



KAPREALIAN ENGINEERING, INC.
Consulting Engineers

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

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2:41 pm, Apr 23, 2009

Alameda County
Environmental Health

KEI-J89-1106.R4
February 9, 1990

Unocal Corporation
2175 N. California Blvd., #650
Walnut Creek, CA 94596

Attention: Mr. Tim Ross

RE: Stockpiled Soil Sampling for
Unocal Service Station #3072
2445 Castro Valley Blvd.
Castro Valley, California

Dear Mr. Ross:

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

On January 19, 1990, soil samples from approximately 200 cubic yards of stockpiled soil at the referenced site were collected to determine proper disposal of the soil. Four composite soil samples (designated as Comp UU, Comp VV, Comp WW and Comp XX) were taken. Each composite sample consisted of four individual grab samples taken at various locations and depths ranging from one to two feet. The samples were collected in two-inch diameter, clean brass tubes, which were then sealed with aluminum foil, plastic caps and tape, and placed in a cooled ice chest for subsequent delivery to a certified laboratory for analysis. All samples were analyzed at Sequoia Analytical in Redwood, California, and were accompanied by properly executed Chain of Custody documentation. Sample locations are as shown on the attached Site Plan, Figure 1.

On January 25, 1990, KEI returned to the site to collect soil samples from approximately 400 cubic yards of additional stockpiled soil excavated from the referenced site. Eight soil samples, labeled Comp 1, Comp 2, Comp 3, Comp 4, Comp 5, Comp 6, Comp 7 and Comp 8, were collected and stored using the methodology described above.

All composite samples were analyzed to determine concentrations of total petroleum hydrocarbons (TPH) as gasoline using EPA method 5030 in conjunction with modified 8015; benzene, toluene, xylenes and ethylbenzene (BTX&E) using EPA method 8020. The results of the soil analyses showed concentrations of TPH as gasoline ranging from 20 to 71 ppm for all samples except for

KEI-J89-1106.R4
February 9, 1990
Page 2

samples Comp WW and Comp 4, which showed TPH levels of 170 ppm and 160 ppm, respectively. Analytical results are summarized in Table 1. Copies of the laboratory analyses, and the Chain of Custody documentation are attached to this report.

Based on TPH levels in the stockpiled soil represented by all composite samples (excluding Comp WW and Comp 4) of less than 100 ppm, the soil can be disposed of at an approved Class III disposal site (based on Regional Water Quality Control Board guidelines). However, KEI recommends that during disposal, when obvious isolated high contamination is detected within the stockpiled soil, that portion of the soil be separately stockpiled for further sampling.

Based on the TPH levels in Comp WW and Comp 4 exceeding 100 ppm, the soil was retained on-site and permission was obtained for aeration.

On February 1, 1990, KEI returned to the site to collect composite soil samples following the aeration of Comp WW and Comp 4. Two composite samples, labeled Comp 9 and Comp 10, were collected, stored and analyzed as described above. Sample locations are as shown on the attached Site Plan, Figure 2. Results of the composites showed TPH as gasoline of 2.9 ppm for Comp 9, and 9.2 ppm for Comp 10. Based on these laboratory analyses, the soil can be disposed of to an approved Class III disposal site.

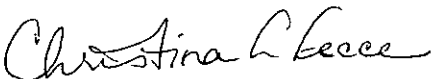
DISTRIBUTION

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

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

Sincerely,

Kaprealian Engineering, Inc.



Christina L. Lecce

Attachments: Table 1
Site Plans - Figure 1 and 2
Laboratory Results
Chain of Custody documentation

KEI-J89-1106.R4
February 9, 1990

TABLE 1
SUMMARY OF LABORATORY ANALYSES
(Results in ppm)

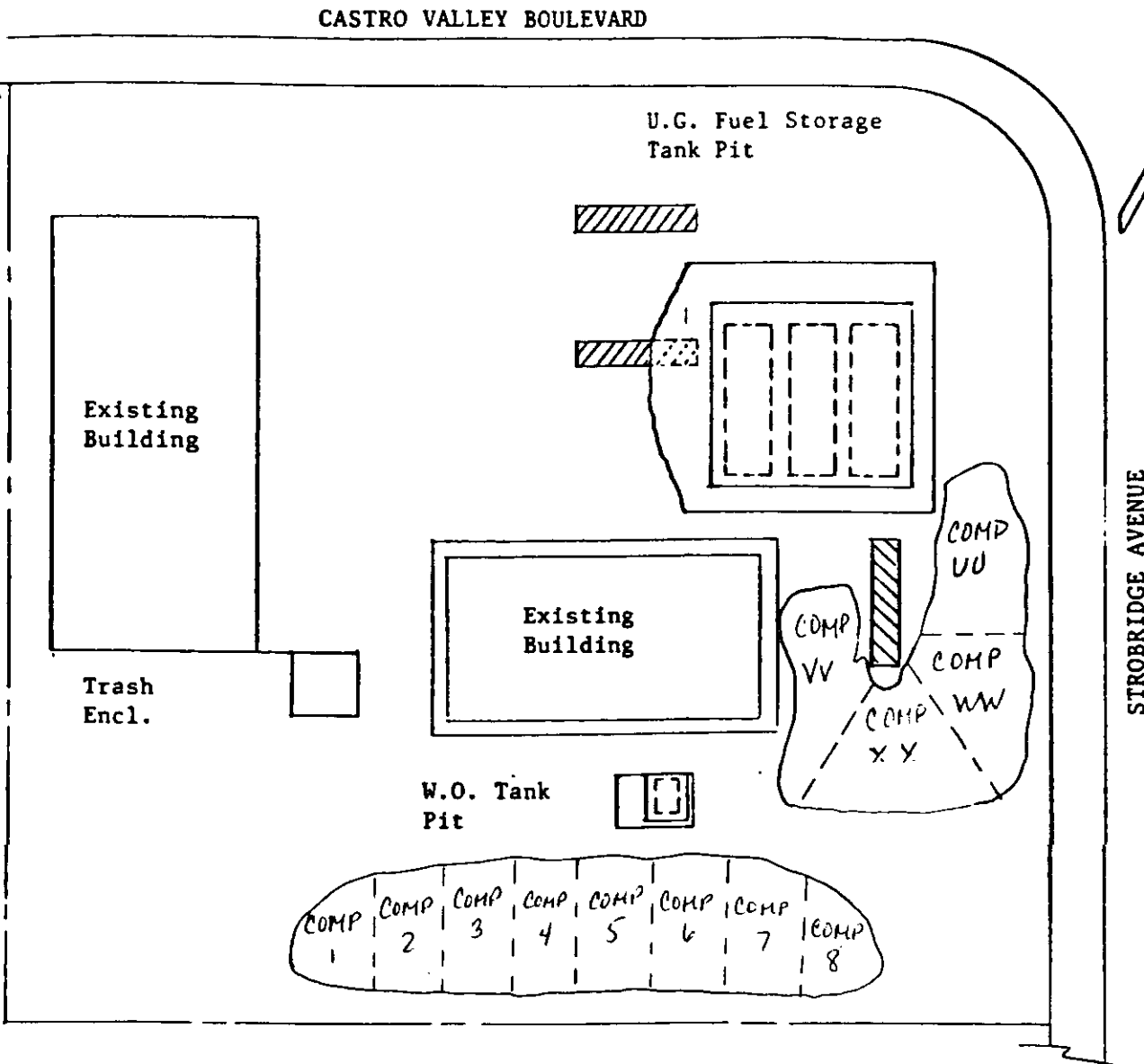
<u>Date</u>	<u>Sample</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethyl-benzene</u>
1/19/90	Comp UU	24	ND	ND	ND	ND
	Comp VV	71	ND	ND	ND	ND
	Comp WW	170	ND	ND	0.28	0.10
	Comp XX	36	ND	ND	ND	ND
1/24/90	Comp 1	20	ND	ND	0.49	0.13
	Comp 2	27	0.071	ND	0.18	0.11
	Comp 3	22	ND	ND	0.28	ND
	Comp 4	160	0.60	0.28	5.1	0.45
	Comp 5	33	0.07	ND	0.67	0.15
	Comp 6	37	ND	0.10	0.42	0.14
	Comp 7	54	0.22	0.51	3.8	0.68
	Comp 8	39	0.080	ND	1.0	0.20
2/1/90	Comp 9	2.9	ND	ND	ND	ND
	Comp 10	9.2	ND	ND	ND	ND
Detection Limits		1.0	0.05	0.1	0.1	0.1

ND = Non-detectable.



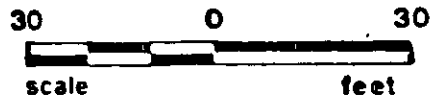
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SITE PLAN

Figure 1

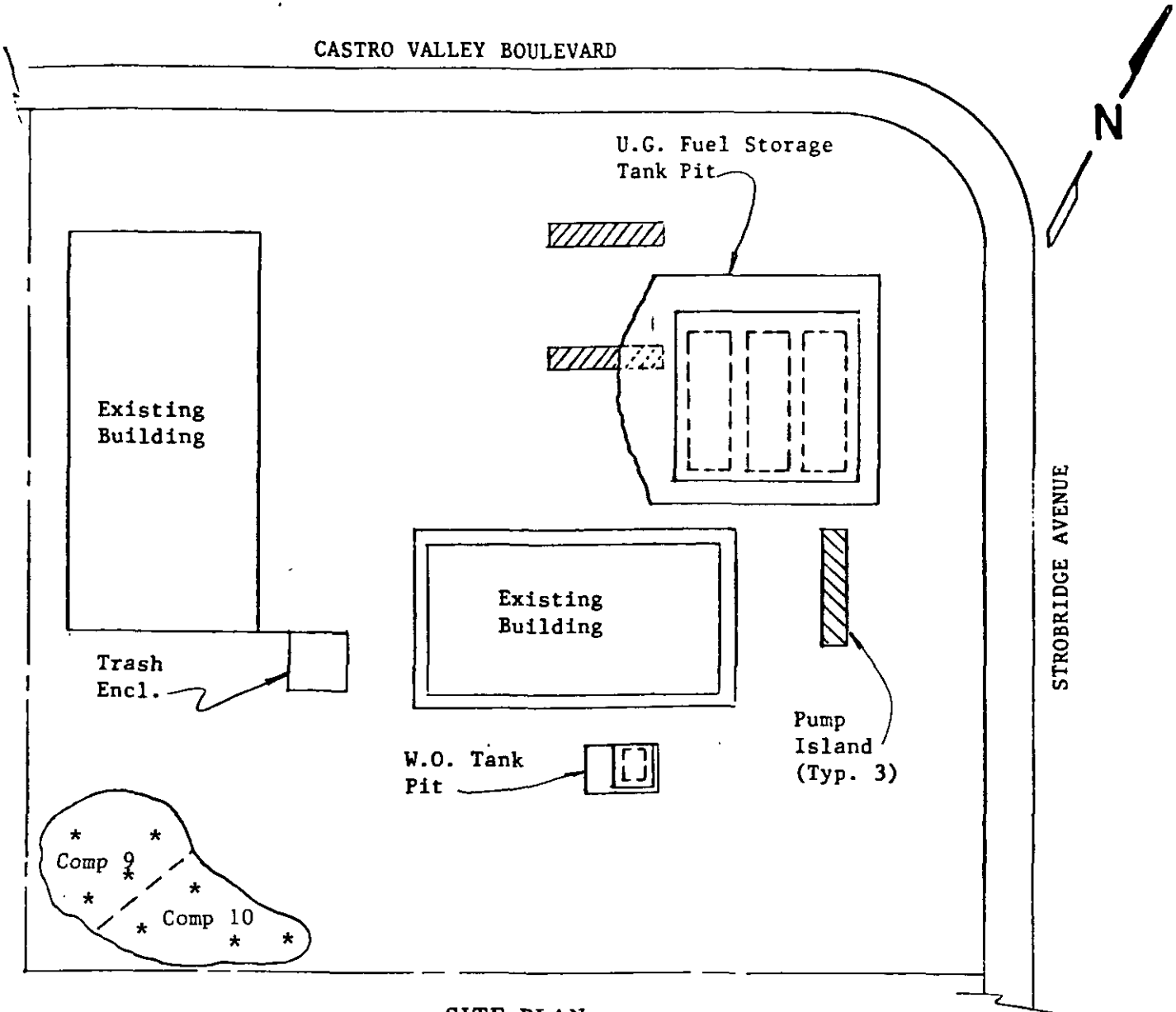


Unocal S/S #3072
2445 Castro Valley Blvd.
Castro Valley, CA

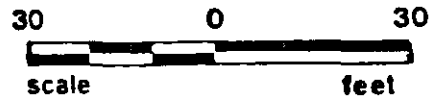


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SITE PLAN
Figure 2



LEGEND

* Sample Point Location

Unocal S/S #3072
2445 Castro Valley Blvd.
Castro Valley, CA



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER <i>[Signature]</i>	SITE NAME & ADDRESS UNION / CASTRO VALLEY CASTRO VALLEY BLVD. AND STEUBRIDGE	ANALYSES REQUESTED	TURN AROUND TIME: 24HR
WITNESSING AGENCY			

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	ANALYSES REQUESTED		REMARKS
									NON-CO	OTHER	
COMP. UV	1-19-90		X			X	4		X	X	0012434 A-D
COMP. UV	1-19-90		X			X	4		X	X	0012435
COMP. UV	1-19-90		X			X	4		X	X	0012436
COMP. UV	1-19-90		X			X	4		X	X	0012437 ↓

Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 1/22/90 8:35	Received by: (Signature) <i>[Signature]</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> <i>[Signature]</i> Sample Review <u>1/22/90</u> Signature Title Date
Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 1/22/90 10:30 AM	Received by: (Signature) <i>[Signature]</i>	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER <i>[Signature]</i>	SITE NAME & ADDRESS UNION / CASTRO VALLEY CASTRO VALLEY BLVD. AND STROBRIDGE	ANALYSES REQUESTED	TURN AROUND TIME: 24HR
WITNESSING AGENCY			

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	NO. OF CONT.	SAMPLING LOCATION	ANALYSES REQUESTED		REMARKS
								LEAD	COPPER	
COMP. UU	1-19-90		X			X		X	X	0012434 A-D
COMP. UV	1-19-90		X			X		X	X	0012435
COMP. UW	1-19-90		X			X		X	X	0012436
COMP. UX	1-19-90		X			X		X	X	0012437 ↓

Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 1/22/90 8:35	Received by: (Signature) <i>[Signature]</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> Signature: <i>[Signature]</i> Title: <u>Sample Review</u> Date: <u>1/22/90</u>
Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 1/22/90 10:30 AM	Received by: (Signature) <i>[Signature]</i>	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E.	Client Project ID: Unocal, Castro Valley, C.V. Blvd/Strobridge Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 001-3153 A-B	Sampled: Jan 24, 1990 Received: Jan 25, 1990 Analyzed: Jan 25, 1990 Reported: Jan 29, 1990
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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)
0013153 A-B	Composite 1	20	N.D.	N.D.	0.13	0.49
0013154 A-B	Composite 2	27	0.071	N.D.	0.11	0.18
0013155 A-B	Composite 3	22	N.D.	N.D.	N.D.	0.28
0013156 A-B	Composite 4	160	0.60	0.28	0.45	5.1
0013157 A-B	Composite 5	33	0.07	N.D.	0.15	0.67
0013158 A-B	Composite 6	37	N.D.	0.10	0.14	0.42
0013159 A-B	Composite 7	54	0.22	0.51	0.68	3.8
0013160 A-B	Composite 8	39	0.080	N.D.	0.20	1.0

Detection Limits:	1.0	0.05	0.1	0.1	0.1
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard. Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Belinda C. Vega
Project Manager



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER SOE/KEI		SITE NAME & ADDRESS Unocal / Castro Valley Strobridge / C. Valley Blvd.					ANALYSES REQUESTED		TURN AROUND TIME: 24 hrs.
WITNESSING AGENCY							TPHG, BTXE		[REDACTED]
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	NO. OF COMP. CONT.			
Comp 1	1/25/90	AFTERNOON	"			2	Stockpile	✓	0013153 ARB
" 2	"		"			2	"	✓	4
" 3	"		"			"	"	✓	5
" 4	"		"			"	"	✓	6
" 5	"		"			"	"	✓	7
" 6	"		"			"	"	✓	8
" 7	"		"			"	"	✓	9
" 8	"		"			"	"	✓	60 ✓
Relinquished by: (Signature) Soe Jen's		Date/Time 1/25/90	Received by: (Signature) Brenda C. CHI		The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <u>WPC</u> 2. Will samples remain refrigerated until analyzed? <u>WPC</u> 3. Did any samples received for analysis have head space? <u>None in 7</u> 4. Were samples in appropriate containers and properly packaged? <u>WPC</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		Title		Date



SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID: Unocal, Castro Valley, 2445 C V Blvd.	Sampled: Feb 1, 1990
P.O. Box 996	Matrix Descript: Soil	Received: Feb 1, 1990
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Feb 2, 1990
Attention: Mardo Kaprealian, P.E.	First Sample #: 002-0069 A-B	Reported: Feb 2, 1990

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

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
0020069 A-B	Composite 9	2.9	N.D.	N.D.	N.D.	N.D.
0020070 A-B	Composite 10	9.2	N.D.	N.D.	N.D.	N.D.

Detection Limits:	1.0	0.05	0.1	0.1	0.1
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard. Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
 Belinda C. Vega
 Project Manager



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER HAGOP		SITE NAME & ADDRESS Unocal - Castro Valley 2445 Castro Valley Blvd			ANALYSES REQUESTED			TURN AROUND TIME: 24 Hrs
WITNESSING AGENCY					TPH-G BTXE			

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	NO. OF CONT.	SAMPLING LOCATION	TPH-G	BTXE	REMARKS
Comp 9	2/1/90	2:10 pm	✓			2	Aerated stockpile	✓	✓	0020069 A→B
Comp 10	2/1/90		✓			2	Aerated stockpile	✓	✓	0020070 ↓

Relinquished by: (Signature) Hagop Revoll	Date/Time 2/1/90 335	Received by: (Signature) Ben Ponauak	The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? 2. Will samples remain refrigerated until analyzed? 3. Did any samples received for analysis have head space? 4. Were samples in appropriate containers and properly packaged?	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		yes yes no yes
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		
Relinquished by: (Signature) Ben Ponauak	Date/Time 2/1/90 17:05	Received by: (Signature) Brenda Oliver		Signature: elo Title: logan Date: 2/1/90