MONITORING PURGING DISPOSING SAMPLING

MPDS SERVICES, INCORPORATED

MPDS-UN0746-11
December 4, 1996

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

Attention: Mr. Edward C. Ralston

RE: Semi-Annual Data Report
Unocal Service Station #0746
3943 Broadway
Oakland, California

Dear Mr. Ralston:

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 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 semi-annual period is shown on the attached Figure 1.

Ground water samples were collected on November 5, 1996. The monitoring wells were not purged prior to sampling. Dissolved oxygen concentrations were measured and are presented in Table 3. Water samples were 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 Table 2. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline and benzene detected in the ground water samples collected this semi-annual period are shown on the attached Figure 2. Copies of the laboratory analytical results and the Chain of Custody documentation are attached to this report.

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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

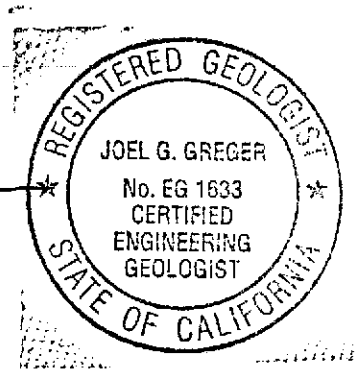
A copy of this report should be sent to the Alameda County Health Care Services.

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

Attachments: Tables 1, 2 & 3
Location Map
Figures 1 & 2
Laboratory Analyses
Chain of Custody documentation

cc: Mr. Timothy R. Ross, 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)	Sheen	Water Purged (gallons)
(Monitored and Sampled on November 5, 1996)						
MW1	72.64	7.90	20.03	0	No	0
MW2*	70.34	10.98	20.09	0	--	0
MW3	70.77	10.64	22.82	0	No	0
MW4	71.29	10.00	20.05	0	No	0
MW5	70.97	10.41	20.60	0	No	0
MW6*	72.31	7.63	19.97	0	--	0
MW7*	72.97	8.67	18.05	0	--	0
MW8	WELL WAS INACCESSIBLE (PARKED OVER)					
MW9	69.11	11.42	22.10	0	No	0
MW10*	69.65	11.96	21.90	0	--	0
MW11*	67.28	10.90	19.25	0	--	0
MW12*	67.73	11.88	17.67	0	--	0
(Monitored and Sampled on May 6, 1996)						
MW1	73.14	7.40	19.61	0	No	8.5
MW2*	72.42	8.90	19.85	0	--	0
MW3	71.97	9.44	22.44	0	Yes	9
MW4	72.59	8.70	20.00	0	No	8
MW5	72.35	9.03	19.81	0	Yes	7.5
MW6*	72.14	7.80	19.58	0	--	0
MW7*	73.49	8.15	20.00	0	--	0
MW8	WELL WAS INACCESSIBLE (PARKED OVER)					
MW9	71.52	9.01	21.95	0	No	9
MW10*	70.71	10.90	21.74	0	--	0
MW11*	64.88	13.30	19.15	0	--	0
MW12*	66.36	13.25	17.61	0	--	0
(Monitored and Sampled on November 7, 1995)						
MW1	72.39	8.15	19.62	0	No	8
MW2	71.67	9.65	19.85	0	No	7
MW3	70.62	10.79	22.21	0	No	8
MW4	71.01	10.28	20.01	0	No	7
MW5	71.38	10.00	19.73	0	No	7
MW6	71.96	7.98	19.58	0	No	8
MW7	72.69	8.95	20.00	0	No	8
MW8	70.36	11.05	21.28	0	No	7
MW9	69.89	10.64	21.95	0	No	8
MW10	68.63	12.98	21.71	0	No	6
MW11	65.90	12.28	19.15	0	No	5
MW12	66.83	12.78	17.61	0	No	3.5

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 August 3, 1995)				
MW1*	72.85	7.69	19.60	0	--	0
MW2	71.97	9.35	19.82	0	No	7.5
MW3	72.13	9.28	22.20	0	No	9
MW4	72.69	8.60	20.00	0	No	8
MW5	72.13	9.25	19.71	0	No	7.5
MW6*	72.66	7.28	19.58	0	--	0
MW7*	73.24	8.40	20.00	0	--	0
MW8	WELL WAS INACCESSIBLE (PARKED OVER)					
MW9	70.83	9.70	21.93	0	No	8.5
MW10*	69.88	11.73	21.71	0	--	0
MW11*	65.51	12.67	19.11	0	--	0
MW12*	66.14	13.47	17.60	0	--	0

Well #	Well Casing Elevation (feet)**
MW1	80.54
MW2	81.32
MW3	81.41
MW4	81.29
MW5	81.38
MW6	79.94
MW7	81.64
MW8	81.41
MW9	80.53
MW10	81.61
MW11	78.18
MW12	79.61
RW1	80.63

Table 1

Summary of Monitoring Data

♦ The depth to water level and total well depth measurements were taken from the top of the well casings.

* Monitored only.

** The elevations of the top of the well casings are relative to Mean Sea Level (MSL), per the City of Oakland Benchmark BM#1336 (elevation = 82.28 feet MSL).

-- Sheen determination was not performed.

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW1	11/1/89	ND	ND	ND	ND	0.3	--
	2/15/90	170	7.9	ND	2.2	2.8	--
	8/16/90	ND	ND	ND	ND	ND	--
	11/7/90	45	ND	ND	ND	ND	--
	2/25/91	ND	ND	ND	ND	ND	--
	5/28/91	ND	ND	ND	ND	ND	--
	8/28/91	ND	ND	ND	ND	ND	--
	11/19/91	ND	ND	ND	ND	ND	--
	2/6/92	ND	ND	ND	ND	ND	--
	5/23/92	ND	ND	ND	ND	ND	--
	8/26/92	ND	ND	ND	ND	ND	--
	11/20/92	ND	0.75	ND	ND	ND	--
	2/24/93	1,100	280	4.9	120	140	--
	5/25/93	260	27	4.9	2.6	54	--
	8/25/93	ND	ND	ND	ND	ND	--
	11/30/93	SAMPLED SEMI-ANNUALLY					
	2/16/94	ND	0.84	ND	ND	0.59	--
	8/31/94	ND	ND	0.98	ND	0.84	--
	11/10/94	SAMPLED SEMI-ANNUALLY					
	2/7/95	6,100	670	ND	120	60	--
	5/3/95	260	21	39	17	24	--
	8/3/95	SAMPLED SEMI-ANNUALLY					
	11/7/95	ND	ND	ND	ND	ND	--
	5/6/96	170	1.0	20	2.3	17	55
	11/5/96	ND	ND	ND	ND	ND	5.2
MW2	11/1/89	200	ND	ND	3.0	1.2	--
	2/15/90	ND	ND	ND	ND	ND	--
	8/16/90	ND	ND	6.7	ND	ND	--
	11/7/90	ND	ND	ND	ND	ND	--
	2/25/91	ND	0.68	0.42	ND	0.86	--
	5/28/91	ND	ND	ND	ND	ND	--
	8/28/91	ND	ND	ND	ND	ND	--
	11/19/91	ND	ND	ND	ND	ND	--
	2/6/92	ND	0.36	0.66	ND	0.62	--
	5/23/92	ND	ND	ND	ND	ND	--
	8/26/92	ND	ND	ND	ND	ND	--
	11/20/92	510♦	ND	ND	ND	ND	--
	2/24/93	11,000♦	ND	ND	ND	ND	--
	5/25/93	1,300♦	ND	ND	ND	ND	2,700
	8/25/93	190♦	ND	ND	ND	ND	--
	11/30/93	480♦	ND	ND	ND	ND	--
	2/16/94	3,200♦	ND	ND	ND	ND	--
	5/31/94	1,100♦	ND	ND	ND	ND	--

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW2	8/31/94	310♦	ND	ND	ND	ND	--
(Cont)	11/10/94	95♦♦	ND	ND	ND	ND	--
	2/7/95	1,600♦	ND	ND	ND	ND	--
	5/3/95	ND	ND	ND	ND	ND	--
	8/3/95	ND	ND	ND	ND	ND	--
	11/7/95†	ND	ND	ND	ND	ND	160
	5/6/96	NOT SAMPLED*					
	11/5/96	NOT SAMPLED*					
MW3	11/1/89	13,000	57	48	1.7	120	--
	2/15/90	20,000	1,700	2,100	750	3,100	--
	8/16/90	6,800	600	660	760	160	--
	11/7/90	42,000	1,400	5,000	1,800	7,500	--
	2/25/91	37,000	730	2,900	1,300	7,300	--
	5/28/91	24,000	570	1,100	810	4,200	--
	8/28/91	16,000	650	2,200	1,100	5,400	--
	11/19/91	22,000	250	440	660	3,000	--
	2/6/92	24,000	600	1,800	1,200	5,800	--
	5/23/92	25,000	300	130	880	4,900	--
	8/26/92	20,000	690	1,900	1,300	5,700	--
	11/20/92	1,100,000♦♦	1,800	6,400	3,000	15,000	--
	2/24/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	5/25/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	8/25/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	11/30/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	2/16/94	57,000	910	2,500	2,100	9,000	--
	5/31/94	39,000	670	630	1,500	6,200	--
	8/31/94	44,000	500	240	1,400	5,700	--
	11/10/94	86,000	3,300	3,800	1,800	8,300	--
	2/7/95	45,000	1,400	1,300	1,500	5,600	--
	5/3/95	26,000	740	990	1,100	4,400	--
	8/3/95	18,000	59	ND	530	1,900	--
	11/7/95†	17,000	110	26	400	1,500	880
	5/6/96	5,100	48	ND	87	210	370
	11/5/96	35,000	2,200	ND	1,200	2,800	460
MW4	2/15/90	150	8.0	8.0	10	45	--
	8/16/90	3,600	480	17	230	260	--
	11/7/90	180	1.5	0.37	6.3	26	--
	2/25/91	22,000	600	1,300	780	2,800	--
	5/28/91	38	ND	ND	ND	1.9	--
	8/28/91	2,000	1,500	20	120	300	--
	11/19/91	55	9.2	4.5	1.4	6.7	--
	2/6/92	5,700	2,200	140	57	980	--
	5/23/92	ND	ND	ND	ND	ND	--

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW4	8/26/92	120	86	0.52	0.57	1.6	--
(Cont)	11/20/92	ND	6.2	ND	1.2	0.52	--
	2/24/93	140	12	0.64	9.4	3.7	--
	5/25/93	74	10	ND	4.6	1.8	--
	8/25/93	640	100	1.1	100	22	--
	11/30/93	200	28	ND	17	8.1	--
	2/16/94	190	11	0.98	21	6.6	--
	5/31/94	1,100	190	ND	100	58	--
	8/31/94	400	17	0.94	14	5.2	--
	11/10/94	7,700	1,800	280	460	1,300	--
	2/7/95	540	47	ND	17	2.5	--
	5/3/95	160	8.3	0.52	1.5	3.7	--
	8/3/95	57	2.0	ND	ND	ND	--
	11/7/95	ND	0.71	ND	ND	ND	0.86
	5/6/96	1,200	12	11	15	36	ND
	11/5/96	700	32	0.71	1.8	1.3	6.5
MW5	2/15/90	24,000	1,500	1,700	260	3,600	--
	8/16/90	16,000	1,400	1,900	2,800	660	--
	11/7/90	20,000	640	1,100	670	3,000	--
	2/25/91	25,000	950	1,300	900	3,500	--
	5/28/91	24,000	2,300	3,400	1,300	6,000	--
	8/28/91	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	11/19/91	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	2/6/92	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	5/23/92	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	8/26/92	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	11/20/92	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	2/24/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	5/25/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	8/25/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	11/30/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	2/16/94	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	5/31/94	43,000	1,500	1,200	1,600	6,700	--
	8/31/94	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	11/10/94	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	2/7/95	25,000	1,400	740	990	3,000	--
	5/3/95	12,000	680	160	600	1,800	--
	8/3/95	23,000	940	280	810	2,700	--
	11/7/95†	40,000	510	280	1,000	5,700	630
	5/6/96	13,000	200	ND	180	610	170
	11/5/96	35,000	1,800	ND	1,300	4,900	580

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW6	11/7/90	ND	ND	ND	ND	ND	--
	2/25/91	ND	0.37	0.4	0.35	1.5	--
	5/28/91	ND	ND	ND	ND	0.42	--
	8/28/91	ND	ND	ND	ND	ND	--
	11/19/91	ND	ND	ND	ND	ND	--
	2/6/92	ND	ND	ND	ND	ND	--
	5/23/92	ND	ND	ND	ND	ND	--
	8/26/92	ND	ND	ND	ND	ND	--
	11/20/92	ND	ND	ND	ND	ND	--
	2/24/93	ND	ND	ND	ND	ND	--
	5/25/93	ND	ND	ND	ND	ND	--
	8/25/93	ND	ND	ND	ND	ND	--
	11/30/93	SAMPLED SEMI-ANNUALLY					
	2/16/94	ND	ND	ND	ND	ND	--
	8/31/94	ND	ND	1.5	ND	1.6	--
	11/10/94	SAMPLED SEMI-ANNUALLY					
	2/7/95	ND	ND	ND	ND	ND	--
	5/3/95	ND	ND	ND	ND	1.0	--
	8/3/95	SAMPLED SEMI-ANNUALLY					
	11/7/95	ND	ND	ND	ND	ND	--
	5/6/96	NOT SAMPLED*					
	11/5/96	NOT SAMPLED*					
MW7	11/7/90	ND	ND	ND	ND	ND	--
	2/25/91	70	ND	ND	ND	0.52	--
	5/28/91	39	ND	ND	ND	0.73	--
	8/28/91	ND	ND	ND	ND	ND	--
	11/19/91	32	ND	ND	ND	ND	--
	2/6/92	ND	ND	ND	ND	ND	--
	5/23/92	ND	ND	ND	ND	ND	--
	8/26/92	ND	ND	ND	0.73	ND	--
	11/20/92	ND	ND	ND	ND	ND	--
	2/24/93	ND	ND	ND	ND	ND	--
	5/25/93	ND	ND	ND	ND	ND	--
	8/25/93	ND	ND	ND	ND	ND	--
	11/30/93	SAMPLED SEMI-ANNUALLY					
	2/16/94	ND	ND	ND	ND	0.7	--
	8/31/94	ND	ND	0.8	ND	0.75	--
	11/10/94	SAMPLED SEMI-ANNUALLY					
	2/7/95	ND	ND	ND	ND	ND	--
	5/3/95	ND	ND	ND	ND	1.0	--
	8/3/95	SAMPLED SEMI-ANNUALLY					
	11/7/95	ND	ND	ND	ND	ND	--
	5/6/96	NOT SAMPLED*					
	11/5/96	NOT SAMPLED*					

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW8	11/07/90	4,700	28	38	86	7,200	--
	2/25/91	5,300	17	6.1	53	300	--
	5/28/91	4,800	4.2	1.3	5.1	170	--
	8/28/91	1,800	3.2	1.9	19	74	--
	11/19/91	1,600	8.1	1.8	19	52	--
	2/6/92	2,600	4.1	7.0	31	93	--
	5/23/92	2,100	8.6	1.6	1.7	28	--
	8/26/92	1,800	12	8.0	4.0	13	--
	11/20/92	WELL WAS INACCESSIBLE					
	2/24/93	WELL WAS INACCESSIBLE					
	5/25/93	1,200	5.4	ND	9.0	21	--
	8/25/93	1,800	11	17	8.9	29	--
	11/30/93	3,500	18	ND	ND	ND	--
	2/16/94	990	4.9	1.8	2.4	4.5	--
	5/31/94	350	3.0	1.0	0.73	1.7	--
	8/31/94	1,800♦	ND	ND	ND	ND	--
	11/10/94	940	6.7	6.3	ND	16	--
	2/7/95	230	1.4	0.95	0.9	1.1	--
	5/3/95	75	ND	ND	ND	1.0	--
	8/3/95	WELL WAS INACCESSIBLE (PARKED OVER)					
	11/7/95†	210	1.3	1.2	ND	ND	--
	5/6/96	WELL WAS INACCESSIBLE (PARKED OVER)					
	11/5/96	WELL WAS INACCESSIBLE (PARKED OVER)					
MW9	11/7/90	480	7.8	1.2	13	47	--
	2/25/91	390	13	1.1	2.8	14	--
	5/28/91	590	6.0	0.43	6.8	1.4	--
	8/28/91	450	17	0.9	13	14	--
	11/19/91	360	17	0.45	15	11	--
	2/6/92	660	41	1.0	33	15	--
	5/23/92	460	18	0.66	1.4	3.2	--
	8/26/92	250	13	ND	8.6	3.8	--
	11/20/92	WELL WAS INACCESSIBLE					
	2/24/93	WELL WAS INACCESSIBLE					
	5/25/93	160	6.1	ND	7.4	1.1	--
	8/25/93	220	10	ND	6.8	1.4	--
	11/30/93	200	5.6	ND	2.9	2.7	--
	2/16/94	250	5.1	1.3	4.4	1.5	--
	5/31/94	360	7.8	0.97	4.6	2.2	--
	8/31/94	650	7.7	2.8	4.4	5.0	59
	11/10/94	ND	ND	ND	ND	ND	--
	2/7/95	57	0.7	ND	0.86	ND	--
	5/03/95	ND	0.85	0.67	1.3	1.0	--

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW9	8/3/95	91	1.1	ND	ND	ND	--
(Cont)	11/7/95	--	--	--	--	--	60
	11/7/95†	130	1.5	0.62	0.71	ND	--
	5/6/96	860	6.1	13	6.0	25	ND
	11/5/96	84	0.74	ND	1.2	4.5	ND
MW10	2/6/92	ND	ND	ND	ND	ND	--
	5/23/92	ND	ND	ND	ND	ND	--
	8/26/92	ND	ND	ND	ND	ND	--
	11/20/92	ND	ND	ND	ND	ND	--
	2/24/93	ND	ND	ND	ND	ND	--
	5/25/93	ND	ND	ND	ND	ND	--
	8/25/93	ND	ND	ND	ND	ND	--
	11/30/93	WELL WAS INACCESSIBLE					
	2/16/94	ND	ND	ND	ND	ND	--
	5/31/94	ND	ND	0.9	ND	0.91	--
	8/31/94	ND	ND	0.64	ND	0.54	--
	11/10/94	ND	ND	ND	ND	ND	--
	2/7/95	SAMPLED SEMI-ANNUALLY					--
	5/3/95	ND	ND	ND	ND	0.65	--
	8/3/95	SAMPLED SEMI-ANNUALLY					--
	11/7/95	ND	ND	ND	ND	ND	--
	5/6/96	NOT SAMPLED*					
	11/5/96	NOT SAMPLED*					
MW11	2/6/92	ND	ND	ND	ND	ND	--
	5/23/92	ND	ND	ND	ND	ND	--
	8/26/92	ND	ND	ND	ND	ND	--
	11/20/92	ND	ND	ND	ND	ND	--
	2/24/93	ND	ND	ND	ND	ND	--
	5/25/93	ND	ND	0.75	ND	1.0	--
	8/25/93	ND	ND	ND	ND	ND	--
	11/30/93	ND	ND	ND	ND	ND	--
	2/16/94	ND	ND	ND	ND	ND	--
	5/31/94	ND	ND	ND	ND	ND	--
	8/31/94	ND	ND	1.5	ND	1.8	--
	11/10/94	ND	ND	ND	ND	ND	--
	2/7/95	SAMPLED SEMI-ANNUALLY					
	5/3/95	ND	ND	ND	ND	ND	--
	8/3/95	SAMPLED SEMI-ANNUALLY					
	11/7/95	ND	ND	ND	ND	ND	--
	5/6/96	NOT SAMPLED*					
	11/5/96	NOT SAMPLED*					

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW12	8/26/92	ND	ND	ND	ND	ND	--
	11/20/92	ND	ND	ND	ND	ND	--
	11/30/93	ND	ND	ND	ND	ND	--
	8/25/93	ND	ND	ND	ND	ND	--
	5/25/93	ND	ND	ND	ND	ND	--
	2/24/93	ND	ND	ND	ND	ND	--
	2/16/94	ND	ND	ND	ND	ND	--
	8/31/94	ND	ND	1.0	ND	1.0	ND
	5/31/94	ND	ND	0.81	ND	0.82	--
	11/10/94	ND	ND	ND	ND	ND	--
	2/7/95	SAMPLED SEMI-ANNUALLY					
	5/3/95	ND	ND	ND	ND	ND	--
	8/3/95	SAMPLED SEMI-ANNUALLY					
	11/7/95	ND	ND	ND	ND	ND	--
	5/6/96	NOT SAMPLED*					
	11/5/96	NOT SAMPLED*					

† Sequoia Analytical Laboratory has identified the presence of MTBE at a level greater than 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.

* Sampling discontinued per Alameda County Health Care Services' letter dated January 24, 1996.

ND = Non-detectable.

MTBE = Methyl tert butyl ether.

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 30, 1993, were provided by Kaprealian Engineering, Inc.

Table 3

Summary of Monitoring Data

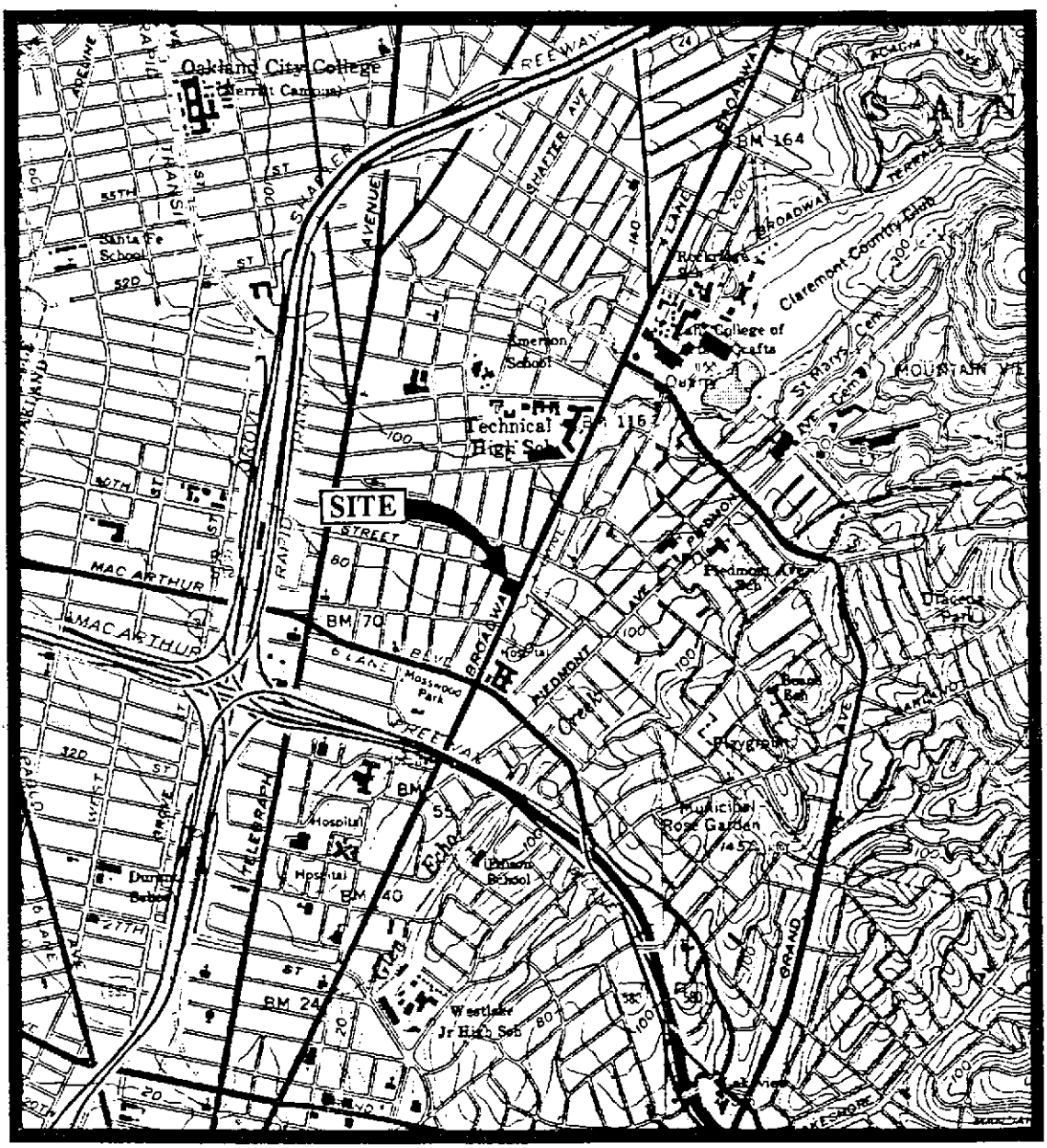
Date	Well #	Dissolved Oxygen Concentrations Before Purging (mg/L)	After Purging (mg/L)
11/5/96	MW1	3.12	*
	MW3	2.03	*
	MW4	2.11	*
	MW5	1.85	*
	MW-8	WELL WAS INACCESSIBLE (PARKED OVER)	
	MW9	2.98	*
5/6/96	MW1	5.21	4.13
	MW3	3.18	3.40
	MW4	3.75	5.97
	MW5	2.91	1.80
	MW9	4.23	3.25
11/7/95	MW3	--	1.68
	MW4	--	8.43
	MW5	--	1.79
	RW1	--	2.13
8/19/95	MW2	--	2.77
	MW3	--	2.06
	MW4	--	2.19
	MW5	--	2.09

* On November 5, 1996, the wells were not purged prior to sampling.

-- Indicates measurement was not taken.

mg/L = milligrams per liter

Note : Measurements were taken using a LaMotte DO4000 dissolved oxygen meter.

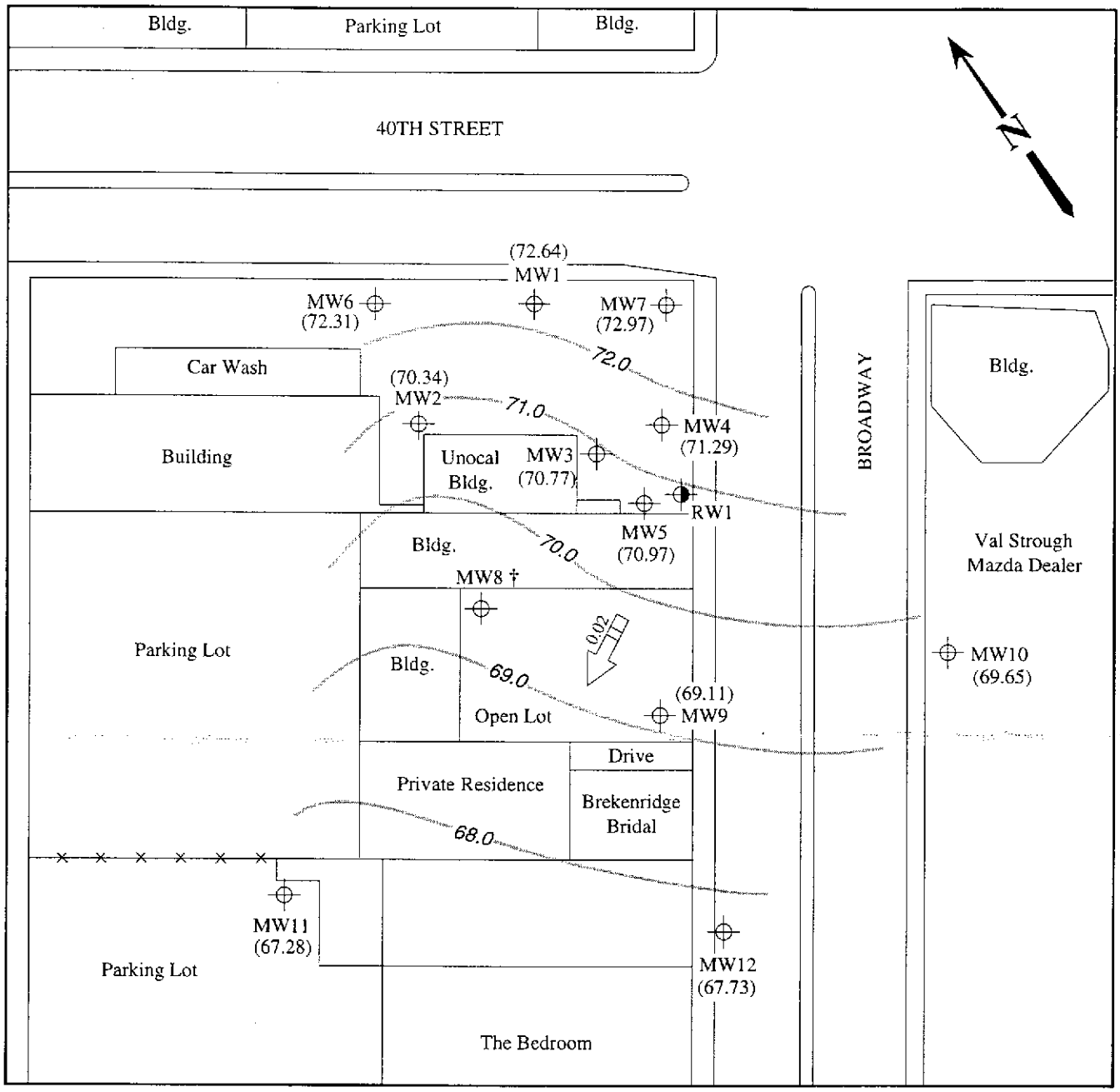


Base modified from 7.5 minute U.S.G.S. Oakland East and West Quadrangles (both photorevised 1980)

0 2000 4000

Approx. scale feet

mpds SERVICES, INCORPORATED	**UNOCAL SERVICE STATION #0746** **3943 BROADWAY** **OAKLAND, CALIFORNIA**	**LOCATION MAP**



LEGEND

- Monitoring well
- 6-inch diameter recovery well
- ( ) Ground water elevation in feet above Mean Sea Level
- #.## Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation
- † Well was inaccessible.

0 60 120

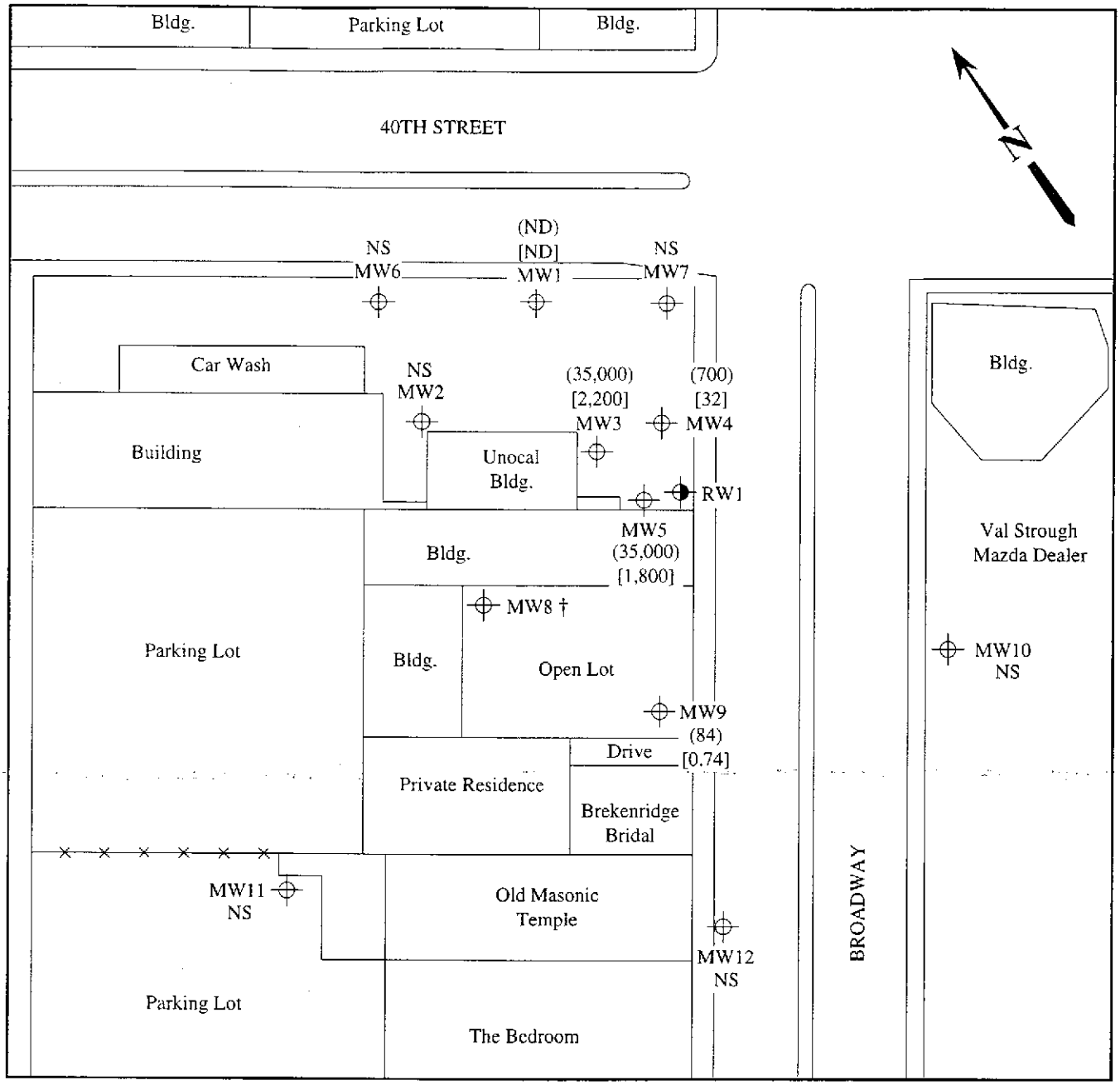
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE NOVEMBER 5, 1996 MONITORING EVENT

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION #0746
3943 BROADWAY
OAKLAND, CALIFORNIA

FIGURE
1



LEGEND

- Monitoring well
- 6-inch diameter recovery well
- ( ) Concentration of TPH as gasoline in µg/L
- [ ] Concentration of TPH as gasoline in µg/L
- ND Non-detectable, NS Not sampled
- † Well was inaccessible.

0 60 120

Approx. scale feet

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON NOVEMBER 5, 1996

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION #0746
3943 BROADWAY
OAKLAND, CALIFORNIA

FIGURE
2

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

MPDS Services	Client Project ID:	Unocal #0746, 3943 Broadway, Oakland	Sampled: Nov 5, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Water	Received: Nov 6, 1996
Concord, CA 94520	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: Nov 26, 1996
Attention: Jarrel Crider	First Sample #:	611-0515	

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
611-0515	MW-1	ND	ND	ND	ND	ND
611-0516	MW-3	35,000	2,200	ND	1,200	2,800
611-0517	MW-4	700	32	0.71	1.8	1.3
611-0518	MW-5	35,000	1,800	ND	1,300	4,900
611-0519	MW-9	84	0.74	ND	1.2	4.5
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

6110515.MPD <1>

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

MPDS Services	Client Project ID:	Unocal #0746, 3943 Broadway, Oakland	Sampled:	Nov 5, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Water	Received:	Nov 6, 1996
Concord, CA 94520	Analysis Method:	EPA 5030/8015 Mod./8020	Reported:	Nov 26, 1996
Attention: Jarrel Crider	First Sample #:	611-0515		

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
611-0515	MW-1	--	1.0	11/18/96	HP-4	94
611-0516	MW-3	Gasoline	200	11/21/96	HP-5	80
611-0517	MW-4	Gasoline	1.0	11/18/96	HP-4	64
611-0518	MW-5	Gasoline	200	11/21/96	HP-5	78
611-0519	MW-9	Gasoline	1.0	11/18/96	HP-4	89

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

6110515.MPD <2>

Sequoia Analytical

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404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

MPDS Services	Client Project ID:	Unocal #0746, 3943 Broadway, Oakland	Sampled: Nov 5, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received: Nov 6, 1996
Concord, CA 94520	Analysis for:	MTBE (Modified EPA 8020)	
Attention: Jarrel Crider	First Sample #:	611-0515	Analyzed: Nov 21, 1996
			Reported: Nov 26, 1996

LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
611-0515	MW-1	5.0	5.2
611-0516	MW-3	120	460
611-0517	MW-4	5.0	6.5
611-0518	MW-5	120	580
611-0519	MW-9	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

6110515.MPD <3>

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

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

Client Project ID: Unocal #0746, 3943 Broadway, Oakland
Matrix: Liquid
QC Sample Group: 6110515-522

Reported: Nov 26, 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
MS/MSD Batch#:	6110450	6110450	6110450	6110450
Date Prepared:	11/21/96	11/21/96	11/21/96	11/21/96
Date Analyzed:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	90	90	90	93
Matrix Spike Duplicate % Recovery:	90	90	95	93
Relative % Difference:	0.0	0.0	5.4	0.0
LCS Batch#:	5LCS112196	5LCS112196	5LCS112196	5LCS112196
Date Prepared:	11/21/96	11/21/96	11/21/96	11/21/96
Date Analyzed:	11/21/96	11/21/96	11/21/96	11/21/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	90	90	90	91
% Recovery Control Limits:	60-140	60-140	60-140	60-140

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

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

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

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

Client Project ID: Unocal #0746, 3943 Broadway, Oakland
Matrix: Liquid
QC Sample Group: 6110515-519

Reported: Nov 26, 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
MS/MSD Batch#:	6110123	6110123	6110123	6110123
Date Prepared:	11/18/96	11/18/96	11/18/96	11/18/96
Date Analyzed:	11/18/96	11/18/96	11/18/96	11/18/96
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	125	90	85	86
Matrix Spike Duplicate % Recovery:	115	90	90	88
Relative % Difference:	8.3	0.0	5.7	1.9
LCS Batch#:	4LCS111996	4LCS111996	4LCS111996	4LCS111996
Date Prepared:	11/19/96	11/19/96	11/19/96	11/19/96
Date Analyzed:	11/19/96	11/19/96	11/19/96	11/19/96
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
LCS % Recovery:	115	90	85	88
% Recovery Control Limits:	60-140	60-140	60-140	60-140

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

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.

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

SAMPLER: (JOE) HOVSIA AJEMIAN

WITNESSING AGENCY

UNOCAL S/S # 0746 CITY: Oakland

ADDRESS: 3943 Broadway

ANALYSES REQUESTED

TURN AROUND TIME: Regular

SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-GAS BTEX & MTBE	TPH-DIESEL	TOG	8010				REMARKS
MW-1	11-5-96	9:45 A.M	✓	✓		2 VOA	Wells	✓	611515		A-B				MTBE with Detection limit of 5 ppb.
MW-3	"	10:15 A.M	✓	✓		"	✓	✓	611516						
MW-4	"	10:00 A.M	✓	✓		"	✓	✓	611517						
MW-5	"	10:20 A.M	✓	✓		"	✓	✓	611518						
MW-9	"	11:00 A.M.	✓	✓		"	✓	✓	611519		A-B				

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
(SIGNATURE)	11-5-96 1:10 p.m	(SIGNATURE) 11/5/96 1310
(SIGNATURE)	11/6/96 1435	(SIGNATURE)
(SIGNATURE)	11-6-96 1600	(SIGNATURE)
(SIGNATURE)		(SIGNATURE)

THE FOLLOWING MUST BE COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:

1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? Y
2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? Y
3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? N
4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? Y

SIGNATURE: TITLE: ANALYST DATE: 11/5/96