

MONITORING
PURGING
DISPOSING
SAMPLING

MPDS

SERVICES, INCORPORATED

ENVIRONMENTAL
PROTECTION
96 MAY 16 PM 12:59

STD
1747

May 15, 1996

Mr. Scott Seery
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94502

RE: Unocal Service Station #5430
1935 Washington Avenue
San Leandro, California

Per the request of the Unocal Corporation Project Manager, Mr. David J. Camille, 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) 277-2335.

Sincerely,

MPDS Services, Inc.



Jarrel F. Crider

/dr

Enclosure

cc: Mr. David J. Camille



PACIFIC
ENVIRONMENTAL
GROUP, INC.

ENVIRONMENTAL
PROTECTION
96 APR 23 PM 1:52

STD
1747

April 19, 1996
Project 310-038.1D

Mr. John Jang
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

Re: Unocal Corporation
Quarterly Summary Report
First Quarter 1996

Dear Mr. Jang:

As directed by Mr. Dave Camille of Unocal Corporation, Pacific Environmental Group, Inc. is forwarding the quarterly summary report for the following location:

Service Station

Location

5430

1935 Washington Avenue, San Leandro

If you have questions or comments, please do not hesitate to contact our office at (408) 441-7500.

Sincerely,

Pacific Environmental Group, Inc.

Joseph Muzzio
Project Geologist

Enclosure

cc: Mr. Dave Camille, Unocal Corporation
Mr. Michael Bakaldin, San Leandro Fire Department
✓ Mr. Dale Klettke, Alameda County Environmental Health Care Services

Quarterly Summary Report First Quarter 1996

Unocal Service Station 5430
1935 Washington Avenue at Castro Street
San Leandro, California

County STID #: 1747
County: Alameda

BACKGROUND

Unocal files suggest that a product line leak occurred in June 1976, and that one of the original underground gasoline storage tanks failed a precision test in October 1981. In December 1981, the two original steel gasoline storage tanks were replaced with two fiberglass gasoline storage tanks. Groundwater Monitoring Wells U-1 through U-3 and Borings U-A through U-E were installed in August 1993. Perimeter Wells U-4 through U-7 were installed in June 1995 to further delineate the extent of hydrocarbon impacted groundwater. Monthly groundwater monitoring and quarterly groundwater sampling of the wells was initiated in December 1993.

RECENT QUARTER ACTIVITIES

Quarterly groundwater monitoring and sampling were performed in March 1996. Alameda County Health Services submitted a letter requesting additional site assessment to further delineate hydrocarbon impacted groundwater in the southern portion of the site. A work plan was written and submitted by Unocal in January 1996. Unocal performed a file review to investigate former usage of the site located south of the Unocal site. The file review found that the adjacent site was formerly a service station which included 4 USTs. Unocal proceeded with access agreement negotiations to install borings on properties south and west of the facility.

NEXT QUARTER ACTIVITIES

Second quarter 1996 groundwater monitoring and sampling will be performed. Unocal will implement offsite investigations upon receipt of signed access agreements from the adjacent property owners.

CHARACTERIZATION/REMEDIAL STATUS

Soil contamination delineated? None encountered.
Dissolved groundwater delineated? No.
Free product delineated? Not applicable.
Amount of groundwater contaminant recovered this quarter? None
Soil remediation in progress? Not applicable.
Anticipated start date? Not applicable.
Anticipated completion date? Not applicable.

Dissolved/free product remediation in progress? No.
Anticipated start? Unknown.
Anticipated completion? Unknown.

CONSULTANT: Pacific Environmental Group, Inc.

MPDS-UN5430-10
April 16, 1996

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

Attention: Mr. David J. Camille

RE: Quarterly Data Report
Unocal Service Station #5430
1935 Washington Avenue
San Leandro, California

Dear Mr. Camille:

This data report presents the results of the most recent quarter of 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 quarter 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 March 6, 1996. Prior to sampling, the wells were each purged of between 6 and 10 gallons of water. During purging operations, the field parameters pH, temperature, and electrical conductivity were recorded and are presented in Table 2. Once the field parameters were observed to stabilize, and where possible, a minimum of approximately four casing volumes had been removed from each well, 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 3 and 4. 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 Mr. Scott Seery of the Alameda County Environmental Health Care Services, Mr. Michael Bakaldin of the San Leandro Fire Department.

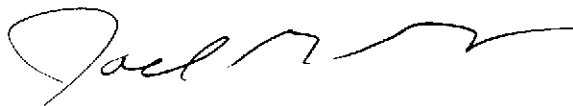
If you have any questions regarding this report, please do not hesitate to call Mr. Joel G. Greger at (510) 602-5120.

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 through 4
Location Map
Figures 1 & 2
Laboratory Analyses
Chain of Custody documentation

cc: Mr. Joe Muzzio, Pacific Environmental Group, Inc.

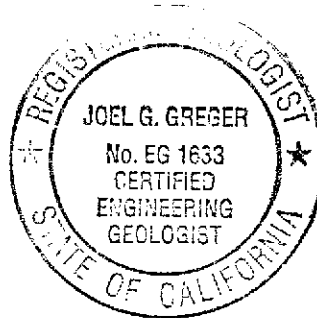


TABLE 1

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 March 6, 1996)						
U-1	29.56	26.53	39.63	0	No	6
U-2	30.12	25.17	39.30	0	No	10
U-3	29.98	25.25	38.57	0	No	9.5
U-4	30.09	25.30	39.10	0	No	9.5
U-5	30.15	24.03	38.65	0	No	10
U-6	29.65	25.71	40.02	0	No	10
U-7	29.95	25.10	37.82	0	No	9
(Monitored and Sampled on December 14, 1995)						
U-1	23.89	32.20	39.66	0	No	5.5
U-2	24.19	31.10	39.40	0	No	6
U-3	24.21	31.02	38.61	0	No	5.5
U-4	24.16	31.23	39.20	0	No	6
U-5	24.24	29.94	38.74	0	No	6
U-6	24.04	31.32	40.09	0	No	6
U-7	24.30	30.75	37.90	0	No	5
(Monitored and Sampled on September 18, 1995)						
U-1	25.44	30.65	39.66	0	No	6.5
U-2	25.64	29.65	39.40	0	No	7
U-3	25.68	29.55	38.61	0	No	6.5
U-4	25.60	29.79	39.20	0	No	6.5
U-5	25.63	28.55	38.76	0	No	7.5
U-6	25.41	29.95	40.12	0	No	7
U-7	25.84	29.21	37.91	0	No	6

TABLE 2

RECORD OF THE TEMPERATURE, CONDUCTIVITY, AND pH VALUES
 IN THE MONITORING WELLS DURING PURGING AND PRIOR TO SAMPLING

(Measured on March 6, 1996)

Well #	Gallons per Casing Volume	Time	Gallons Purged	Casing Volumes Purged	Temper- ature (°F)	Conductivity ([μmhos/cm] x1000)	pH
U-1	2.23	11:00	0	0	72.1	1.18	7.95
			2.5	1.12	73.5	1.20	7.43
		11:05	5	2.24	74.0	1.17	7.35
			6	2.69	68.2	1.22	7.47
			WELL DEWATERED				
U-2	2.40	08:15	0	0	69.8	0.22	8.15
			2	0.83	72.5	0.47	7.36
			5	2.08	74.6	0.49	7.30
			7.5	3.13	74.0	0.50	7.20
			10	4.17	74.8	0.54	7.10
U-3	2.26	12:30	0	0	71.2	1.18	7.69
			2.5	1.11	75.0	1.22	7.36
			5	2.21	74.6	1.21	7.30
			7	3.10	74.4	1.21	7.25
			12:40	9.5	4.20	74.3	1.23
U-4	2.35	08:50	0	0	71.2	0.83	7.39
			2.5	1.06	71.5	0.82	7.15
			5	2.13	72.8	0.90	7.10
			7	2.98	73.5	0.91	7.08
			09:00	9.5	4.04	73.5	0.89
U-5	2.49	09:25	0	0	72.2	0.86	7.65
			2.5	1.00	74.0	0.84	7.26
			5	2.01	74.0	0.83	7.20
			7.5	3.01	75.1	0.80	7.10
			09:35	10	4.02	74.8	0.84

TABLE 2 (Continued)

RECORD OF THE TEMPERATURE, CONDUCTIVITY, AND pH VALUES
 IN THE MONITORING WELLS DURING PURGING AND PRIOR TO SAMPLING

(Measured on March 6, 1996)

<u>Well #</u>	<u>Gallons per Casing Volume</u>	<u>Time</u>	<u>Gallons Purged</u>	<u>Casing Volumes Purged</u>	<u>Temper- ature (°F)</u>	<u>Conductivity ([μmhos/cm] x1000)</u>	<u>pH</u>
U-6	2.43	11:50	0	0	70.8	1.25	7.58
			2.5	1.03	72.0	1.26	7.42
			5	2.06	74.0	1.27	7.23
			7.5	3.09	74.0	1.33	7.20
		12:00	10	4.12	74.5	1.32	7.15
		U-7	2.16	10:25	0	0	70.5
2	0.93				71.9	0.95	7.40
5	2.31				72.9	1.02	7.26
7	3.24				73.8	1.05	7.28
10:35	9				4.17	74.0	1.07

TABLE 3

**SUMMARY OF LABORATORY ANALYSES
 WATER**

<u>Well#</u>	<u>Date</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-1	3/06/96★	ND	96	4.5	ND	ND	3.7
	12/14/95	ND	ND	0.072	1.4	1.2	3.6
	9/18/95▼	72	57	1.2	0.75	0.57	2.2
	6/20/95	170**	500	50	ND	ND	4.4
	3/14/95	71**	380	20	ND	ND	10
	12/06/94▲	ND	ND	ND	ND	ND	ND
	9/15/94▲	83**	ND	0.50	0.85	ND	0.77
	6/19/94▲	61**	51	ND	1.4	ND	2.7
	3/25/94▲	57**	58	0.63	0.79	ND	0.65
	12/16/93▲	130**	ND	ND	ND	ND	ND
	8/13/93▲	50*	310	0.84	ND	2.6	1
U-2	3/06/96★	--	ND	ND	ND	ND	ND
	12/14/95▼▼	--	ND	ND	0.89	ND	2.0
	9/18/95▼	--	ND	ND	ND	ND	0.85
	6/20/95	--	ND	ND	0.58	ND	1.7
	3/14/95	--	89	ND	ND	ND	1.2
	12/06/94	--	250	19	ND	ND	ND
	9/15/94	--	1,000◆◆	44	ND	ND	ND
	6/19/94	--	180◆	ND	ND	ND	0.86
	3/25/94	--	130	0.70	0.78	0.65	0.64
	12/16/93	--	330	1.7	ND	11	8.5
8/13/93	--	1,400	ND	ND	ND	ND	
U-3	3/06/96★	--	19,000	1,400	ND	1,800	3,000
	12/14/95▼▼	--	10,000	520	ND	920	630
	9/18/95▼	--	9,800	600	ND	1,000	760
	6/20/95	--	9,800	590	ND	800	1,000
	3/14/95	--	13,000	860	120	1,300	1,700
	12/06/94	--	17,000	390	ND	990	560
	9/15/94	--	12,000	370	ND	970	610
	6/19/94	--	17,000	580	ND	1,300	90
	3/25/94	--	18,000	560	40	1,000	770
	12/16/93	--	15,000	570	ND	940	670
8/13/93	--	23,000	1,000	ND	1,700	1,600	

TABLE 3 (Continued)

SUMMARY OF LABORATORY ANALYSES
 WATER

Well#	Date	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
U-4	3/06/96★	--	ND	ND	ND	ND	0.62
	12/14/95▼▼	--	ND	ND	0.59	ND	0.79
	9/18/95▼	--	ND	ND	ND	ND	ND
	6/20/95	--	ND	ND	ND	ND	1.5
	3/14/95	--	490	3.2	2.1	0.79	1.2
U-5	3/06/96★	--	ND	ND	ND	ND	ND
	12/14/95	--	ND	ND	ND	ND	ND
	9/18/95	--	ND	ND	ND	ND	0.66
	6/20/95	--	ND	ND	ND	ND	1.6
	3/14/95	--	ND	ND	ND	ND	1.2
U-6	3/06/96★	--	2,400	54	ND	170	250
	12/14/95▼▼	--	15,000	240	ND	1,400	1,700
	9/18/95▼	--	9,500	260	ND	1,400	1,800
	6/20/95	--	8,500	170	11	950	1,300
	3/14/95	--	14,000	170	36	790	1,500
U-7	3/06/96★	--	ND	ND	ND	ND	ND
	12/14/95	--	ND	ND	ND	ND	0.88
	9/18/95	--	ND	ND	ND	ND	ND
	6/20/95	--	ND	ND	ND	ND	ND
	3/14/95	--	ND	ND	ND	ND	ND

★ Methyl tert butyl ether (MTBE) was non-detectable except in wells U-2, U-3, and U-4 where it was detected at concentrations of 80 µg/L, 73 µg/L, and 50 µg/L, respectively.

▼ Sequoia Analytical Laboratory has potentially identified the presence of MTBE at reportable levels in the ground water 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 µg/L in the sample collected from this well.

▲ Total Oil and Grease was non-detectable.

TABLE 3 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

- ◆ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- ◆◆ Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.
- * Not a typical diesel pattern; lower boiling hydrocarbons in the boiling range of stoddard calculated as diesel.
- ** Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be diesel.

ND = Non-detectable.

-- Indicates analysis was not performed.

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

- Note:**
- The detection limit for results reported as ND by Sequoia Analytical Laboratory is equal to the stated detection limit times the dilution factor indicated on the laboratory analytical sheets.
 - Prior to August 1, 1995, the total purgeable petroleum hydrocarbon (TPH as gasoline) quantification range used by Sequoia Analytical Laboratory was C4 - C12. Since August 1, 1995, the quantification range used by Sequoia Analytical Laboratory is C6 - C12.
 - Laboratory analyses data prior to December 16, 1993, were provided by Pacific Environmental Group, Inc.

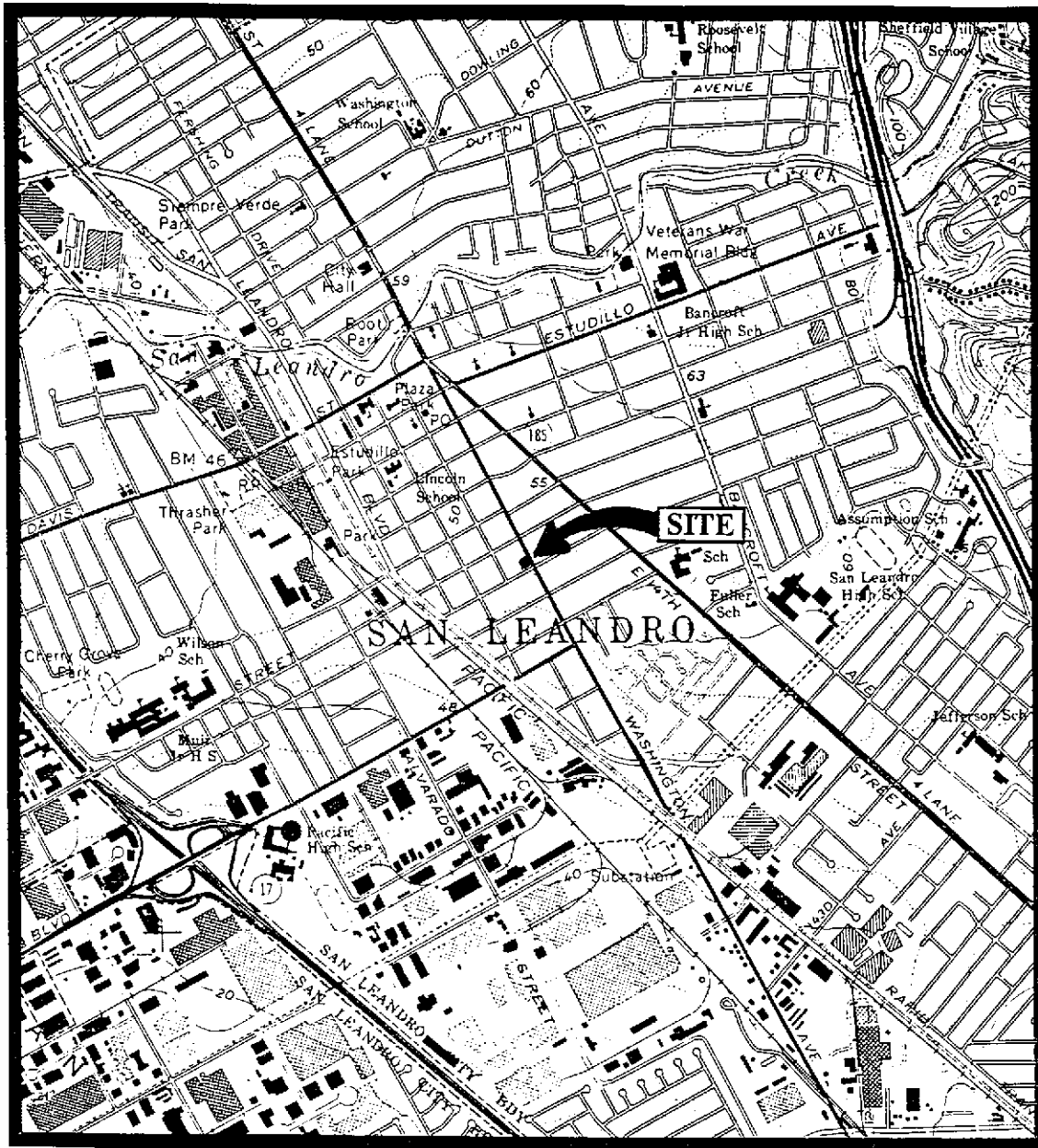
TABLE 4
SUMMARY OF LABORATORY ANALYSES
WATER

<u>Date</u>	<u>Well #</u>	<u>1,2-Dichloro- benzene</u>	<u>1,2-Dichloro- ethane</u>
12/14/95	U-1	ND	3.8
12/06/94	U-1	ND	5.8
9/15/94	U-1	ND	9.5
6/19/94	U-1	ND	7.4
12/14/95	U-2	ND	ND
3/25/94	U-2	ND	11
12/06/94	U-2	ND	ND
9/15/94	U-2	ND	0.66
6/19/94	U-2	ND	0.54
3/25/94	U-2	ND	ND
12/14/95	U-3	ND	240
12/06/94	U-3	ND	430
9/15/94	U-3	ND	420
6/19/94	U-3	ND	410
3/25/94	U-3	ND	480
12/14/95	U-4	ND	ND
3/14/95	U-4	ND	ND
12/14/95	U-5	ND	ND
3/14/95	U-5	ND	ND
12/14/95	U-6	ND	370
3/14/95	U-6	ND	210
12/14/95	U-7	ND	ND
3/14/95	U-7	ND	ND

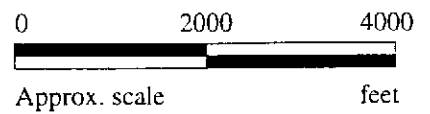
ND = Non-detectable.

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

Note: All EPA method 8010 constituents were non-detectable, except as indicated above.



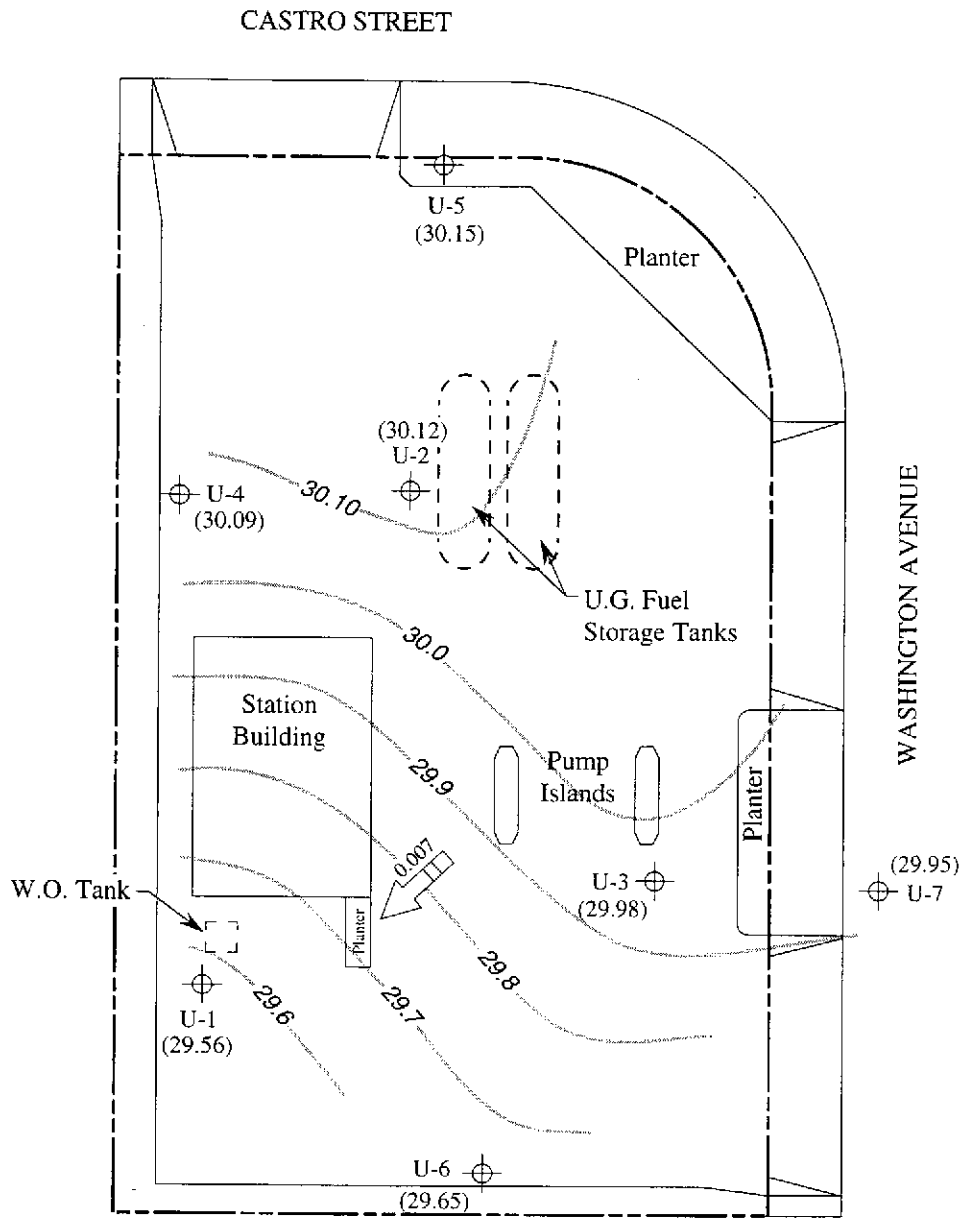
Base modified from 7.5 minute U.S.G.S. San Leandro Quadrangle
(photorevised 1980)



MPDS
SERVICES, INCORPORATED

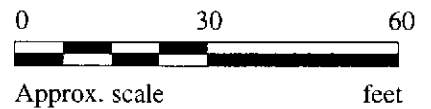
UNOCAL SERVICE STATION #5430
1935 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

LOCATION
MAP



LEGEND

- ⊕ Monitoring well
- () Ground water elevation in feet above Mean Sea Level
- ### → Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation

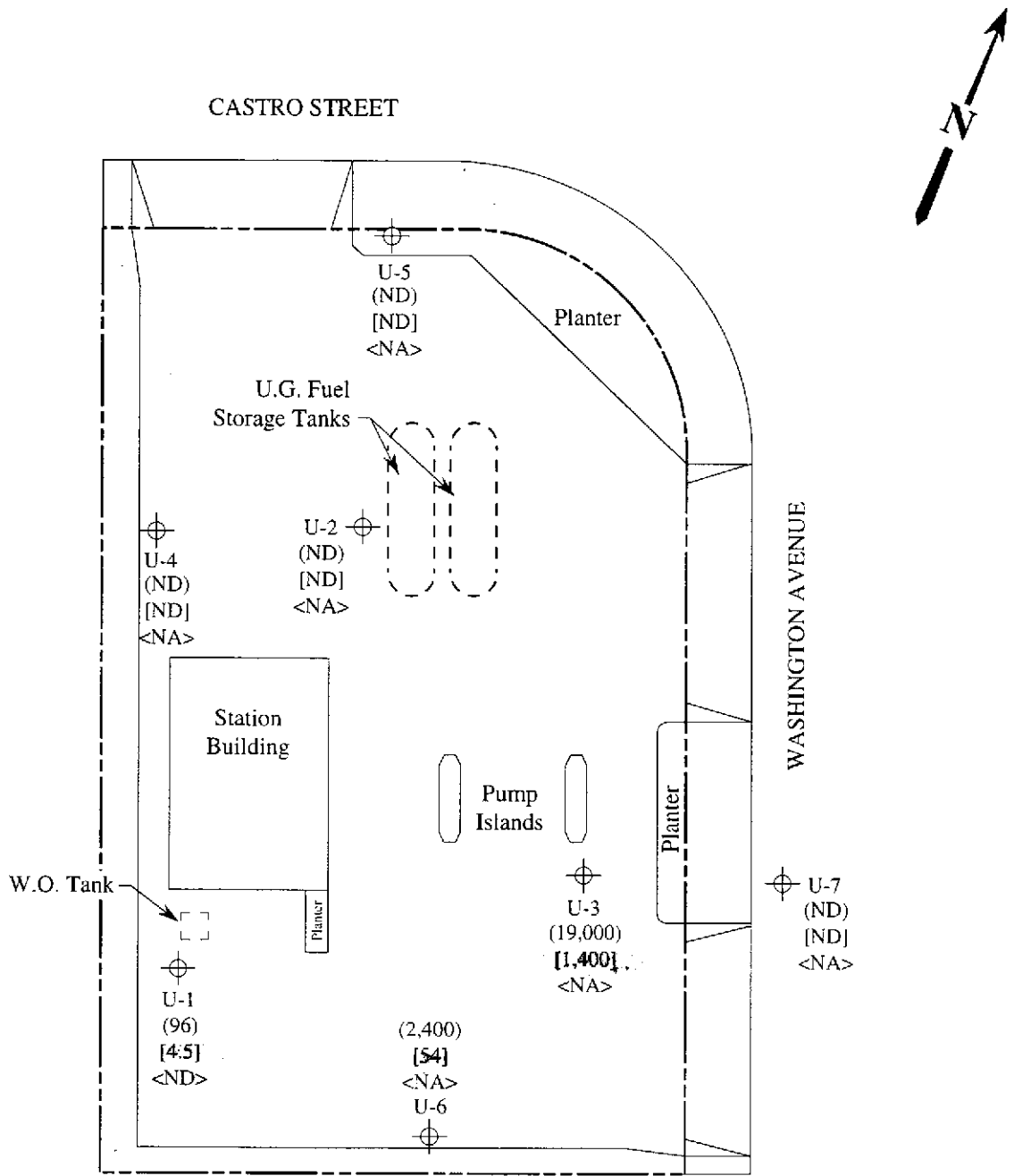


POTENTIOMETRIC SURFACE MAP FOR THE MARCH 6, 1996 MONITORING EVENT

MPDS SERVICES, INCORPORATED

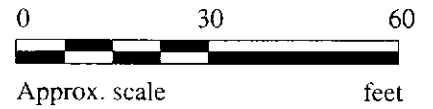
**UNOCAL SERVICE STATION #5430
1935 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA**

**FIGURE
1**



LEGEND

- ⊕ Monitoring well
- () Concentration of TPH as gasoline in µg/L
- [] Concentration of benzene in µg/L
- < > Concentration of TPH as diesel in µg/L
- ND Non-detectable, NA Not analyzed



PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON MARCH 6, 1996



**UNOCAL SERVICE STATION #5430
1935 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA**

**FIGURE
2**



MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #5430, 1935 Washington, Matrix Descript: Water San Leandro Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 603-0378	Sampled: Mar 6, 1996 Received: Mar 6, 1996 Reported: Mar 21, 1996
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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
603-0378	U-1	96	4.5	ND	ND	3.7
603-0379	U-2	ND	ND	ND	ND	ND
603-0380	U-3	19,000	1,400	ND	1,800	3,000
603-0381	U-4	ND	ND	ND	ND	0.62
603-0382	U-5	ND	ND	ND	ND	ND
603-0383	U-6	2,400	54	ND	170	250
603-0384	U-7	ND	ND	ND	ND	ND
603-0385	ES-1	ND	ND	ND	ND	ND
603-0386	ES-2	ND	ND	ND	ND	ND
603-0387	ES-3	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, #1271

Signature on File

Alan B. Kemp
Project Manager

Please Note:
*Revised Report, 4/15/96





MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #5430, 1935 Washington, Matrix Descript: Water San Leandro Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 603-0378	Sampled: Mar 6, 1996 Received: Mar 6, 1996 Reported: Mar 21, 1996
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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
603-0378	U-1	Gasoline	1.0	3/19/96	HP-9	110
603-0379	U-2	--	1.0	3/19/96	HP-9	115
603-0380	U-3	Gasoline	100	3/20/96	HP-11	103
603-0381	U-4	--	1.0	3/19/96	HP-9	110
603-0382	U-5	--	1.0	3/19/96	HP-9	113
603-0383	U-6	Gasoline	10	3/20/96	HP-11	116
603-0384	U-7	--	1.0	3/19/96	HP-9	115
603-0385	ES-1	--	1.0	3/19/96	HP-9	117
603-0386	ES-2	--	1.0	3/19/96	HP-9	115
603-0387	ES-3	--	1.0	3/19/96	HP-9	111

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 #5430, 1935 Washington, Sample Descript: Water San Leandro Analysis for: MTBE (Modified EPA 8020) First Sample #: 603-0378	Sampled: Mar 6, 1996 Received: Mar 6, 1996 Analyzed: Mar 19-20, 1996 Reported: Mar 21, 1996
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LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
603-0378	U-1	40	N.D.
603-0379	U-2	40	80
603-0380	U-3	40	73
603-0381	U-4	40	50
603-0382	U-5	40	N.D.
603-0383	U-6	40	N.D.
603-0384	U-7	40	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	Client Project ID:	Unocal #5430, 1935 Washington,	Sampled:	Mar 6, 1996
2401 Stanwell Dr., Ste. 300	Sample Matrix:	Water	Received:	Mar 6, 1996
Concord, CA 94520	Analysis Method:	EPA 3510/8015 Mod.	Reported:	Mar 21, 1996
Attention: Jarrel Crider	First Sample #:	603-0378		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 603-0378 U-1
Extractable Hydrocarbons	50	N.D.

Chromatogram Pattern: --

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Extracted:	3/8/96
Date Analyzed:	3/11/96
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





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

Client Project ID: Unocal #5430, 1935 Washington, San Leandro
Matrix: Liquid

QC Sample Group: 6030378-387

Reported: Mar 21, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn	J. Dinsay

MS/MSD Batch#:	6030295	6030295	6030295	6030295	BLK030896
Date Prepared:	3/19/96	3/19/96	3/19/96	3/19/96	3/8/96
Date Analyzed:	3/19/96	3/19/96	3/19/96	3/19/96	3/11/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Matrix Spike % Recovery:	85	85	85	87	83
Matrix Spike Duplicate % Recovery:	95	90	95	97	90
Relative % Difference:	11	5.7	11	11	7.7

LCS Batch#:	3LCS031996	3LCS031996	3LCS031996	3LCS031996	LCS030896
Date Prepared:	3/19/96	3/19/96	3/19/96	3/19/96	3/8/96
Date Analyzed:	3/19/96	3/19/96	3/19/96	3/19/96	3/8/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
LCS % Recovery:	90	85	90	92	83

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



CHAIN OF CUSTODY

960309i

SAMPLER			UNOCAL					ANALYSES REQUESTED							TURN AROUND TIME:				
HOVSIA AJEMIAN "Joe"			S/S # <u>5430</u> CITY: <u>San Leandro</u>					TPH-GAS BTEX + MTBE	TPH- DIESEL	TOG	8010								Regular
WITNESSING AGENCY			ADDRESS: <u>1935 Washington</u>																REMARKS
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION												
U-1	3-6-96	11:30 A.M.	✓	✓		2 (VoA) 1 Amber	Wells	✓	✓			6030378	AC						
U-2	"	8:38 A.M.	✓	✓		2 (VoA)	"	✓				6030379	AS						
U-3	"	12:55 P.M.	✓	✓		"	"	✓				6030380							
U-4	"	9:15 A.M.	✓	✓		"	"	✓				6030381							
U-5	"	9:45 A.M.	✓	✓		"	"	✓				6030382							
U-6	"	12:15 P.M.	✓	✓		"	"	✓				6030383							
U-7	"	10:45 A.M.	✓	✓		"	"	✓				6030384	↓						
RELINQUISHED BY:		DATE/TIME	RECEIVED BY:			DATE/TIME	THE FOLLOWING <u>MUST BE</u> COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:												
		2:30 P.M. 3-6-96				1430 3/6/96	1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? <u>yes</u>												
(SIGNATURE)			(SIGNATURE)			1430 3-7	2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? <u>yes</u>												
			(SIGNATURE)				3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? <u>no</u>												
(SIGNATURE)			(SIGNATURE)				4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? <u>yes</u>												
			(SIGNATURE)			15:45 3-7-96	SIGNATURE:												
(SIGNATURE)			(SIGNATURE)				TITLE: <u>Technician</u>												
							DATE: <u>3/6/96</u>												

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 HN03. All other containers are unpreserved.

CHAIN OF CUSTODY

9603091

SAMPLER			UNOCAL					ANALYSES REQUESTED							TURN AROUND TIME:	
HOVSIA AJEMIAN "Joe"			S/S # <u>5430</u> CITY: <u>San Leandro</u>					TPH-GAS BTEX	TPH- DIESEL	TOG	8010					Regular
WITNESSING AGENCY			ADDRESS: <u>1935 Washington</u>													
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION									
ES1	3-6-96					1 (VOA)		/								
ES2	"					1		/								
ES3	"							/								
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:					DATE/TIME	THE FOLLOWING <u>MUST BE</u> COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:								
<i>Joe Ajemian</i>	2:30 PM 3-6-96	<i>[Signature]</i>					1430 5/6/96	1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? <u>yes</u>								
(SIGNATURE)		(SIGNATURE)						2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? <u>yes</u>								
<i>[Signature]</i>	3-7	<i>[Signature]</i>					1430 3-7	3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? <u>no</u>								
(SIGNATURE)		(SIGNATURE)						4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? <u>yes</u>								
<i>[Signature]</i>		<i>[Signature]</i>					15:45 3-7-96	SIGNATURE: <i>[Signature]</i>		TITLE: <u>Technician</u>			DATE: <u>3/6/96</u>			

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 unpreserved.