

January 9, 1997

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

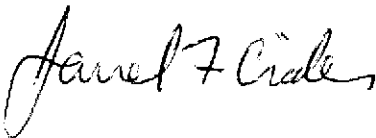
Dear Mr. Seery:

Per the request of the Unocal Corporation Project Manager, Mr. Edward C. Ralston, enclosed please find our report (MPDS-UN3292-13) dated December 10, 1996, 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

97 JAN 13 AM 9:52

ENVIRONMENTAL  
PROTECTION



MPDS-UN3292-13  
December 10, 1996

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. (MPDS).

#### 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.

A joint monitoring event was conducted with the consultants for the nearby former Mobil and Chevron sites on November 7, 1996. The monitoring data collected from the monitoring wells at the former Mobil and Chevron sites are summarized in Tables 4 and 5, respectively. The ground water flow direction in the vicinity of the three sites during the most recent quarter is shown on the attached Figure 1.

Ground water samples were collected from the Unocal wells on November 7, 1996. In addition, dissolved oxygen concentrations were measured and are presented in Table 3. Prior to sampling, the Unocal wells were each purged of between 4 and 6 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 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. Joel G. Greger at (510) 602-5120.

Sincerely,

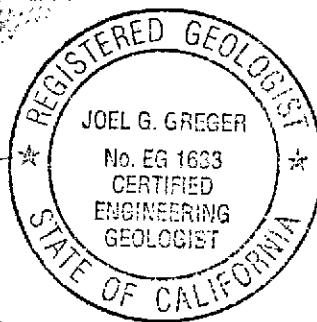
MPDS Services, Inc.



Haig (Gary) Tejrjian  
Senior Staff Geologist



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



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

Attachments: Tables 1 through 5  
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)	Screen	Water Purged (gallons)
--------	-------------------------------	------------------------	--------------------------	--------------------------	--------	------------------------

**(Monitored and Sampled on November 7, 1996)**

MW1	25.63	10.74	18.95	0	No	4.5
MW2	25.65	10.69	19.10	0	No	4.5
MW3	25.46	10.96	22.15	0	No	6
MW4	25.46	11.58	19.65	0	No	4.5
MW5	25.29	10.65	22.08	0	No	6
MW6	25.55	10.12	20.10	0	No	5.5
MW7	25.33	10.76	21.11	0	No	5.5
MW8	25.18	11.71	19.01	0	No	4
MW9	25.19	11.10	19.00	0	No	4
MW10	25.12	10.92	19.83	0	No	5
MW11	24.92	10.58	18.92	0	No	4.5
MW2‡	24.46	10.98	20.90	0	No	5
MW3‡	24.93	10.88	20.70	0	No	5

**(Monitored and Sampled on August 9, 1996)**

MW1	26.65	9.72	19.00	0	No	6.5
MW2	26.80	9.54	19.12	0	No	6.5
MW3	26.89	9.53	22.16	0	No	9
MW4	26.80	10.24	19.64	0	No	6.5
MW5	26.57	9.37	22.16	0	No	9
MW6	26.95	8.72	20.15	0	No	8
MW7	27.02	9.07	21.25	0	No	8.5
MW8	26.42	10.47	19.10	0	No	6
MW9	26.45	9.84	19.11	0	No	6.5
MW10	26.28	9.76	19.91	0	No	7
MW11	26.04	9.46	19.00	0	No	6.5
MW2‡	25.46	9.98	19.99	0	No	7
MW3‡	26.08	9.73	20.20	0	No	7.5

**Table 1**  
 Summary of Monitoring Data

Well #	Ground Water Elevation (feet)	Depth to Water (feet)*	Total Well Depth (feet)*	Product Thickness (feet)	Sheen	Water Purged (gallons)
--------	-------------------------------------	------------------------------	--------------------------------	--------------------------------	-------	------------------------------

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

MW1	27.87	8.50	19.00	0	No	7.5
MW2	28.13	8.21	19.11	0	No	7.5
MW3	28.22	8.20	22.16	0	No	9.5
MW4	WELL WAS INACCESSIBLE					
MW5	27.69	8.25	22.16	0	No	10
MW6	28.27	7.40	20.16	0	No	9
MW7	28.98	7.11	21.25	0	No	10
MW8	27.43	9.46	19.10	0	No	7
MW9	27.54	8.75	19.10	0	No	7.5
MW10	27.34	8.70	19.90	0	No	8
MW11	27.00	8.50	18.98	0	No	7.5
MW2‡	26.32	9.12	20.00	0	No	7.5
MW3‡	27.08	8.73	20.20	0	No	8

**(Monitored and Sampled on February 14, 1996)**

MW8★	27.65	9.24	19.10	0	No	7
MW11★	27.32	8.18	19.02	0	No	7.5

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

MW1	28.63	7.74	18.98	0	No	8
MW2	28.82	7.52	19.12	0	No	8
MW3	29.01	7.41	22.16	0	No	10.5
MW4	28.89	8.15	19.65	0	No	8
MW5	28.58	7.36	22.16	0	No	10.5
MW6	29.01	6.66	20.16	0	No	9.5
MW7	28.96	7.13	21.23	0	No	10
MW8★	27.91	8.98	19.10	0	No	7
MW9	28.14	8.15	19.11	0	No	7.5
MW10	27.99	8.05	19.91	0	No	8.5
MW11★	27.74	7.76	19.05	0	No	8

**Table 1**  
Summary of Monitoring Data

Well #	Well Casing Elevation (feet)*
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
MW2‡	35.44**
MW3‡	35.81**

- ◆ The depth to water level and total well depth measurements were taken from the top of the well casings.
- ★ Monitoring wells MW8 and MW11 were resampled on February 14, 1996. The vials containing the ground water samples collected from these wells on February 8, 1996, were inadvertently broken by the laboratory.
- \* 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).
- \*\* The elevations of the top of the well casings are relative to Mean Sea Level (MSL), per Chevron monitoring well MW-6 used as a benchmark (elevation = 36.92 feet MSL).
- ‡ Wells located on Shadrall Property.

**Table 2**  
 Summary of Laboratory Analyses  
 Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW1	5/4/91	31,000	74	20	920	1,500	--
	9/19/91	26,000	130	16	1,300	1,800	--
	12/18/91	17,000	160	20	1,400	1,600	--
	3/17/92	23,000	320	19	1,000	940	--
	5/19/92	29,000	650	370	1,100	1,200	--
	8/20/92	18,000	230	22	640	950	--
	11/10/92	18,000	220	ND	690	830	--
	2/20/93	19,000	190	ND	880	620	--
	5/21/93	27,000	150	200	1,200	950	--
	8/23/93	24,000	160	110	840	810	--
	11/23/93	18,000	210	63	900	620	--
	2/24/94	18,000	74	30	940	480	--
	5/25/94§	6,400	72	ND	170	67	--
	8/23/94	24,000	130	57	970	320	--
	11/23/94	23,000	180	44	970	270	--
	2/3/95	20,000	77	17	950	390	--
	5/10/95	16,000	230	27	880	630	--
	8/2/95	18,000	190	ND	860	590	--
	11/20/95†	20,000	180	ND	960	450	970
	2/8/96	15,000	43	16	940	410	5,200
	5/8/96	16,000	37	16	930	410	1,600
	8/9/96	2,300	25	ND	77	39	1,200
11/7/96	38,000	140	ND	1,900	5,600	ND	
MW2	5/4/91	19,000	6.6	1.4	460	630	--
	9/19/91	19,000	100	6.8	790	310	--
	12/18/91	10,000	110	5.1	420	96	--
	3/17/92	16,000	110	ND	730	220	--
	5/19/92	17,000	140	87	680	170	--
	8/20/92	13,000	52	ND	660	70	--
	11/10/92	11,000	36	7.2	570	45	--
	2/20/93	1,500	2.9	3.8	9.1	ND	--
	5/21/93	9,500	37	ND	470	62	--
	8/23/93	15,000	110	ND	590	64	--
	11/23/93	11,000	80	10	480	20	--
	2/24/94◆	11,000	44	ND	580	32	--
	5/25/94	11,000	50	ND	400	22	--
	8/23/94	12,000	45	10	360	20	--
	11/23/94	15,000	61	24	440	ND	--
	2/3/95	9,700	5.7	ND	250	10	--
	5/10/95	7,500	56	4.7	310	33	--
	8/2/95	8,200	53	22	220	25	--
	11/2/95	5,000	56	4.5	170	7.7	110
	2/8/96	7,200	ND	ND	170	ND	ND
	5/8/96	8,400	5.6	9.0	170	10	130
	8/9/96	3,100	24	ND	80	ND	64
11/7/96	36,000	140	ND	1,900	5,600	ND	

**Table 2**  
 Summary of Laboratory Analyses  
 Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	
MW3	5/4/91	9,100	2.0	ND	55	180	--	
	9/19/91	7,600	ND	13	190	170	--	
	12/18/91	5,900	54	6.4	110	64	--	
	3/17/92	5,800	66	7.5	100	58	--	
	5/19/92	3,400	25	3.6	66	41	--	
	8/20/92	4,500	58	ND	65	35	--	
	11/10/92	3,400	37	ND	85	34	--	
	2/20/93	1,600	12	18	8.9	12	--	
	5/21/93	2,600	42	ND	43	15	--	
	8/23/93	2,900	25	ND	50	18	--	
	11/23/93	2,300	34	ND	24	5.6	--	
	2/24/94	3,400	46	ND	53	11	--	
	5/25/94	1,400	20	ND	ND	ND	--	
	8/23/94	2,900	37	49	14	2.9	--	
	11/23/94	3,200	48	ND	22	ND	--	
	2/3/95	780	13	ND	2.1	ND	--	
	5/10/95	1,300	ND	ND	ND	ND	--	
	8/2/95	1,500	6.3	ND	16	2.1	--	
	11/2/95	1,100	5.2	2.1	7.4	0.5	15	
	2/8/96	450	ND	ND	ND	ND	ND	
	5/8/96	590	ND	11	10	ND	ND	
	8/9/96	ND	ND	ND	ND	ND	ND	
	11/7/96	140	1.2	ND	ND	ND	5.6	
MW4	5/4/91	6,300	ND	ND	2.8	61	--	
	9/19/91	1,800	0.83	ND	54	46	--	
	12/18/91	2,500	28	2.5	54	22	--	
	3/17/92	1,800	3.7	1.4	90	21	--	
	5/19/92	2,000	20	3.5	42	8.3	--	
	8/20/92	1,000	15	ND	11	3.0	--	
	11/10/92	690	9.1	ND	16	2.8	--	
	2/20/93	2,400	40	2.1	33	ND	--	
	5/21/93	1,900	31	ND	20	4.5	--	
	8/23/93	1,200	5.0	ND	16	ND	--	
	11/23/93	720	10	ND	8.7	ND	--	
	2/24/94	1,300	8.9	ND	20	ND	--	
	5/25/94	1,700	22	ND	4.5	ND	--	
	8/23/94	690	9.2	1.3	7.1	1.9	--	
	11/23/94	420	5.0	1.1	4.2	1.2	--	
	2/3/95	620	6.4	ND	9.3	ND	--	
	5/10/95	280	2.8	ND	2.7	2.4	--	
	8/2/95	290	3.6	ND	2.8	ND	--	
	11/2/95	42,000	390	210	2,800	6,300	270	
	2/8/96	130	2.1	ND	1.5	0.69	ND	
	5/8/96	WELL WAS INACCESSIBLE						
	8/9/96	ND	ND	ND	ND	ND	ND	
	11/7/96	ND	ND	ND	ND	ND	ND	



**Table 2**  
 Summary of Laboratory Analyses  
 Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW5	5/4/91	69,000	1,400	2,500	3,500	15,000	--
	9/19/91	57,000	1,600	2,700	5,200	20,000	--
	12/18/91	31,000	1,600	3,100	4,800	19,000	--
	3/17/92	81,000	850	1,600	4,800	18,000	--
	5/19/92	84,000	760	1,500	4,000	17,000	--
	8/20/92	58,000	660	1,700	4,200	19,000	--
	11/10/92	57,000	800	1,800	4,400	18,000	--
	2/20/93	17,000	75	ND	1,000	620	--
	5/21/93	55,000	ND	160	3,500	12,000	--
	8/23/93	61,000	340	380	3,600	14,000	--
	11/23/93	46,000	290	310	4,100	15,000	--
	2/24/94	57,000	140	400	4,400	16,000	--
	5/25/94	53,000	ND	ND	4,000	14,000	--
	8/23/94	61,000	360	380	4,800	17,000	--
	11/23/94	46,000	230	260	3,900	14,000	--
	2/3/95	56,000	140	330	3,500	13,000	--
	5/10/95	27,000	160	170	2,200	5,200	--
	8/2/95	65,000	260	300	3,500	12,000	--
	11/2/95	240	0.76	ND	1.1	ND	ND
	2/8/96	54,000	210	150	3,400	12,000	170
5/8/96	52,000	170	200	3,600	11,000	170	
8/9/96	25,000	54	16	1,700	4,700	ND	
11/7/96	2,100	42	ND	9.3	ND	2,300	
MW6	5/19/92	1,300	2.0	2.1	ND	2.7	--
	8/20/92	280	8.4	ND	0.51	0.84	--
	11/10/92	490	7.0	1.2	1.7	ND	--
	2/20/93	2,400	43	ND	33	2.0	--
	5/21/93	940	18	1.0	7.1	2.7	--
	8/23/93	1,000	9.4	2.3	5.0	2.3	--
	11/23/93	520	ND	1.7	1.9	0.82	--
	2/24/94♦	810	12	ND	2.6	0.77	--
	5/25/94	500	11	ND	ND	0.73	--
	8/23/94	570	8.8	2.5	3.2	2.6	--
	11/23/94	460	6.4	1.1	1.9	1.1	--
	2/3/95	660	4.8	13	1.4	ND	--
	5/10/95	470	ND	0.65	1.4	0.67	--
	8/2/95	360	3.2	ND	1.6	ND	--
	11/2/95	470	ND	0.92	0.89	0.58	5.5
	2/8/96	450	3.1	ND	1.1	0.68	ND
	5/8/96	ND	ND	ND	ND	ND	ND
8/9/96	ND	ND	ND	ND	ND	ND	
11/7/96	ND	ND	ND	ND	ND	ND	

**Table 2**  
 Summary of Laboratory Analyses  
 Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW7	5/19/92	17,000	540	90	1,200	1,900	--
	8/20/92	13,000	460	54	ND	3,100	--
	11/10/92	1,800	74	ND	230	350	--
	2/20/93	1,800	37	4.6	11	7.7	--
	5/21/93	22,000	330	37	2,100	2,900	--
	8/23/93	33,000	360	ND	2,500	4,300	--
	11/23/93	19,000	310	30	2,500	2,300	--
	2/24/94♦	16,000	220	19	2,400	3,200	--
	5/25/94	14,000	200	ND	1,500	1,800	--
	8/23/94	19,000	210	50	2,000	2,800	--
	11/23/94	10,000	220	ND	1,000	730	--
	2/3/95	26,000	170	ND	2,300	3,700	--
	5/10/95	1,300	13	1.5	170	230	--
	8/2/95	15,000	200	ND	2,200	2,000	--
	11/2/95	18,000	190	9.4	2,100	2,200	72
	2/8/96	19,000	150	ND	2,100	3,000	ND
	5/8/96	13,000	130	18	1,900	1,600	85
	8/9/96	11,000	67	ND	1,700	1,800	ND
11/7/96	32,000	160	ND	3,300	8,400	570	
MW8	5/19/92	5,300	28	3.3	2.6	2.1	--
	8/20/92	3,500*	67	11	ND	ND	--
	11/10/92	1,800	20	ND	ND	ND	--
	2/20/93	2,200	32	ND	42	5.0	--
	5/21/93	2,500	44	ND	ND	ND	--
	8/23/93	280*	49	4.5	ND	ND	--
	11/23/93	1,800	ND	3.4	ND	ND	--
	2/24/94	1,200	10	2.3	ND	3.2	--
	5/25/94	14,000	29	ND	ND	ND	--
	8/23/94	3,200	46	18	2.0	7.2	--
	11/23/94	1,700	34	ND	ND	3.1	--
	2/3/95	800	6.1	ND	ND	ND	--
	5/10/95	1,400	15	1.5	0.65	0.84	--
	8/2/95	690	8.3	1.9	ND	ND	--
	11/2/95	1,200	ND	1.9	0.56	ND	6.4
	2/14/96††	650	9.0	1.2	ND	0.52	ND
5/8/96	1,200	0.7	35	2.2	3.0	ND	
8/9/96	350	ND	12	0.81	0.95	ND	
11/7/96	1,000	23	ND	ND	ND	ND	
MW9	5/19/92	8,100	11	ND	25	5.8	--
	8/20/92	3,800*	37	ND	ND	ND	--
	11/10/92	4,200	ND	ND	21	23	--
	2/20/93	2,300	47	ND	32	ND	--
	5/21/93	3,200	32	ND	8.1	ND	--
	8/23/93	3,000	29	ND	ND	ND	--
	11/23/93	2,500	23	2.1	ND	ND	--
	2/24/94	2,900	35	ND	ND	ND	--

**Table 2**  
 Summary of Laboratory Analyses  
 Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW9 (Cont.)	5/25/94	ND	ND	ND	ND	ND	--
	8/23/94	2,800	28	32	ND	ND	--
	11/23/94	2,000	24	2.2	2.2	2.5	--
	2/3/95	2,100	26	2.5	ND	ND	--
	5/10/95	1,700	0.81	2.2	1.0	1.4	--
	8/2/95	1,900	26	6.6	ND	3.9	--
	11/2/95	1,600	ND	1.3	ND	ND	11
	2/8/96	1,900	ND	ND	ND	ND	ND
	5/8/96	1,700	1.9	22	1.7	2.7	ND
	8/9/96	200	ND	4.5	ND	0.58	ND
	11/7/96	920	24	ND	ND	ND	ND
MW10	8/20/92	15,000	230	ND	1,000	350	--
	11/10/92	15,000	300	42	3,500	330	--
	2/20/93	17,000	74	ND	1,000	620	--
	5/21/93	23,000	250	ND	3,000	240	--
	8/23/93	20,000	230	13	3,200	140	--
	11/23/93	18,000	300	10	2,800	110	--
	2/24/94	15,000	330	19	2,000	83	--
	5/25/94	14,000	240	ND	230	62	--
	8/23/94	16,000	250	41	1,800	74	--
	11/23/94	16,000	260	ND	1,600	49	--
	2/3/95	17,000	310	ND	1,500	93	--
	5/10/95	12,000	260	16	1,200	54	--
	8/2/95	8,900	240	ND	780	40	--
	11/2/95	9,300	190	ND	470	1.7	110
	2/8/96	9,700	170	ND	440	ND	ND
	5/8/96	7,100	100	ND	240	ND	43
8/9/96	4,400	59	7.5	110	6.5	73	
11/7/96	6,300	65	ND	110	ND	130	
MW11	8/20/92	4,600*	62	ND	ND	54	--
	11/10/92	5,800	130	ND	260	42	--
	2/20/93	18,000	76	ND	1,000	630	--
	5/21/93	7,100	64	ND	340	120	--
	8/23/93	5,400	68	ND	230	43	--
	11/23/93	3,400	105	ND	120	43	--
	2/24/94	4,600	170	ND	140	36	--
	5/25/94	1,400	49	ND	26	ND	--
	8/23/94	7,300	250	13	150	42	--
	11/23/94	5,800	250	10	120	22	--
	2/3/95	4,400	110	ND	150	37	--
	5/10/95	4,200	120	ND	170	38	--
	8/2/95	4,200	110	ND	110	22	--
	11/2/95	6,100	150	ND	78	6.8	6,200
	2/14/96††	3,100	60	ND	98	ND	4,000
	5/8/96	3,500	120	ND	160	ND	6,400
8/9/96	1,100	42	ND	15	ND	4,300	
11/7/96	2,900	57	ND	13	ND	3,400	

**Table 2**  
 Summary of Laboratory Analyses  
 Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE
MW2‡	5/8/96	540	0.68	21	1.0	1.7	ND
	8/9/96	170	ND	7.8	ND	ND	ND
	11/7/96	430	8.9	1.5	ND	ND	10
MW3‡	5/8/96	4,700	7.9	36	13	4.0	42
	8/9/96	2,000	ND	14	7.6	ND	ND
	11/7/96	1,800	29	ND	ND	ND	40

*farthest away*  
*closest*

‡ Wells located on Shadrall Property.

§ The analytical results of the ground water sample for well MW1 was inconsistent with the previous analytical results for this well. Sequoia Analytical Laboratory re-analyzed the sample past hold time; therefore the results may be biased low.

† Monitoring well MW1 was resampled on November 20, 1995. The vial containing the water sample collected from this well on November 2, 1995, was inadvertently broken by the laboratory.

†† Monitoring wells MW8 and MW11 were resampled on February 14, 1996. The vials containing the water samples collected from the wells on February 8, 1996, were inadvertently broken by the laboratory.

\* Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

♦ All EPA 8010 constituents were non-detectable.

MTBE = methyl tert butyl ether.

ND = Non-detectable.

-- Indicates analysis was not performed.

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 November 23, 1993, were provided by Kaprealian Engineering, Inc.

**Table 3**  
 Summary of Monitoring Data  
 Dissolved Oxygen (DO) Concentration Measurements

Well #	Date	(mg/L)♦	Dissolved Oxygen Reading	
			Before Purging (mg/L)♦♦	After Purging (mg/L)♦♦
MW8	11/2/95	--	--	--
	2/8/96	--	3.85	--
	5/8/96	--	--	2.09
	8/9/96	--	2.56	--
	11/7/96	--	1.67	1.84
MW9	11/2/95	--	--	--
	2/8/96	--	3.62	--
	5/8/96	--	--	2.20
	8/9/96	--	2.51	--
	11/7/96	--	2.06	2.02
MW10	11/2/95	3.1	3.96	--
	2/8/96	--	2.88	--
	5/8/96	--	--	2.71
	8/9/96	--	2.63	--
	11/7/96	--	1.81	1.84
MW11	11/2/95	2.6	3.55	--
	2/8/96	--	2.19	--
	5/8/96	--	--	2.06
	8/9/96	--	2.11	--
	11/7/96	--	2.35	2.36
MW2‡	11/7/96	--	2.85	2.8
MW3‡	11/7/96	--	2.41	2.4

- ♦ Dissolved oxygen concentrations measured in the laboratory.
- ♦♦ Dissolved oxygen concentrations measured in the field using a LaMotte DO4000 dissolved oxygen meter.
- ‡ Wells located on Shadrall Property.
- Indicates measurement was not taken.

**Table 5**  
Summary of Monitoring Data  
Chevron Service Station Monitoring Wells  
(Provided by Blaine Tech Services, Inc.)

Well #	Ground Water Elevation (feet)	Depth to Water (feet)*	Well Casing Elevation (feet)*
--------	-------------------------------------	------------------------------	-------------------------------------

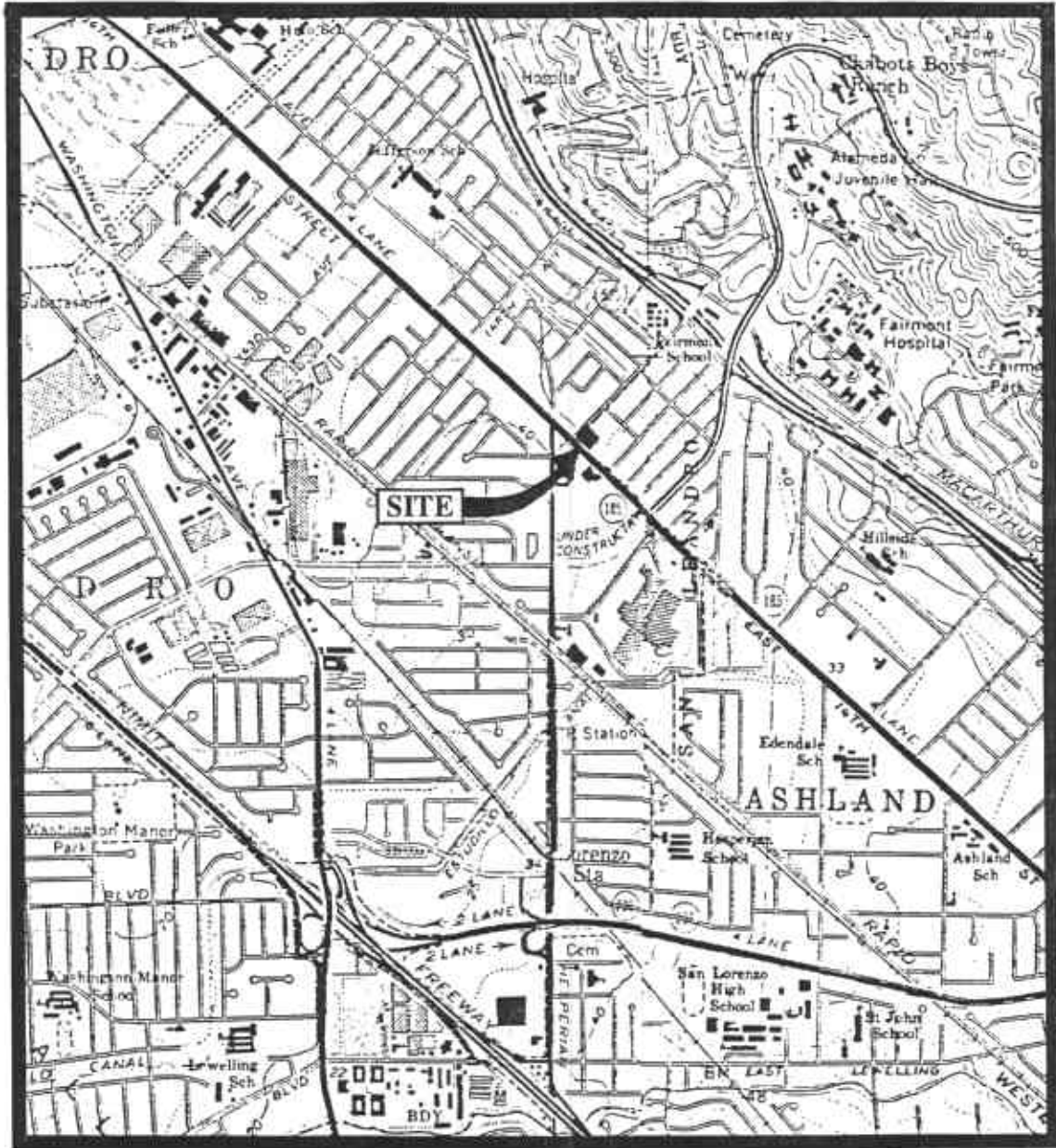
(Monitored on November 7, 1996)

MW-1	25.01	10.76	35.77
MW-2	24.92	10.08	35.00
MW-3	24.73	11.44	36.17
MW-4	25.27	10.78	36.05
MW-5	25.47	10.18	35.65
MW-6	25.64	11.28	36.92
MW-7	25.35	10.36	35.71
MW-8	25.05	10.23	35.28
MW-A	NA	11.14	NA

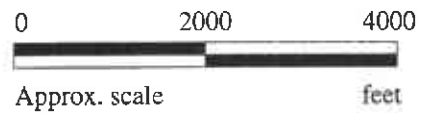
◆ The depth to water level measurements were taken from the top of the well casings.

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

NA = Not available



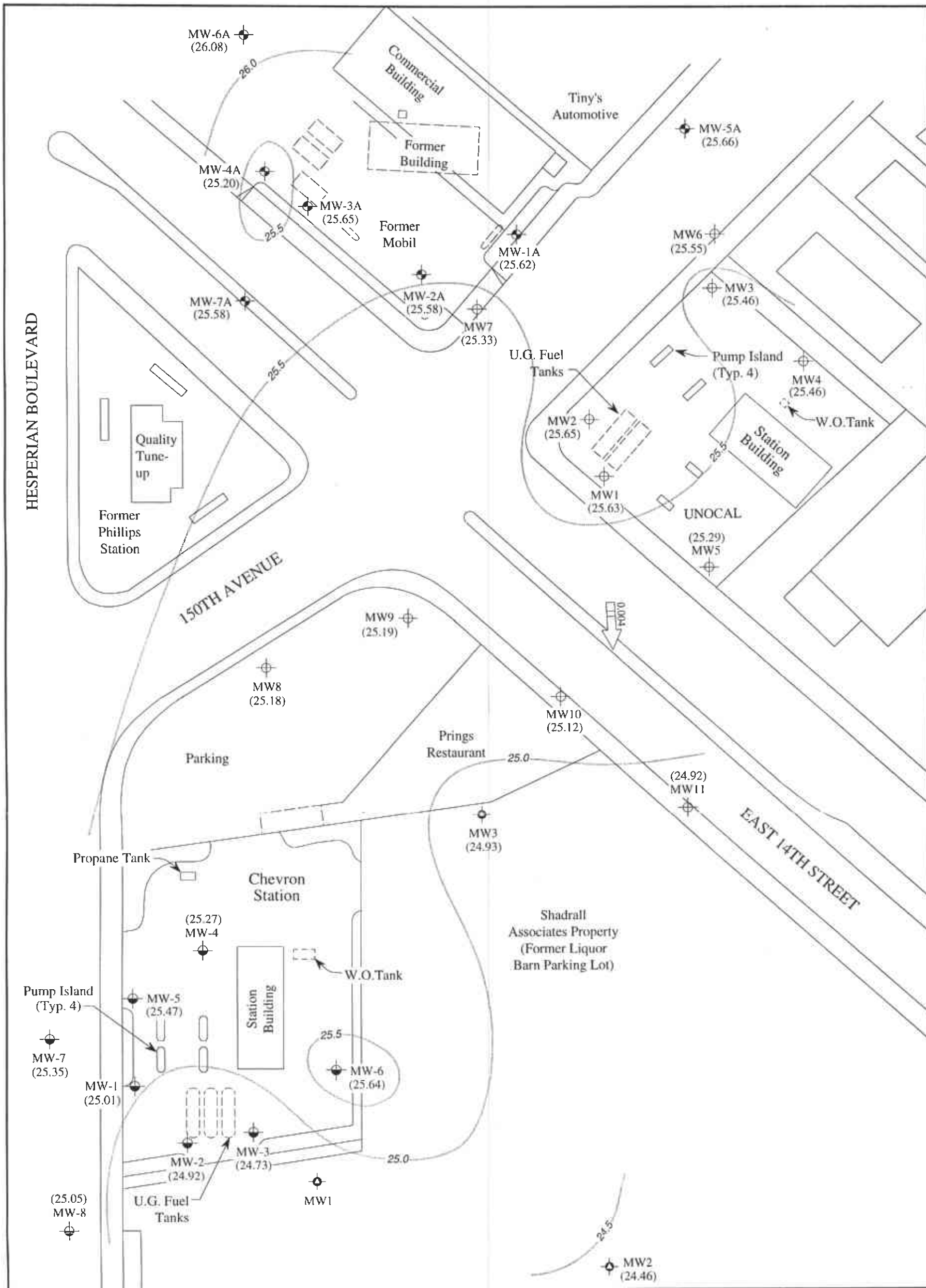
Base modified from 7.5 minute U.S.G.S.  
Hayward and San Leandro Quadrangles  
(both photorevised 1980)



**MPDS** SERVICES, INCORPORATED

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

**LOCATION  
MAP**



**LEGEND**

- ⊕ Monitoring well (Unocal)
- ⊙ Monitoring well (Shadrall Property)
- ⊙ Monitoring well (Former Mobil)
- ⊙ Monitoring well (Chevron)
- ( ) 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 NOVEMBER 7, 1996 MONITORING EVENT**

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

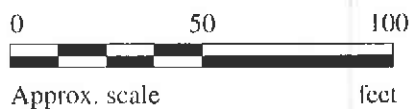
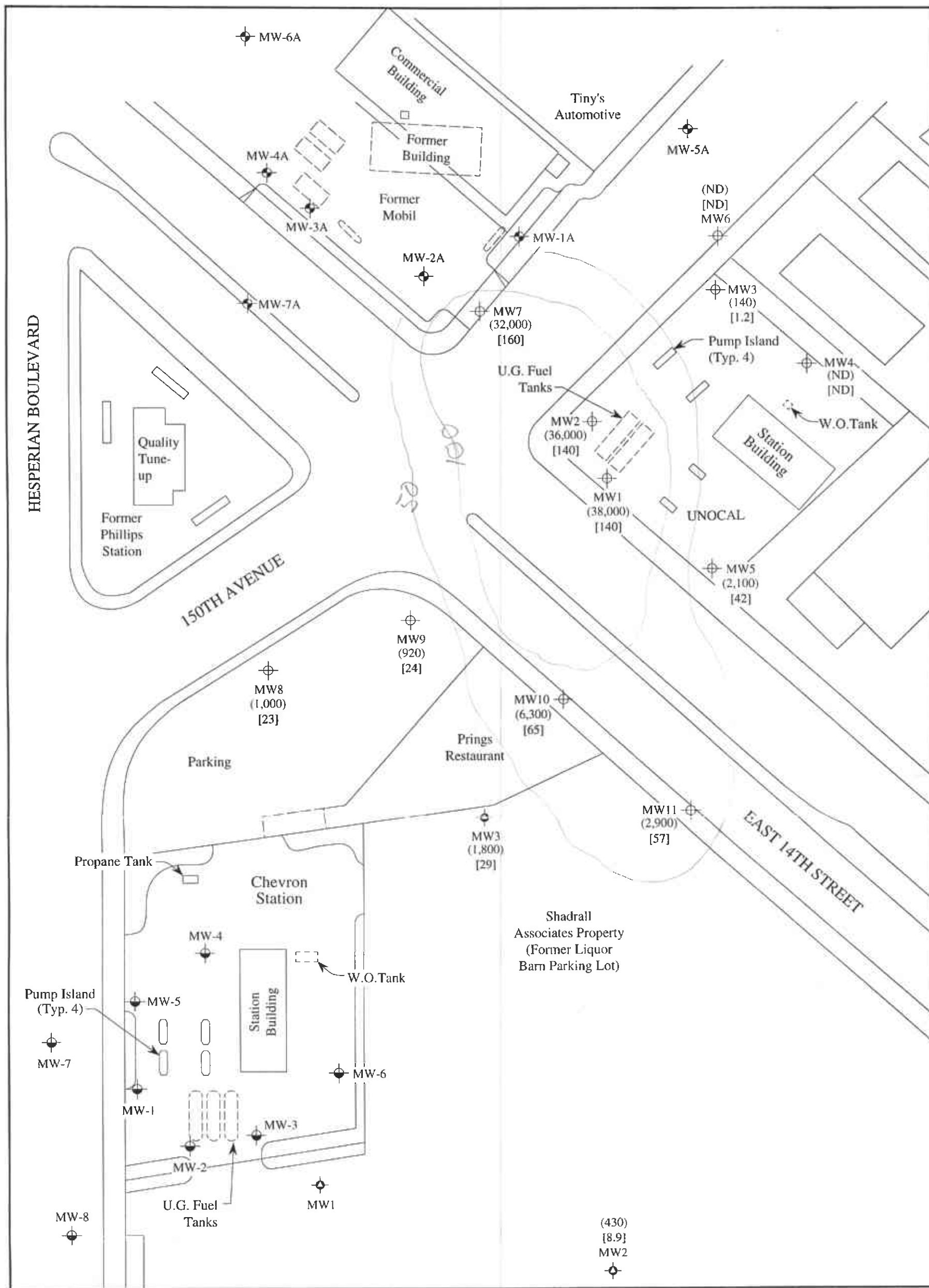


FIGURE  
**1**



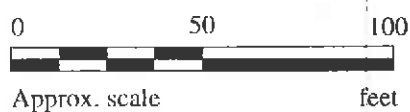


**LEGEND**

- ⊕ Monitoring well (Unocal)
- ⊕ Monitoring well (Shadrall Property)
- ⊕ Monitoring well (Former Mobil)
- ⊕ Monitoring well (Chevron)
- ( ) Concentration of TPH as gasoline in µg/L
- [ ] Concentration of benzene in µg/L
- ND Non-detectable

**PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON NOVEMBER 7, 1996**

UNOCAL SERVICE STATION #3292  
15008 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 #3292, 15008 E.14th St. San Leandro Matrix Descript: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 611-0715	Sampled: Nov 7, 1996 Received: Nov 8, 1996 Reported: Nov 27, 1996
---	---	---

**TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION**

Sample Number	Sample Description	Purgeable Hydrocarbons µg/L	Benzene µg/L	Toluene µg/L	Ethyl Benzene µg/L	Total Xylenes µg/L
611-0715	MW-1	38,000	140	ND	1,900	5,600
611-0716	MW-2	36,000	140	ND	1,900	5,400
611-0717	MW-3	140	1.2	ND	ND	ND
611-0718	MW-4	ND	ND	ND	ND	ND
611-0719	MW-5	2,100	42	ND	9.3	ND
611-0720	MW-6	ND	ND	ND	ND	ND
611-0721	MW-7	32,000	160	ND	3,300	8,400
611-0722	MW-8	1,000	23	ND	ND	ND
611-0723	MW-9	920	24	ND	ND	ND
611-0724	MW-10	6,300	65	ND	110	ND

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

Total Purgeable Petroleum Hydrocarbons are quantitated against a fresh gasoline standard.  
Analytes reported as ND were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL, #1271**

Signature on File

Alan B. Kemp  
Project Manager





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

Client Project ID: Unocal #3292, 15008 E. 14th St. San Leandro  
Matrix Descript: Water  
Analysis Method: EPA 5030/8015 Mod./8020  
First Sample #: 611-0715

Sampled: Nov 7, 1996  
Received: Nov 8, 1996  
Reported: Nov 27, 1996

**TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION**

Sample Number	Sample Description	Chromatogram Pattern	DL Mult. Factor	Date Analyzed	Instrument ID	Surrogate Recovery, % QC Limits: 70-130
611-0715	MW-1	Gasoline	200	11/21/96	HP-4	86
611-0716	MW-2	Gasoline	200	11/21/96	HP-4	85
611-0717	MW-3	Gasoline	1.0	11/21/96	HP-4	97
611-0718	MW-4	--	1.0	11/21/96	HP-4	95
611-0719	MW-5	Gasoline	5.0	11/21/96	HP-4	76
611-0720	MW-6	--	1.0	11/21/96	HP-4	95
611-0721	MW-7	Gasoline	100	11/21/96	HP-2	119
611-0722	MW-8	Gasoline	10	11/21/96	HP-4	94
611-0723	MW-9	Gasoline	10	11/21/96	HP-4	92
611-0724	MW-10	Gasoline	10	11/21/96	HP-4	66

**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 #3292, 15008 E.14th St. San Leandro  
Matrix Descript: Water  
Analysis Method: EPA 5030/8015 Mod./8020  
First Sample #: 611-0725

Sampled: Nov 7, 1996  
Received: Nov 8, 1996  
Reported: Nov 27, 1996

**TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION**

Sample Number	Sample Description	Purgeable Hydrocarbons µg/L	Benzene µg/L	Toluene µg/L	Ethyl Benzene µg/L	Total Xylenes µg/L
611-0725	MW-11	2,900	57	ND	13	ND
611-0726	MW-2 SH	430	8.9	1.5	ND	ND
611-0727	MW-3 SH	1,800	29	ND	ND	ND

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

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 #3292, 15008 E.14th St. San Leandro	Sampled: Nov 7, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript: Water	Received: Nov 8, 1996
Concord, CA 94520	Analysis Method: EPA 5030/8015 Mod./8020	Reported: Nov 27, 1996
Attention: Jarrel Crider	First Sample #: 611-0725	

**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
611-0725	MW-11	Gasoline	10	11/21/96	HP-4	82
611-0726	MW-2 SH	Gasoline	1.0	11/21/96	HP-4	95
611-0727	MW-3 SH	Gasoline	10	11/21/96	HP-4	90

**SEQUOIA ANALYTICAL, #1271**

Signature on File

Alan B. Kemp  
Project Manager





# Sequoia Analytical

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: Unocal #3292, 15008 E.14th St. San Leandro  
Sample Descript: Water  
Analysis for: MTBE (Modified EPA 8020)  
First Sample #: 611-0715

Sampled: Nov 7, 1996  
Received: Nov 8, 1996  
Analyzed: 11/21 & 22/96  
Reported: Nov 27, 1996

## LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
611-0715	MW-1	500	N.D.
611-0716	MW-2	500	N.D.
611-0717	MW-3	5.0	5.6
611-0718	MW-4	5.0	N.D.
611-0719	MW-5	10	2,300
611-0720	MW-6	5.0	N.D.
611-0721	MW-7	250	570
611-0722	MW-8	25	N.D.
611-0723	MW-9	25	N.D.
611-0724	MW-10	25	130

Analytes reported as N.D. were not present above the stated limit of detection.

### SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp  
Project Manager





# Sequoia Analytical

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	Client Project ID: Unocal #3292, 15008 E.14th St. San Leandro	Sampled: Nov 7, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript: Water	Received: Nov 8, 1996
Concord, CA 94520	Analysis for: MTBE (Modified EPA 8020)	Analyzed: Nov 21, 1996
Attention: Jarrel Crider	First Sample #: 611-0725	Reported: Nov 27, 1996

## LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
611-0725	MW-11	25	3,400
611-0726	MW-2 SH	5.0	10
611-0727	MW-3 SH	25	40

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 #3292, 15008 E. 14th St. San Leandro  
 2401 Stanwell Dr., Ste. 300 Matrix: Liquid  
 Concord, CA 94520  
 Attention: Jarrel Crider QC Sample Group: 6110715-730 Reported: Nov 27, 1996

**QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb

<b>MS/MSD</b>				
Batch#:	6110461	6110461	6110461	6110461
Date Prepared:	11/22/96	11/22/96	11/22/96	11/22/96
Date Analyzed:	11/22/96	11/22/96	11/22/96	11/22/96
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
<b>Matrix Spike</b>				
% Recovery:	113	114	130	119
<b>Matrix Spike Duplicate %</b>				
Recovery:	113	114	130	119
<b>Relative % Difference:</b>	0.0	5.7	0.0	0.0

<b>LCS Batch#:</b>	2LCS112296	2LCS112296	2LCS112296	2LCS112296
Date Prepared:	11/22/96	11/22/96	11/22/96	11/22/96
Date Analyzed:	11/22/96	11/22/96	11/22/96	11/22/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
<b>LCS % Recovery:</b>	110	120	130	127

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

**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

9611152

## CHAIN OF CUSTODY

SAMPLER (JOE) HOVSIA AJEMIAN		UNOCAL SIS # 3292 CITY: San Leandro		ANALYSES REQUESTED							TURN AROUND TIME:	
WITNESSING AGENCY		ADDRESS: 15008 E. 14th St.		TPH-GAS BTEX+MTBE	TPH-DIESEL	TOG	8010				Regular	
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION					REMARKS
MW-1	11-7-96	5:12 P.m.	-	-		2 (voA)	Wells	-	6110715	A-B		MTBE with D.L. of Spb.
MW-2	/	6:00 P.m.	-	-		-	-	-	6110716			
MW-3	/	9:45 A.m.	-	-		-	-	-	6110717			
MW-4	/	10:20 A.m.	-	-		-	-	-	6110718			
MW-5	/	4:22 P.m.	-	-		-	-	-	6110719			
MW-6	/	10:50 A.m.	-	-		-	-	-	6110720			
MW-7	/	3:38 P.m.	-	-		-	-	-	6110721			
MW-8	/	2:08 P.m.	-	-		-	-	-	6110722			
MW-9	/	2:42 P.m.	-	-		-	-	-	6110723			
MW-10	/	11:30 A.m.	-	-		-	-	-	6110724			
MW-11	/	11:55 A.m.	-	-		-	-	-	6110725	▽		

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	THE FOLLOWING MUST BE COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:
(SIGNATURE) Joe Ajemian	7:45 P.m.	(SIGNATURE) JDCardenas 11-7-96	1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? Y
(SIGNATURE) JDCardenas	11-7-96	(SIGNATURE) JDCardenas 1945	2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? Y
(SIGNATURE) [Signature]	11-8-96	(SIGNATURE) [Signature]	3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? N
(SIGNATURE) [Signature]	11-8	(SIGNATURE) [Signature] 11-8-96	4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? Y
(SIGNATURE) [Signature]		(SIGNATURE) [Signature]	SIGNATURE: JDCardenas TITLE: analyst DATE: 11-7-96

# M P D S Services, Inc.

2401 Stenwell Drive, Suite 400, Concord, CA 94520  
 Tel: (510) 602-5120 Fax: (510) 609-1918

9611152

## CHAIN OF CUSTODY

SAMPLER			UNOCAL					ANALYSES REQUESTED							TURN AROUND TIME:		
(JOE) HOVSIA AJEMIAN			SIS # <u>3292</u> CITY: <u>San Leandro</u>					TPH-GAS BTEX/MTBE	TPH-DIESEL	TOG	8010						Regular
			ADDRESS: <u>15008 E. 14<sup>th</sup> st.</u>														
WITNESSING AGENCY			WATER	URINE	COMB	NO. OF CONT.	SAMPLING LOCATION										
SAMPLE ID NO.	DATE	TIME															
mw-2 SH	11-7-96	1:30 P.M.	-	-		2 (VOA)	wells	✓	6110726			A-B				MTBE with D.L. of Spgs.	
mw-3 SH	"	12:50 P.M.	✓	✓		1	'	✓	6110727			↓					

RELINQUISHED BY:		DATE/TIME	RECEIVED BY:	THE FOLLOWING <u>MUST BE</u> COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:		
(SIGNATURE)	<i>Joe Ajemian</i>	11:35 A.M.	(SIGNATURE)	1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE?		
(SIGNATURE)	<i>L.D. Cardenas</i>	11-7-96	<i>L.D. Cardenas</i>	Y		
(SIGNATURE)	<i>[Signature]</i>	11-8-96	(SIGNATURE)	2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED?		
(SIGNATURE)	<i>[Signature]</i>	1350	(SIGNATURE)	Y		
(SIGNATURE)	<i>[Signature]</i>	RT	(SIGNATURE)	3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE?		
(SIGNATURE)	<i>[Signature]</i>	1530	(SIGNATURE)	N		
(SIGNATURE)	<i>[Signature]</i>		(SIGNATURE)	4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED?		
(SIGNATURE)	<i>[Signature]</i>		(SIGNATURE)	Y		
			SIGNATURE:	TITLE:	DATE:	
			<i>L.D. Cardenas</i>	<i>analyst</i>	<i>11-7-96</i>	