

MONITORING  
PURGING  
DISPOSING  
SAMPLING

**MPDS**

SERVICES, INCORPORATED

October 4, 1995

Mr. Scott Seery  
Alameda County Health Care Services  
1131 Harbor Bay Parkway  
Alameda, California 94501

RE: Unocal Service Station #3292  
15008 E. 14th Street  
San Leandro, California

Dear Mr. Seery:

Per the request of the Unocal Corporation Project Manager, Mr. Edward C. Ralston, enclosed please find our report (MPDS-UN3292-08) dated August 24, 1995 for the above referenced site.

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

Sincerely,

MPDS Services, Inc.



Jarrel F. Crider

/jfc

Enclosure

cc: Mr. Edward C. Ralston

MPDS-UN3292-08  
August 24, 1995

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

Attention: Mr. Edward C. Ralston

RE: Quarterly Data Report  
Unocal Service Station #3292  
15008 E. 14th Street  
San Leandro, California

Dear Mr. Ralston:

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

A joint monitoring and sampling event was conducted with the consultant for the nearby former Mobil and Chevron service station sites on August 2, 1995. The monitoring data collected for the former Mobil and Chevron site's monitoring wells (provided by Alisto Engineering Group and Blaine-Tech Services, Inc.) are summarized Tables 3 and 4.

Ground water samples were collected from the Unocal wells on August 2, 1995. Prior to sampling, the Unocal wells were each purged of between 6 and 9 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. 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 collected from the Unocal wells 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 from the Unocal wells are summarized in Table 2. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline and benzene detected in the ground water samples collected from the Unocal wells this quarter are shown on the attached Figure 2. Copies of the laboratory analytical results and the Chain of Custody documentation for the Unocal wells 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.

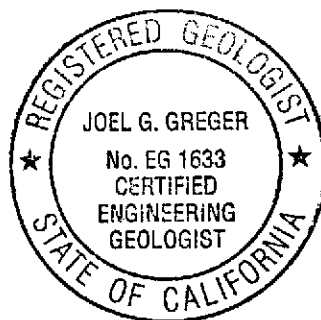
If you have any questions regarding this report, please do not hesitate to call Mr. Nubar Srabian at (510) 602-5120.

Sincerely,

MPDS Services, Inc.

  
Sarkis A. Karkarian  
Staff Engineer

  
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. Robert H. Kezerian, Kaprealian Engineering, Inc.

**TABLE 1**

**SUMMARY OF MONITORING DATA**

<b>Well #</b>	<b>Ground Water Elevation (feet)</b>	<b>Depth to Water (feet)◆</b>	<b>Total Well Depth (feet)◆</b>	<b>Product Thickness (feet)</b>	<b>Sheen</b>	<b>Water Purged (gallons)</b>
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**(Monitored and Sampled on August 2, 1995)**

MW1	26.37	10.00	18.95	0	No	7
MW2	26.98	9.36	19.10	0	No	7
MW3	26.93	9.49	22.15	0	No	9
MW4	26.86	10.18	19.64	0	No	7
MW5	26.71	9.23	22.13	0	No	9
MW6	26.99	8.68	20.15	0	No	8
MW7	27.07	9.02	21.21	0	No	8.5
MW8	26.49	10.40	19.09	0	No	6
MW9	26.54	9.75	19.10	0	No	7
MW10	26.49	9.55	19.88	0	No	7.5
MW11	26.19	9.31	19.00	0	No	7

**(Monitored and Sampled on May 10, 1995)**

MW1	27.86	8.51	18.96	0	No	7.5
MW2	27.96	8.38	19.10	0	No	7.5
MW3	28.04	8.38	22.13	0	No	10
MW4	27.07	9.97	19.62	0	No	7
MW5	27.74	8.20	22.13	0	No	10
MW6	28.14	7.53	20.13	0	No	9
MW7	28.21	7.88	21.20	0	No	9.5
MW8	27.54	9.35	19.08	0	No	7
MW9	27.59	8.70	19.08	0	No	7.5
MW10	27.34	8.70	19.88	0	No	8
MW11	27.14	8.36	19.00	0	No	7.5

**TABLE 1 (Continued)**

**SUMMARY OF MONITORING DATA**

<b>Well #</b>	<b>Ground Water Elevation (feet)</b>	<b>Depth to Water (feet)◆</b>	<b>Total Well Depth (feet)◆</b>	<b>Product Thickness (feet)</b>	<b>Sheen</b>	<b>Water Purged (gallons)</b>
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**(Monitored and Sampled on February 3, 1995)**

MW1	28.36	8.01	18.94	0	No	7.5
MW2	28.47	7.87	19.08	0	No	8
MW3	28.60	7.82	22.12	0	No	10
MW4	28.52	8.52	19.60	0	No	8
MW5	28.25	7.69	22.12	0	No	9.5
MW6	28.68	6.99	20.12	0	No	9
MW7	28.60	7.49	21.19	0	No	9.5
MW8	27.73	9.16	19.07	0	No	7
MW9	27.84	8.45	19.07	0	No	7.5
MW10	27.72	8.32	19.86	0	No	8
MW11	27.48	8.02	18.98	0	No	7.5

**(Monitored and Sampled on November 23, 1994)**

MW1	25.20	11.17	18.94	0	No	5.5
MW2	25.37	10.97	19.10	0	No	6
MW3	25.44	10.98	22.13	0	No	8
MW4	25.39	11.65	19.60	0	No	5.5
MW5	25.23	10.71	22.13	0	No	8
MW6	25.46	10.21	20.13	0	No	7
MW7	25.40	10.69	21.19	0	No	7.5
MW8	24.91	11.98	19.08	0	No	5
MW9	24.98	11.31	19.08	0	No	5.5
MW10	24.94	11.10	19.85	0	No	6
MW11	24.83	10.67	18.97	0	No	6

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TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

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<u>Well #</u>	<u>Well Casing Elevation (feet)*</u>
MW1	36.37
MW2	36.34
MW3	36.42
MW4	37.04
MW5	35.94
MW6	35.67
MW7	36.09
MW8	36.89
MW9	36.29
MW10	36.04
MW11	35.50

◆ 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), per a Benchmark located at the northwest corner of East 14th Street and 150th Avenue (elevation = 36.88 feet MSL).

**TABLE 2**

**SUMMARY OF LABORATORY ANALYSES  
 WATER**

Date	Well #	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
8/02/95	MW1	18,000	190	ND	860	590
5/10/95	MW1	16,000	230	27	880	630
2/03/95	MW1	20,000	77	17	950	390
11/23/94	MW1	23,000	180	44	970	270
8/23/94	MW1	24,000	130	57	970	320
5/25/94	MW1▲	6,400	72	ND	170	67
2/24/94	MW1	18,000	74	30	940	480
11/23/93	MW1	18,000	210	63	900	620
8/23/93	MW1	24,000	160	110	840	810
5/21/93	MW1	27,000	150	200	1,200	950
2/20/93	MW1	19,000	190	ND	880	620
11/10/92	MW1	18,000	220	ND	690	830
8/20/92	MW1	18,000	230	22	640	950
5/19/92	MW1	29,000	650	370	1,100	1,200
3/17/92	MW1	23,000	320	19	1,000	940
12/18/91	MW1	17,000	160	20	1,400	1,600
9/19/91	MW1	26,000	130	16	1,300	1,800
5/04/91	MW1	31,000	74	20	920	1,500
8/02/95	MW2	8,200	53	22	220	25
5/10/95	MW2	7,500	56	4.7	310	33
2/03/95	MW2	9,700	5.7	ND	250	10
11/23/94	MW2	15,000	61	24	440	ND
8/23/94	MW2	12,000	45	10	360	20
5/25/94	MW2	11,000	50	ND	400	22
2/24/94	MW2◆	11,000	44	ND	580	32
11/23/93	MW2	11,000	80	10	480	20
8/23/93	MW2	15,000	110	ND	590	64
5/21/93	MW2	9,500	37	ND	470	62
2/20/93	MW2	1,500	2.9	3.8	9.1	ND
11/10/92	MW2	11,000	36	7.2	570	45
8/20/92	MW2	13,000	52	ND	660	70
5/19/92	MW2	17,000	140	87	680	170
3/17/92	MW2	16,000	110	ND	730	220
12/18/91	MW2	10,000	110	5.1	420	96
9/19/91	MW2	19,000	100	6.8	790	310
5/04/91	MW2	19,000	6.6	1.4	460	630

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES  
 WATER

<u>Date</u>	<u>Well #</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>
8/02/95	MW3	1,500	6.3	ND	16	2.1
5/10/95	MW3	1,300	ND	ND	ND	ND
2/03/95	MW3	780	13	ND	2.1	ND
11/23/94	MW3	3,200	48	ND	22	ND
8/23/94	MW3	2,900	37	49	14	2.9
5/25/94	MW3	1,400	20	ND	ND	ND
2/24/94	MW3	3,400	46	ND	53	11
11/23/93	MW3	2,300	34	ND	24	5.6
8/23/93	MW3	2,900	25	ND	50	18
5/21/93	MW3	2,600	42	ND	43	15
2/20/93	MW3	1,600	12	18	8.9	12
11/10/92	MW3	3,400	37	ND	85	34
8/20/92	MW3	4,500	58	ND	65	35
5/19/92	MW3	3,400	25	3.6	66	41
3/17/92	MW3	5,800	66	7.5	100	58
12/18/91	MW3	5,900	54	6.4	110	64
9/19/91	MW3	7,600	ND	13	190	170
5/04/91	MW3	9,100	2.0	ND	55	180
8/02/95	MW4	290	3.6	ND	2.8	ND
5/10/95	MW4	280	2.8	ND	2.7	2.4
2/03/95	MW4	620	6.4	ND	9.3	ND
11/23/94	MW4	420	5.0	1.1	4.2	1.2
8/23/94	MW4	690	9.2	1.3	7.1	1.9
5/25/94	MW4	1,700	22	ND	4.5	ND
2/24/94	MW4	1,300	8.9	ND	20	ND
11/23/93	MW4	720	10	ND	8.7	ND
8/23/93	MW4	1,200	5.0	ND	16	ND
5/21/93	MW4	1,900	31	ND	20	4.5
2/20/93	MW4	2,400	40	2.1	33	ND
11/10/92	MW4	690	9.1	ND	16	2.8
8/20/92	MW4	1,000	15	ND	11	3.0
5/19/92	MW4	2,000	20	3.5	42	8.3
3/17/92	MW4	1,800	3.7	1.4	90	21
12/18/91	MW4	2,500	28	2.5	54	22
9/19/91	MW4	1,800	0.83	ND	54	46
5/04/91	MW4	6,300	ND	ND	2.8	61



TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES  
 WATER

<u>Date</u>	<u>Well #</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>
8/02/95	MW5	65,000	260	300	3,500	12,000
5/10/95	MW5	27,000	160	170	2,200	5,200
2/03/95	MW5	56,000	140	330	3,500	13,000
11/23/94	MW5	46,000	230	260	3,900	14,000
8/23/94	MW5	61,000	360	380	4,800	17,000
5/25/94	MW5	53,000	ND	ND	4,000	14,000
2/24/94	MW5	57,000	140	400	4,400	16,000
11/23/93	MW5	46,000	290	310	4,100	15,000
8/23/93	MW5	61,000	340	380	3,600	14,000
5/21/93	MW5	55,000	ND	160	3,500	12,000
2/20/93	MW5	17,000	75	ND	1,000	620
11/10/92	MW5	57,000	800	1,800	4,400	18,000
8/20/92	MW5	58,000	660	1,700	4,200	19,000
5/19/92	MW5	84,000	760	1,500	4,000	17,000
3/17/92	MW5	81,000	850	1,600	4,800	18,000
12/18/91	MW5	31,000	1,600	3,100	4,800	19,000
9/19/91	MW5	57,000	1,600	2,700	5,200	20,000
5/04/91	MW5	69,000	1,400	2,500	3,500	15,000
8/02/95	MW6	360	3.2	ND	1.6	ND
5/10/95	MW6	470	ND	0.65	1.4	0.67
2/03/95	MW6	660	4.8	13	1.4	ND
11/23/94	MW6	460	6.4	1.1	1.9	1.1
8/23/94	MW6	570	8.8	2.5	3.2	2.6
5/25/94	MW6	500	11	ND	ND	0.73
2/24/94	MW6♦	810	12	ND	2.6	0.77
11/23/93	MW6	520	ND	1.7	1.9	0.82
8/23/93	MW6	1,000	9.4	2.3	5.0	2.3
5/21/93	MW6	940	18	1.0	7.1	2.7
2/20/93	MW6	2,400	43	ND	33	2.0
11/10/92	MW6	490	7.0	1.2	1.7	ND
8/20/92	MW6	280	8.4	ND	0.51	0.84
5/19/92	MW6	1,300	2.0	2.1	ND	2.7

TABLE 2 (Continued)  
 SUMMARY OF LABORATORY ANALYSES  
 WATER

<u>Date</u>	<u>Well #</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>
8/02/95	MW7	15,000	200	ND	2,200	2,000
5/10/95	MW7	1,300	13	1.5	170	230
2/03/95	MW7	26,000	170	ND	2,300	3,700
11/23/94	MW7	10,000	220	ND	1,000	730
8/23/94	MW7	19,000	210	50	2,000	2,800
5/25/94	MW7	14,000	200	ND	1,500	1,800
2/24/94	MW7♦	16,000	220	19	2,400	3,200
11/23/93	MW7	19,000	310	30	2,500	2,300
8/23/93	MW7	33,000	360	ND	2,500	4,300
5/21/93	MW7	22,000	330	37	2,100	2,900
2/20/93	MW7	1,800	37	4.6	11	7.7
11/10/92	MW7	1,800	74	ND	230	350
8/20/92	MW7	13,000	460	54	ND	3,100
5/19/92	MW7	17,000	540	90	1,200	1,900
8/02/95	MW8	690	8.3	1.9	ND	ND
5/10/95	MW8	1,400	15	1.5	0.65	0.84
2/03/95	MW8	800	6.1	ND	ND	ND
11/23/94	MW8	1,700	34	ND	ND	3.1
8/23/94	MW8	3,200	46	18	2.0	7.2
5/25/94	MW8	14,000	29	ND	ND	ND
2/24/94	MW8	1,200	10	2.3	ND	3.2
11/23/93	MW8	1,800	ND	3.4	ND	ND
8/23/93	MW8	280*	49	4.5	ND	ND
5/21/93	MW8	2,500	44	ND	ND	ND
2/20/93	MW8	2,200	32	ND	42	5.0
11/10/92	MW8	1,800	20	ND	ND	ND
8/20/92	MW8	3,500*	67	11	ND	ND
5/19/92	MW8	5,300	28	3.3	2.6	2.1
8/02/95	MW9	1,900	26	6.6	ND	3.9
5/10/95	MW9	1,700	0.81	2.2	1.0	1.4
2/03/95	MW9	2,100	26	2.5	ND	ND
11/23/94	MW9	2,000	24	2.2	2.2	2.5
8/23/94	MW9	2,800	28	32	ND	ND
5/25/94	MW9	ND	ND	ND	ND	ND
2/24/94	MW9	2,900	35	ND	ND	ND
11/23/93	MW9	2,500	23	2.1	ND	ND

TABLE 2 (Continued)  
 SUMMARY OF LABORATORY ANALYSES  
 WATER

<u>Date</u>	<u>Well #</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>
8/23/93	MW9	3,000	29	ND	ND	ND
5/21/93	MW9	3,200	32	ND	8.1	ND
2/20/93	MW9	2,300	47	ND	32	ND
11/10/92	MW9	4,200	ND	ND	21	23
8/20/92	MW9	3,800*	37	ND	ND	ND
5/19/92	MW9	8,100	11	ND	25	5.8
5/10/95	MW10	12,000	260	16	1,200	54
2/03/95	MW10	17,000	310	ND	1,500	93
11/23/94	MW10	16,000	260	ND	1,600	49
8/23/94	MW10	16,000	250	41	1,800	74
5/25/94	MW10	14,000	240	ND	230	62
2/24/94	MW10	15,000	330	19	2,000	83
11/23/93	MW10	18,000	300	10	2,800	110
8/23/93	MW10	20,000	230	13	3,200	140
5/21/93	MW10	23,000	250	ND	3,000	240
2/20/93	MW10	17,000	74	ND	1,000	620
11/10/92	MW10	15,000	300	42	3,500	330
8/20/92	MW10	15,000	230	ND	1,000	350
8/02/95	MW11	4,200	110	ND	110	22
5/10/95	MW11	4,200	120	ND	170	38
2/03/95	MW11	4,400	110	ND	150	37
11/23/94	MW11	5,800	250	10	120	22
8/23/94	MW11	7,300	250	13	150	42
5/25/94	MW11	1,400	49	ND	26	ND
2/24/94	MW11	4,600	170	ND	140	36
11/23/93	MW11	3,400	105	ND	120	43
8/23/93	MW11	5,400	68	ND	230	43
5/21/93	MW11	7,100	64	ND	340	120
2/20/93	MW11	18,000	76	ND	1,000	630
11/10/92	MW11	5,800	130	ND	260	42
8/20/92	MW11	4,600*	62	ND	ND	54

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TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES  
WATER

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- ▲ The analytical results of the ground water sample for well MW1 was inconsistent with the previous analytical results for this well. Therefore, Sequoia Analytical Laboratory re-analyzed the sample past hold time; therefore the results may be biased low.
- \* Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.
- ◆ All EPA 8010 constituents were non-detectable.

ND = Non-detectable.

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

Note: Laboratory analyses data prior to November 23, 1993, were provided by Kaprealian Engineering, Inc.

**TABLE 3**

SUMMARY OF MONITORING DATA  
FORMER MOBIL SERVICE STATION MONITORING WELLS  
(Provided by Alisto Engineering Group)

<u>Well #</u>	<u>Ground Water Elevation (feet)</u>	<u>Depth to Water (feet)</u>	<u>Well Casing Elevation (feet)*</u>
(Monitored on August 2, 1995)			
MW1	26.86	9.49	36.35
MW2	27.07	9.54	36.61
MW3	27.17	9.75	36.92

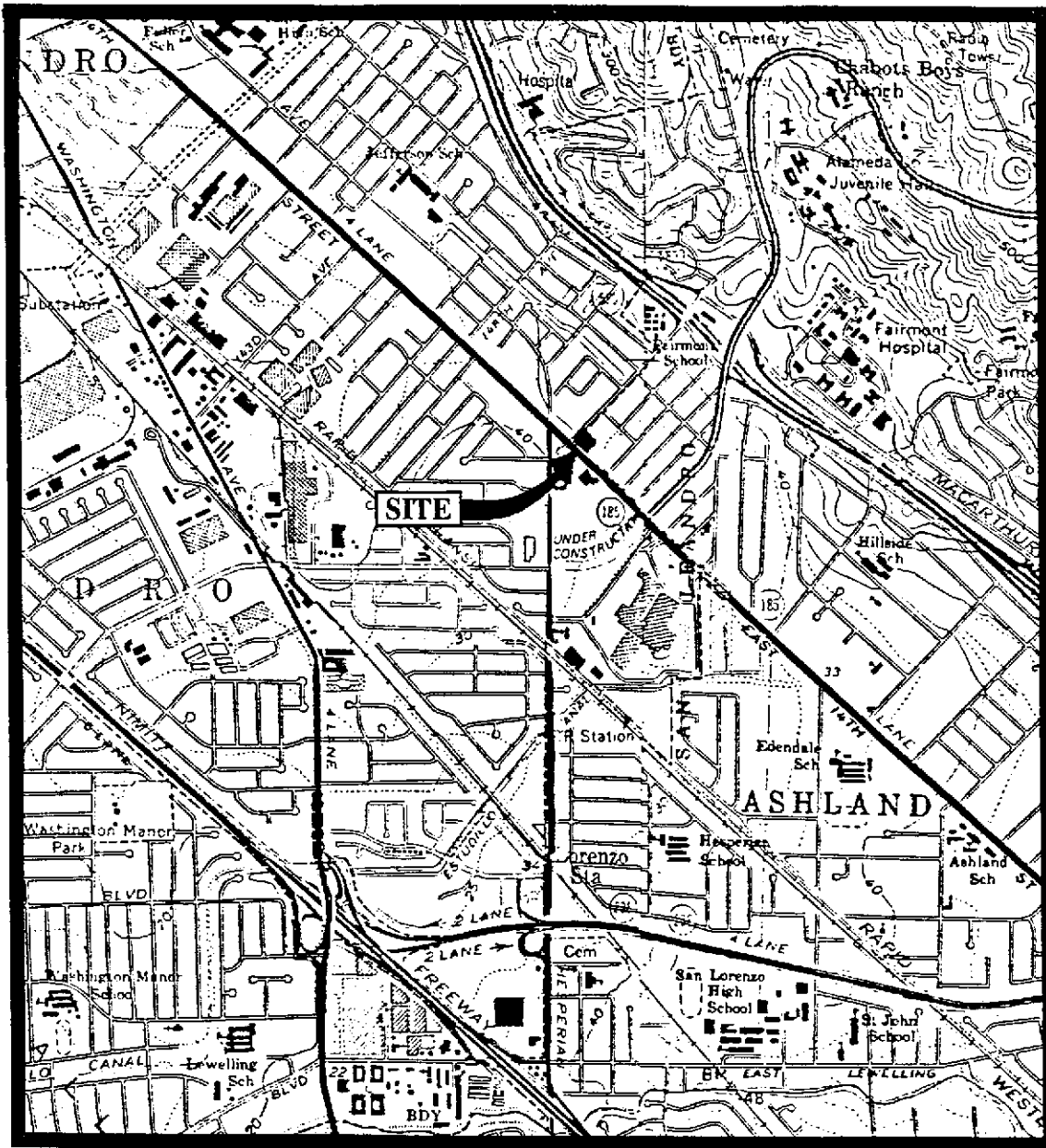
\* The elevations of the top of the well casings have been surveyed relative to Mean Sea Level.

**TABLE 4**

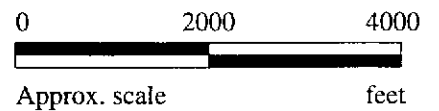
SUMMARY OF MONITORING DATA  
CHEVRON SERVICE STATION MONITORING WELLS  
(Provided by Blaine Tech Services, Inc.)

<u>Well #</u>	<u>Ground Water Elevation (feet)</u>	<u>Depth to Water (feet)</u>	<u>Well Casing Elevation (feet)*</u>
(Monitored on August 2, 1995)			
MW1	26.06	9.71	35.77
MW2	25.92	9.08	35.00
MW3	25.97	10.20	36.17
MW4	26.15	9.90	36.05
MW5	26.17	9.48	35.65
MW6	26.02	10.90	36.92
MW7	26.05	9.66	35.71
MW8	25.90	9.38	35.28

\* Top of well casings elevation.



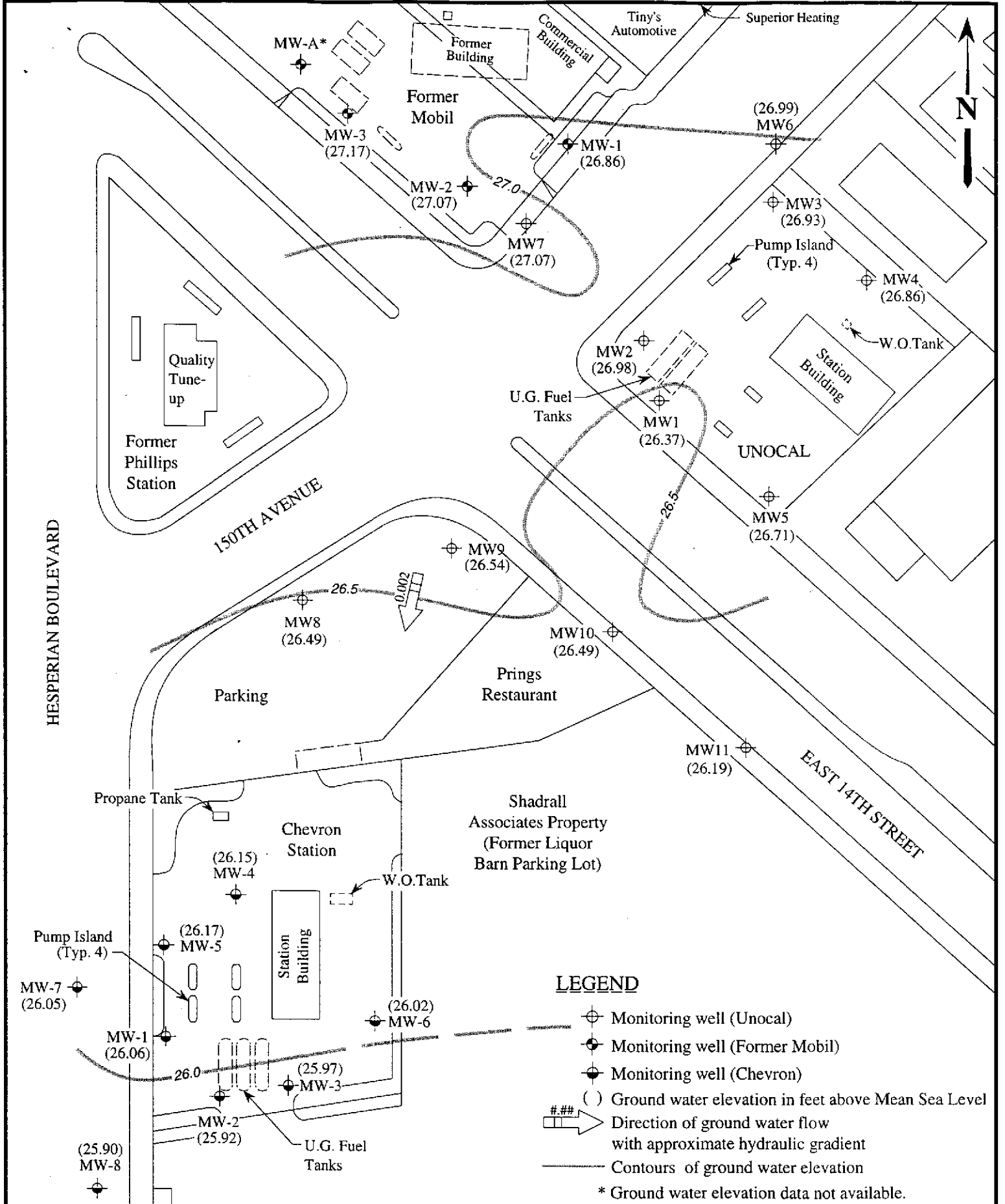
Base modified from 7.5 minute U.S.G.S.  
Hayward and San Leandro Quadrangles  
(both photorevised 1980)



**MPDS**  
SERVICES, INCORPORATED

**UNOCAL SERVICE STATION #3292**  
15008 E. 14TH STREET  
SAN LEANDRO, CALIFORNIA

**LOCATION  
MAP**



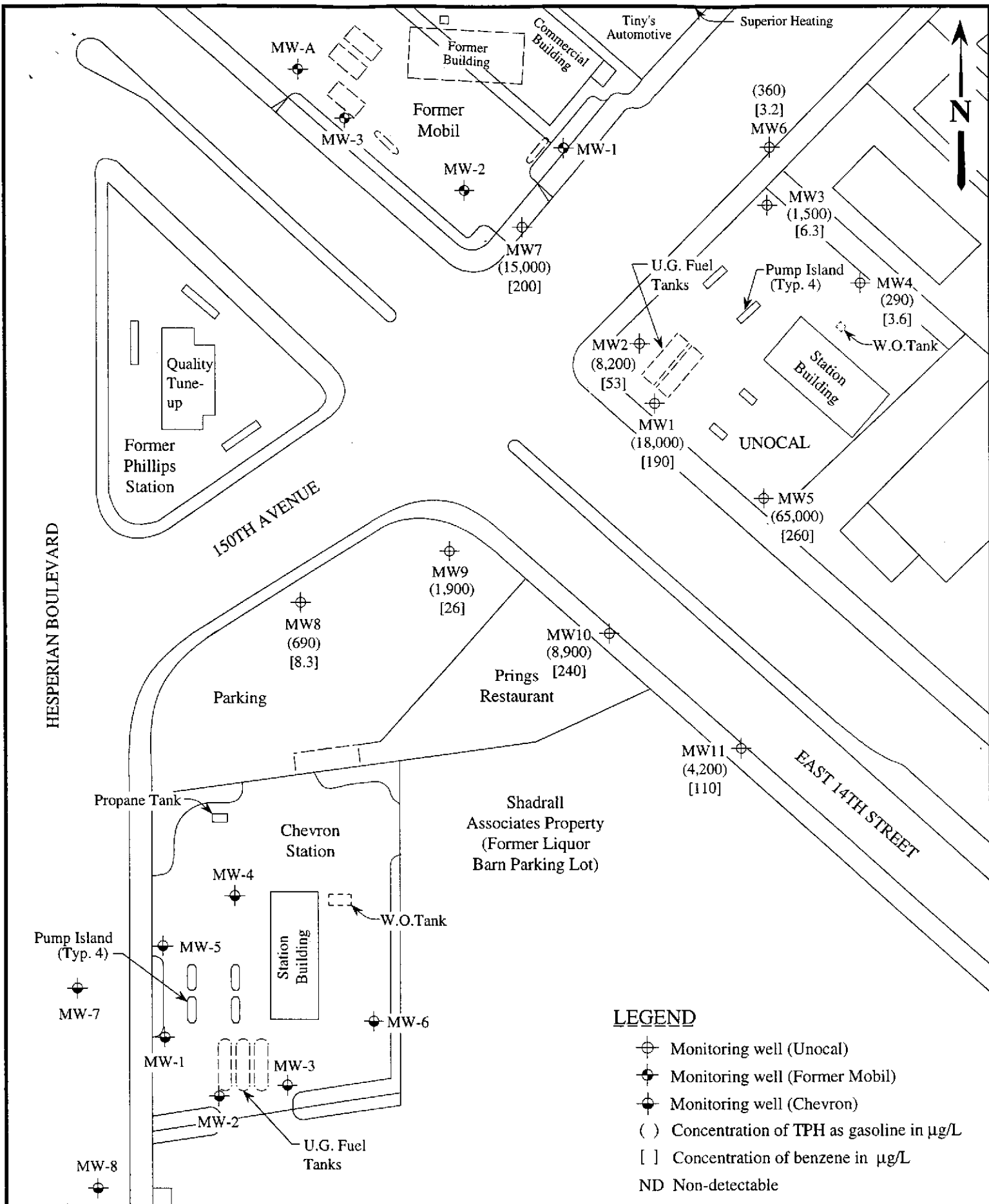
**POTENTIOMETRIC SURFACE MAP FOR THE AUGUST 2, 1995 MONITORING EVENT**

**UNOCAL SERVICE STATION #3292**  
**15008 E. 14TH STREET**  
**SAN LEANDRO, CALIFORNIA**



**FIGURE**  
**1**





**PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON AUGUST 2, 1995**

**UNOCAL SERVICE STATION #3292**  
 15008 E. 14TH STREET  
 SAN LEANDRO, CALIFORNIA



**FIGURE**  
**2**



MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Sarkis Karkarian	Client Project ID: Unocal #3292, 15008 E. 14th St., Matrix Descript: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 508-0293	San Leandro	Sampled: Aug 2, 1995 Received: Aug 2, 1995 Reported: Aug 16, 1995
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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
508-0293	MW1	18,000	190	ND	860	590
508-0294	MW2	8,200	53	22	220	25
508-0295	MW3	1,500	6.3	ND	16	2.1
508-0296	MW4	290	3.6	ND	2.8	ND
508-0297	MW5	65,000	260	300	3,500	12,000
508-0298	MW6	360	3.2	ND	1.6	ND
508-0299	MW7	15,000	200	ND	2,200	2,000
508-0300	MW8	690	8.3	1.9	ND	ND
508-0301	MW9	1,900	26	6.6	ND	3.9
508-0302	MW10	8,900	240	ND	780	40
508-0303	MW-11	4,200	110	ND	110	22

<b>Detection Limits:</b>	<b>50</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</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  
2401 Stanwell Dr., Ste. 300  
Concord, CA 94520  
Attention: Sarkis Karkarian

Client Project ID: Unocal #3292, 15008 E. 14th St.,  
Matrix Descript: Water San Leandro  
Analysis Method: EPA 5030/8015 Mod./8020  
First Sample #: 508-0293

Sampled: Aug 2, 1995  
Received: Aug 2, 1995  
Reported: Aug 16, 1995

**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
508-0293	MW1	Gasoline	50	8/13/95	HP-4	101
508-0294	MW2	Gasoline	40	8/13/95	HP-4	100
508-0295	MW3	Gasoline	4.0	8/12/95	HP-5	72
508-0296	MW4	Gasoline	1.0	8/12/95	HP-5	70
508-0297	MW5	Gasoline	200	8/12/95	HP-5	85
508-0298	MW6	Gasoline	1.0	8/12/95	HP-5	70
508-0299	MW7	Gasoline	50	8/13/95	HP-4	103
508-0300	MW8	Gasoline	2.0	8/14/95	HP-5	81
508-0301	MW9	Gasoline	5.0	8/12/95	HP-9	83
508-0302	MW10	Gasoline	40	8/14/95	HP-4	96
508-0303	MW-11	Gasoline	20	8/12/95	HP-9	72

**SEQUOIA ANALYTICAL, #1271**

Signature on File

Alan B. Kemp  
Project Manager





MPDS Services  
2401 Stanwell Dr., Ste. 300  
Concord, CA 94520  
Attention: Sarkis Karkarian

Client Project ID: Unocal #3292, 15008 E. 14th St., San Leandro  
Matrix: Liquid

QC Sample Group: 5080293-303

Reported: Aug 16, 1995

**QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
<b>Method:</b>	EPA 8020	EPA 8020	EPA 8020	EPA 8020
<b>Analyst:</b>	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha

<b>MS/MSD Batch#:</b>	5080307	5080307	5080307	5080307
<b>Date Prepared:</b>	8/13/95	8/13/95	8/13/95	8/13/95
<b>Date Analyzed:</b>	8/13/95	8/13/95	8/13/95	8/13/95
<b>Instrument I.D.#:</b>	HP-4	HP-4	HP-4	HP-4
<b>Conc. Spiked:</b>	20 µg/L	20 µg/L	20 µg/L	60 µg/L
<b>Matrix Spike % Recovery:</b>	75	105	115	115
<b>Matrix Spike Duplicate % Recovery:</b>	75	100	110	112
<b>Relative % Difference:</b>	0.0	4.9	4.4	2.9

<b>LCS Batch#:</b>	2LCS081395	2LCS081395	2LCS081395	2LCS081395
<b>Date Prepared:</b>	8/13/95	8/13/95	8/13/95	8/13/95
<b>Date Analyzed:</b>	8/13/95	8/13/95	8/13/95	8/13/95
<b>Instrument I.D.#:</b>	HP-4	HP-4	HP-4	HP-4
<b>LCS % Recovery:</b>	76	98	108	109

<b>% Recovery Control Limits:</b>	71-133	72-128	72-130	71-120
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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: Sarkis Karkarian

Client Project ID: Unocal #3292, 15008 E. 14th St., San Leandro  
Matrix: Liquid

QC Sample Group: 5080293-303

Reported: Aug 16, 1995

**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>	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha

**MS/MSD**

<b>Batch#:</b>	5080184	5080184	5080184	5080184
<b>Date Prepared:</b>	8/11/95	8/11/95	8/11/95	8/11/95
<b>Date Analyzed:</b>	8/11/95	8/11/95	8/11/95	8/11/95
<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>	75	85	100	98
<b>Matrix Spike Duplicate % Recovery:</b>	80	90	100	100
<b>Relative % Difference:</b>	6.5	5.7	0.0	1.7

<b>LCS Batch#:</b>	3LCS081295	3LCS081295	3LCS081295	3LCS081295
<b>Date Prepared:</b>	8/12/95	8/11/95	8/11/95	8/11/95
<b>Date Analyzed:</b>	8/12/95	8/11/95	8/11/95	8/11/95
<b>Instrument I.D.#:</b>	HP-5	HP-5	HP-5	HP-5
<b>LCS % Recovery:</b>	79	89	95	98

<b>% Recovery Control Limits:</b>	71-133	72-128	72-130	71-120
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MPDS Services  
2401 Stanwell Dr., Ste. 300  
Concord, CA 94520  
Attention: Sarkis Karkarian

Client Project ID: Unocal #3292, 15008 E. 14th St., San Leandro  
Matrix: Liquid

QC Sample Group: 5080293-303

Reported: Aug 16, 1995

**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>	K. Nill	K. Nill	K. Nill	K. Nill

<b>MS/MSD</b>				
<b>Batch#:</b>	5080285	5080285	5080285	5080285
<b>Date Prepared:</b>	8/14/95	8/14/95	8/14/95	8/14/95
<b>Date Analyzed:</b>	8/14/95	8/14/95	8/14/95	8/14/95
<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</b>				
<b>% Recovery:</b>	85	85	85	87
<b>Matrix Spike Duplicate %</b>				
<b>Recovery:</b>	90	90	85	90
<b>Relative %</b>				
<b>Difference:</b>	5.7	5.7	0.0	3.8

<b>LCS Batch#:</b>	3LCS081495	3LCS081495	3LCS081495	3LCS081495
<b>Date Prepared:</b>	8/14/95	8/14/95	8/14/95	8/14/95
<b>Date Analyzed:</b>	8/14/95	8/14/95	8/14/95	8/14/95
<b>Instrument I.D.#:</b>	HP-5	HP-5	HP-5	HP-5
<b>LCS %</b>				
<b>Recovery:</b>	75	94	103	107

<b>% Recovery</b>				
<b>Control Limits:</b>	71-133	72-128	72-130	71-120

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**SEQUOIA ANALYTICAL, #1271**

Signature on File

Alan B. Kemp  
Project Manager





MPDS Services  
2401 Stanwell Dr., Ste. 300  
Concord, CA 94520  
Attention: Sarkis Karkarian

Client Project ID: Unocal #3292, 15008 E. 14th St., San Leandro  
Matrix: Liquid

QC Sample Group: 5080293-303

Reported: Aug 16, 1995

**QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
<b>Method:</b>	EPA 8020	EPA 8020	EPA 8020	EPA 8020
<b>Analyst:</b>	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha

<b>MS/MSD Batch#:</b>	5080308	5080308	5080308	5080308
<b>Date Prepared:</b>	8/12/95	8/12/95	8/12/95	8/12/95
<b>Date Analyzed:</b>	8/12/95	8/12/95	8/12/95	8/12/95
<b>Instrument I.D.#:</b>	HP-9	HP-9	HP-9	HP-9
<b>Conc. Spiked:</b>	20 µg/L	20 µg/L	20 µg/L	60 µg/L
<b>Matrix Spike % Recovery:</b>	90	110	120	128
<b>Matrix Spike Duplicate % Recovery:</b>	90	110	120	130
<b>Relative % Difference:</b>	0.0	0.0	0.0	1.3

<b>LCS Batch#:</b>	4LCS081295	4LCS081295	4LCS081295	4LCS081295
<b>Date Prepared:</b>	8/12/95	8/12/95	8/12/95	8/12/95
<b>Date Analyzed:</b>	8/12/95	8/12/95	8/12/95	8/12/95
<b>Instrument I.D.#:</b>	HP-9	HP-9	HP-9	HP-9
<b>LCS % Recovery:</b>	79	96	102	111

<b>% Recovery Control Limits:</b>	71-133	72-128	72-130	71-120
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MPDS Services  
2401 Stanwell Dr., Ste. 300  
Concord, CA 94520  
Attention: Sarkis Karkarian

Client Project ID: Unocal #3292, 15008 E. 14th St., San Leandro  
Matrix: Liquid

QC Sample Group: 5080293-303

Reported: Aug 16, 1995

**QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
<b>Method:</b>	EPA 8020	EPA 8020	EPA 8020	EPA 8020
<b>Analyst:</b>	M. Creusere	M. Creusere	M. Creusere	M. Creusere

MS/MSD				
<b>Batch#:</b>	5080544	5080544	5080544	5080544
<b>Date Prepared:</b>	8/14/95	8/14/95	8/14/95	8/14/95
<b>Date Analyzed:</b>	8/14/95	8/14/95	8/14/95	8/14/95
<b>Instrument I.D.#:</b>	HP-4	HP-4	HP-4	HP-4
<b>Conc. Spiked:</b>	20 µg/L	20 µg/L	20 µg/L	60 µg/L
<b>Matrix Spike % Recovery:</b>	90	95	95	97
<b>Matrix Spike Duplicate % Recovery:</b>	95	100	100	102
<b>Relative % Difference:</b>	5.4	5.1	5.1	5.0

<b>LCS Batch#:</b>	2LCS081495	2LCS081495	2LCS081495	2LCS081495
<b>Date Prepared:</b>	8/14/95	8/14/95	8/14/95	8/14/95
<b>Date Analyzed:</b>	8/14/95	8/14/95	8/14/95	8/14/95
<b>Instrument I.D.#:</b>	HP-4	HP-4	HP-4	HP-4
<b>LCS % Recovery:</b>	80	108	119	120

<b>% Recovery Control Limits:</b>	71-133	72-128	72-130	71-120
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**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

9508053

## CHAIN OF CUSTODY

SAMPLER			UNOCAL					ANALYSES REQUESTED						TURN AROUND TIME:	
RAY MARANGOSIAN			S/S # <u>3292</u> CITY: <u>SAN LEANDRO</u>					TPH-GAS BTEX	TPH-DIESEL	TOG	8010				REGULAR
WITNESSING AGENCY			ADDRESS: <u>15008 E. 14TH ST.</u>												
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION								
MW1	8.2.95	15:10	X	X		2	Well	X						5080293	
MW2	4	14:25	X	X		4	4	X						5080294	
MW3	4	12:10	X	X		4	4	X						5080295	
MW4	4	12:45	X	X		4	4	X						5080296	
MW5	4	14:40	X	X		4	4	X						5080297	
MW6	4	11:30	X	X		4	4	X						5080298	
MW7	4	12:20	X	X		4	4	X						5080299	
MW8	4	14:00	X	X		4	4	X						5080300	
MW9	4	13:45	X	X		4	4	X						5080301	
MW10	4	10:50	X	X		4	4	X						5080302	
MW11	4	10:25	X	X		4	4	X						5080303	

REINQUISHED BY: <i>Ray Marangosian</i> (SIGNATURE)	16:18 DATE/TIME 8.2.95	RECEIVED BY: <i>5-3</i> <i>12:45</i> (SIGNATURE)	THE FOLLOWING <u>MUST</u> BE COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:
(SIGNATURE)	8-3 1415	(SIGNATURE)	1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? YES
(SIGNATURE)		(SIGNATURE)	2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? YES
(SIGNATURE)		(SIGNATURE)	3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? no
(SIGNATURE)		(SIGNATURE)	4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? yes
(SIGNATURE)	8/2/95 1618	(SIGNATURE)	SIGNATURE: <i>Jean</i> TITLE: <i>analyst</i> DATE: <i>8/2/95</i>

Relinquished: *V. Bay* 8-8-95  
1015