September 10, 1997

Alameda County Health Care Services 1131 Harbor Bay Parkway Alameda, CA 94502

Attn: Mr. Scott Seery

RE: Unocal Service Station #6277

15803 E. 14th Street

San Leandro, California 44576

Dear Mr. Seery:

Per the request of the Tosco Marketing Company Project Manager, Ms. Tina R. Berry, enclosed please find our report (MPDS-UN6277-13) dated August 1, 1997 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) 277-2321. Sincerely,

MPDS Services, Inc.

Jarrel F. Crider

/jfc

Enclosure

cc: Ms. Tina R. Berry



PROTECTION AL 97 JUL 21 PM 2:55

July 18, 1997 Project 311-038;1A

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

Re: Unocal Station 5430

Quarterly Summary Report
Second Quarter 1997

Dear Mr. Jang:

As directed by Ms. Tina Berry of Tosco Marketing Company, 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 Muzzió Project Geologist

Enclosure

cc: Ms. Tina Berry, Tosco Marketing Company

Mr. Kevin Tinsley, Alameda County Environmental Health Care Services

# Quarterly Summary Report Second Quarter 1997

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 for further delineation of hydrocarbon impacted groundwater. Monthly groundwater monitoring and quarterly sampling of the wells was initiated in December 1993.

Alameda County Health Services (ACHS) submitted a request for delineation of hydrocarbon impacted groundwater in the southern portion of the site. Unocal submitted a workplan in January 1996. Unocal investigated former usage of the site located south of their site. The review found that the adjacent site was formerly a service station which included four USTs. Unocal proceeded with access agreement negotiations to install borings on properties south and west of the facility.

# RECENT QUARTER ACTIVITIES

Quarterly groundwater monitoring and sampling were performed in June. Tosco continued to pursue a license agreement to access the property west of the service station.

# **NEXT QUARTER ACTIVITIES**

Third quarter 1997 groundwater monitoring and sampling will be performed. In July, Tosco will proceed with the proposed soil and groundwater investigation on property south of the site.

# 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.





April 15, 1997 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: 76 Products Company Quarterly Summary Report First Ouarter 1997

Dear Mr. Jang:

As directed by Ms. Tina Berry of Tosco Marketing Company (formerly 76 Products Company), 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

Ms. Tina Berry, Tosco Marketing Company

Mr. Dilk Klettke, Alamedi Lounty Environmental Health Care St

# Quarterly Summary Report First Quarter 1997

76 Products Company 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 for further delineation of hydrocarbon impacted groundwater. Monthly groundwater monitoring and quarterly sampling of the wells was initiated in December 1993.

Alameda County Health Services (ACHS) submitted a request for delineation of hydrocarbon impacted groundwater in the southern portion of the site. Unocal submitted a workplan in January 1996. Unocal investigated former usage of the site located south of their site. The review found that the adjacent site was formerly a service station which included four USTs. Unocal proceeded with access agreement negotiations to install borings on properties south and west of the facility.

### RECENT QUARTER ACTIVITIES

Quarterly groundwater monitoring and sampling were performed in March. 76 Products received a license agreement to install exploratory borings on the property south of the service station. 76 Products continued in to pursue a license agreement to access the property west of the service station.

# **NEXT QUARTER ACTIVITIES**

Second quarter 1997 groundwater monitoring and sampling will be performed. Upon receipt of the final license agreement, Tosco Marketing (formerly 76 Products Company) will proceed with the proposed soil and groundwater investigation.

### 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-UN6277-13 August 1, 1997

Tosco Marketing Company Environmental Compliance Department 2000 Crow Canyon Place, Suite 400 San Ramon, California 94583

Attention: Ms. Tina R. Berry

RE: Semi-Annual Data Report

Unocal Service Station #6277

15803 E. 14th Street San Leandro, California

Dear Ms. Berry:

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 event 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 event is shown on the attached Figure 1.

Ground water samples were collected on July 1, 1997. Prior to sampling, the wells were each purged of between 9 and 10 gallons of water. The 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. MPDS Services, Inc. transported the purged ground water to the Tosco 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 and benzene detected in the ground water samples collected during this event are shown on the attached Figure 2. Copies of the laboratory analytical results and the Chain of Custody documentation are attached to this report.

MPDS-UN6277-13 August 1, 1997 Page 2

### **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 Health Care Services Agency.

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

Sincerely,

MPDS Services, Inc.

Haig (Gary) Tejirian Senior Staff Geologist

Phoofox Koul

Hagop Kevork, P.E. Senior Staff Engineer

License No. C 55734

Exp. Date December 31, 2000

/aab

Attachments: Tables 1, 2 & 3

Location Map Figures 1 & 2

Laboratory Analyses

Chain of Custody documentation

cc: Mr. Sarkis A. Soghomonian, Kaprealian Engineering, Inc.

Table 1
Summary of Monitoring Data

	Ground Water	Depth to	Total Well	Product		Water
Well#	Elevation (feet)	Water (feet)+	Depth (feet)+	Thickness (feet)	Sheen	Purged (gallons)
				····		
		(Monitored	and Sampled on	July 1, 1997)		
MW1	22.10	10.40	24.80	0	No	10
MW2A	22.46	11.07	25.35	0	No	10
MW3	22.45	9.77	23.43	0	No	10
MW4	22.24	9.52	22.52	0	No	9
MW5	21.70	7.59	20.97	0	No	9
MW6	21.46	7.38	19.63	0	No	9
	ı	(Monitored ar	ıd Sampled on Ja	nuary 2, 1997)		
MW1	23.57	8.93	24.80	0	No	9
MW2A	23.86	9.67	25.35	0	No	9
MW3	23.80	8.42	23.45	0	No	9
MW4	23.52	8.24	22.50	0	No	8
MW5	23.31	5.98	20.95	Ō	No	8
MW6	23.32	5.52	19.63	0	No	8
	(1)	Ionitored and	Sampled on Nov	vember 25, 1996)	)	
MW1	22.54	9.96	24.80	0	No	8
MW2A	22.69	10.84	25,35	0	No	8
MW3	22.81	9.41	23.45	0	No	8
MW4	22.58	9.18	22.51	0	No	7
MW5	22.47	6.82	20.93	0	No	7
MW6	22.36	6.48	19.62	0	No	7
		(Monitored	and Sampled on	July 1, 1996)		
MW1	22.36	10.14	24.40	0	No	10
MW2A	22.46	11.07	25.20	o	No	10
MW3	22.70	9.52	23.38	0	No	9.5
MW3 MW4 MW5 MW6	22.40 22.44 22.45 22.53	9.52 9.32 6.84 6.31	23.38 22.75 20.51 19.21	0 0 0	No No No No	9.5 9.5 9.5 9

Table 1
Summary of Monitoring Data

	Well Casing
	Elevation
Well#	(feet)*
MW1	32.50
MW2A	33.53
MW3	32.22
MW4	31.76
MW5	29.29
MW6	28.84

- ♦ 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 casings are relative to Mean Sea Level (MSL), based on a Benchmark located on the west side of East 14th Street, approximately 75 feet north of 155th Avenue (elevation = 31.65 feet MSL).

**Table 2**Summary of Laboratory Analyses
Water

					_		
Well#	Date	TPH as Gasoline	Benzene	Toluene	Ethyl- Benzene	Xylenes	мтве
MW1	7/1/97	460	50	ND	6.0	17	420
141 44 1	1/2/97	230 ♦ ♦	29	ND	6.8	17	420
	11/25/96	510♦	72	ND	ND ND	0.91	250
	7/1/96	ND	ND	ND ND	ND	17 ND	390
	4/8/96	2,100	43	27	ND 7.4	ND 21	230
	1/10/96	2,100	35				480
	7/14/95	410	33 77	ND ND	2.0	7.6	†
	4/4/95	410 410◆	19	ND ND	7.4	30 ND	
	1/5/95	410 <b>▼</b> 780		ND ND	ND	ND	
	10/6/94	970	30	ND ND	ND	9.1	
	7/7/94		19	ND	ND	13	
		2,100 ♦ ♦	250	ND	57 ND	200	
	4/4/94	1,100	15	ND	ND	7.4	<del></del>
	1/6/94	260	21	ND	2.5	14	
	10/6/93	1,200♦	36	ND	ND	23	
	7/1/93	510	100	0.79	5.7	52	
	4/2/93	690	94	0.73	5.3	39	
	1/29/93	740♦♦	69	ND	3.8	43	
	10/20/92	720	110	1.4	18	110	
	7/20/92	630	100	2.8	6.3	52	
	4/23/92	530	100	7.9	4.6	60	
	1/13/92	450	240	4.6	8.6	73	
	9/10/91	280	38	3.1	4.1	22	
	6/10/91	310	1.5	ND	ND	0.31	
	3/15/91	110	21	ND	ND	8.4	
	12/14/90	450	150	6.8	0.28	49	
	9/19/90	140	ND	ND	ND	3.5	
	6/25/90	310	10	0.89	0.37	2.1	
	3/29/90	320	12	1.6	0.31	3.5	
	12/12/89	340	100	13	3.4	44	
	9/13/89	550	32	17	3.4	52	
	6/6/89	590	ND	ND	ND	ND	
MW2	12/12/89	660	220	6.6	13	36	
	9/13/89	170	2.0	0.38	ND	9.5	
	6/6/89	77	ND	ND	ND	ND	
MW2A	7/1/97	120♦	ND	ND	ND	ND	14
	1/2/97	78♦	ND	ND	ND	ND	8.2
	11/25/96	86◆	0.82	ND	ND	ND	ND
	7/1/96	170	2.4	ND	0.65	2.0	ND
	4/8/96	ND	ND	ND	ND	ND	ND
	1/10/96	89	1.2	ND	ND	0.58	
	7/14/95	60	3.0	ND	1.3	2.4	
	4/4/95	67♦	1.0	ND	ND	ND	

**Table 2**Summary of Laboratory Analyses
Water

		TPH as			Ethyl-		
Well#	Date	Gasoline	Benzene	Toluene	Benzene	Xylenes	MTBE
MW2A	1/5/95	140 ♦	1.4	ND	ND	ND	
(Cont.)	10/6/94	71	6.4	ND	2.1	2.4	
(,	7/7/94	90	5.2	ND	1.5	2.2	
	4/4/94	80	8.0	ND	1.4	1.5	
	1/6/94	110	2.6	ND	1.6	1.7	
	10/6/93	110◆	12	ND	7.4	1.4	
	7/1/93	74♦	0.75	ND	ND	ND	
	4/2/93	120	7.2	ND	5.8	1.2	
	10/20/92	96	2.8	ND	1.8	1.6	
	7/20/92	99	8.6	ND	2.4	0.95	
	4/23/92	190	15	ND	15	2.0	
	1/13/92	160	11	2.0	10	5.9	
	9/10/91	180	8.7	0.93	15	13	
	6/10/91	54	1.2	ND	ND	0.69	
	3/15/91	160	2.5	ND	ND	51	
MW3	7/1/97	140♦	ND	ND	ND	ND	ND
	1/2/97	110◆	ND	ND	ND	ND	8.5
	11/25/96	120♦	ND	ND	ND	ND	ND
	7/1/96	ND	ND	ND	ND	ND	ND
	4/8/96	ND	ND	ND	ND	ND	ND
	1/10/96	100♦	ND	ND	ND	ND	
	7/14/95	130♦	ND	ND	1.3	4.2	
	4/4/95	100♦	0.62	ND	ND	ND	
	1/5/95	140◆	ND	ND	ND	ND	
	10/6/94	93♦	ND	ND	ND	ND	
	7/7/94	190♦	ND	ND	ND	ND	
	4/4/94	170♦	ND	ND	ND	ND	
	1/6/94	140◆	ND	ND	ND	ND	
	10/6/93	140♦	ND	ND	ND	ND	
	7/1/93	120♦	ND	ND	ND	ND	
	4/2/93	130♦	ND	ND	ND	ND	
	1/29/93	130 ♦	0.84	ND	ND	ND	
	10/20/92	180♦	ND	ND	ND	ND	
	7/20/92	120♦	ND	ND	ND	ND	
	4/23/92	150♦	1.6	ND	ND	ND	
	1/13/92	120♦	ND	ND	ND	ND	
	9/10/91	170	ND	ND	ND	ND	
	6/10/91	160	0.65	ND	ND	ND	
	3/15/91	150	ND	ND	ND	0.45	
	12/14/90	150	ND	ND ND	ND	ND	
	9/19/90	74 100	0.74	ND	ND	ND	
	6/25/90	190	1.5	0.68	ND	5.3	

**Table 2**Summary of Laboratory Analyses
Water

			774101				
		TPH as			Ethyl-		
Well #	Date	Gasoline	Benzene	Toluene	Benzene	Xylenes	MTBE
MUU	2 (20 (00	o.c	ND	MD	3.175	3175	
MW3	3/29/90	85	ND	ND	ND	ND	
(Cont.)	12/12/89	120	6.7	0.64	0.46	1.5	
	9/13/89	76	ND	ND	ND	ND	
	6/6/89	32	ND	ND	ND	ND	
MW4	7/1/97	140◆	ND	ND	ND	ND	ND
	1/2/97	120♦	ND	ND	ND	ND	8.6
	11/25/96	120♦	ND	ND	ND	ND	ND
	7/1/96	ND	ND	ND	ND	ND	ND
	4/8/96	ND	ND	ND	ND	ND	ND
	1/10/96	100♦	ND	ND	ND	1.8	
	7/14/95	89◆	ND	ND	0.97	0.52	
	4/4/95	82♦	ND	ND	ND	ND	
	1/5/95	150♦	ND	ND	ND	ND	
	10/6/94	78♦	ND	ND	ND	ND	
	7/7/94	150♦	ND	ND	ND	ND	
	4/4/94	120	0.76	0.76	ND	0.98	
	1/6/94	100♦	ND	ND	ND	ND	
	10/6/93	130♦	ND	ND	ND	ND	
	7/1/93	91♦	ND	ND	ND	ND	
	4/2/93	110♦	ND	ND	ND	ND	
	1/29/93	130♦	0.95	ND	ND	ND	
	10/20/92	110♦	ND	ND	ND	ND	
	7/20/92	80♦	ND	ND	ND	ND	
	4/23/92	120♦	ND	ND	ND	ND	
	1/13/92	58♦	ND	ND	ND	ND	
	9/10/91	56	ND	ND	ND	ND	
	6/10/91	64	ND	ND	ND	ND	
	3/15/91	53	ND	ND	ND	ND	
	12/14/90	54	ND	ND	ND	ND	
	9/19/90	61	ND	ND	ND	ND	
	6/25/90	66	ND	ND	ND	ND	
	3/29/90	120	0.39	ND	ND	ND	
	12/12/89	97	4.6	ND	ND	ND	
	9/13/89	77	ND	ND	ND	ND	
	6/6/89	37	ND	ND	ND	ND	
MW5	7/1/97	130♦	ND	ND	ND	ND	ND
	1/2/97	110♦	ND	ND	ND	ND	8.4
	11/25/96	120♦	ND	ND	ND	ND	ND
	7/1/96	ND	ND	ND	ND	ND	ND
	4/8/96	ND	ND	ND	ND	ND	ND
	1/10/96	50♦	ND	ND	ND	ND	<del>-+</del>

Table 2
Summary of Laboratory Analyses
Water

		TPH as			Ethyl-		
Well #	Date	Gasoline	Benzene	Toluene	Benzene	Xylenes	MTBE
MW5	7/14/95	ND	ND	0.91	ND	1.1	
(Cont.)	4/4/95	ND	ND	ND	ND	ND	
	1/5/95	ND	ND	ND	ND	ND	
	10/6/94	ND	ND	ND	ND	ND	
	7/7/94	72♦	ND	ND	ND	ND	
	4/4/94	65♦	ND	ND	ND	ND	
	1/6/94	62♦	ND	ND	ND	ND	
	10/6/93	60♦	ND	ND	ND	ND	
	7/1/93	54 ♦	ND	ND	ND	ND	
	4/2/93	65♦	ND	ND	ND	ND	
MW6	7/1/97	130◆	ND	ND	ND	ND	ND
	1/2/97	110♦	ND	ND	ND	ND	8.3
	11/25/96	120◆	ND	ND	ND	ND	ND
	7/1/96	ND	ND	ND	ND	ND	ND
	4/8/96	ND	ND	ND	ND	ND	ND
	1/10/96	53♦	ND	ND	ND	ND	
	7/14/95	ND	ND	ND	ND	ND	
	4/4/95	ND	ND	ND	ND	ND	
	1/5/95	ND	ND	ND	ND	ND	
	10/6/94	ND	ND	ND	ND	ND	
	7/7/94	ND	ND	ND	ND	ND	
	4/4/94	57♦	ND	ND	ND	ND	
	1/6/94	53♦	ND	ND	ND	ND	
	10/6/93	ND	ND	ND	ND	ND	
	7/1/93	ND	ND	ND	ND	ND	
	4/2/93	ND	ND	ND	ND	ND	

- 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.

MTBE = methyl tert butyl ether.

ND = Non-detectable.

<sup>†</sup> Sequoia Analytical Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40  $\mu$ g/L in the sample collected from this well.

# Table 2 Summary of Laboratory Analyses Water

Results are in micrograms per liter (µg/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 January 6, 1994, were provided by Kaprealian Engineering, Inc.

Table 3
Summary of Laboratory Analyses
Water

		TPH as	Tetra-	Trichloro-	1,2+ Dichloro-	Cis-1,2- dichloro-	Total Oil & Grease
Well#	Date	Diesel	chloroethene	ethene	ethane	ethene	(mg/L)
MW1	4/04/94*		390	38 .	ND	17	
171 77 1	4/2/93	ND	J <del>9</del> 0	·			
	1/29/93	ND	300	ND	ND	ND	
	10/20/92	ND	230	22	ND	16	
	7/20/92	62♦	200	7.4	ND	ND	~~
MW2	4/2/93	ND					
111 11 2	12/12/89	1,700	30	9.0	ND	ND	1.2
	9/13/89	ND	18	6.1	4.2	1.2	ND
	6/6/89	ND	110	4.4	2.8	ND	ND
MW2A	9/10/93	65					
1.1.1.	1/29/93	ND	140	10	ND	ND	<del></del>
	10/20/92	ND	64	11	ND	ND	
	7/20/92	ND	35	7.2	ND	4.8	ND
	4/23/92	ND	17	5.6	ND	1.9	ND
	1/13/92**	ND	33	ND	ND	2.1	ND
	6/10/91	100	150	10	ND	ND	ND
	3/15/91	ND	67	8.2	ND	2.6	ND
MW3	1/2/97		630	23		6.0	
	1/10/96		950	ND	ND	ND	
	1/5/95		1,100	18	ND	6.2	
	1/6/94		960	ND	ND	ND	
	4/2/93	ND					
	1/29/93	ND	980	ND	ND	ND	
	10/20/92	ND	1,100	20	ND	ND	
	7/20/92	ND	1,400	25	ND	ND	
MW4	1/29/93	ND	950	ND	ND	ND	
	7/20/92	ND	440	11	ND	ND	
	4/2/93	ND					
	10/20/92	ND	360	17	ND	ND	
MW5	4/2/93	ND	190	ND	ND	ND	
MW6	4/2/93	ND	<b>7</b> 1	ND	ND	ND	

# Table 3 Summary of Laboratory Analyses Water

- \* All EPA method 8240 constituents were non-detectable, except for concentrations of benzene at 29  $\mu$ g/L, ethylbenzene at 3.4  $\mu$ g/L, total xylenes at 19  $\mu$ g/L, and trans-1,2-dichloroethene at 2.4  $\mu$ g/L.
- \*\* 1,1,2-trichloroethane was detected at a concentration of 9.9  $\mu$ g/L.
- Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear be diesel.

ND = Non-detectable.

-- Indicates analysis was not performed.

mg/L = milligrams per liter.

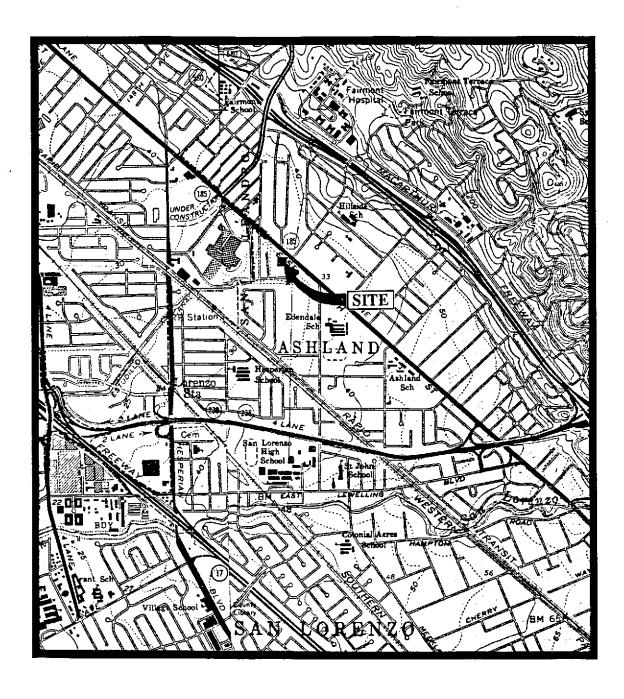
Results are in micrograms per liter (µg/L), unless otherwise indicated.

Note:

All EPA method 8010 constituents were non-detectable in all of the ground water samples, except as indicated.

Laboratory analyses data prior to January 6, 1994, were provided by Kaprealian Engineering, Inc.



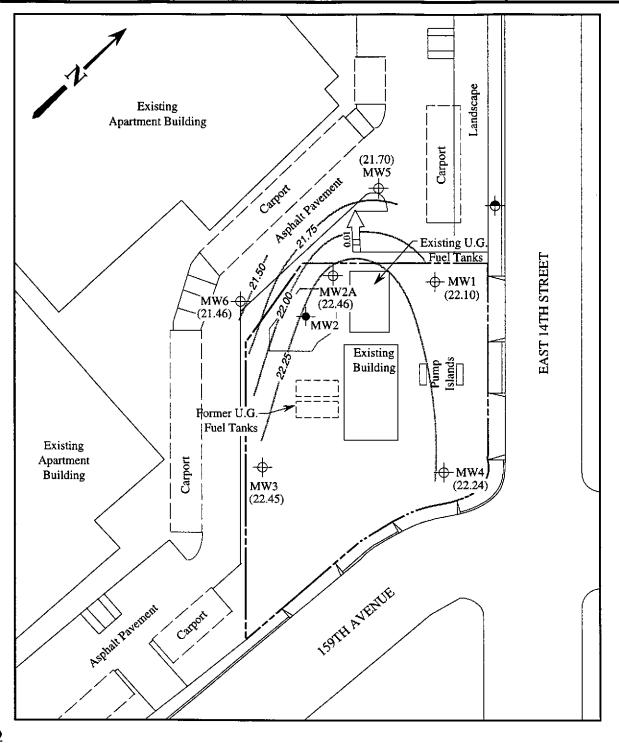


Base modified from 7.5 minute U.S.G.S. Hayward and San Leandro Quadrangles (both photorevised 1980)





UNOCAL SERVICE STATION #6277 15803 E. 14TH STREET SAN LEANDRO, CALIFORNIA LOCATION MAP



## **LEGEND**

Monitoring well (existing)

Monitoring well (previously attempted)

Monitoring well (destroyed February 1, 1990)

) Ground water elevation in feet above Mean Sea Level

> Direction of ground water flow with approximate hydraulic gradient

Contours of ground water elevation

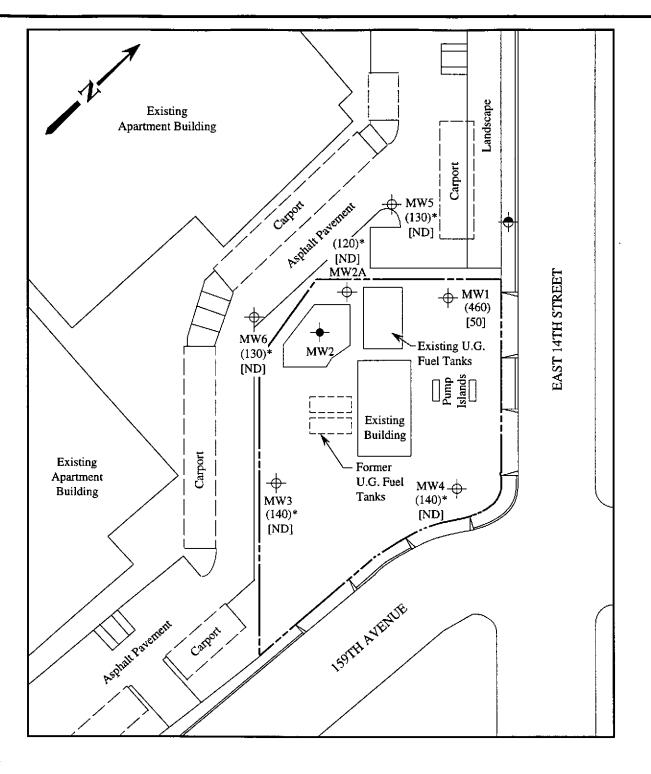


POTENTIOMETRIC SURFACE MAP FOR THE JULY 1, 1997 MONITORING EVENT



UNOCAL SERVICE STATION #6277 15803 E. 14TH STREET SAN LEANDRO, CALIFORNIA

FIGURE



### **LEGEND**

- → Monitoring well (existing)
  - Monitoring well (previously attempted)
- Monitoring well (destroyed February 1, 1990)
- ( ) Concentration of TPH as gasoline in μg/L
- [ ] Concentration of benzene in  $\mu$ g/L
- ND Non-detectable
  - \* The lab reported that the hydrocarbons detected did not appear to be gasoline.



PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON JULY 1, 1997



UNOCAL SERVICE STATION #6277 15803 E. 14TH STREET SAN LEANDRO, CALIFORNIA **FIGURE** 

2



680 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

Client Project ID: Matrix Descript:

Analysis Method:

First Sample #:

Tosco #6277, 15803 E.14th St., San Leandro

Water

•

EPA 5030/8015 Mod./8020 707-0412

Sampled:

Jul 1, 1997

Jul 1, 1997 Received: Reported:

Jul 16, 1997

### TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Sample Number	Sample Description	Purgeable Hydrocarbons μg/L	<b>Benzene</b> μg/L	<b>Toluene</b> μg/L	Ethyl Benzene μg/L	Total Xylenes μg/L
707-0412	<b>MW</b> -1	460	50	ND	6.8	17
707-0413	MW-2A	120 *	ND	ND	ND	ND
707-0414	MW-3	140 *	ND	ND	ND	ND
707-0415	MW-4	140 *	ND	ND	ND	ND
707-0416	MW-5	130 *	ND	ND	ND	ND
707-0417	MW-6	130 *	ND	ND	ND	ND

<sup>\*</sup> Hydrocarbons detected did not appear to be gasoline.

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







680 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

Client Project ID: Tosco #6277, 15803 E.14th St., San Leandro

Sampled:

Jul 1, 1997 Jul 1, 1997

Attention: Jarrel Crider

Matrix Descript: Analysis Method: First Sample #:

EPA 5030/8015 Mod./8020 707-0412

Received: Reported:

Jul 16, 1997

## TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Water

Sample Number	Sample Description	Chromatogram Pattern	DL Mult. Factor	Date Analyzed	Instrument ID	Surrogate Recovery, % QC Limits: 70-130
707-0412	MW-1	Gasoline	1.0	7/10/97	HP-2	89
707-0413	MW-2A	Discrete * Peaks	1.0	7/10/97	HP-2	85
707-0414	MW-3	Discrete * Peaks	1.0	7/10/97	HP-2	76
707-0415	MW-4	Discrete * Peaks	1.0	7/10/97	HP-2	83
707-0416	MW-5	Discrete * Peaks	1.0	7/10/97	HP-2	83
707-0417	MW-6	Discrete * Peaks	1.0	7/11/97	HP-2	86

## **SEQUOIA ANALYTICAL, #1271**

Signature on File

Alan B. Kemp Project Manager Please Note:

\* Discrete Peaks", refers to unidentified peaks in the EPA 8010 range.







680 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 Client Project ID: Sample Descript: Analysis for:

First Sample #:

Tosco #6277, 15803 E.14th St., San Leandro

Water

MTBE (Modified EPA 8020) 707-0412 Sampled: Received:

Jul 1, 1997 Jul 1, 1997

Analyzed: Jul 1 Reported: Jul

Jul 10-11, 1997 Jul 16, 1997

### LABORATORY ANALYSIS FOR:

## MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit $\mu \mathrm{g}/\mathrm{L}$	Sample Result µg/L
707-0412	MW-1	5.0	420
707-0413	MW-2A	5.0	14
707-0414	MW-3	5.0	N.D.
707-0415	MW-4	5.0	N.D.
707-0416	MW-5	5.0	N.D.
707-0417	MW-6	5.0	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





680 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 Client Project ID: Tosco #6277, 15803 E.14th St., San Leandro

Matrix: Liquid

QC Sample Group: 7070412-417

Reported:

Jul 16, 1997

### **QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl	Xylenes	
			Benzene		
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill	
MS/MSD					
Batch#:	7070395	7070395	7070395	7070395	
Date Prepared:	7/11/97	7/11/97	7/11/97	7/11/97	
Date Analyzed:	7/11/97	7/11/97	7/11/97	7/11/97	
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	
Conc. Spiked:	20 μg/L	20 μg/L	20 μg/L	60 μg/L	
Matrix Spike					
% Recovery:	85	100	90	93	
Matrix Spike Duplicate % Recovery:	80	95	90	90	
Relative % Difference:	6.1	5.1	0.0	3.6	
LCS Batch#:	2LCS071197	2LCS071197	2LC\$071197	2LCS071197	
Date Prepared:	7/11/97	7/11/97	7/11/97	7/11/97	
Date Analyzed:	7/11/97	7/11/97	7/11/97	7/11/97	
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	
LCS %					
Recovery:	85	100	95	93	

#### | T

70-130

Signature on File

% Recovery Control Limits:

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp Project Manager Please Note:

70-130

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.

70-130



70-130



680 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

Client Project ID:

Tosco #6277, 15803 E.14th St., San Leandro

Matrix: Liquid

QC Sample Group: 7070412-417

Reported:

Jul 16, 1997

### QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl	Xylenes	
			Benzene		
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	
Analyst:	K. Nill	K. Nill	K. Nili	K. Nill	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
MS/MSD					
Batch#:	7070395	7070395	7070395	7070395	
Date Prepared:	7/10/97	7/10/97	7/10/97	7/10/97	
Date Analyzed:	7/10/97	7/10/97	7/10/97	7/10/97	
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	
Conc. Spiked:	$20\mu\mathrm{g/L}$	20 μg/L	20 μg/L	60 μg/L	
Matrix Spike					
% Recovery:	85	100	90	95	
Matrix Spike Duplicate %					
Recovery:	65	80	75	73	
Relative %					
Difference:	27	22	18	26	

LCS Batch#:	2LCS071097	2LCS071097	2LCS071097	2LCS071097
Date Prepared:	7/10/97	7/10/97	7/10/97	7/10/97
Date Analyzed:	7/10/97	7/10/97	7/10/97	7/10/97
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS %				
Recovery:	85	100	90	98
% Recovery	<del></del>			
Control Limits:	70-130	60-140	60-140	60-140

## SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp Project Manager

1 00 D-1-1- ".

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.

9707137

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

# CHAIN OF CUSTODY

JOE AJEMIAN		TOSCO S/S# 6277 CITY: San Leaudro				ANALYSES REQUESTED						TURN AROUND TIME:			
WITNESSING AGENCY		ADDRESS: 15803 E-1445-			10x	m (se						Regular			
SAMPLE ID NO.	DATE	TIME	WATE	GF <del>A8</del>	СОМР	NO. OF CONT.	SAMPLING LOCATION	II/ _ 0V	M					:	REMARKS
( Mw-1	7-1-97	12:45 m		/		2 401	Wells		/		707	0412	AB		MTBE: 5 pps.
1 WW-2A	/	12:00 pin		_		^			/		7070	413			
Mw-3	/	10:52 A.M			i	/					7070	414			
M4-4		11:32 Aum	/				_	/	/		707	0415			
1 MW-5	/	9:38	~	~				/	/		7070	416			
mw-e	,	10:20 An	-	<b>&gt;</b>				/	/		707	0417	\ \\		
		_										ļ <u></u> .			
		·													
											_		ļ		·
				<del></del>				ļ						<u> </u>	1
		المالية									,				
RELINQUISHED BY: DATE/T						ATE/TIME	TE/TIME THE FOLLOWING MUST BE COMPLETED BY THE LABORATORY ACCEPTING SAMI  1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE?								
J			30 m	R 1					2. WILL 9		7				
(SIGNATURE) 7-1-9			77	7 Mara (zustis 7/1)			197			N					
(SIGNATURE)  Mara Susus 7-1-9  ISIGNATURE)				171 2-1			(A)(D)	3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE?  4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACE						(AGED?	
ė	,	Signature of			100	signature: Mara Guilis TITLE: Malyidoate:						1 1			
(SIGNATURE) SIGNATURE: // [MULCAMMA TITLE: /// [MUL								1950AIL							