

MONITORING
PURGING
DISPOSING
SAMPLING

MPDS

SERVICES, INCORPORATED

FIRE DEPARTMENT

JAN 17 1996

January 15, 1996

City of San Leandro
Development Services
835 E. 14th Street
San Leandro, CA 94577

RE: Former Unocal Service Station #2512
1300 Davis Street
San Leandro, California

Per the request of the Unocal Corporation Project Manager, Mr. Edward C. Ralston, enclosed please find our report (MPDS-UN2512-03) dated December 4, 1995 for the above referenced site.

Should you have any questions regarding the reporting of data, please feel free to call our office at (510) 602-5120. Any other questions may be directed to the Project Manager at (510) 277-2311.

Sincerely,

MPDS Services, Inc.



Jarrel F. Crider

/jfc

Enclosure

cc: Mr. Edward C. Ralston



MPDS-UN2512-03
December 4, 1995

Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, California 94583

Attention: Mr. Edward C. Ralston

RE: Quarterly Report
Former Unocal Service Station #2512
1300 Davis Street
San Leandro, California

Dear Mr. Ralston:

This data report presents the results of the most recent monitoring and sampling of the monitoring wells at the referenced site by MPDS Services, Inc.

RECENT FIELD ACTIVITIES

The monitoring wells that were monitored and sampled during this period are indicated in Table 1. Prior to sampling, the wells were checked for depth to water and the presence of free product or sheen. The monitoring data and the ground water elevations are summarized in Table 1. The ground water flow direction during the most recent quarter is shown on the attached Figure 1.

Ground water samples were collected on October 21, 1995. Prior to sampling, the wells were each purged of between 10 and 13 gallons of water. Samples were then collected using a clean Teflon bailer. The samples were decanted into clean VOA vials and/or one-liter amber bottles, as appropriate, which were then sealed with Teflon-lined screw caps, labeled, and stored in a cooler, on ice, until delivery to a state-certified laboratory. Equipment blank, Field blank and Trip blank samples (denoted as ES1, ES2 and ES3 respectively) were also collected for quality assurance and control. MPDS Services, Inc. transported the purged ground water to the Unocal Refinery located in Rodeo, California, for treatment and discharge to San Pablo Bay under NPDES permit.

ANALYTICAL RESULTS

The ground water samples were analyzed at Sequoia Analytical Laboratory and were accompanied by properly executed Chain of Custody documentation. The analytical results of the ground water samples collected to date are summarized in Tables 2 and 3. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline, TPH as diesel, and benzene detected in the ground water samples collected this quarter are shown

on the attached Figure 2. Copies of the laboratory analytical results and the Chain of Custody documentation are attached to this report.

LIMITATIONS

Environmental changes, either naturally-occurring or artificially-induced, may cause changes in ground water levels and flow paths, thereby changing the extent and concentration of any contaminants.

DISTRIBUTION

A copy of this report should be sent to the Alameda County Health Care Services Agency, and to the City of San Leandro.

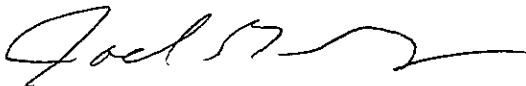
If you have any questions regarding this report, please do not hesitate to call at (510) 602-5120.

Sincerely,

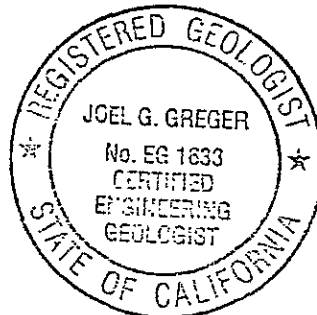
MPDS Services, Inc.



Haig (Gary) Tejirian
Senior Staff Geologist



Joel G. Greger, C.E.G.
Senior Engineering Geologist



License No. EG 1633
Exp. Date 8/31/96

/bp

Attachments: Tables 1, 2 & 3
Location Map
Figures 1 & 2
Laboratory Analyses
Chain of Custody documentation

cc: Mr. Robert H. Kezerian, Kaprealian Engineering, Inc.

TABLE 1

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Ground Water Elevation (feet)</u>	<u>Depth to Water (feet)◆</u>	<u>Total Well Depth (feet)◆</u>	<u>Product Thickness (feet)</u>	<u>Sheen</u>	<u>Water Purged (gallons)</u>
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(Monitored and Sampled on October 21, 1995)

MW3	17.04	14.98	33.70	0	No	13 (100)
MW7	16.97	14.74	29.81	0	No	10.5
MW8	17.08	15.65	30.00	0	No	10
MW9	16.74	15.59	30.02	0	No	10

(Monitored and Developed October 5, 1995)

MW3	17.16	14.86	33.72	0	--	110
MW8	17.17	15.56	30.10	0	--	95
MW9	17.06	15.27	30.02	0	--	75

<u>Well #</u>	<u>Well Cover Elevation (feet)*</u>
MW3	32.02
MW7	31.71
MW8	32.73
MW9	32.33

◆ The depth to water level and total well depth measurements were taken from the top of the well casings.

* The elevations of the top of the well casing are relative to MSL, per East Bay MJD Benchmark "DAVIS FREE #2 - San Leandro 1952" (Elevation = 32.02 feet MSL).

(x) Amount of water purged after sampling.

-- Sheen determination was not performed.

TABLE 2

SUMMARY OF LABORATORY ANALYSES
 WATER

<u>Date</u>	<u>Well #</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>	<u>TOG (mg/L)</u>
10/21/95	MW3▲▲	5,900*	50,000	250	4,200	1,700	18,000	--
	MW7	--	ND	ND	ND	ND	ND	--
	MW8	--	ND	ND	ND	ND	ND	--
	MW9▲▲	--	ND	ND	ND	ND	ND	--
9/08/94	MW1	--	160◆◆	ND	1.6	ND	3.1	--
	MW2	--	3,000◆	ND	ND	ND	17	--
	MW3	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	MW4	ND	300◆	ND	ND	ND	ND	--
	MW5	WELL WAS INACCESSIBLE						
	MW6	WELL WAS INACCESSIBLE						
	MW7	--	ND	ND	1.3	ND	1.6	--
6/09/94	MW1	--	580◆	ND	ND	ND	ND	--
	MW2	--	1,900◆◆	6.7	ND	66	ND	--
	MW3	17,000*	69,000	1,300	7,100	1,900	11,000	--
	MW4	ND	780◆	ND	ND	ND	ND	--
	MW5	WELL WAS INACCESSIBLE						
	MW6	WELL WAS INACCESSIBLE						
	MW7	--	610◆	ND	ND	ND	ND	--
10/30/92	MW1	NOT SAMPLED						
	MW2	--	1,200◆	ND	ND	ND	ND	--
	MW3	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	MW4	WELL WAS INACCESSIBLE						
	MW5	NOT SAMPLED						
	MW6	--	ND	ND	ND	ND	ND	--
	MW7	--	ND	ND	ND	ND	ND	--
5/26/92	MW1	NOT SAMPLED						
	MW2	--	2,900	8.8	9.3	54	36	--
	MW3▲	2,400,000	1,300,000	5,100	66,000	20,000	150,000	880
	MW4	ND	120	0.59	0.82	ND	1.9	--
	MW5	NOT SAMPLED						
	MW6	--	ND	ND	ND	ND	0.65	--
	MW7	--	ND	ND	ND	ND	0.60	--

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
 WATER

<u>Date</u>	<u>Well #</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>	<u>TOG (mg/L)</u>
2/27/92	MW1	NOT SAMPLED						
	MW2	--	330	12	12	10	93	--
	MW3	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	MW4	ND	43	ND	1.0	0.37	2.5	--
	MW5	NOT SAMPLED						
	MW6	--	ND	3.2	ND	ND	3.8	--
	MW7	--	38	ND	0.97	0.69	4.0	--
11/19/91	MW1	NOT SAMPLED						
	MW2	--	220	2.5	8.4	2.4	14	--
	MW3	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	MW4	ND	ND	ND	ND	ND	ND	--
	MW5	NOT SAMPLED						
	MW6	--	ND	ND	ND	ND	ND	--
8/15/91	MW1	NOT SAMPLED						
	MW2	--	ND	ND	ND	ND	ND	ND
	MW3	NOT SAMPLED DUE TO A TRACE OF FREE PRODUCT						
	MW4	ND	ND	ND	ND	ND	ND	ND
	MW5	NOT SAMPLED						
	MW6	--	ND	ND	ND	ND	ND	ND
5/24/91	MW1	--	ND	ND	ND	ND	ND	ND
	MW2	--	ND	1.5	ND	ND	ND	ND
	MW3	2,000	23,000	940	3,400	590	2,600	ND
	MW4	ND	ND	0.64	ND	ND	ND	ND
	MW5	ND	ND	ND	ND	ND	ND	ND
	MW6	--	ND	ND	ND	ND	ND	ND
2/04/91	MW1	ND	ND	ND	0.31	ND	0.62	ND
	MW2	ND	ND	ND	0.38	ND	0.87	ND
	MW3	NOT SAMPLED DUE TO A TRACE OF FREE PRODUCT						
	MW4	ND	ND	ND	0.72	ND	1.1	ND
	MW5	ND	ND	ND	0.35	ND	ND	ND
	MW6	ND	ND	ND	ND	ND	ND	ND

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
 WATER

<u>Date</u>	<u>Well #</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>	<u>TOG (mc/L)</u>
11/06/90	MW1	ND	ND	ND	ND	ND	ND	
	MW2	ND	ND	ND	0.42	ND	1.4	ND
	MW3	940	16,000	820	1,500	2,200	770	ND
	MW4	ND	ND	ND	0.36	ND	0.98	ND
	MW5	ND	ND	ND	ND	ND	ND	ND
	MW6	ND	ND	1.6	0.35	ND	ND	ND
8/09/90	MW1	ND	ND	ND	ND	ND	ND	ND
	MW2	ND	ND	ND	ND	ND	ND	ND
	MW3	500	1,900	56	140	140	31	ND
	MW4	ND	ND	ND	ND	ND	ND	ND
	MW5	ND	ND	ND	ND	ND	ND	ND
	MW6	ND	ND	ND	ND	ND	ND	ND
5/10/90	MW1	ND	ND	ND	ND	ND	ND	ND
	MW2	ND	43	ND	1.0	ND	ND	ND
	MW3	850	6,200	94	460	160	540	2.8
	MW4	88	54	ND	2.0	ND	0.37	ND
	MW5	83	ND	ND	ND	ND	0.31	ND
	MW6	ND	ND	ND	1.2	ND	ND	ND
2/23/90	MW1	ND	ND	ND	ND	ND	ND	ND
	MW2	ND	44	ND	ND	ND	ND	ND
	MW3	350	ND	0.32	ND	ND	ND	1.3
	MW4	ND	ND	ND	ND	ND	ND	ND
	MW5	ND	ND	ND	ND	ND	ND	ND
	MW6	ND	ND	ND	ND	ND	ND	ND
11/21/89	MW1	ND	ND	ND	ND	ND	ND	8.9
	MW2	ND	48	ND	0.51	ND	ND	1.6
	MW3	110	1,900	ND	ND	ND	ND	3.8
	MW4	ND	ND	ND	ND	ND	ND	ND
	MW5	70	ND	ND	ND	ND	ND	ND
	MW6	ND	ND	ND	ND	ND	ND	ND
8/29/89	MW4	120	ND	ND	ND	ND	ND	ND
	MW5	100	ND	ND	0.94	0.30	ND	ND
	MW6	ND	ND	ND	ND	ND	ND	ND

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
 WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG (mg/L)
8/10/89	MW1	ND	ND	ND	ND	ND	ND	ND
	MW2	ND	ND	ND	0.39	ND	ND	ND
	MW3	860	3,200	73	140	35	240	ND
4/25/89	MW1	100	ND	0.31	ND	ND	ND	--
	MW2	ND	32	0.35	ND	ND	ND	--
	MW3	5,700	56	ND	ND	0.31	0.49	--

TOG = Total Oil & Grease

- * Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a diesel and non-diesel mixture
- ◆ Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.
- ◆◆ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- ▲ Free product was detected in well MW3; however, a water sample was collected and analyzed to determine if the product was predominantly hydrocarbon based.
- ▲▲ Sequoia Analytical Laboratory has potentially identified the presence of MTBE at reportable levels in the sample collected from this well.

-- Indicates analysis was not performed.

ND = Non-detectable.

mg/L = milligrams per liter.

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

Note: Monitoring data prior to June 9, 1994, were provided by Kaprealian Engineering, Inc.

TABLE 3
 SUMMARY OF LABORATORY ANALYSES
 WATER

Date	Well #	Tetrachloro-ethene	1,1-Dichloro-ethane	1,1,1-Trichloro-ethane	Chloro-methane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	
10/21/95	MW3	ND	ND	ND	ND	ND	ND	
	MW7	ND	ND	ND	ND	ND	ND	
	MW8	ND	ND	ND	ND	ND	ND	
	MW9	17	1.0	ND	ND	ND	ND	
9/08/94	MW1	1.2	ND	ND	ND	ND	ND	
	MW2	ND	ND	ND	ND	ND	ND	
	MW3	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	MW4***	1.8	ND	ND	ND	ND	ND	
	MW5	WELL WAS INACCESSIBLE						
	MW6	WELL WAS INACCESSIBLE						
	MW7	0.76	ND	ND	ND	ND	ND	
6/09/94	MW1	1.0	ND	ND	ND	ND	ND	
	MW2	ND	ND	ND	ND	ND	ND	
	MW3	ND	ND	ND	ND	ND	ND	
	MW4**	2.8	8.8	0.83	ND	0.51	ND	
	MW5	WELL WAS INACCESSIBLE						
	MW6	WELL WAS INACCESSIBLE						
	MW7	0.67	ND	ND	ND	ND	ND	

TABLE 3 (Continued)

SUMMARY OF LABORATORY ANALYSES
 WATER

Date	Well #	Tetrachloro-ethene	1,1-Dichloro-ethane	1,1,1-Trichloro-ethane	Chloro-methane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	
10/30/92	MW2	ND	ND	ND	ND	ND	ND	
	MW3	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						ND
	MW4	WELL WAS INACCESSIBLE						
	MW6	1.2	ND	ND	ND	ND	ND	
	MW7	2.2	ND	ND	ND	ND	ND	
5/26/92	MW2	ND	ND	ND	ND	ND	ND	
	MW3	ND	ND	ND	ND	ND	ND	
	MW4	2.4	13	3.5	ND	0.83	ND	
	MW6	1.1	ND	ND	ND	ND	1.7	
	MW7	2.2	ND	ND	ND	ND	ND	
2/27/92	MW2	ND	ND	ND	ND	ND	ND	
	MW3	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	MW4	3.5	6.0	ND	ND	ND	ND	
	MW6	1.5	ND	ND	ND	ND	1.6	
	MW7	2.4	ND	ND	ND	ND	ND	
11/19/91	MW2	ND	ND	ND	ND	ND	ND	
	MW3	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	MW4	3.4	ND	ND	ND	ND	ND	
	MW6	1.3	ND	ND	ND	ND	ND	

TABLE 3 (Continued)

SUMMARY OF LABORATORY ANALYSES
 WATER

Date	Well #	Tetrachloro-ethene	1,1-Dichloro-ethane	1,1,1-Trichloro-ethane	Chloro-methane	1,1-Dichloro-ethene	1,2-Dichloro-benzene	
8/15/91	MW2	ND	ND	ND	ND	ND	ND	
	MW3	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						ND
	MW4	3.6	ND	ND	ND	ND	ND	
	MW6	1.2	ND	ND	ND	ND	ND	
5/24/91	MW1	4.6	ND	ND	ND	ND	ND	
	MW2	ND	ND	ND	ND	ND	ND	
	MW3	ND	ND	ND	ND	ND	ND	
	MW4	4.1	2.5	3.9	ND	ND	ND	
	MW5	0.89	ND	ND	ND	ND	ND	
	MW6	0.88	ND	ND	5.6	ND	ND	
11/06/90	MW1	4.8	ND	ND	ND	ND	ND	
	MW2	ND	ND	ND	ND	ND	ND	
	MW3	ND	ND	ND	ND	ND	ND	
	MW4	2.9	ND	ND	ND	ND	ND	
	MW5	0.7	ND	ND	ND	ND	ND	
	MW6	1.2	ND	ND	ND	ND	ND	
4/25/89	MW1*	3.3	ND	ND	ND	ND	ND	
	MW2	0.68	ND	ND	ND	ND	ND	
	MW3	1.0	ND	ND	ND	ND	ND	

TABLE 3 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

* Trichloroethene was detected at 0.55 $\mu\text{g/L}$.

** Trichloroethene was detected at 0.70 $\mu\text{g/L}$.

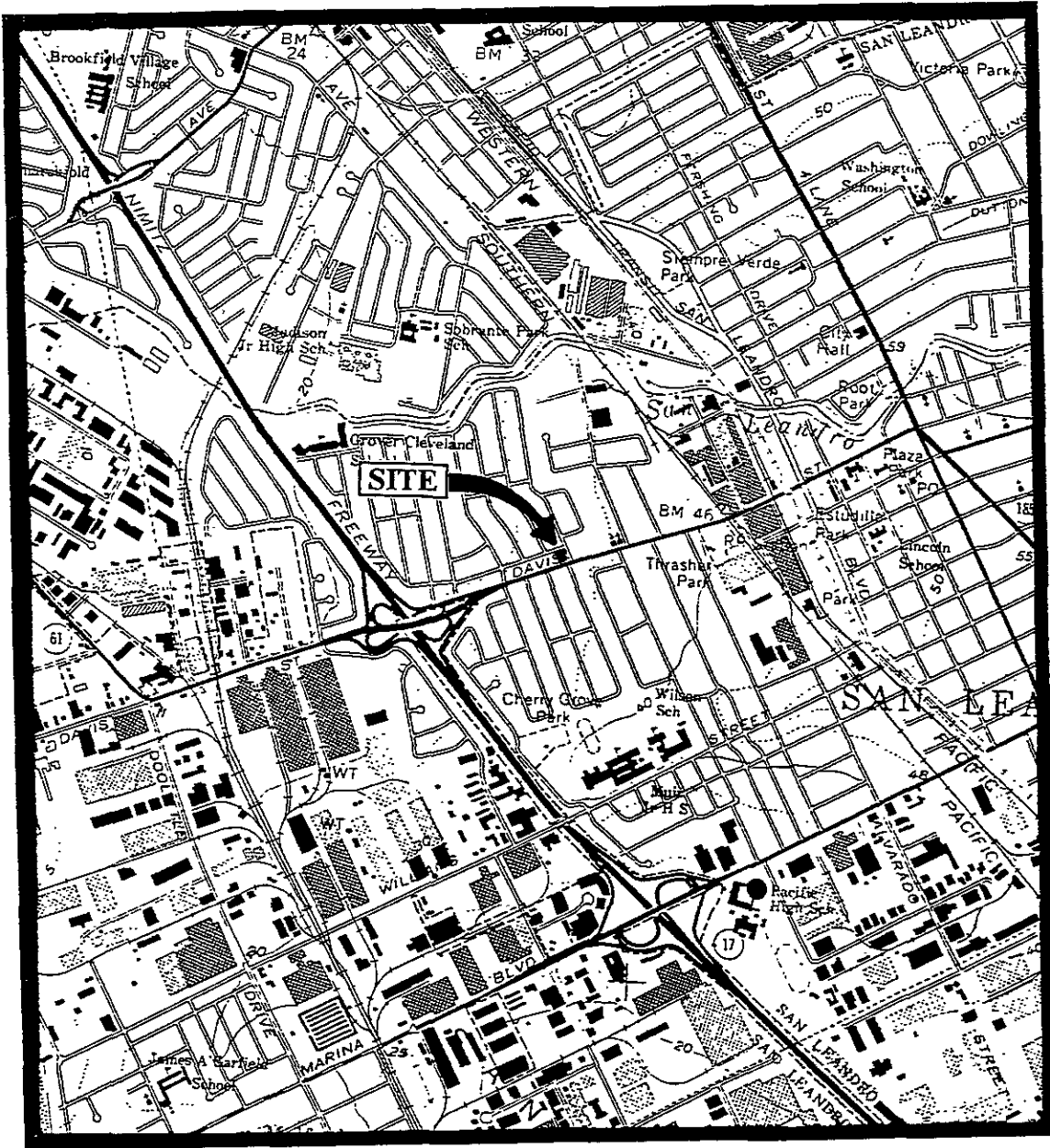
*** Trichloroethene was detected at 0.60 $\mu\text{g/L}$ and 1,2 Dichloroethane was detected at 4.8 $\mu\text{g/L}$.

ND = Non-detectable.

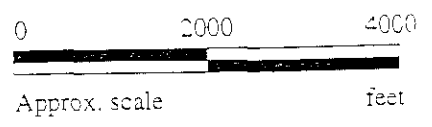
Results are in micrograms per liter ($\mu\text{g/L}$), unless otherwise indicated.

Note: - All EPA method 8010 constituents were non-detectable, except for those shown in this table.

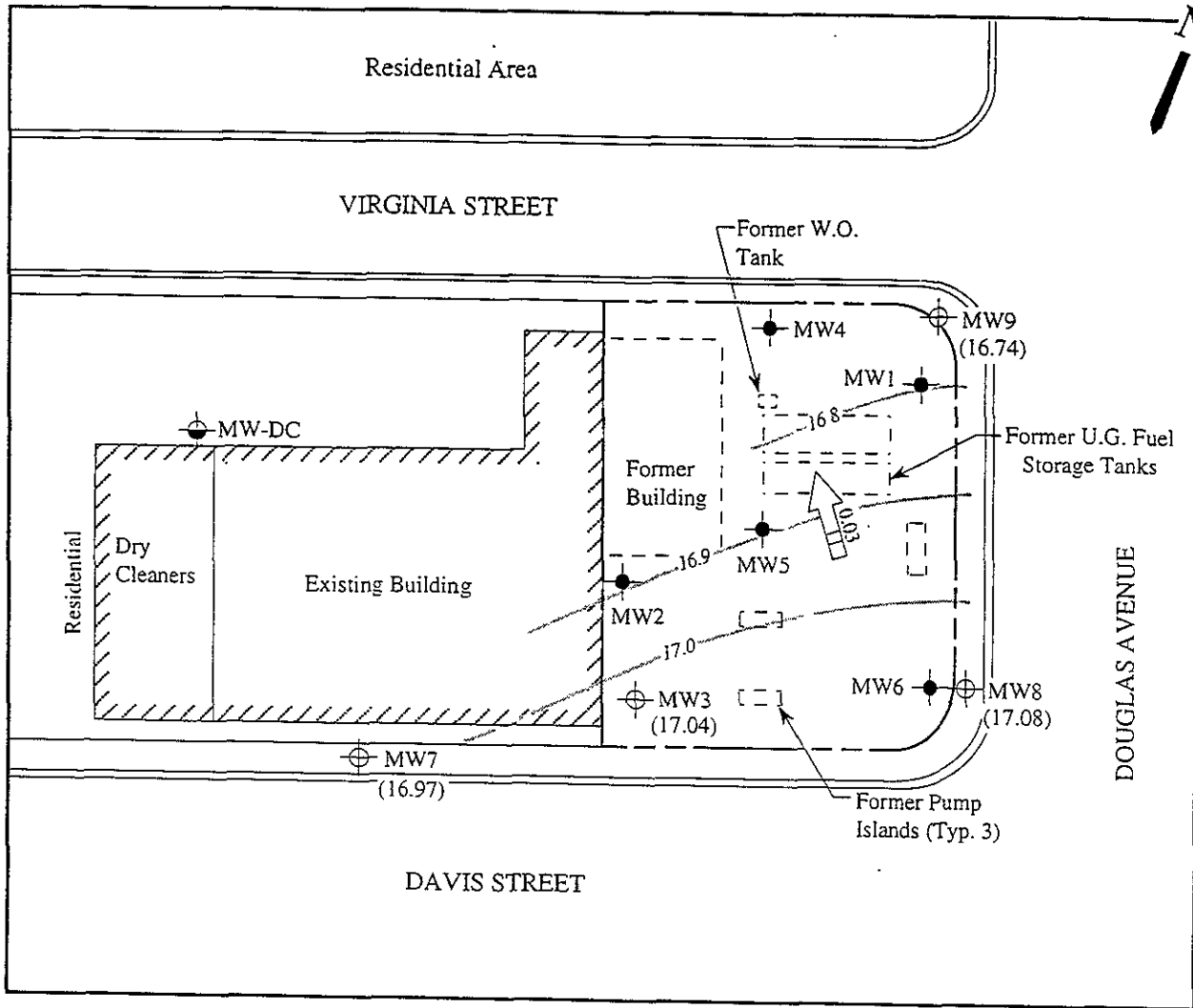
Laboratory analyses data prior to June 9, 1994, were provided by Kaprealian Engineering, Inc.



Base modified from: 7.5 minute U.S.G.S. San Leandro Quadrangle
 (photorevised 1980)

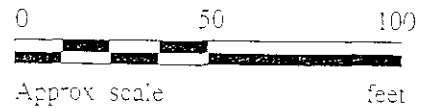


	<p>FORMER UNOCAL S/S #2512 1300 DAVIS STREET SAN LEANDRO, CALIFORNIA</p>	<p>LOCATION MAP</p>
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LEGEND

- ⊕ Monitoring well (by KEI-existing)
- Monitoring well (by KEI-destroyed)
- Monitoring well (by others)
- () Ground water elevation in feet above Mean Sea Level
- Direction of ground water flow with approximate hydraulic gradient
- - - Contours of ground water elevation

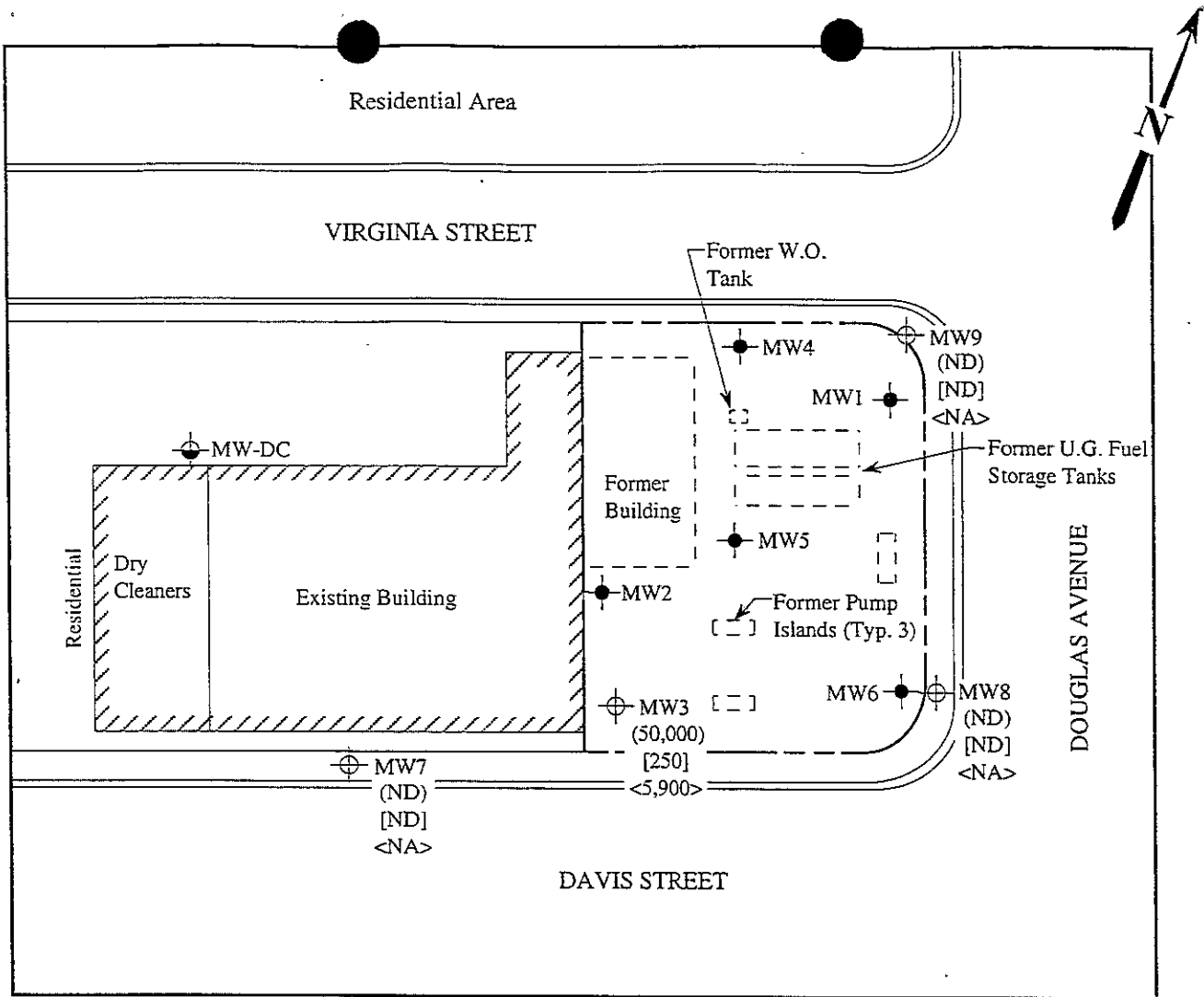


POTENTIOMETRIC SURFACE MAP FOR THE OCTOBER 21, 1995 MONITORING EVENT

MPDS
SERVICES INCORPORATED

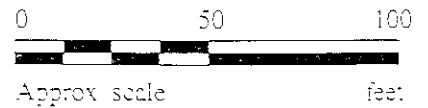
FORMER UNOCAL S/S #2512
1300 DAVIS STREET
SAN LEANDRO, CALIFORNIA

FIGURE
1



LEGEND

- ⊕ Monitoring well (by KEI-existing)
- Monitoring well (by KEI-destroyed)
- ⊙ Monitoring well (by others - existing)
- () Concentration of TPH as gasoline in $\mu\text{g/L}$
- [] Concentration of benzene in $\mu\text{g/L}$
- < > Concentration of TPH as diesel in $\mu\text{g/L}$
- ND Non-detectable NA Not analyzed



PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON OCTOBER 21, 1995



FORMER UNOCAL S/S #2512
1300 DAVIS STREET
SAN LEANDRO, CALIFORNIA

FIGURE
2



**Sequoia
Analytical**

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

Redwood City, CA 94063 (415) 364-9600
Walnut Creek, CA 94596 (510) 988-9600
Sacramento, CA 95834 (916) 921-9600

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

MPDS Services
2401 Stanwell Dr., Ste. 300
Concord CA 94520
Attention: Jarrel Crider

Date: 11/9/95

Sequoia Analytical has potentially identified the presence of MTBE at reportable levels for the following site(s):

Client Project I.D. - **Unocal #2512, San Leandro**

Sequoia Work Order # - **9510449**

Sample Number:

5101945

5101948

Sample Description:

MW-3

MW-9

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager



MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #2512, 1300 Davis St., San Leandro Matrix Descript: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 510-1945	Sampled: Oct 21, 1995 Received: Oct 23, 1995 Reported: Nov 8, 1995
-----------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Sample Number	Sample Description	Purgeable Hydrocarbons $\mu\text{g/L}$	Benzene $\mu\text{g/L}$	Toluene $\mu\text{g/L}$	Ethyl Benzene $\mu\text{g/L}$	Total Xylenes $\mu\text{g/L}$
510-1945	MW-3	50,000	250	4,200	1,700	18,000
510-1946	MW-7	ND	ND	ND	ND	ND
510-1947	MW-8	ND	ND	ND	ND	ND
510-1948	MW-9	ND	ND	ND	ND	ND
510-1949	ES1	ND	ND	ND	ND	ND
510-1950	ES2	ND	ND	ND	ND	ND
510-1951	ES3	ND	ND	ND	ND	ND

Detection Limits:	50	0.50	0.50	0.50	0.50
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Total Purgeable Petroleum Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as ND were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1894

Signature on File

Alan B. Kemp
Project Manager





MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #2512, 1300 Davis St., San Leandro Matrix Descript: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 510-1945	Sampled: Oct 21, 1995 Received: Oct 23, 1995 Reported: Nov 8, 1995
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TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Sample Number	Sample Description	Chromatogram Pattern	DL Mult. Factor	Date Analyzed	Instrument ID	Surrogate Recovery, % QC Limits: 70-130
510-1945	MW-3	Gasoline	400	11/3/95	HP-3	96
510-1946	MW-7	--	1.0	11/3/95	HP-3	109
510-1947	MW-8	--	1.0	11/3/95	HP-3	101
510-1948	MW-9	--	1.0	11/3/95	HP-3	104
510-1949	ES1	--	1.0	11/3/95	HP-3	100
510-1950	ES2	--	1.0	11/3/95	HP-3	103
510-1951	ES3	--	1.0	11/3/95	HP-3	101

SEQUOIA ANALYTICAL, #1894

Signature on File

Alan B. Kemp
Project Manager





MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #2512, 1300 Davis St., San Leandro Sample Matrix: Water Analysis Method: EPA 3510/8015 Mod. First Sample #: 510-1945	Sampled: Oct 21, 1995 Received: Oct 23, 1995 Reported: Nov 8, 1995
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TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 510-1945 MW-3 ^
Extractable Hydrocarbons	50	5900

Chromatogram Pattern: Diesel & Unidentified Hydrocarbons <C15 & >C20

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Extracted:	10/26/95
Date Analyzed:	10/27/95
Instrument Identification:	HP-3A

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

Signature on File
Alan B. Kemp
Project Manager

Please Note
^ This sample appears to contain diesel and non-diesel mixtures. Unidentified Hydrocarbons <C15 are probably gasoline, ">C20" refers to unidentified peaks in the total oil and grease range





MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #2512, 1300 Davis St., San Leandro Sample Descript: Water, MW-3 Analysis Method: EPA 5030/8010 Lab Number: 510-1945	Sampled: Oct 21, 1995 Received: Oct 23, 1995 Analyzed: Nov 2, 1995 Reported: Nov 8, 1995
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HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane.....	1.0	N.D.
Bromoform.....	1.0	N.D.
Bromomethane.....	2.0	N.D.
Carbon tetrachloride.....	1.0	N.D.
Chlorobenzene.....	1.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethylvinyl ether.....	2.0	N.D.
Chloroform.....	1.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	1.0	N.D.
1,3-Dichlorobenzene.....	1.0	N.D.
1,4-Dichlorobenzene.....	1.0	N.D.
1,2-Dichlorobenzene.....	1.0	N.D.
1,1-Dichloroethane.....	1.0	N.D.
1,2-Dichloroethane.....	1.0	N.D.
1,1-Dichloroethene.....	1.0	N.D.
cis-1,2-Dichloroethene.....	1.0	N.D.
trans-1,2-Dichloroethene.....	1.0	N.D.
1,2-Dichloropropane.....	1.0	N.D.
cis-1,3-Dichloropropene.....	1.0	N.D.
trans-1,3-Dichloropropene.....	1.0	N.D.
Methylene chloride.....	10	N.D.
1,1,2,2-Tetrachloroethane.....	1.0	N.D.
Tetrachloroethene.....	1.0	N.D.
1,1,1-Trichloroethane.....	1.0	N.D.
1,1,2-Trichloroethane.....	1.0	N.D.
Trichloroethene.....	1.0	N.D.
Trichlorofluoromethane.....	1.0	N.D.
Vinyl chloride.....	2.0	N.D.

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

SEQUOIA ANALYTICAL, #1271

Signature of File

Alan B. [Signature]
Project Manager





MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #2512, 1300 Davis St., San Leandro Sample Descript: Water, MW-7 Analysis Method: EPA 5030/8010 Lab Number: 510-1946	Sampled: Oct 21, 1995 Received: Oct 23, 1995 Analyzed: Nov 2, 1995 Reported: Nov 8, 1995
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HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane.....	0.50	N.D.
Bromoform.....	0.50	N.D.
Bromomethane.....	1.0	N.D.
Carbon tetrachloride.....	0.50	N.D.
Chlorobenzene.....	0.50	N.D.
Chloroethane.....	1.0	N.D.
2-Chloroethylvinyl ether.....	1.0	N.D.
Chloroform.....	0.50	N.D.
Chloromethane.....	1.0	N.D.
Dibromochloromethane.....	0.50	N.D.
1,3-Dichlorobenzene.....	0.50	N.D.
1,4-Dichlorobenzene.....	0.50	N.D.
1,2-Dichlorobenzene.....	0.50	N.D.
1,1-Dichloroethane.....	0.50	N.D.
1,2-Dichloroethane.....	0.50	N.D.
1,1-Dichloroethene.....	0.50	N.D.
cis-1,2-Dichloroethene.....	0.50	N.D.
trans-1,2-Dichloroethene.....	0.50	N.D.
1,2-Dichloropropane.....	0.50	N.D.
cis-1,3-Dichloropropene.....	0.50	N.D.
trans-1,3-Dichloropropene.....	0.50	N.D.
Methylene chloride.....	5.0	N.D.
1,1,2,2-Tetrachloroethane.....	0.50	N.D.
Tetrachloroethene.....	0.50	N.D.
1,1,1-Trichloroethane.....	0.50	N.D.
1,1,2-Trichloroethane.....	0.50	N.D.
Trichloroethene.....	0.50	N.D.
Trichlorofluoromethane.....	0.50	N.D.
Vinyl chloride.....	1.0	N.D.

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

SEQUOIA ANALYTICAL #1271

Signature on File

Alex B. Kemp
Project Manager



MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Unocal #2512, 1300 Davis St., San Leandro
Sample Descript: Water, MW-8
Analysis Method: EPA 5030/8010
Lab Number: 510-1947

Sampled: Oct 21, 1995
Received: Oct 23, 1995
Analyzed: Nov 2, 1995
Reported: Nov 8, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane.....	0.50	N.D.
Bromoform.....	0.50	N.D.
Bromomethane.....	1.0	N.D.
Carbon tetrachloride.....	0.50	N.D.
Chlorobenzene.....	0.50	N.D.
Chloroethane.....	1.0	N.D.
2-Chloroethylvinyl ether.....	1.0	N.D.
Chloroform.....	0.50	N.D.
Chloromethane.....	1.0	N.D.
Dibromochloromethane.....	0.50	N.D.
1,3-Dichlorobenzene.....	0.50	N.D.
1,4-Dichlorobenzene.....	0.50	N.D.
1,2-Dichlorobenzene.....	0.50	N.D.
1,1-Dichloroethane.....	0.50	N.D.
1,2-Dichloroethane.....	0.50	N.D.
1,1-Dichloroethene.....	0.50	N.D.
cis-1,2-Dichloroethene.....	0.50	N.D.
trans-1,2-Dichloroethene.....	0.50	N.D.
1,2-Dichloropropane.....	0.50	N.D.
cis-1,3-Dichloropropene.....	0.50	N.D.
trans-1,3-Dichloropropene.....	0.50	N.D.
Methylene chloride.....	5.0	N.D.
1,1,2,2-Tetrachloroethane.....	0.50	N.D.
Tetrachloroethene.....	0.50	N.D.
1,1,1-Trichloroethane.....	0.50	N.D.
1,1,2-Trichloroethane.....	0.50	N.D.
Trichloroethene.....	0.50	N.D.
Trichlorofluoromethane.....	0.50	N.D.
Vinyl chloride.....	1.0	N.D.

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

SEQUOIA ANALYTICAL, #1271

Signature of File

Alan B. Kemp
Project Manager





MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #2512, 1300 Davis St., San Leandro Sample Descript: Water, MW-9 Analysis Method: EPA 5030/8010 Lab Number: 510-1948	Sampled: Oct 21, 1995 Received: Oct 23, 1995 Analyzed: Nov 2, 1995 Reported: Nov 8, 1995
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HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane.....	0.50	N.D.
Bromoform.....	0.50	N.D.
Bromomethane.....	1.0	N.D.
Carbon tetrachloride.....	0.50	N.D.
Chlorobenzene.....	0.50	N.D.
Chloroethane.....	1.0	N.D.
2-Chloroethylvinyl ether.....	1.0	N.D.
Chloroform.....	0.50	N.D.
Chloromethane.....	1.0	N.D.
Dibromochloromethane.....	0.50	N.D.
1,3-Dichlorobenzene.....	0.50	N.D.
1,4-Dichlorobenzene.....	0.50	N.D.
1,2-Dichlorobenzene.....	0.50	N.D.
1,1-Dichloroethane.....	0.50	1.0
1,2-Dichloroethane.....	0.50	N.D.
1,1-Dichloroethene.....	0.50	N.D.
cis-1,2-Dichloroethene.....	0.50	N.D.
trans-1,2-Dichloroethene.....	0.50	N.D.
1,2-Dichloropropane.....	0.50	N.D.
cis-1,3-Dichloropropene.....	0.50	N.D.
trans-1,3-Dichloropropene.....	0.50	N.D.
Methylene chloride.....	5.0	N.D.
1,1,2,2-Tetrachloroethane.....	0.50	N.D.
Tetrachloroethene.....	0.50	17
1,1,1-Trichloroethane.....	0.50	N.D.
1,1,2-Trichloroethane.....	0.50	N.D.
Trichloroethene.....	0.50	N.D.
Trichlorofluoromethane.....	0.50	N.D.
Vinyl chloride.....	1.0	N.D.

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

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

M P D S Services, Inc.

2401 Stanwell Drive, Suite 400, Concord, CA 94520
 Tel: (510) 602 5120 Fax: (510) 689-1918

9510449

CHAIN OF CUSTODY

SAMPLER (JOE) HOVSIA AJEMIAN			UNOCAL S/S # <u>2512</u> CITY: <u>San Leandro</u>					ANALYSES REQUESTED							TURN AROUND TIME: Regular			
WITNESSING AGENCY			ADDRESS: <u>1300 Davis St.</u>					TPH-GAS BTEX	TPH-DIESEL	TOG	8010							
SAMPLE ID NO	DATE	TIME	WATER	GRAB	COMP	NO OF CONT.	SAMPLING LOCATION											REMARKS
ES1	10.21.95					1 VOA		✓										5101949
ES2	1					"		✓										5101950
ES3	1					"		✓										5101951

RELINQUISHED BY			DATE/TIME			RECEIVED BY:			THE FOLLOWING <u>MUST</u> BE COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:								
(SIGNATURE) <i>Joe Lem...</i>			10-23-95 1:55 p.m.			(SIGNATURE) <i>[Signature]</i> 10-23-95			1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE?								
(SIGNATURE) <i>[Signature]</i>			10-24 1:32			(SIGNATURE) <i>[Signature]</i> 10-24			2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED?								
(SIGNATURE) <i>[Signature]</i>			10-24			(SIGNATURE) <i>Kevin Molander</i> 10-24-95			3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE?								
(SIGNATURE) <i>[Signature]</i>			10-24			(SIGNATURE) <i>[Signature]</i> 15:15			4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED?								
(SIGNATURE)						(SIGNATURE)			SIGNATURE:			TITLE:			DATE:		

M P D S Services, Inc.

2401 Stanwell Drive, Suite 400, Concord, CA 94520
 Tel. (610) 602-6120 Fax: (510) 689-1918

~~SECRET~~

9510449

CHAIN OF CUSTODY

SAMPLER (JOE) HOVSIA AJEMIAN			UNOCAL S/S # <u>2512</u> CITY: <u>San Leandro</u>					ANALYSES REQUESTED							TURN AROUND TIME:	
WITNESSING AGENCY			ADDRESS: <u>1300 Davis St.</u>					TPH-GAS BTEX	TPH-DIESEL	TOG	8010					REMARKS
SAMPLE ID NO	DATE	TIME	WATER	SOIL	COMP	NO. OF CONT.	SAMPLING LOCATION									
MW-3	10.21.95	3:55 P.M.	✓	✓		4 (VOA) 1 Amber	Wells	✓	✓		✓				5101945 A-E	
MW-7	"	2:18 P.M.	✓	✓		4 (VOA)	"	✓			✓				5101946 A-D	
MW-8	"	2:00 P.M.	✓	✓		"	"	✓			✓				5101947	
MW-9	"	3:30 P.M.	✓	✓		"	"	✓			✓				5101948	

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	THE FOLLOWING <u>MUST BE</u> COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:
(SIGNATURE) <i>Joe Ajemian</i>	10-23-95 1:54 P.M.	(SIGNATURE) <i>[Signature]</i> 15:05 10-23-95	1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE?
(SIGNATURE) <i>[Signature]</i>	10-24-95 1:54 P.M.	(SIGNATURE) <i>[Signature]</i>	2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED?
(SIGNATURE) <i>[Signature]</i>	10-24-95	(SIGNATURE) <i>[Signature]</i>	3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE?
(SIGNATURE) <i>[Signature]</i>	10-24-95	(SIGNATURE) <i>Kevin Morales</i> 10/24/95 15:15	4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED?
		SIGNATURE: _____	TITLE: _____
			DATE: _____



MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Unocal #2512, 1300 Davis St., San Leandro
Matrix: Liquid

QC Sample Group: 5101945-951

Reported: Nov 8, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-benzene	Diesel
Method:	EPA 8010	EPA 8010	EPA 8010	EPA 8015
Analyst:	I.Z.	I.Z.	I.Z.	S. Le

MS/MSD	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-benzene	Diesel
Batch#:	5101946	5101946	5101946	BLK102695
Date Prepared:	11/2/95	11/2/95	11/2/95	10/26/95
Date Analyzed:	11/2/95	11/2/95	11/2/95	10/27/95
Instrument I.D.#:	HP-7	HP-7	HP-7	GCHP-3B
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	300 µg/L
Matrix Spike % Recovery:	81	141	80	103
Matrix Spike Duplicate % Recovery:	87	100	82	90
Relative % Difference:	7.1	34	2.5	14

LCS Batch#:	LCS110295	LCS110295	LCS110295	LCS102695
Date Prepared:	11/2/95	11/2/95	11/2/95	10/26/95
Date Analyzed:	11/2/95	11/2/95	11/2/95	10/27/95
Instrument I.D.#:	HP-7	HP-7	HP-7	GCHP-3B
LCS % Recovery:	84	90	77	90

% Recovery Control Limits:	LCS110295	LCS110295	LCS110295	LCS102695
	28-167	35-146	36-150	38-122

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

Signature of File
Alan B. Kemp
Project Manager





MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Unocal #2512, 1300 Davis St., San Leandro
Matrix: Liquid

QC Sample Group: 5101945-951

Reported: Nov 8, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	Z.T.	Z.T.	Z.T.	Z.T.

MS/MSD Batch#:	5110092	5110092	5110092	5110092
Date Prepared:	11/3/95	11/3/95	11/3/95	11/3/95
Date Analyzed:	11/3/95	11/3/95	11/3/95	11/3/95
Instrument I.D.#:	HP-3	HP-3	HP-3	HP-3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	79	81	79	82
Matrix Spike Duplicate % Recovery:	85	86	85	91
Relative % Difference:	7.3	6.0	7.3	10

LCS Batch#:	LCS110395	LCS110395	LCS110395	LCS110395
Date Prepared:	11/3/95	11/3/95	11/3/95	11/3/95
Date Analyzed:	11/3/95	11/3/95	11/3/95	11/3/95
Instrument I.D.#:	HP-3	HP-3	HP-3	HP-3
LCS % Recovery:	88	91	89	95

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

The LCS is a control sample of known intererent 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, #1894

Signature of File

Alan B. Kemp
Project Manager

