinda C. Vega



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680 Chesapeake Drive • Redwood City, CA 94063
 (415) 364-9500 • FAX (415) 364-9233

Kaprealian Engineering, Inc.	Client Project ID	Unocal, Oakland 80th/San Leandro	Sampled:	Nov 29, 1989
P.O. Box 913	Matrix Descript:	Soil	Received:	Nov 29, 1989
Benicia, CA 94510	Analysis Method:	EPA 3550/8015	Extracted:	Nov 30, 1989
Attention: Merdo Kaprealian, P.E.	First Sample #:	911-3725	Analyzed:	Nov 30, 1989
			Reported:	Dec 1, 1989

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
911-3725	SWA	N.D.
911-3726	SWB	N.D.
911-3727	WOT	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 analytical method detection limit.

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Belinda C. Vega
 Project Manager



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Kaprelian Engineering, Inc.	Client Project ID.	Sample Location: Borehole	Sampled:	Nov 29, 1989
P.O. Box 913	Matrix Descript.	Soil	Received:	Nov 29, 1989
Bencla, CA 94510	Analysis Method	Soil Oil & Grease (Gravimetric)	Extracted:	Dec 1, 1989
Attention: Mardo Kaprelian, P.E.	First Sample #.	911-3725	Analyzed:	Dec 1, 1989
			Reported:	Dec 1, 1989

TOTAL RECOVERABLE OIL & GREASE

Sample Number	Sample Description	Oil & Grease (mg/kg) (ppm)
911-3725	BWA	< 50
911-3726	BWA	< 50
911-3727	WO1	< 50

Detection Limits:

Analyses reported as N.D. where not present above detection limits.

SEQUOIA ANALYTICAL

Belinda Vega

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Project Manager



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880 Chesapeake Drive • Redwood City, CA 94063
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Kapreallan Engineering, Inc.	Client Project ID:	General Clean-up With/San Leandro	Sampled:	Nov 29, 1989
P.O. Box 913	Sample Descrip:	Soil SWA	Received:	Nov 29, 1989
Benicia, CA 94510	Analyte Method:	EPA 8000-8010	Analyzed:	Nov 30, 1989
Attention: Mardo Kapreallan, P.E.	Lab Number:	011-272	Reported:	Dec 1, 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	3.0	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	15.0	N.D.
1,3-Dichlorobenzene	15.0	N.D.
1,4-Dichlorobenzene	15.0	N.D.
1,1-Dichloroethane	3.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
Total 1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropane	5.0	N.D.
trans-1,3-Dichloropropane	5.0	N.D.
Methylene chloride	5.0	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	5.0	N.D.

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

SEQUOIA ANALYTICAL

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 580 Chesapeake Drive • Redwood City, CA 94063
 (415) 384-9600 • FAX (415) 384-9233

Kaprealian Engineering, Inc P.O. Box 913 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E.	Client Project ID: Universal Oakland/San Leandro Sample Descript: Soil, 274B Analysis Method: EPA 8010/8010 Lab Number: 811-4728	Sampled: Nov 29, 1989 Received: Nov 29, 1989 Analyzed: Nov 30, 1989 Reported: Dec 1, 1989
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HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Description Unit 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	5.0	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-Dichloroethane	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	10.0	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethane	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethane	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10.0	N.D.

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

SEQUOIA ANALYTICAL

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 Project Manager



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Kaprealian Engineering, Inc.	Client Project ID:	Unocal, Oakland 557/San Leandro	Sampled:	Nov 29, 1989
P.O. Box 913	Sample Descript:	Soil, W01	Received:	Nov 29, 1989
Benicia, CA 94510	Analysis Method:	EPA 5030/8010	Analyzed:	Nov 30, 1989
Attention: Mario Kaprealian, P.E.	Lab Number:	611-3727	Reported:	Dec 1, 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-Dichloroethane	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	10.0	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 above detection limit.

SEQUOIA ANALYTICAL

Belinda C. Vega
Project Manager



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

10/04/89 11:18 AM 748 5581: # 8
4153669233-
NAPREALIAN ENCL
707 748 5581: # 8

CLIENT		SITE NAME & ADDRESS						ANALYSES REQUESTED					TURN AROUND TIME:
Dick Bradish		Unocal - Oakland 66th & San Leandro						TPH-G	TPH-D	TOG (SO2D+E)	SDIO	CA. Cr. Pb. Zn.	24 hrs
ISSUING AGENCY San Lab Contra Costa Health Agency													
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	AIR	COMP	CON	TPH-G	TPH-D	TOG (SO2D+E)	SDIO	CA. Cr. Pb. Zn.	REMARKS
SWA	11/29		X	X				✓	✓	✓	✓	✓	9113725
SWA	11/29		X	X				✓	✓	✓	✓	✓	26
W01	11/29		X	X				✓	✓	✓	✓	✓	27

Relinquished by: (Signature) <i>Dick Bradish</i>	Date/Time 11/29/89 1605	Received by: (Signature) <i>Ben Porawak</i>	The following MUST BE completed by the Laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <u>YES</u> 2. Will samples remain refrigerated until analyzed? <u>YES</u> 3. Did any samples received for analysis have head space? <u>NO</u> 4. Were samples in appropriate containers and properly packaged?
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature) <i>Ben Porawak</i>	Date/Time 11-29-89 550	Received by: (Signature) <i>John C. [Signature]</i>	
			Signature: <i>[Signature]</i> Title: <i>[Signature]</i> Date: 11-29-89