MPDS

SERVICES, INCORPORATED

3693

ALCO HAZMAT

94 APR 13 PM 3:18

April 12, 1994

Ms. Cynthia Chapman
Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

RE: Unocal Service Station #3135
845 - 66th Avenue
Oakland, California 94621

Dear Ms. Chapman:

Per the request of the Unocal Corporation Project Manager, Mr. Tim Howard, enclosed please find our report (MPDS-UN3135-01) dated March 15, 1994, 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) 277-2354.

Sincerely,

MPDS Services, Inc.

Deanna L. Harding
Technical Assistant

/bp

Enclosure

cc: Mr. Tim Howard

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

MPDS

SERVICES, INCORPORATED

MPDS-UN3135-01
March 15, 1994

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

Attention: Mr. Tim Howard

RE: Quarterly Data Report
Unocal Service Station #3135
845 - 66th Avenue
Oakland, California

94621

Dear Mr. Howard:

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 directions during the most recent quarter are shown on the attached Figures 1, 2, and 3.

Ground water samples were collected on February 10, 1994. Prior to sampling, the wells were each purged of between 8 and 13 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.

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, TPH as diesel, and benzene detected in the ground water samples collected this quarter are shown on the attached Figure 4. Copies of the laboratory analytical results and the Chain of Custody documentation are attached to this report.

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

DISTRIBUTION

A copy of this report should be sent to Ms. Cynthia Chapman of the Alameda County Health Care Services Agency, and to Mr. Lester Feldman of the Regional Water Quality Control Board, San Francisco Bay Region.

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

Sincerely,

MPDS Services, Inc.

Talin Kaloustian
Staff Engineer

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

License No. EG 1633
Exp. Date 6/30/94

/dlh

Attachments: Tables 1 & 2
Location Map
Figures 1 through 4
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)◆	Product Thickness (feet)	Sheen	Water Purged (gallons)	Total Well Depth (feet)◆
(Monitored and Sampled on February 10, 1994)						
MW1	-3.59	8.58	0	No	10	22.38
MW2	-3.36	6.93	0	No	11	22.35
MW3	-3.11	6.23	0	No	11	21.60
MW4	-3.86	8.79	0	No	11	24.92
MW5	-3.44	7.71	0	No	13	26.02
MW6	-3.20	7.23	0	No	13	25.73
MW7	-3.51	7.93	0	No	8	19.70
MW8	-2.80	7.23	0	No	11	23.03
MW9	-2.60	7.20	0	No	11	23.05
MW10	-5.52	8.21	0	No	11	23.04
(Monitored on January 10, 1994)						
MW1	-4.81	9.80	0	--	0	
MW2	-4.72	8.29	0	--	0	
MW3	-4.42	7.54	0	--	0	
MW4	-4.99	9.92	0	--	0	
MW5	-4.83	9.10	0	--	0	
MW6	-4.78	8.81	0	--	0	
MW7	-4.88	9.30	0	--	0	
MW8	-4.74	9.17	0	--	0	
MW9	-4.67	9.27	0	--	0	
MW10	-5.00	7.69	0	--	0	
(Monitored on December 14, 1993)						
MW1	-4.51	9.50	0	--	0	
MW2	-4.48	8.05	0	--	0	
MW3	-4.24	7.36	0	--	0	
MW4	-4.67	9.60	0	--	0	
MW5	-4.58	8.85	0	--	0	
MW6	-4.57	8.60	0	--	0	
MW7	-4.10	8.52	0	--	0	
MW8	-4.57	9.00	0	--	0	
MW9	-4.54	9.14	0	--	0	
MW10	-4.81	7.50	0	--	0	

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

Well #	Ground Water Elevation (feet)	Depth to Water (feet)◆	Product Thickness (feet)	Sheen	Water Purged (gallons)	Total Well Depth (feet)◆
(Monitored and Sampled on November 11, 1993)						
MW1	-5.81	10.80	0	No	8.5	
MW2	-5.65	9.22	0	Yes	9.5	
MW3	-5.80	8.92	0	No	9	
MW4	-5.95	10.88	0	No	10	
MW5	-5.86	10.13	0	No	11	
MW6	-5.84	9.87	0	No	11	
MW7	-5.85	10.27	0	No	7	
MW8	-5.79	10.22	0	No	9	
MW9	-5.79	10.39	0	No	9	
MW10	-5.90	8.59	0	No	10	
(Monitored and Sampled on August 13, 1993)						
MW1	-4.82	10.00	0	No	9	
MW2	-4.81	8.64	0	No	10	
MW3	-4.55	7.85	0	No	10	
MW4	-4.96	10.23	0	No	11	
MW5	-4.88	9.49	0	No	12	
MW6	-4.89	9.20	0	No	12	
MW7	-4.39	9.23	0	No	8	
MW8	-4.88	10.00	0	No	10	
MW9	-4.85	9.69	0	No	10	
MW10	-5.08	8.42	0	No	11	
(Monitored and Sampled on May 17, 1993)						
MW1	-3.07	8.25	0	No	10	
MW2	-3.25	7.08	0	No	12	
MW3	-2.17	5.47	0	No	12	
MW4	-3.19	8.46	0	No	12	
MW5	-3.14	7.75	0	No	13	
MW6	-3.19	7.50	0	No	13	
MW7	-2.16	7.00	0	No	9	
MW8	-3.13	8.25	0	No	11	
MW9	-3.11	7.95	0	No	11	
MW10	-3.70	7.04	0	No	12	

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

Well #	Well Cover Elevation (feet)*	Well Casing Elevation (feet)**
MW1	5.18	4.99
MW2	3.83	3.57
MW3	3.30	3.12
MW4	5.27	4.93
MW5	4.61	4.27
MW6	4.31	4.03
MW7	4.84	4.42
MW8	5.12	4.43
MW9	4.84	4.60
MW10	3.34	2.69

♦ The depth to water level and total well depth measurements were taken from the top of the well casings. Prior to November 11, 1993, the depth to water level and total well depth measurements were taken from the top of the well covers.

* The elevations of the top of the well covers have been surveyed relative to Mean Sea Level (MSL), per the City of Oakland Benchmark No. 3881 (elevation = 4.72 MSL).

** Relative to MSL.

-- Sheen determination was not performed.

Note: Monitoring data prior to December 14, 1993, were provided by Kaprealian Engineering, Inc.

TABLE 2

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG
2/10/94	MW1	ND	170*	0.90	2.3	ND	ND	--
	MW2	2,000♦♦	12,000	1,000	17	880	940	--
	MW3	50♦♦	ND	ND	ND	ND	0.84	--
	MW4	170♦	830	3.5	1.4	36	80	--
	MW5	ND	ND	ND	ND	ND	0.59	--
	MW6	ND	ND	3.5	ND	1.5	ND	--
	MW7	ND	ND	ND	ND	ND	ND	--
	MW8	ND	ND	ND	ND	ND	ND	--
	MW9	ND	ND	ND	ND	ND	ND	--
	MW10	71	1,480*	ND	ND	ND	ND	--
11/11/93	MW1	160♦♦	930	7.3	ND	25	19	--
	MW2	7,000♦♦	36,000	4,800	970	3,000	8,100	--
	MW3	51	ND	ND	ND	ND	ND	--
	MW4	4,000♦	16,000	110	12	1,800	3,800	--
	MW5	ND	ND	ND	ND	ND	ND	--
	MW6	650♦♦	3,000	470	ND	220	270	--
	MW7	66	ND	ND	ND	ND	ND	--
	MW8	ND	ND	ND	ND	ND	ND	--
	MW9	ND	ND	ND	ND	ND	ND	--
	MW10	88♦♦	1,600*	ND	ND	ND	ND	--
8/13/93	MW1	170♦♦	860	3.5	ND	17	20	--
	MW2	2,800♦♦	44,000	5,100	600	2,900	8,500	--
	MW3	ND	ND	ND	ND	ND	ND	--
	MW4	2,000♦♦	19,000	ND	ND	1,600	4,100	--
	MW5	ND	ND	ND	ND	ND	ND	--
	MW6	440♦♦	2,300	330	ND	95	40	--
	MW7	ND	ND	ND	ND	ND	ND	--
	MW8	ND	ND	ND	ND	ND	ND	--
	MW9	ND	ND	ND	ND	ND	ND	--
	MW10	97♦♦	1,500**	ND	ND	41	21	--

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG
5/17/93	MW1	490♦♦	960**	39	ND	57	60	--
	MW2	5,500♦♦	46,000	4,400	510	2,900	9,900	--
	MW3	53	ND	ND	ND	ND	ND	--
	MW4	3,100♦	2,500	ND	ND	170	410	--
	MW5	ND	ND	ND	ND	ND	ND	--
	MW6	1,400♦	4,900	890	46	210	530	--
	MW7	ND	ND	ND	ND	ND	ND	--
	MW8	ND	ND	ND	ND	ND	ND	--
	MW9	ND	ND	ND	ND	ND	ND	--
	MW10	ND	1,200*	ND	ND	ND	ND	--
2/03/93	MW1	ND	94**	ND	ND	1.4	1.6	--
	MW2	3,900♦	9,300	780	68	830	1,200	ND
	MW3	ND	ND	ND	ND	ND	ND	--
	MW4	720♦♦	370	2.6	ND	1.2	53	--
	MW5	ND	ND	ND	ND	ND	ND	--
	MW6	ND	ND	1.2	ND	ND	ND	ND
	MW8	ND	ND	ND	ND	ND	ND	--
	MW9	ND	ND	ND	ND	ND	ND	--
	MW10	ND	1,200*	ND	ND	ND	ND	--
11/03/92	MW1	400♦	1,100	28	ND	80	78	--
	MW2	9,600♦	40,000	5,600	130	3,000	6,100	ND
	MW3	52♦	ND	ND	ND	ND	ND	--
	MW4	8,300♦	36,000	69	ND	3,000	7,400	--
	MW5	ND	ND	ND	ND	ND	ND	--
	MW6	220♦	920	45	0.76	12	110	ND
	MW8	ND	ND	ND	ND	ND	ND	--
	MW9	ND	ND	ND	ND	ND	ND	--
	MW10	160♦	740	11	2.1	32	56	--
8/03/92	MW1	220♦	980	22	0.69	77	82	--
	MW2	3,300♦♦	37,000	4,500	480	3,300	9,700	ND
	MW3	58	ND	ND	ND	ND	ND	--
	MW4	2,400♦	24,000	61	ND	2,100	5,400	--
	MW5	ND	ND	ND	ND	ND	ND	--
	MW6	170♦	1,100	180	1.1	62	78	ND

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG
5/05/92	MW1	120	310	5.7	ND	7.1	15	--
	MW2	4,600	26,000	2,300	110	2,700	6,900	ND
	MW3	56	ND	ND	ND	0.43	1.8	--
	MW4	3,200	15,000	82	12	2,000	5,600	--
	MW5	72	ND	ND	ND	0.42	1.4	--
	MW6	47	ND	ND	ND	ND	1.3	ND
2/07/92	MW1	ND	220	2.1	ND	10	16	--
	MW2	2,300	11,000	1,400	30	1,900	1,400	ND
	MW3	ND	ND	ND	ND	ND	ND	--
	MW4	2,300	8,100	24	4.9	1,800	3,200	--
	MW5	ND	ND	ND	ND	0.36	0.94	--
	MW6	ND	180	22	0.68	22	20	ND
11/05/91	MW1	260	4,900	80	ND	150	160	--
	MW2	3,900	110,000	4,200	200	3,400	8,600	78
	MW3	ND	31	ND	ND	ND	0.65	--
	MW4	7,700	140,000	320	ND	4,800	13,000	--
	MW5	ND	ND	ND	ND	ND	ND	--
	MW6	300	7,100	200	ND	190	580	ND
8/05/91	MW1	200	1,200	95	6.2	230	80	--
	MW2	4,200	33,000	2,900	190	3,400	7,900	ND
	MW3	63	ND	ND	ND	ND	ND	--
	MW4	6,200	37,000	310	70	3,600	9,700	--
	MW5	ND	ND	ND	ND	ND	ND	--
	MW6	130	860	130	11	92	150	ND
2/21/91	MW1	690	26,000	280	39	1,200	1,900	--
	MW2	7,000	3,400	160	61	200	490	ND
	MW3	--	ND	ND	ND	ND	0.64	--
	MW4	4,100	33,000	210	21	3,800	12,000	--
	MW5	--	56	ND	ND	ND	4.7	--
	MW6	160	750	77	14	23	140	ND
	MWD (MW6 duplicate)	--	740	74	12	33	140	--

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	TOG
11/26/90	MW1	--	2,900	160	2.3	330	320	--
	MW2	3,800	15,000	1,600	450	1,100	2,100	ND
	MW3	--	ND	ND	ND	ND	ND	--
	MW4	--	49,000	360	36	3,800	11,000	--
	MW5	--	ND	ND	ND	ND	ND	--
	MW6	320	4,800	1,000	200	340	650	ND
	MW7	--	4,000	800	120	250	440	--
	(MW6 duplicate)							
8/28/90	MW1	--	1,700	140	1.4	180	150	--
	MW2	3,100	27,000	2,600	1,300	1,900	3,000	ND
	MW3	--	ND	ND	ND	ND	0.70	--
	MW4	--	62,000	810	72	4,400	4,600	--
	MW5	--	ND	ND	ND	ND	1.2	--
	MW6	1,000	12,000	1,700	1,400	230	2,100	16
	MW7	--	2,600	180	3.0	810	270	--
	(MW1 duplicate)							
5/11/90	MW1	--	22,000	590	42	1,200	3,600	--
	MW2	--	65,000	3,300	3,300	4,100	12,000	--
	MW3	--	ND	ND	ND	ND	ND	--

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

* 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.

♦ Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be diesel.

♦♦ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

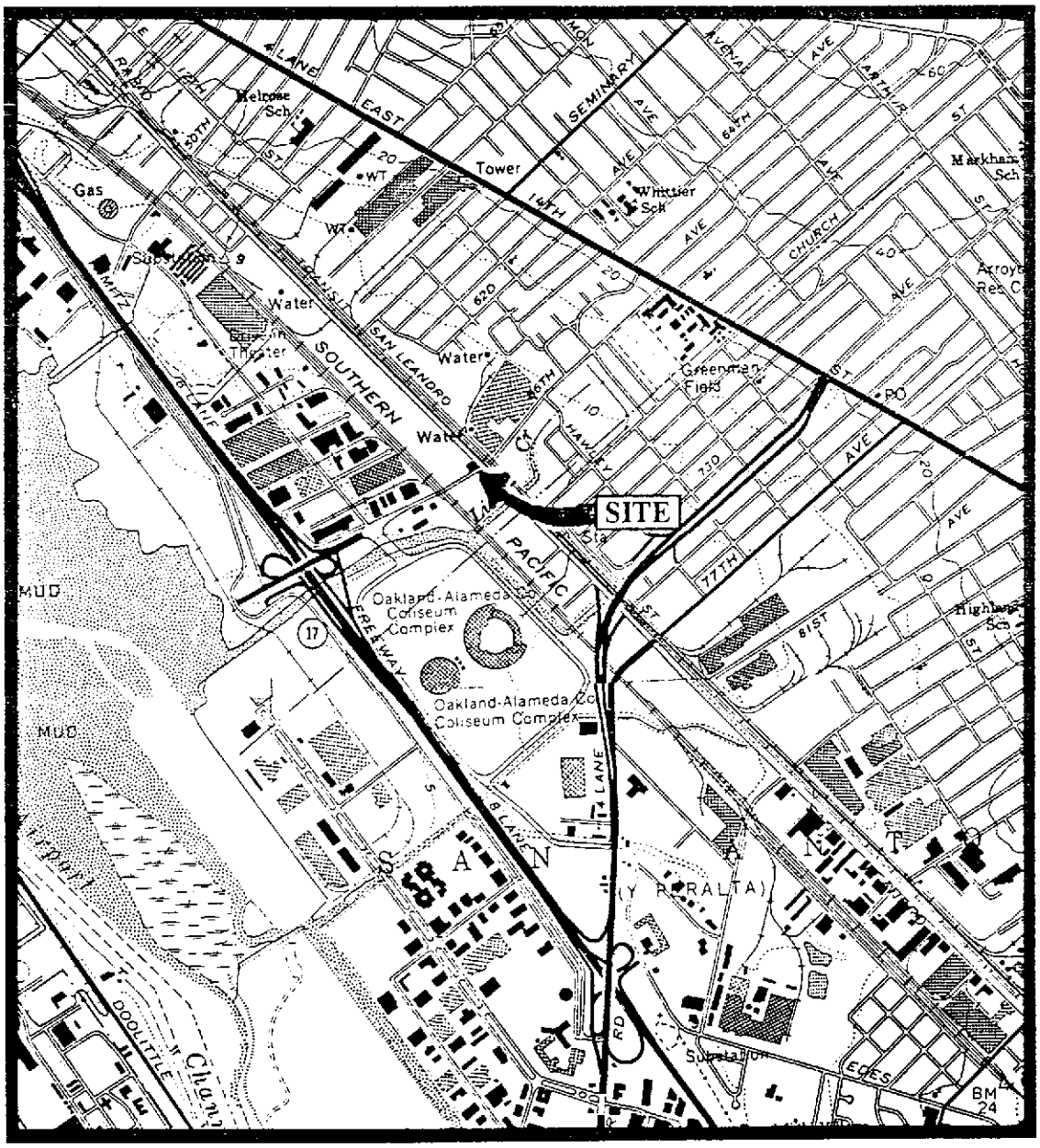
TOG = Total Oil and Grease.

ND = Non-detectable.

-- Indicates analysis was not performed.

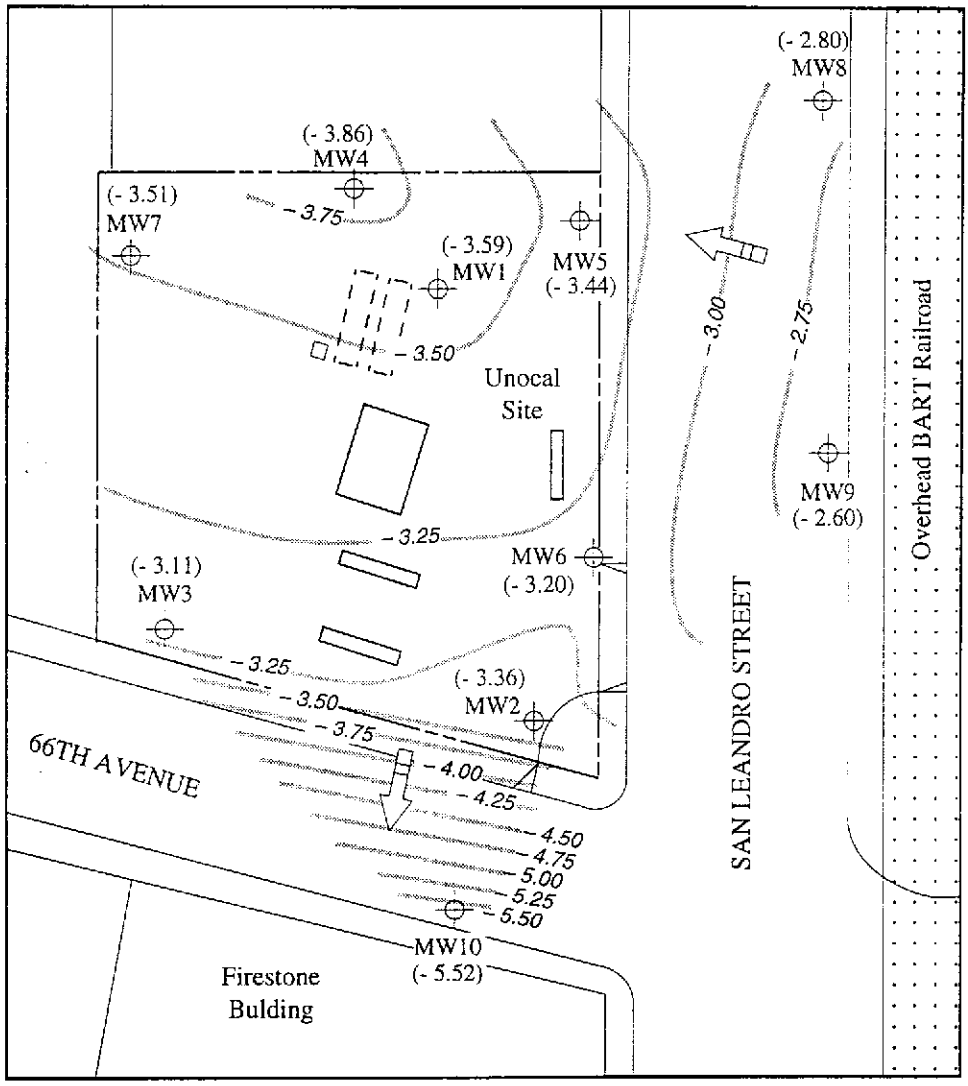
Results are in micrograms per liter (µg/L), unless otherwise indicated.

Note: Laboratory analyses data prior to February 10, 1994, were provided by Kaprealian Engineering, Inc.



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

M P D S SERVICES, INCORPORATED	**UNOCAL SERVICE STATION #3135** **845 - 66TH AVENUE** **OAKLAND, CALIFORNIA**	**LOCATION MAP**



LEGEND

- Monitoring well
- Direction of ground water flow
- ( ) Ground water elevation in feet relative to Mean Sea Level
- Contours of ground water elevation

0 60 120

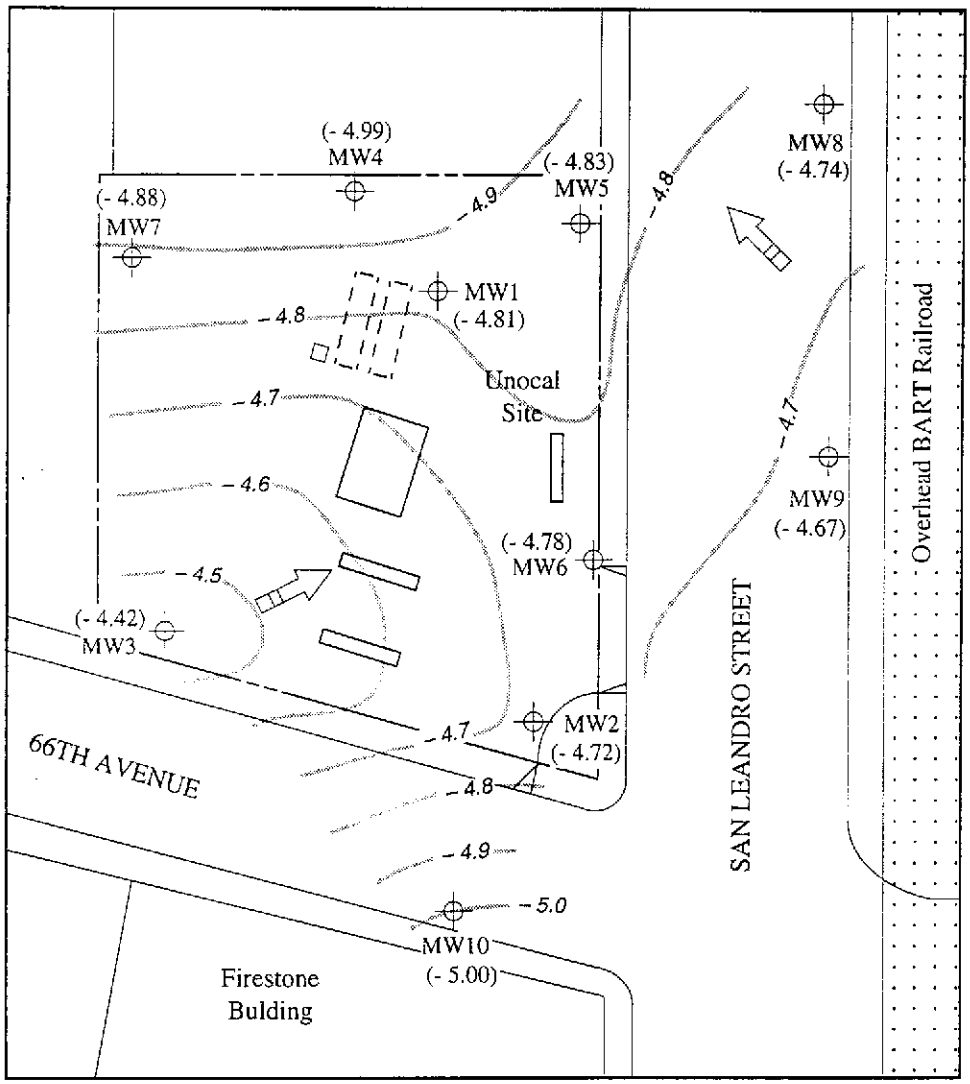
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE FEBRUARY 10, 1994 MONITORING EVENT

MPDS
SERVICES, INCORPORATED

UNOCAL SERVICE STATION #3135
845 - 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE
1



LEGEND

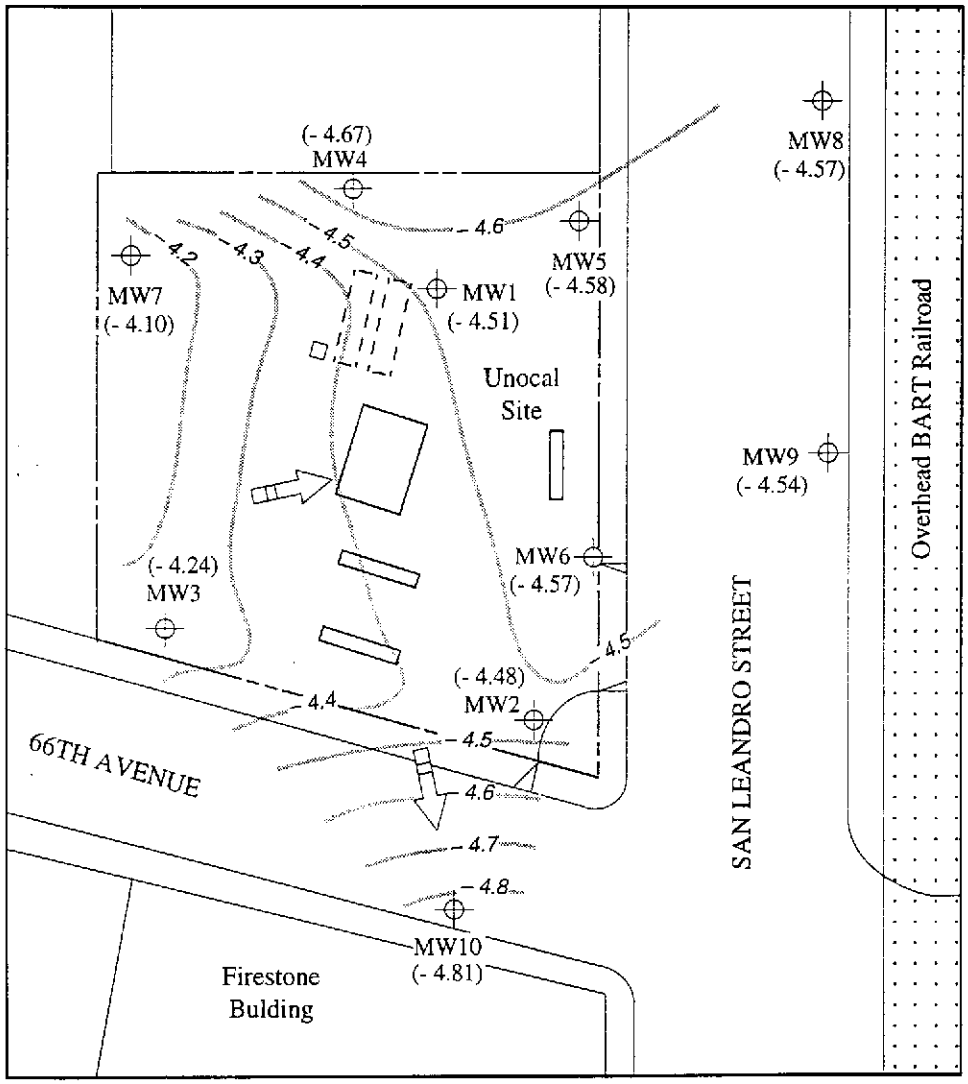
- Monitoring well
- Direction of ground water flow
- ( ) Ground water elevation in feet relative to Mean Sea Level
- Contours of ground water elevation

0 60 120

Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE JANUARY 10, 1994 MONITORING EVENT

M P D S SERVICES, INCORPORATED	**UNOCAL SERVICE STATION #3135** **845 - 66TH AVENUE** **OAKLAND, CALIFORNIA**	FIGURE **2**



LEGEND

- Monitoring well
- Direction of ground water flow
- ( ) Ground water elevation in feet relative to Mean Sea Level
- Contours of ground water elevation

0 60 120

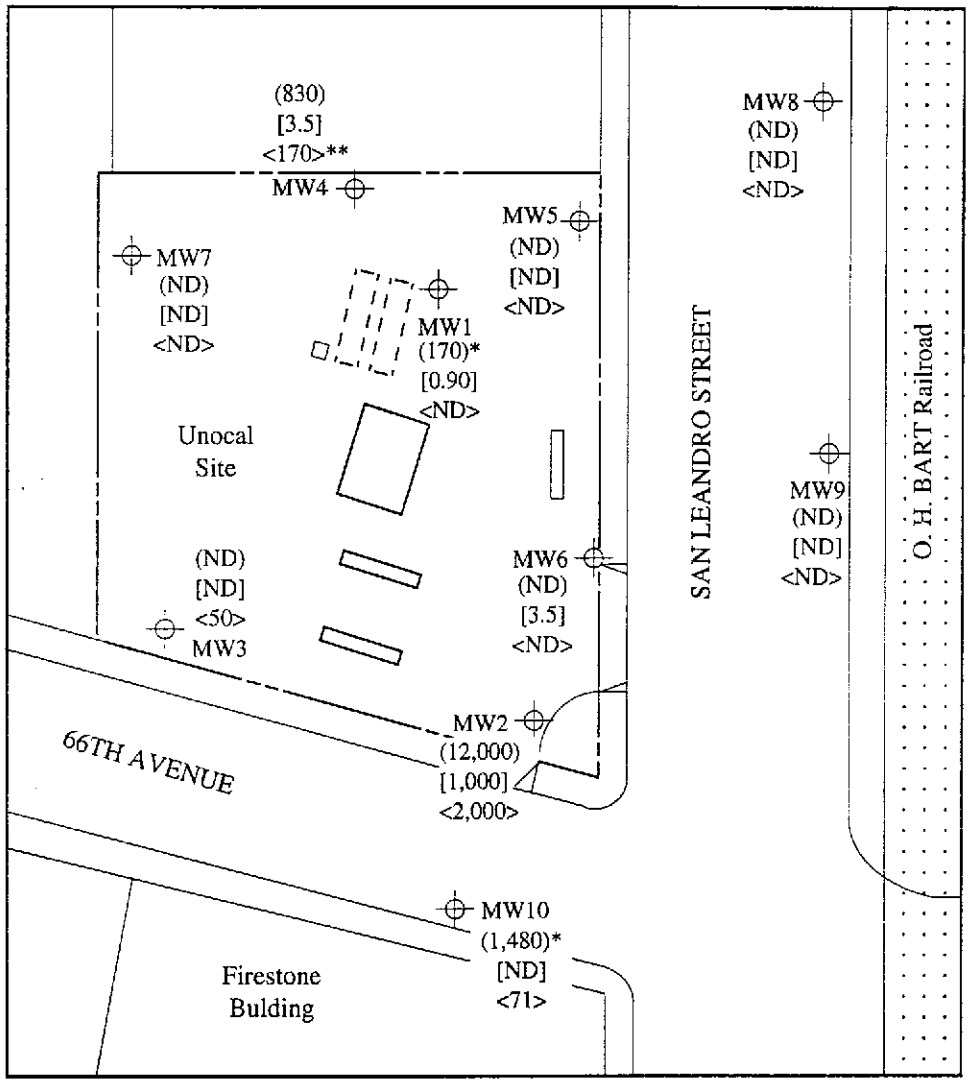
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE DECEMBER 14, 1993 MONITORING EVENT

M P D S
SERVICES, INCORPORATED

UNOCAL SERVICE STATION #3135
845 - 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE
3



LEGEND

- ⊕ Monitoring well
- ( ) Concentration of TPH as gasoline in µg/L
- [ ] Concentration of benzene in µg/L
- < > Concentration of TPH as diesel in µg/L

ND= Non-detectable

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

** The lab reported that the hydrocarbons did not appear to be diesel.

0 60 120

Approx. scale feet

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON FEBRUARY 10, 1994

M P D S SERVICES, INCORPORATED	**UNOCAL SERVICE STATION #3135** **845 - 66TH AVENUE** **OAKLAND, CALIFORNIA**	FIGURE **4**

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

MPDS Services, Inc.	Client Project ID:	Unocal #3135, 845 66th Ave., Oakland	Sampled:	Feb 10, 1994
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	Received:	Feb 10, 1994
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Feb 28, 1994
Attention: Avo Avedissian	First Sample #:	402-0766		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 402-0766 MW-1*	Sample I.D. 402-0767 MW-2	Sample I.D. 402-0768 MW-3	Sample I.D. 402-0769 MW-4	Sample I.D. 402-0770 MW-5	Sample I.D. 402-0771 MW-6
Purgeable Hydrocarbons	50	170	12,000	N.D.	830	N.D.	N.D.
Benzene	0.5	0.90	1,000	N.D.	3.5	N.D.	3.5
Toluene	0.5	2.3	17	N.D.	1.4	N.D.	N.D.
Ethyl Benzene	0.5	N.D.	880	N.D.	36	N.D.	1.5
Total Xylenes	0.5	N.D.	940	0.84	80	0.59	N.D.
Chromatogram Pattern:		Unidentified Hydrocarbons (<C7)	Gasoline	--	Gasoline	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	10	1.0	1.0	1.0	1.0
Date Analyzed:	2/23/94	2/23/94	2/23/94	2/23/94	2/23/94	2/23/94
Instrument Identification:	ML #2	ML #2	ML #2	ML #2	ML #2	ML #2
Surrogate Recovery, %: (QC Limits = 70-130%)	93	83	97	80	100	97

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

Please Note:
*This sample does not appear to contain gasoline. Unidentified hydrocarbons, <C7, refers to unidentified peaks in the EPA 8010 Range.

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

MPDS Services, Inc.	Client Project ID:	Unocal #3135, 845 66th Ave., Oakland	Sampled:	Feb 10, 1994
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	Received:	Feb 10, 1994
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Feb 28, 1994
Attention: Avo Avedissian	First Sample #:	402-0772		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 402-0772 MW-7	Sample I.D. 402-0773 MW-8	Sample I.D. 402-0774 MW-9	Sample I.D. 402-0775 MW-10*	Sample I.D. Matrix Blank
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	1,480	
Benzene	0.5	N.D.	N.D.	N.D.	N.D.	
Toluene	0.5	N.D.	N.D.	N.D.	N.D.	
Ethyl Benzene	0.5	N.D.	N.D.	N.D.	N.D.	
Total Xylenes	0.5	N.D.	N.D.	N.D.	N.D.	
Chromatogram Pattern:		--	--	--	Discrete Peak	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	10	1.0
Date Analyzed:	2/23/94	2/23/94	2/23/94	2/23/94	2/23/94
Instrument Identification:	ML #2	ML #2	ML #2	HP-4	ML #2
Surrogate Recovery, %: (QC Limits = 70-130%)	103	100	100	95	93

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

Please Note:
*This samples does not appear to contain gasoline. Discrete Peak refers to an unidentified peak in the MTBE Range.

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

MPDS Services, Inc.	Client Project ID:	Unocal #3135, 845 66th Ave., Oakland	Sampled:	Feb 10, 1994
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	Received:	Feb 10, 1994
Concord, CA 94520	Analysis Method:	EPA 3510/3520/8015	Reported:	Feb 28, 1994
Attention: Avo Avedissian	First Sample #:	402-0766		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 402-0766 MW-1	Sample I.D. 402-0767 MW-2*	Sample I.D. 402-0768 MW-3*	Sample I.D. 402-0769 MW-4*	Sample I.D. 402-0770 MW-5	Sample I.D. 402-0771 MW-6
Extractable Hydrocarbons	50	N.D.	2,000	50	170	N.D.	N.D.
Chromatogram Pattern:		--	Diesel & Unidentified Hydrocarbons (<C14; >C20)	Diesel & Unidentified Hydrocarbons (>C20)	Unidentified Hydrocarbons (<C14)	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Extracted:	2/17/94	2/17/94	2/17/94	2/17/94	2/17/94	2/17/94
Date Analyzed:	2/22/94	2/22/94	2/22/94	2/22/94	2/22/94	2/22/94
Instrument Identification:	HP-3B	HP-3B	HP-3B	HP-3B	HP-3B	HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

Please Note:
*This samples appears to contain diesel and a non-diesel mixture. Unidentified hydrocarbons, <C14, are probably gasoline; >C20 refers to unidentified peaks in the Total Oil & Grease Range.

SEQUOIA ANALYTICAL

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MPDS Services, Inc.	Client Project ID:	Unocal #3135, 845 66th Ave., Oakland	Sampled:	Feb 10, 1994
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	Received:	Feb 11, 1994
Concord, CA 94520	Analysis Method:	EPA 3510/3520/8015	Reported:	
Attention: Avo Avedissian	First Sample #:	402-0772		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 402-0772 MW-7	Sample I.D. 402-0773 MW-8	Sample I.D. 402-0774 MW-9	Sample I.D. 402-0775 MW-10	Sample I.D. Method Blank
Extractable Hydrocarbons	50	N.D.	N.D.	N.D.	71	
Chromatogram Pattern:		--	--	--	Diesel	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0
Date Extracted:	2/17/94	2/17/94	2/17/94	2/17/94	2/17/94
Date Analyzed:	2/22/94	2/22/94	2/22/94	2/22/94	2/22/94
Instrument Identification:	HP-3B	HP-3B	HP-3B	HP-3B	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

SEQUOIA ANALYTICAL

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MPDS Services, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedissian

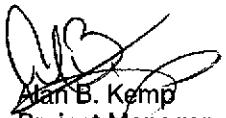
Client Project ID: Unocal #3135, 845 66th Ave., Oakland
Matrix: Liquid
QC Sample Group: 4020766-775

Reported: Feb 28, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Analyst:	J.F., A.T.	J.F., A.T.	J.F., A.T.	J.F., A.T.	K.W.
MS/MSD Batch#:	4020807	4020807	4020807	4020807	BLK021794
Date Prepared:	2/23/94	2/23/94	2/23/94	2/23/94	2/17/94
Date Analyzed:	2/23/94	2/23/94	2/23/94	2/23/94	2/22/94
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3A
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Matrix Spike % Recovery:	104	94	89	99	94
Matrix Spike Duplicate % Recovery:	108	95	70	93	93
Relative % Difference:	3.8	1.1	24	6.3	1.8
LCS Batch#:	2LCS022394	2LCS022394	2LCS022394	2LCS022394	BLK021794
Date Prepared:	2/23/94	2/23/94	2/23/94	2/23/94	2/17/94
Date Analyzed:	2/23/94	2/23/94	2/23/94	2/23/94	2/22/94
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3A
LCS % Recovery:	88	91	91	93	94
% Recovery Control Limits:	71-133	72-128	72-130	71-120	28-122

SEQUOIA ANALYTICAL



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.

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MPDS Services, Inc.	Client Project ID:	Unocal #3135, 845 66th Ave., Oakland
2401 Stanwell Dr., Ste. 400	Matrix:	Liquid
Concord, CA 94520		
Attention: Avo Avedissian	QC Sample Group: 4020766-775	Reported: Feb 28, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M.N.	M.N.	M.N.	M.N.
MS/MSD Batch#:	4020774	4020774	4020774	4020774
Date Prepared:	2/23/94	2/23/94	2/23/94	2/23/94
Date Analyzed:	2/23/94	2/23/94	2/23/94	2/23/94
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	85	85	90	90
Matrix Spike Duplicate % Recovery:	95	95	100	96
Relative % Difference:	11	11	11	6.5
LCS Batch#:	LCS022394	LCS022394	LCS022394	LCS022394
Date Prepared:	2/23/94	2/23/94	2/23/94	2/23/94
Date Analyzed:	2/23/94	2/23/94	2/23/94	2/23/94
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	80	80	80	80
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL

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.

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MPDS Services, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedissian

Client Project ID: Unocal #3135, 845 66th Ave., Oakland

QC Sample Group: 4020766-72

Reported: Mar 2, 1994

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA 8015	EPA 8015	EPA 8015	EPA 8015	EPA 8015	EPA 8015	EPA 8015
Analyst:	K. Wimer	K. Wimer	K. Wimer	K. Wimer	K. Wimer	K. Wimer	K. Wimer
Reporting Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	2/22/94	2/22/94	2/22/94	2/22/94	2/22/94	2/22/94	2/22/94
Sample #:	402-0766	402-0767	402-0768	402-0769	402-0770	402-0771	402-0772
Surrogate % Recovery:	89	87	83	84	81	84	85

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

SEQUOIA ANALYTICAL

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MPDS Services, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedissian

Client Project ID: Unocal #3135, 845 66th Ave., Oakland

QC Sample Group: 4020773-74

Reported: Mar 2, 1994

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA 8015	EPA 8015	EPA 8015	EPA 8015
Analyst:	K. Wimer	K. Wimer	K. Wimer	K. Wimer
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	2/22/94	2/22/94	2/22/94	2/22/94
Sample #:	402-0773	402-0774	402-0775	Matrix Blank
Surrogate % Recovery:	87	93	102	92

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

MPDS
Services, Inc.

CHAIN OF CUSTODY

SAMPLER: RAYMARANGOSIAN
WITNESSING AGENCY:
SITE NAME & ADDRESS: UNOCAL 3135 OAKLAND 345 - 66TH AVE

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	ANALYSES REQUESTED: TPHG BTXE	ANALYSES REQUESTED: TPHD
MW1	2.10			X	X		2	VOA AMB Well	X	X
MW2	"			X	X		"	" "	X	X
MW3	"			X	X		"	" "	X	X
MW4	"			X	X		"	" "	X	X
MW5	"			X	X		"	" "	X	X
MW6	"			X	X		"	" "	X	X
MW7	"			X	X		"	" "	X	X
MW8	"			X	X		"	" "	X	X
MW9	"			X	X		"	" "	X	X

TURN AROUND TIME: REGULAR

REMARKS: 4020766 A-C
0767
0768
0769
0770
0771
0772
0773
0774

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
	2-10-94		2-10-94 19:45
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
	2-11 1135		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
	2-11 3:32p		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	

The following MUST BE completed by the laboratory accepting samples for analysis:
1. Have all samples received for analysis been stored in ice? YES
2. Will samples remain refrigerated until analyzed? YES
3. Did any samples received for analysis have head space? No
4. Were samples in appropriate containers and properly packaged? YES

Signature: [illegible] Title: Analyst Date: 2-10-94

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: 510 602 5100 Fax: 510 687 0602

MPDS
Services, Inc.

CHAIN OF CUSTODY

SAMPLER: RAY MARANGOSIAN
WITNESSING AGENCY:

SITE NAME & ADDRESS: UNOCAL # 3135 OAKLAND 845 - 66TH Ave

ANALYSES REQUESTED: TPH(Gas) X, TPH(D) X

TURN AROUND TIME: REGULAR

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	REMARKS
MW10	2-10			X	X		2 1	VOA AMB	4020775 A-C

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Ray	2-10-94	2-10-94 19:45
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	2/11 1135	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	2/11 3:30p	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

The following MUST BE completed by the laboratory accepting samples for analysis:
1. Have all samples received for analysis been stored in ice? yes
2. Will samples remain refrigerated until analyzed? yes
3. Did any samples received for analysis have head space? no
4. Were samples in appropriate containers and properly packaged? yes

Signature | Title | Date: 2-10-94

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: 510 602 5100 Fax: 510 687 0602