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# 2422  
KT

February 24, 1997

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

Attn: Mr. Scott Seery *Kevin Tinsley*

RE: Unocal Service Station #6277  
15803 E. 14th Street  
San Leandro, California

Dear Mr. Seery:

Per the request of the 76 Products Company Project Professional, Ms. Tina R. Berry, enclosed please find our report (MPDS-UN6277-12) dated February 6, 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 Professional at (510) 277-2321.

Sincerely,

MPDS Services, Inc.



Jarrel F. Crider

/jfc

Enclosure

cc: Ms. Tina R. Berry



PACIFIC  
ENVIRONMENTAL  
GROUP, INC.

ENVIRONMENTAL  
PROTECTION

97 JAN 22 AM 9:20

January 13, 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

STD  
1747  
AT

Re: 76 Products Company  
Quarterly Summary Report  
Fourth Quarter 1996

Dear Mr. Jang:

As directed by Ms. Tina Berry of 76 products Company, Pacific Environmental Group, Inc. is forwarding the quarterly summary report for the following location:

Service Station

5430

Location

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: Ms. Tina Berry, 76 products Company  
Mr. Michael Bakaldin, San Leandro Fire Department  
Mr. Dale Klettke, Alameda County Environmental Health Care Services

3110381A/4Q96QSR

2025 Gateway Place, Suite 440, San Jose, California 95110

(408) 441-7500

FAX (408) 441-7539

## Quarterly Summary Report Fourth Quarter 1996

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 December. Unocal obtained a site access agreement for the site south of the Unocal facility. 76 Products Company has attempted to obtain an access agreement for private property located adjacent to and west of the facility, but has not been able to contact the property owner.

### NEXT QUARTER ACTIVITIES

First quarter 1997 groundwater monitoring and sampling will be performed. 76 Products Company will proceed with the proposed groundwater assessment activities.

### 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-UN6277-12  
February 6, 1997

76 Products Company  
2000 Crow Canyon Place, Suite 400  
P.O. Box 5155  
San Ramon, California 94583

Attention: Ms. Tina R. Berry

RE: Quarterly 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 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 January 2, 1997. Prior to sampling, the wells were each purged of between 8 and 9 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 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 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 Health Care Services Agency.

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

Sincerely,

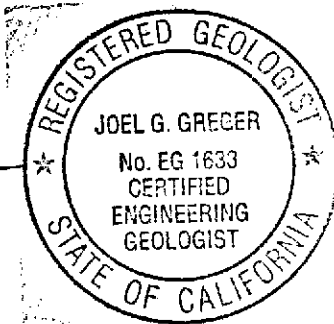
MPDS Services, Inc.



Haig (Gary) Tejirian  
Senior Staff Geologist



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



License No. EG 1633  
Exp. Date 8/31/98

/aab

- 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

Well #	Ground Water Elevation (feet)	Depth to Water (feet)*	Total Well Depth (feet)*	Product Thickness (feet)	Seen	Water Purged (gallons)
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**(Monitored and Sampled on January 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	0	No	8
MW6	23.32	5.52	19.63	0	No	8

**(Monitored and Sampled on November 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	0	No	10
MW3	22.70	9.52	23.38	0	No	9.5
MW4	22.44	9.32	22.75	0	No	9.5
MW5	22.45	6.84	20.51	0	No	9.5
MW6	22.53	6.31	19.21	0	No	9

**(Monitored and Sampled on April 8, 1996)**

MW1	22.35	10.15	24.46	0	No	10
MW2A	22.45	11.08	25.23	0	No	10
MW3	22.65	9.57	23.45	0	No	10
MW4	22.46	9.30	22.85	0	No	10
MW5	22.39	6.90	20.53	0	No	10
MW6	22.48	6.36	19.25	0	No	9

**Table 1**  
Summary of Monitoring Data

Well #	Well Casing Elevation (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	MTBE
MW1	1/2/97	230♦♦	29	ND	ND	0.91	250
	11/25/96	510♦	72	ND	ND	17	390
	7/1/96	ND	ND	ND	ND	ND	230
	4/8/96	2,100	43	27	7.4	21	480
	1/10/96	220	35	ND	2.0	7.6	†
	7/14/95	410	77	ND	7.4	30	--
	4/4/95	410♦	19	ND	ND	ND	--
	1/5/95	780	30	ND	ND	9.1	--
	10/6/94	970	19	ND	ND	13	--
	7/7/94	2,100♦♦	250	ND	57	200	--
	4/4/94	1,100	15	ND	ND	7.4	--
	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	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	--
	1/5/95	140♦	1.4	ND	ND	ND	--
	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	--

**Table 2**  
**Summary of Laboratory Analyses**  
**Water**

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW2A	1/6/94	110	2.6	ND	1.6	1.7	--
(Cont.)	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	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	--
	9/19/90	74	0.74	ND	ND	ND	--
	6/25/90	190	1.5	0.68	ND	5.3	--
	3/29/90	85	ND	ND	ND	ND	--
	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	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

**Table 2**  
 Summary of Laboratory Analyses  
 Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW4	4/8/96	ND	ND	ND	ND	ND	ND
(Cont.)	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	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	--
	7/14/95	ND	ND	0.91	ND	1.1	--
	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	--

**Table 2**  
 Summary of Laboratory Analyses  
 Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW6	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 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.

♦ 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.

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

Well #	Date	TPH as Diesel	Tetra-chloroethene	Trichloro-ethene	1,2-Dichloro-ethane	Cis-1,2-dichloro-ethene	Total Oil & Grease (mg/L)
MW1	4/04/94*	--	390	38	ND	17	--
	4/2/93	ND	--	--	--	--	--
	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	--	--	--	--	--
	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	--	--	--	--	--
	1/29/93	ND	140	10	ND	ND	--
	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	71	ND	ND	ND	--

**Table 3**  
**Summary of Laboratory Analyses**  
**Water**

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

ND = Non-detectable.

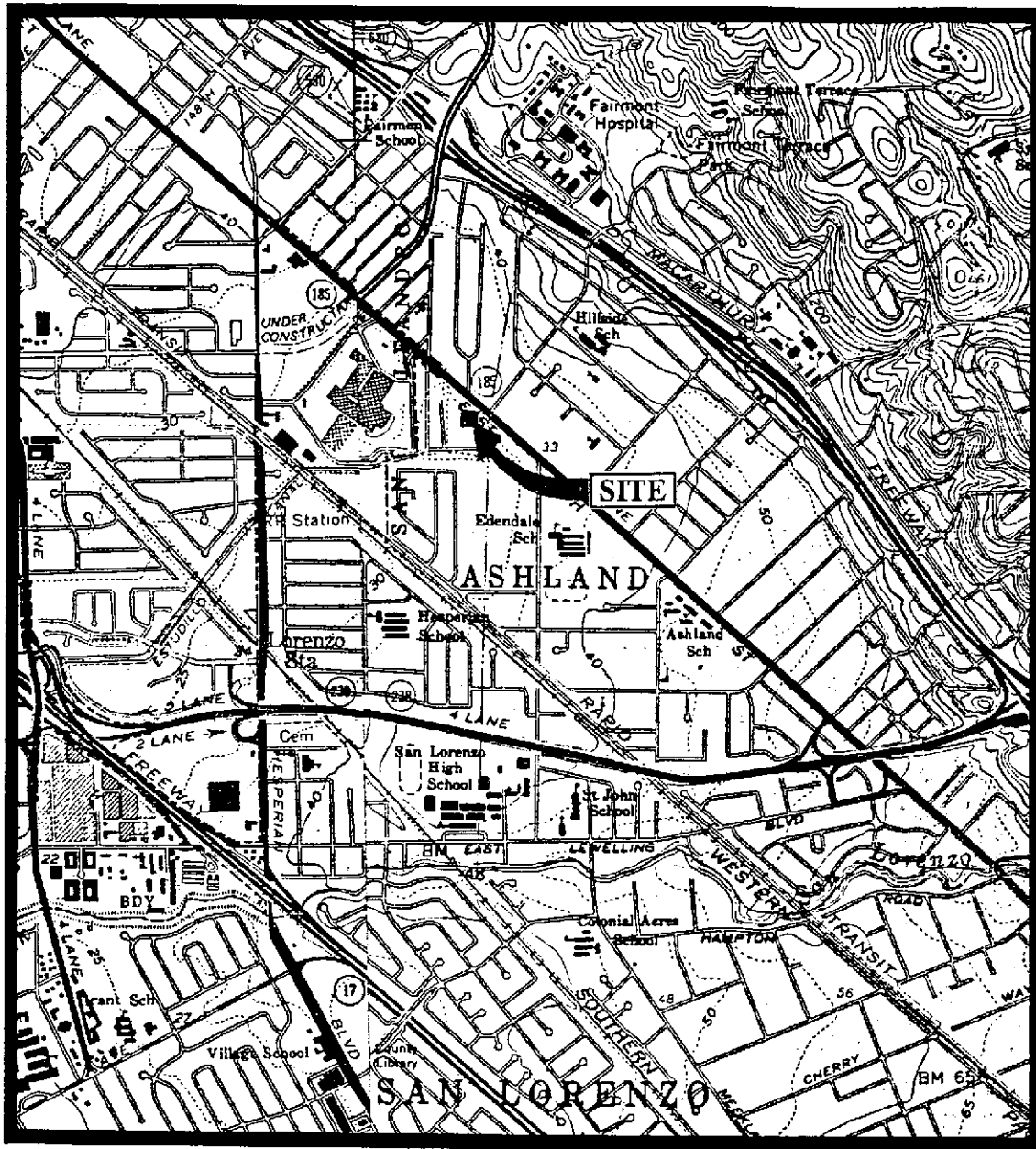
-- Indicates analysis was not performed.

mg/L = milligrams per liter.

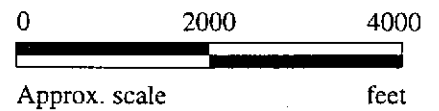
Results are in micrograms per liter (µg/L), unless otherwise indicated.

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.



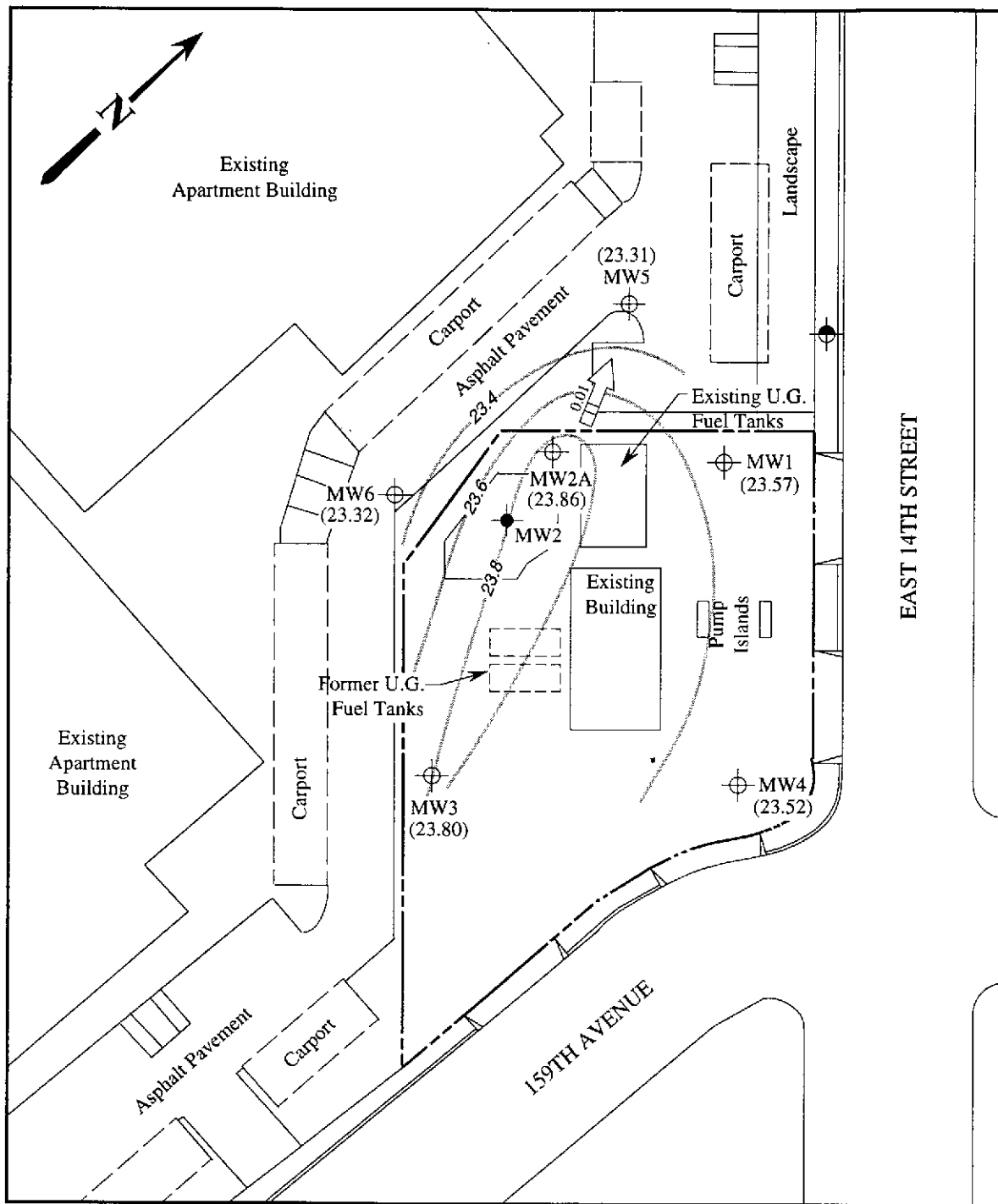
Base modified from 7.5 minute U.S.G.S.  
Hayward and San Leandro Quadrangles  
(both photorevised 1980)



**MPDS** SERVICES, INCORPORATED

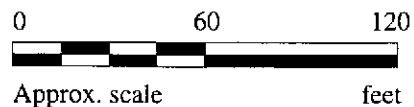
UNOCAL SERVICE STATION #6277  
15803 E. 14TH STREET  
SAN LEANDRO, CALIFORNIA

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



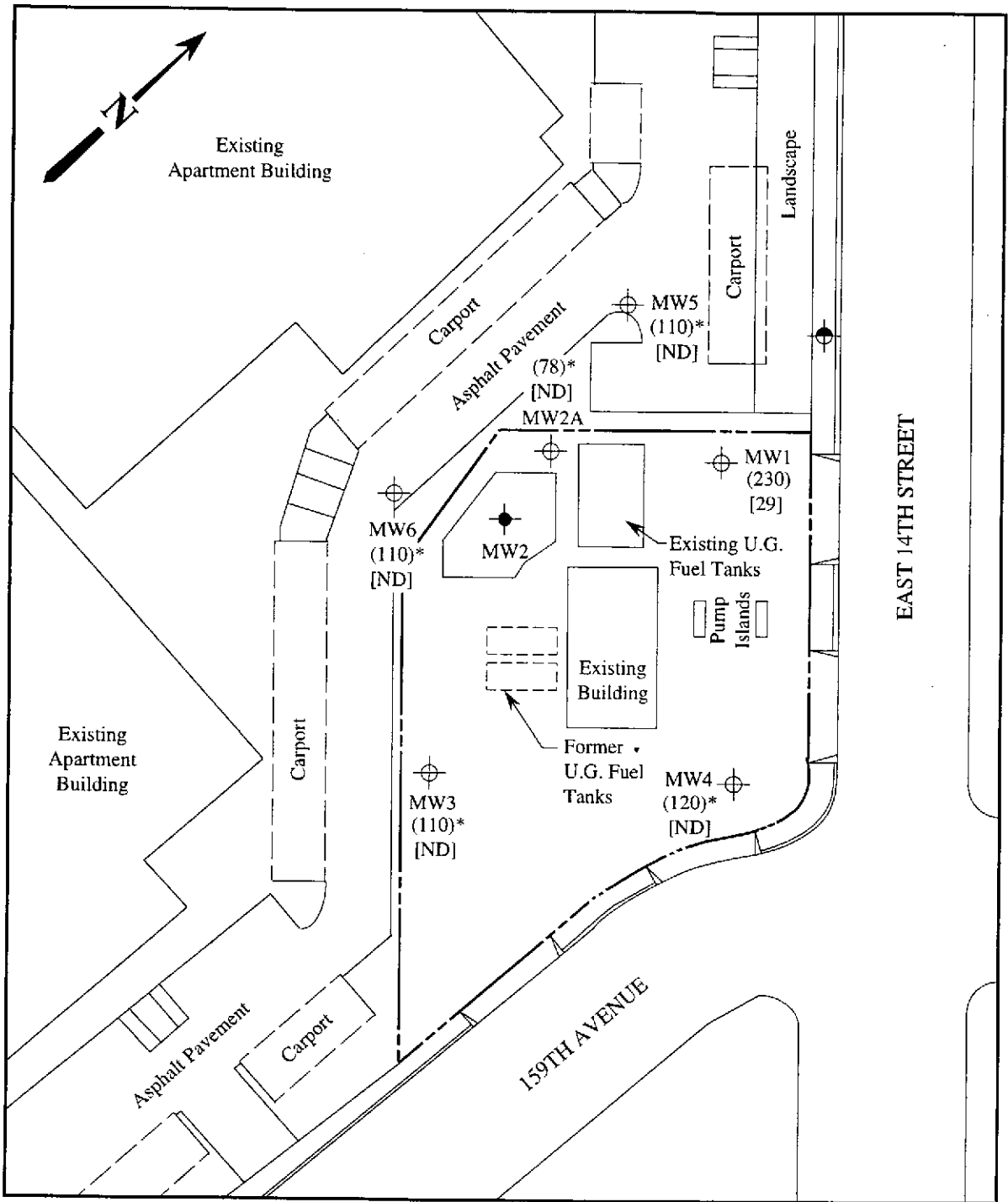
**POTENTIOMETRIC SURFACE MAP FOR THE JANUARY 2, 1997 MONITORING EVENT**

**MPDS** SERVICES, INCORPORATED

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

**FIGURE  
1**

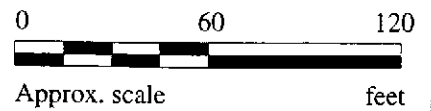




**LEGEND**

- ⊕ Monitoring well (existing)
- ⊙ Monitoring well (previously attempted)
- Monitoring well (destroyed February 1, 1990)
- ( ) Concentration of TPH as gasoline in  $\mu\text{g/L}$
- [ ] Concentration of benzene in  $\mu\text{g/L}$
- ND Non-detectable

\* The lab reported that the hydrocarbons detected did not appear to be gasoline.



**PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON JANUARY 2, 1997**

**MPDS** SERVICES, INCORPORATED

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

FIGURE  
**2**



MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #6277, 15803 E. 14th St., Matrix Descript: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 701-0138	San Leandro	Sampled: Jan 2, 1997 Received: Jan 2, 1997 Reported: Jan 14, 1997
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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	MTBE µg/L
701-0138	MW-1	230 <sup>^</sup>	29	ND	ND	0.91	250
701-0139	MW-2A	78 <sup>*</sup>	ND	ND	ND	ND	8.2
701-0140	MW-3	110 <sup>*</sup>	ND	ND	ND	ND	8.5
701-0141	MW-4	120 <sup>*</sup>	ND	ND	ND	ND	8.6
701-0142	MW-5	110 <sup>*</sup>	ND	ND	ND	ND	8.4
701-0143	MW-6	110 <sup>*</sup>	ND	ND	ND	ND	8.3

\* Hydrocarbons detected did not appear to be gasoline.

<sup>^</sup> Hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

<b>Detection Limits:</b>	<b>50</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</b>	<b>5.0</b>
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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





MPDS Services	Client Project ID: Unocal #6277, 15803 E. 14th St.,	Sampled: Jan 2, 1997
2401 Stanwell Dr., Ste. 300	Matrix Descript: Water San Leandro	Received: Jan 2, 1997
Concord, CA 94520	Analysis Method: EPA 5030/8015 Mod./8020	Reported: Jan 14, 1997
Attention: Jarrel Crider	First Sample #: 701-0138	

**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
701-0138	MW-1	Gasoline & Discrete Peaks^	1.0	1/10/97	HP-2	106
701-0139	MW-2A	Discrete Peaks*	1.0	1/7/97	HP-5	93
701-0140	MW-3	Discrete Peaks*	1.0	1/7/97	HP-5	96
701-0141	MW-4	Discrete Peaks*	1.0	1/7/97	HP-5	98
701-0142	MW-5	Discrete Peaks*	1.0	1/7/97	HP-5	95
701-0143	MW-6	Discrete Peaks*	1.0	1/7/97	HP-5	96

**SEQUOIA ANALYTICAL, #1271**

Signature on File

Alan B. Kemp  
Project Manager

Please Note:  
 ^ \* "Discrete Peaks" refers to unidentified peaks in the EPA 8010 range.





MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Jarrel Crider	Client Project ID: Unocal #6277, 15803 E. 14th St., Sample Descript: Water, MW-3 Analysis Method: EPA 5030/8010 Lab Number: 701-0140	San Leandro	Sampled: Jan 2, 1997 Received: Jan 2, 1997 Analyzed: Jan 9, 1997 Reported: Jan 14, 1997
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**HALOGENATED VOLATILE ORGANICS (EPA 8010)**

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane.....	2.5	N.D.
Bromoform.....	2.5	N.D.
Bromomethane.....	5.0	N.D.
Carbon tetrachloride.....	2.5	N.D.
Chlorobenzene.....	2.5	N.D.
Chloroethane.....	5.0	N.D.
2-Chloroethylvinyl ether.....	5.0	N.D.
Chloroform.....	2.5	N.D.
Chloromethane.....	5.0	N.D.
Dibromochloromethane.....	2.5	N.D.
1,3-Dichlorobenzene.....	2.5	N.D.
1,4-Dichlorobenzene.....	2.5	N.D.
1,2-Dichlorobenzene.....	2.5	N.D.
1,1-Dichloroethane.....	2.5	N.D.
1,2-Dichloroethane.....	2.5	N.D.
1,1-Dichloroethene.....	2.5	N.D.
<b>cis-1,2-Dichloroethene.....</b>	<b>2.5</b>	<b>6.0</b>
trans-1,2-Dichloroethene.....	2.5	N.D.
1,2-Dichloropropane.....	2.5	N.D.
cis-1,3-Dichloropropene.....	2.5	N.D.
trans-1,3-Dichloropropene.....	2.5	N.D.
Methylene chloride.....	25	N.D.
1,1,2,2-Tetrachloroethane.....	2.5	N.D.
<b>Tetrachloroethene.....</b>	<b>50</b>	<b>630</b>
1,1,1-Trichloroethane.....	2.5	N.D.
1,1,2-Trichloroethane.....	2.5	N.D.
<b>Trichloroethene.....</b>	<b>2.5</b>	<b>23</b>
Trichlorofluoromethane.....	2.5	N.D.
Vinyl chloride.....	5.0	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 #6277, 15803 E. 14th St., San Leandro  
Matrix: Liquid

QC Sample Group: 7010138-143

Reported: Jan 14, 1997

**QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
<b>Method:</b>	EPA 8020	EPA 8020	EPA 8020	EPA 8020
<b>Analyst:</b>	K. NIII	K. NIII	K. NIII	K. NIII

<b>MS/MSD Batch#:</b>	7010112	7010112	7010112	7010112
<b>Date Prepared:</b>	1/7/97	1/7/97	1/7/97	1/7/97
<b>Date Analyzed:</b>	1/7/97	1/7/97	1/7/97	1/7/97
<b>Instrument I.D.#:</b>	HP-5	HP-5	HP-5	HP-5
<b>Conc. Spiked:</b>	20 µg/L	20 µg/L	20 µg/L	60 µg/L
<b>Matrix Spike % Recovery:</b>	85	85	95	90
<b>Matrix Spike Duplicate % Recovery:</b>	85	85	100	92
<b>Relative % Difference:</b>	0.0	0.0	5.1	1.8

<b>LCS Batch#:</b>	5CLS010797	5CLS010797	5CLS010797	5CLS010797
<b>Date Prepared:</b>	1/7/97	1/7/97	1/7/97	1/7/97
<b>Date Analyzed:</b>	1/7/97	1/7/97	1/7/97	1/7/97
<b>Instrument I.D.#:</b>	HP-5	HP-5	HP-5	HP-5
<b>LCS % Recovery:</b>	85	85	95	92

<b>% Recovery Control Limits:</b>	60-140	60-140	60-140	60-140
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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





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

Client Project ID: Unocal #6277, 15803 E. 14th St., San Leandro  
 Matrix: Liquid

QC Sample Group: 7010138-143

Reported: Jan 14, 1997

**QUALITY CONTROL DATA REPORT**

<b>ANALYTE</b>	Benzene	Toluene	Ethyl Benzene	Xylenes
<b>Method:</b>	EPA 8020	EPA 8020	EPA 8020	EPA 8020
<b>Analyst:</b>	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb

<b>MS/MSD Batch#:</b>	7010225	7010225	7010225	7010225
<b>Date Prepared:</b>	1/10/97	1/10/97	1/10/97	1/10/97
<b>Date Analyzed:</b>	1/10/97	1/10/97	1/10/97	1/10/97
<b>Instrument I.D.#:</b>	HP-2	HP-2	HP-2	HP-2
<b>Conc. Spiked:</b>	20 µg/L	20 µg/L	20 µg/L	60 µg/L
<b>Matrix Spike % Recovery:</b>	100	120	110	112
<b>Matrix Spike Duplicate % Recovery:</b>	95	115	105	105
<b>Relative % Difference:</b>	5.1	4.3	4.7	6.2

<b>LCS Batch#:</b>	2LCS011097	2LCS011097	2LCS011097	2LCS011097
<b>Date Prepared:</b>	1/10/97	1/10/97	1/10/97	1/10/97
<b>Date Analyzed:</b>	1/10/97	1/10/97	1/10/97	1/10/97
<b>Instrument I.D.#:</b>	HP-2	HP-2	HP-2	HP-2
<b>LCS % Recovery:</b>	95	110	105	105

<b>% Recovery Control Limits:</b>	60-140	60-140	60-140	60-140
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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





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

Client Project ID: Unocal #6277, 15803 E. 14th St.,  
 Matrix: Liquid

QC Sample Group: 7010138-143

Reported: Jan 14, 1997

**QUALITY CONTROL DATA REPORT**

ANALYTE	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-benzene
<b>Method:</b>	EPA 8010	EPA 8010	EPA 8010
<b>Analyst:</b>	P. Horton	P. Horton	P. Horton

MS/MSD			
<b>Batch#:</b>	7010280	7010280	7010280
<b>Date Prepared:</b>	1/9/97	1/9/97	1/9/97
<b>Date Analyzed:</b>	1/9/97	1/9/97	1/9/97
<b>Instrument I.D.#:</b>	HP-7	HP-7	HP-7
<b>Conc. Spiked:</b>	10 µg/L	10 µg/L	10 µg/L
<b>Matrix Spike % Recovery:</b>	111	112	101
<b>Matrix Spike Duplicate % Recovery:</b>	104	108	98
<b>Relative % Difference:</b>	6.5	3.6	3.0

LCS Batch#:	LCS010997	LCS010997	LCS010997
<b>Date Prepared:</b>	1/9/97	1/9/97	1/9/97
<b>Date Analyzed:</b>	1/9/97	1/9/97	1/9/97
<b>Instrument I.D.#:</b>	HP-7	HP-7	HP-7
<b>LCS % Recovery:</b>	106	106	98

<b>% Recovery Control Limits:</b>	60-140	60-140	60-140
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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



# M P D S Services, Inc.

2401 Stanwell Drive, Suite 400, Concord, CA 94520

Tel: (510) 602-5120 Fax: (510) 689-1918

## CHAIN OF CUSTODY

9702040

SAMPLER			UNOCAL					ANALYSES REQUESTED							TURN AROUND TIME:				
JOE ASEMIAN			S/S # 6277 CITY: San Leandro					TPHC	BTEX	MTBE	80/0								Regular
WITNESSING AGENCY			ADDRESS: 15803 E. 14th ct.																REMARKS
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION												
MW-1	1-2-97	2:00 P.M.	✓	✓		2 (VOA)	Wells	✓	✓					7010138	A-B			MTBE; 596b.	
MW-2A	,	1:10 P.M.	✓	✓		2 (VOA)	,	✓	✓					7010139	↓				
MW-3	,	10:30 A.M.	✓	✓		4 (VOA)	,	✓	✓	✓				7010140	A-B				
MW-4	,	11:00 A.M.	✓	✓		2 (VOA)	,	✓	✓					7010141	A-B				
MW-5	,	11:50 A.M.	✓	✓		2 (VOA)	,	✓	✓					7010142					
MW-6	,	12:25 P.M.	✓	✓		2 (VOA)	,	✓	✓					7010143	✓				
RELINQUISHED BY:			DATE/TIME			RECEIVED BY:			THE FOLLOWING <u>MUST BE</u> COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:										
(SIGNATURE) Joe Asemian			3:30 P.M.			(SIGNATURE) ZD Cardenas 1-2-97			1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? Y										
(SIGNATURE) ZD Cardenas			1-3-97			(SIGNATURE) ZD Cardenas 1530			2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? Y										
(SIGNATURE) [Signature]			1-3-1605			(SIGNATURE) [Signature]			3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? N										
(SIGNATURE) [Signature]						(SIGNATURE) [Signature]			4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? Y										
(SIGNATURE) [Signature]						(SIGNATURE) [Signature]			SIGNATURE: ZD Cardenas			TITLE: analyst			DATE: 1-2-97				