

■ MONITORING
■ PURGING
■ DISPOSING
■ SAMPLING

MPDS

SERVICES, INCORPORATED

March 18, 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 most recent data report 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-UN2512-04
February 14, 1996

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 January 24, 1996. Prior to sampling, the wells were each purged of between 10.5 and 14 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. Field blank, Trip blank and Equipment 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 Mr. Joel G. Greger at (510) 602-5120.

Sincerely,

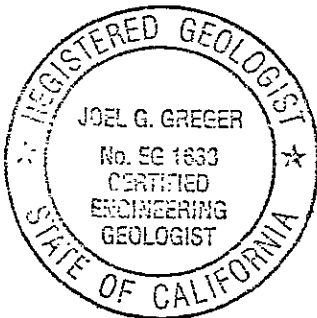
MPDS Services, Inc.



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>
---------------	--------------------------------------	-------------------------------	---------------------------------	---------------------------------	--------------	-------------------------------

(Monitored and Sampled on January 24, 1996)

MW3	18.87	13.15	33.65	0	Yes	14 (100)
MW7	19.21	12.50	29.90	0	No	12
MW8	18.22	14.51	29.95	0	No	10.5
MW9	18.05	14.28	30.00	0	No	11

(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 Casing 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 MUD 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

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG (mg/L)
1/24/96	MW3▼	5,300*	100,000	950	3,300	2,500	16,000	--
	MW7	--	ND	ND	ND	ND	ND	--
	MW8	--	ND	ND	ND	ND	ND	--
	MW9▼	--	ND	ND	ND	ND	ND	--
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	160,000	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

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	TOG (mg/L)
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
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

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
 WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG (mg/L)
8/09/90	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
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	--

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

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.
- ▼ Sequoia Analytical Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 $\mu\text{g/L}$ 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	
1/24/96	MW3	ND	ND	ND	ND	ND	ND	
	MW7	1.2	ND	ND	ND	ND	ND	
	MW8	0.74	ND	ND	ND	ND	ND	
	MW9▼	17	2.2	ND	ND	ND	ND	
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-Dichlo- roethene	1,2-Dichloro- benzene
8/15/91	MW2	ND	ND	ND	ND	ND	ND
	MW3	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	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

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						
	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

▼ Trichloroethene was detected at 0.64 µg/L.

* Trichloroethene was detected at 0.55 µg/L.

** Trichloroethene was detected at 0.70 µg/L.

*** Trichloroethene was detected at 0.60 µg/L and 1,2 Dichloroethane was detected at 4.8 µg/L.

ND = Non-detectable.

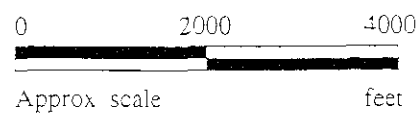
Results are in micrograms per liter (µg/L), unless otherwise indicated.


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

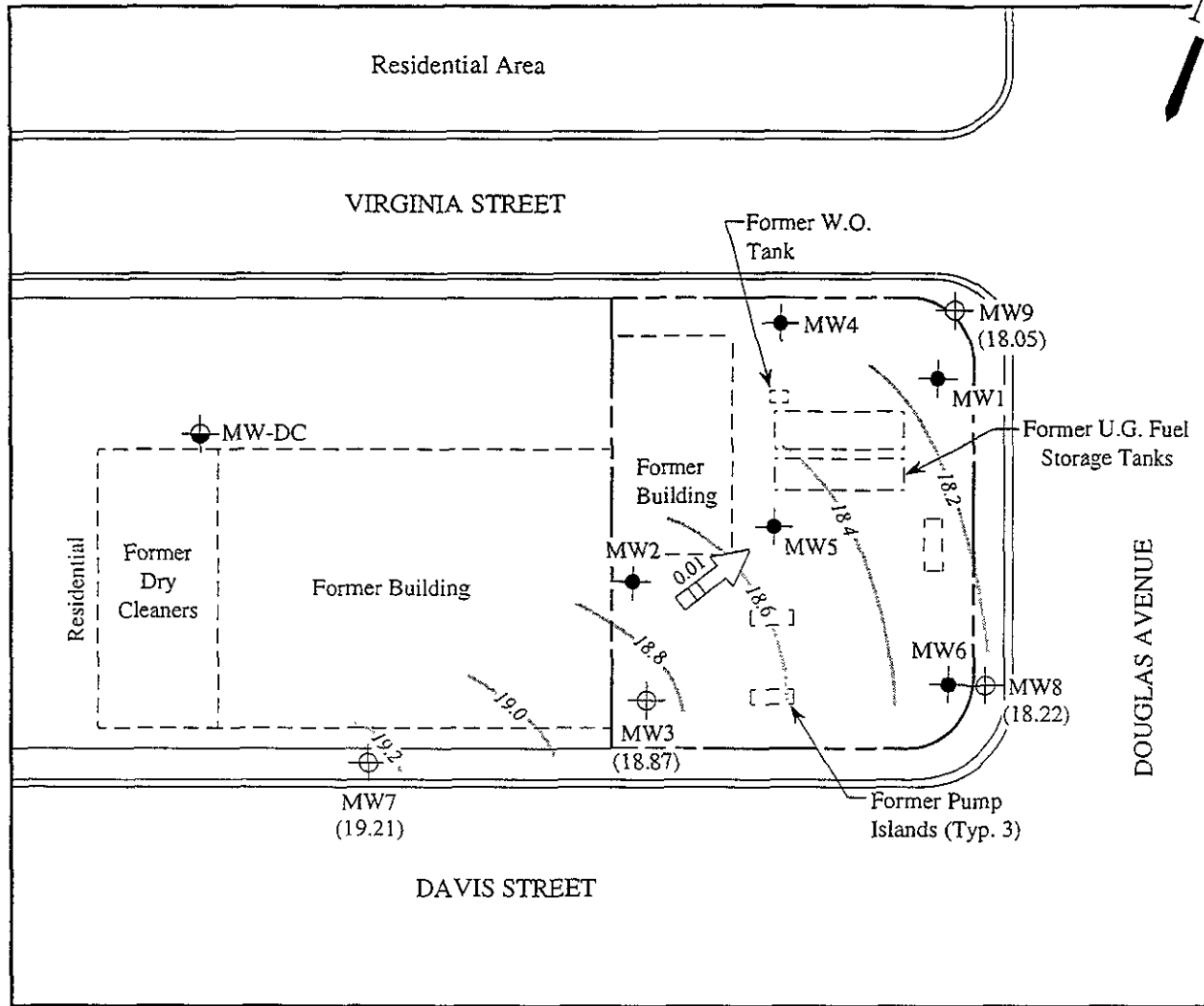
- Laboratory analyses data prior to June 9, 1994, were provided by Kaprealian Engineering, Inc.



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

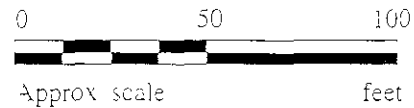


	FORMER UNOCAL S/S #2512 1300 DAVIS STREET SAN LEANDRO, CALIFORNIA	LOCATION MAP
--	---	-----------------

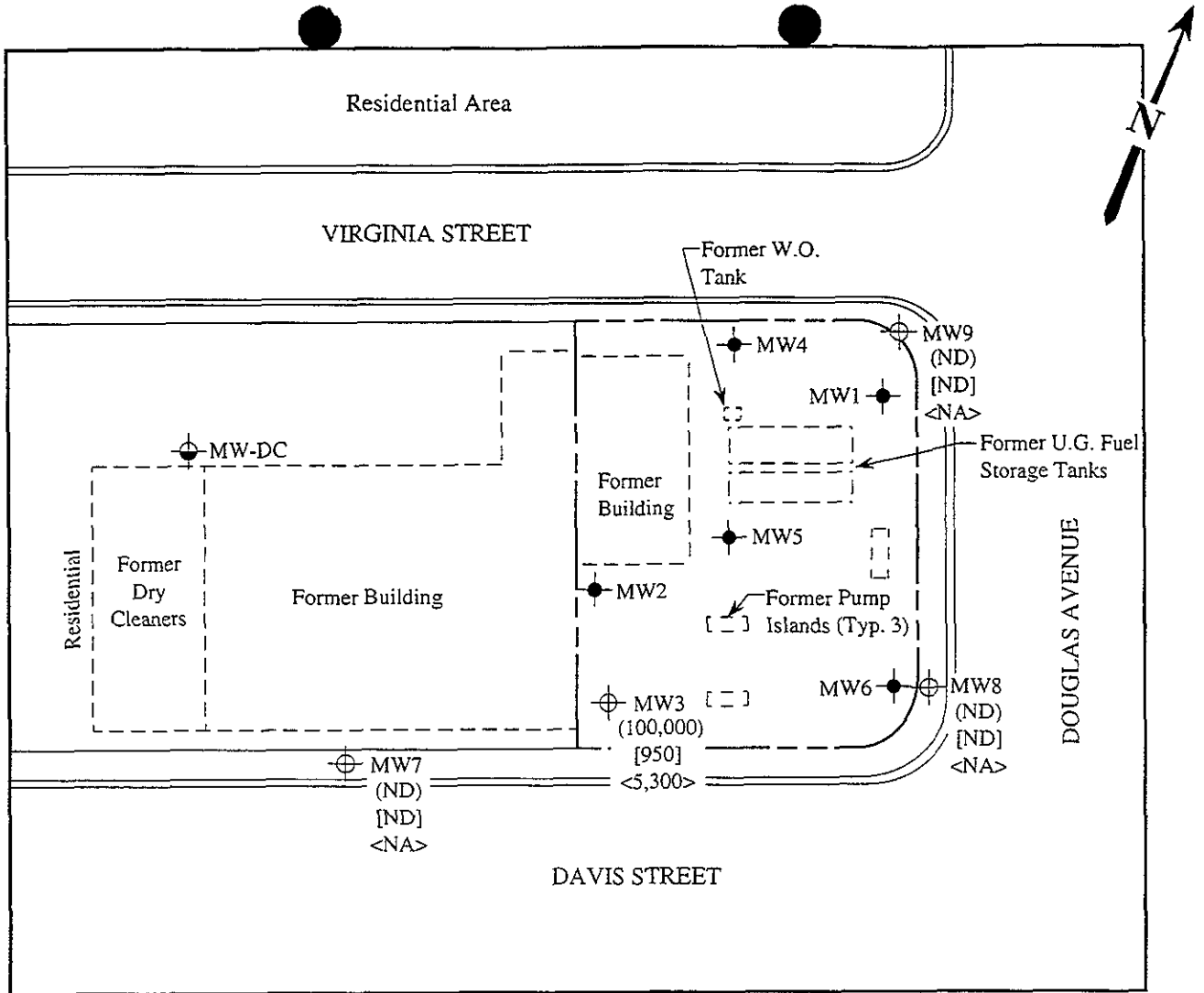


LEGEND

- ⊕ 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

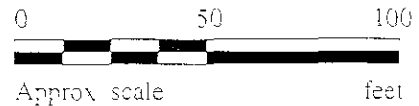


POTENTIOMETRIC SURFACE MAP FOR THE JANUARY 24, 1996 MONITORING EVENT



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 JANUARY 24, 1996



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

FIGURE
2



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 #: 601-1459

Sampled: Jan 24, 1996
Received: Jan 24, 1996
Reported: Feb 7, 1996

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Sample Number	Sample Description	Purgeable Hydrocarbons µg/L	Benzene µg/L	Toluene µg/L	Ethyl Benzene µg/L	Total Xylenes µg/L
601-1459	MW-3	100,000	950	3,300	2,500	16,000
601-1460	MW-7	ND	ND	ND	ND	ND
601-1461	MW-8	ND	ND	ND	ND	ND
601-1462	MW-9	ND	ND	ND	ND	ND
601-1463	ES1	ND	ND	ND	ND	ND
601-1464	ES2	ND	ND	ND	ND	ND
601-1465	ES3	ND	ND	ND	ND	ND

Detection Limits:	50	0.50	0.50	0.50	0.50
--------------------------	----	------	------	------	------

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, #1271

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 #: 601-1459

Sampled: Jan 24, 1996
Received: Jan 24, 1996
Reported: Feb 7, 1996

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
601-1459	MW-3	Gasoline	200	2/2/96	HP-9	77
601-1460	MW-7	--	1.0	2/1/96	HP-5	89
601-1461	MW-8	--	1.0	2/2/96	HP-9	83
601-1462	MW-9	--	1.0	2/2/96	HP-9	88
601-1463	ES1	--	1.0	2/1/96	HP-5	89
601-1464	ES2	--	1.0	2/2/96	HP-9	82
601-1465	ES3	--	1.0	2/2/96	HP-9	85

SEQUOIA ANALYTICAL. #1271

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 #: 601-1459

Sampled: Jan 24, 1996
Received: Jan 24, 1996
Reported: Feb 7, 1996

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 601-1459 MW-3^
Extractable Hydrocarbons	50	5300

Chromatogram Pattern: Diesel & Unidentified Hydrocarbons <C15 >C16

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Extracted:	1/25/96
Date Analyzed:	1/26/96
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

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 >C16 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: 601-1459

Sampled: Jan 24, 1996
Received: Jan 24, 1996
Analyzed: Feb 2, 1996
Reported: Feb 7, 1996

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
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.
1,3-Dichlorobenzene.....	5.0	N.D.
1,4-Dichlorobenzene.....	5.0	N.D.
1,2-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.
1,1,1,2-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. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL, #1271

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 Descript: Water, MW-7
Analysis Method: EPA 5030/8010
Lab Number: 601-1460

Sampled: Jan 24, 1996
Received: Jan 24, 1996
Analyzed: Feb 2, 1996
Reported: Feb 7, 1996

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	1.2
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





**Sequoia
Analytical**

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

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

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

Client Project ID: Unocal #2512, 1300 Davis St., San Leandro
Sample Descript: Water, MW-8
Analysis Method: EPA 5030/8010
Lab Number: 601-1461

Sampled: Jan 24, 1996
Received: Jan 24, 1996
Analyzed: Feb 2, 1996
Reported: Feb 7, 1996

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	0.74
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



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: 601-1462

Sampled: Jan 24, 1996
Received: Jan 24, 1996
Analyzed: Feb 2, 1996
Reported: Feb 7, 1996

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	2.2
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	0.64
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





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: 6011459-465

Reported: Feb 7, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill	J. Dinsay

MS/MSD Batch#:	6011413	6011413	6011413	6011413	BLK012596
Date Prepared:	2/2/96	2/2/96	2/2/96	2/2/96	1/25/96
Date Analyzed:	2/2/96	2/2/96	2/2/96	2/2/96	1/26/96
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9	HP-3B
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Matrix Spike % Recovery:	100	95	90	95	83
Matrix Spike Duplicate % Recovery:	95	90	85	88	77
Relative % Difference:	5.1	5.4	5.7	7.3	8.3

LCS Batch#:	9LCS020296	9LCS020296	9LCS020296	9LCS020296	LCS012596
Date Prepared:	2/2/96	2/2/96	2/2/96	2/2/96	1/25/96
Date Analyzed:	2/2/96	2/2/96	2/2/96	2/2/96	1/26/96
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9	HP-3B
LCS % Recovery:	105	100	95	102	80

% Recovery Control Limits:	71-133	72-128	72-130	71-120	50-150
-----------------------------------	--------	--------	--------	--------	--------

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 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: Liquid

QC Sample Group: 6011459-465

Reported: Feb 7, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes
Batch#:	6011747	6011747	6011747	6011747
Date Prepared:	2/1/96	2/1/96	2/1/96	2/1/96
Date Analyzed:	2/1/96	2/1/96	2/1/96	2/1/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	95	90	95	95
Matrix Spike Duplicate % Recovery:	90	90	90	92
Relative % Difference:	5.4	0.0	5.4	3.6

LCS Batch#:	3LCS020196	3LCS020196	3LCS020196	3LCS020196
Date Prepared:	2/1/96	2/1/96	2/1/96	2/1/96
Date Analyzed:	2/1/96	2/1/96	2/1/96	2/1/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	90	90	90	90

% Recovery Control Limits:	71-133	72-128	72-130	71-120
----------------------------	--------	--------	--------	--------

Please Note
The LCS is a control sample of known, interferences 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 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: Solid

QC Sample Group: 6011459-465

Reported: Feb 7, 1996

QUALITY CONTROL DATA REPORT

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

MS/MSD Batch#:	6011318	6011318	6011318
Date Prepared:	2/2/96	2/2/96	2/2/96
Date Analyzed:	2/2/96	2/2/96	2/2/96
Instrument I.D.#:	HP-7	HP-7	HP-7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L
Matrix Spike % Recovery:	113	104	86
Matrix Spike Duplicate % Recovery:	101	105	87
Relative % Difference:	11	1.0	1.2

LCS Batch#:	LCS020296	LCS020296	LCS020296
Date Prepared:	2/2/96	2/2/96	2/2/96
Date Analyzed:	2/2/96	2/2/96	2/2/96
Instrument I.D.#:	HP-7	HP-7	HP-7
LCS % Recovery:	108	99	87

% Recovery Control Limits:	28-167	35-146	38-150
----------------------------	--------	--------	--------

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 on File

Alan B Kemp
Project Manager





Sequoia
Analytical

80 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

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

Date: 2/8/96

Sequoia Analytical has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 µg/L in the following site(s):

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

Sequoia Work Order # - **9601400**

Sample Number:

6011459

6011462

Sample Description:

MW-3



MW-9

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager

CHAIN OF CUSTODY

9601400

SAMPLER			UNOCAL					ANALYSES REQUESTED							TURN AROUND TIME:		
STEVE BALIAN			SIS # <u>2512</u> CITY: <u>SAN LEANDRO</u>					TPH-GAS BTEX	TPH- DIESEL	TOG	8010						REGULAR
WITNESSING AGENCY			ADDRESS: <u>1300 DAVIS STREET</u>														REMARKS
SAMPLE ID NO	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT	SAMPLING LOCATION										
MW-3	1-24-96	15:15	X	X		5	WELL	X	X		X					6011459 AE	
MW-7	"	13:35	X	X		4	"	X			X					6011460 AD	
MW-8	"	14:10	X	X		4	"	X			X					6011461	
MW-9	"	14:45	X	X		4	"	X			X					6011462	
RELINQUISHED BY:		DATE/TIME	RECEIVED BY:			DATE/TIME	THE FOLLOWING <u>MUST BE</u> COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:										
STEVE BALIAN		16:15 1-24-96				1/24 1615	1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? <u>Y</u>										
(SIGNATURE)			(SIGNATURE)				2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? <u>Y</u>										
(SIGNATURE)			(SIGNATURE)				3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? <u>N</u>										
(SIGNATURE)			(SIGNATURE)				4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? <u>Y</u>										
(SIGNATURE)			(SIGNATURE)				SIGNATURE:  TITLE: DATE: 1/24										

Note: All water containers to be sampled for TPHG/BTEX, 8010 & 8240 are preserved with HCL. All water containers to be sampled for Lead or Metals are preserved with HNO3. All other containers are

