MONITORING
PURGING
DISPOSING
SAMPLING

MPDS SERVICES, INCORPORATED

January 3, 1995

Ms. Cynthia Chapman
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94501

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

Dear Ms. Chapman:

Per the request of the Unocal Corporation Project Manager, Ms. Tina R. Berry, enclosed please find our report (MPDS-UN3135-04) dated November 28, 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) 277-2321.

Sincerely,

MPDS Services, Inc.

Jarrel F. Crider

Jarrel F. Crider

/jfc

Enclosure

cc: Ms. Tina R. Berry

2401 Stanwell Drive, Suite 400, Concord, CA 94520
TEL: (510) 602-5120 FAX: (510) 689-1918

MONITORING
PURGING
DISPOSING
SAMPLING
MPDS SERVICES, INCORPORATED

RO408

MPDS-UN3135-04
November 28, 1994

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

Attention: Ms. Tina R. Berry

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

Dear Ms. Berry:

This data report presents the results of the most recent quarter of monitoring and sampling of the monitoring wells at the referenced site by MPDS Services, Inc.

RECENT FIELD ACTIVITIES

The monitoring wells that were monitored and sampled during this quarter are indicated in Table 1. Prior to sampling, the wells were checked for depth to water and the presence of free product or sheen. The monitoring data and the ground water elevations are summarized in Table 1. The ground water flow directions during the most recent quarter are shown on the attached Figures 1, 2, and 3.

Ground water samples were collected on November 7, 1994. Prior to sampling, the wells were each purged of between 10 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. 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, 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.

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 Ms. Cynthia Chapman 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 Karkarian
Staff Engineer

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

License No. EG 1633
Exp. Date 8/31/96

/jfc

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)◆	Total Well Depth (feet)◆	Product Thickness (feet)	Sheen	Water Purged (gallons)
(Monitored and Sampled on November 7, 1994)						
MW1	-3.27	8.26	22.74	0	No	10
MW2	-2.47	6.04	22.44	0	No	11.5
MW3	-2.93	6.05	21.64	0	No	11
MW4	-3.71	8.64	25.24	0	No	11.5
MW5*	-3.29	7.56	26.05	0	--	0
MW6	-2.75	6.78	25.81	0	No	13
MW7*	-3.44	7.86	19.75	0	--	0
MW8*	-2.13	6.56	23.12	0	--	0
MW9*	-1.84	6.44	23.14	0	--	0
MW10	-3.39	6.08	23.14	0	No	12
(Monitored on October 5, 1994)						
MW1	-4.11	9.10	22.67	0	--	0
MW2	-3.53	7.10	22.43	0	--	0
MW3	-3.23	6.35	21.60	0	--	0
MW4	-4.32	9.25	25.25	0	--	0
MW5	-4.14	8.41	26.01	0	--	0
MW6	-4.02	8.05	26.75	0	--	0
MW7	-3.88	8.30	19.70	0	--	0
MW8	-4.24	8.67	23.05	0	--	0
MW9	-3.75	8.35	24.00	0	--	0
MW10	-4.31	7.00	24.13	0	--	0
(Monitored on September 1, 1994)						
MW1	-3.93	8.92	~	0	--	0
MW2	-3.35	6.92	~	0	--	0
MW3	-3.05	6.17	~	0	--	0
MW4	-4.12	9.05	~	0	--	0
MW5	-3.94	8.21	~	0	--	0
MW6	-3.80	7.83	~	0	--	0
MW7	-4.03	8.45	~	0	--	0
MW8	-3.96	8.39	~	0	--	0
MW9	-3.92	8.52	~	0	--	0
MW10	-4.11	6.80	~	0	--	0

TABLE 1 (Continued)

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 2, 1994)						
MW1	-3.77	8.76	22.71	0	No	9.5
MW2	-3.18	6.75	22.43	0	No	11
MW3	-2.72	5.84	21.60	0	No	11
MW4	-3.98	8.91	25.23	0	No	11.5
MW5	-3.78	8.05	26.03	0	No	12.5
MW6	-3.63	7.66	25.71	0	No	12.5
MW7	-3.56	7.98	19.70	0	No	8
MW8	-3.80	8.23	23.10	0	No	10.5
MW9	-3.74	8.34	23.10	0	No	10.5
MW10	-3.98	6.67	23.09	0	No	11.5
(Monitored and Sampled on May 5, 1994)						
MW1	-3.12	8.11	22.44	0	No	10
MW2	-2.81	6.38	22.43	0	No	11
MW3	-2.38	5.50	21.66	0	No	11
MW4	-3.34	8.27	24.98	0	No	12
MW5*	-3.11	7.38	26.10	0	--	0
MW6	-2.98	7.01	25.80	0	No	13
MW7*	-2.71	7.13	19.76	0	--	0
MW8*	-2.96	7.39	23.11	0	--	0
MW9*	-2.92	7.52	23.12	0	--	0
MW10	-3.34	6.03	23.10	0	No	12
(Monitored and Sampled on February 10, 1994)						
MW1	-3.59	8.58	22.38	0	No	10
MW2	-3.36	6.93	22.35	0	No	11
MW3	-3.11	6.23	21.60	0	No	11
MW4	-3.86	8.79	24.92	0	No	11
MW5	-3.44	7.71	26.02	0	No	13
MW6	-3.20	7.23	25.73	0	No	13
MW7	-3.51	7.93	19.70	0	No	8
MW8	-2.80	7.23	23.03	0	No	11
MW9	-2.60	7.20	23.05	0	No	11
MW10	-5.52	8.21	23.04	0	No	11

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

Well #	Well Casing Elevation (feet)**
MW1	4.99
MW2	3.57
MW3	3.12
MW4	4.93
MW5	4.27
MW6	4.03
MW7	4.42
MW8	4.43
MW9	4.60
MW10	2.69

♦ 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 No. 3881 (elevation = 4.72 feet MSL).

-- Sheen determination was not performed.

~ Total well depth not measured.

TABLE 2

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	Total Oil & Grease
11/07/94	MW1	270♦	890	16	ND	31	21	--
	MW2	3,100♦♦	49,000	1,700	2,000	3,000	10,000	--
	MW3	ND	94*	ND	ND	ND	ND	--
	MW4	2,200♦	20,000	84	17	1,500	3,000	--
	MW5	SAMPLED SEMI-ANNUALLY						
	MW6	770♦	23,000	3,800	970	1,400	4,700	--
	MW7	SAMPLED SEMI-ANNUALLY						
	MW8	SAMPLED SEMI-ANNUALLY						
	MW9	SAMPLED SEMI-ANNUALLY						
	MW10	120♦♦	1,100*	ND	ND	ND	ND	--
8/02/94	MW1	130♦♦	700	13	0.62	2.0	3.6	--
	MW2	8,500♦	32,000	2,400	2,200	2,900	12,000	--
	MW3	76	150*	ND	ND	ND	ND	--
	MW4	2,500♦♦	17,000	38	ND	1,800	4,300	--
	MW5	ND	ND	ND	ND	ND	ND	--
	MW6	2,400♦♦	28,000	2,200	940	1,600	7,500	--
	MW7	ND	ND	ND	ND	ND	0.63	--
	MW8	ND	ND	ND	ND	ND	ND	--
	MW9	ND	ND	ND	ND	ND	ND	--
	MW10	110	95*	ND	ND	ND	ND	--
5/05/94	MW1	ND	96*	ND	ND	ND	ND	--
	MW2	3,100♦♦	36,000	3,200	670	2,700	9,600	--
	MW3	66	62*	ND	ND	ND	ND	--
	MW4	2,000♦♦	6,900	17	ND	480	1,300	--
	MW5	SAMPLED SEMI-ANNUALLY						
	MW6	630♦♦	2,600	430	99	24	420	--
	MW7	SAMPLED SEMI-ANNUALLY						
	MW8	SAMPLED SEMI-ANNUALLY						
	MW9	SAMPLED SEMI-ANNUALLY						
	MW10	55	1,000*	ND	ND	ND	ND	--

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	Total Oil & Grease
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	Total Oil & Grease
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	Total Oil & Grease
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	--	740	74	12	33	140	--

Duplicate (MW6)

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	Total Oil & Grease
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	--
Duplicate	(MW6)							
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	--
Duplicate	(MW1)							
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.

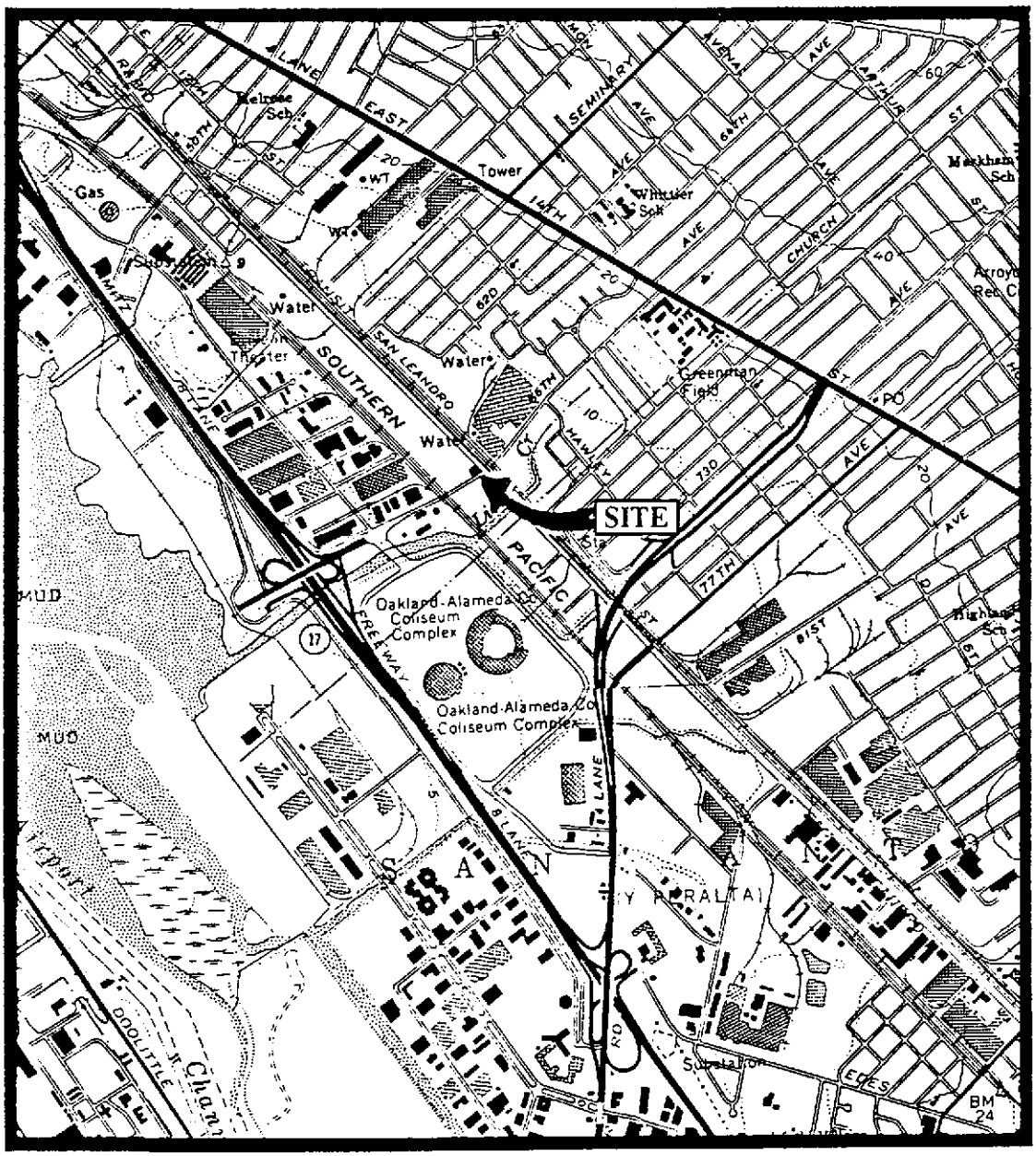
♦♦ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

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.

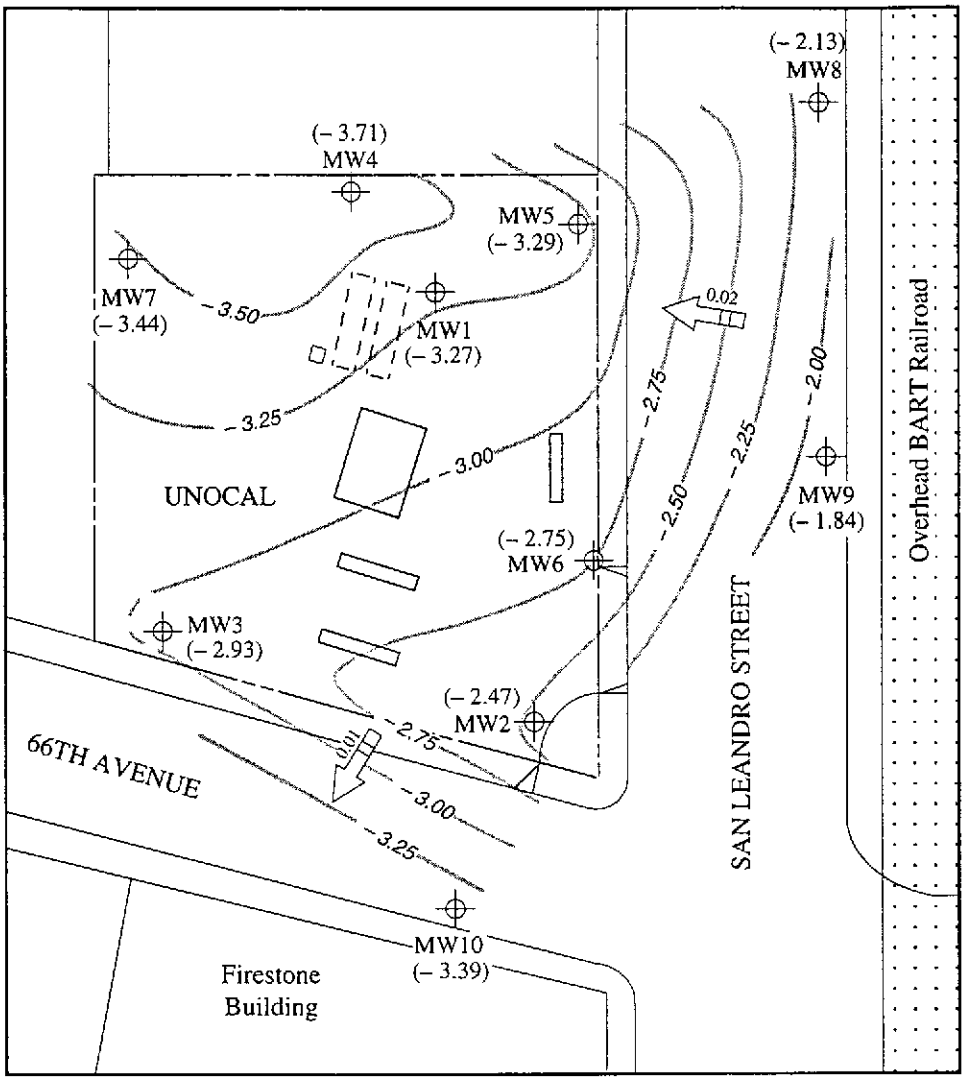


Base modified from 7.5 minute U.S.G.S.
Oakland East and San Leandro Quadrangles
(both photorevised 1980)

0 2000 4000

Approx. scale feet

mpds SERVICES, INCORPORATED	**UNOCAL SERVICE STATION #3135** **845 - 66TH AVENUE** **OAKLAND, CALIFORNIA**	**LOCATION MAP**



LEGEND

- Monitoring well
- ( ) Ground water elevation in feet relative to Mean Sea Level
- #.## Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation

0 60 120

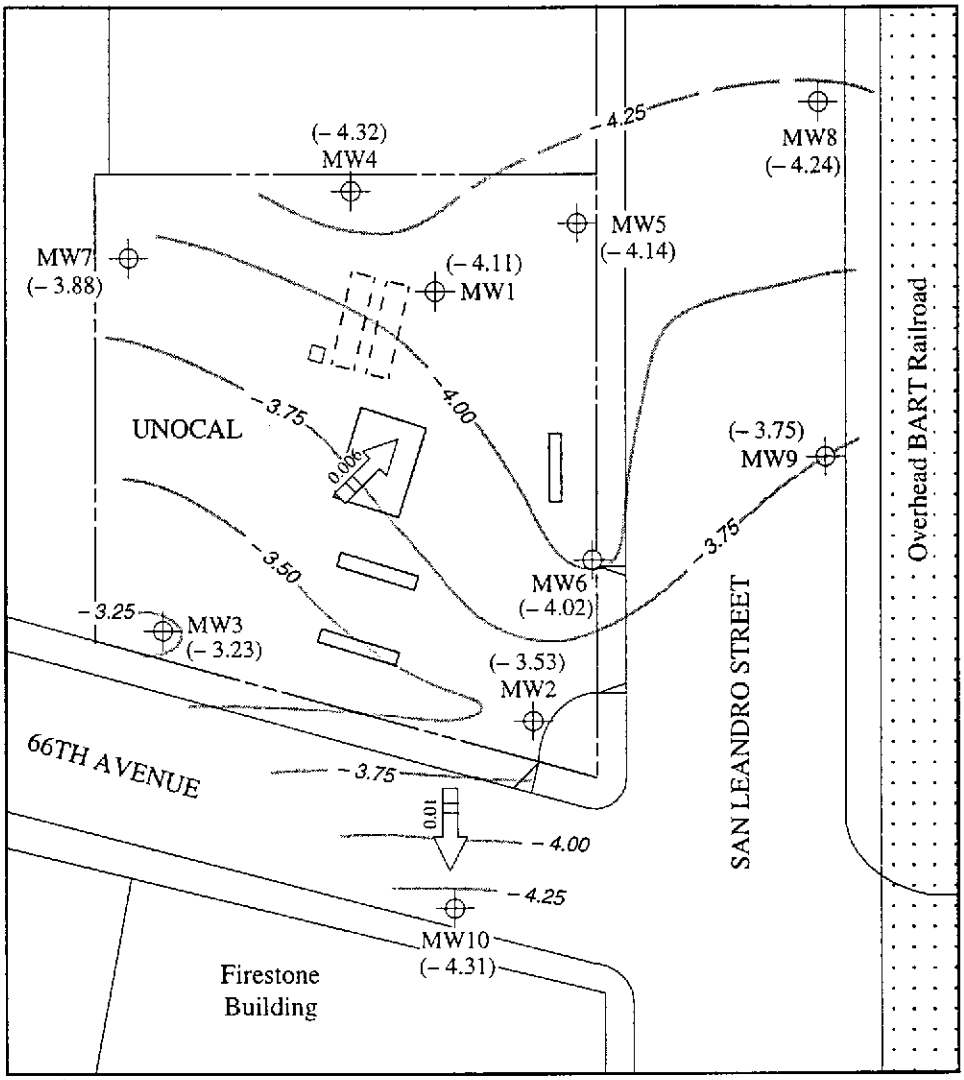
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE NOVEMBER 7, 1994 MONITORING EVENT

mpds SERVICES, INCORPORATED

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

FIGURE
1



LEGEND

- Monitoring well
- ( ) Ground water elevation in feet relative to Mean Sea Level
- #.## Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation

0 60 120

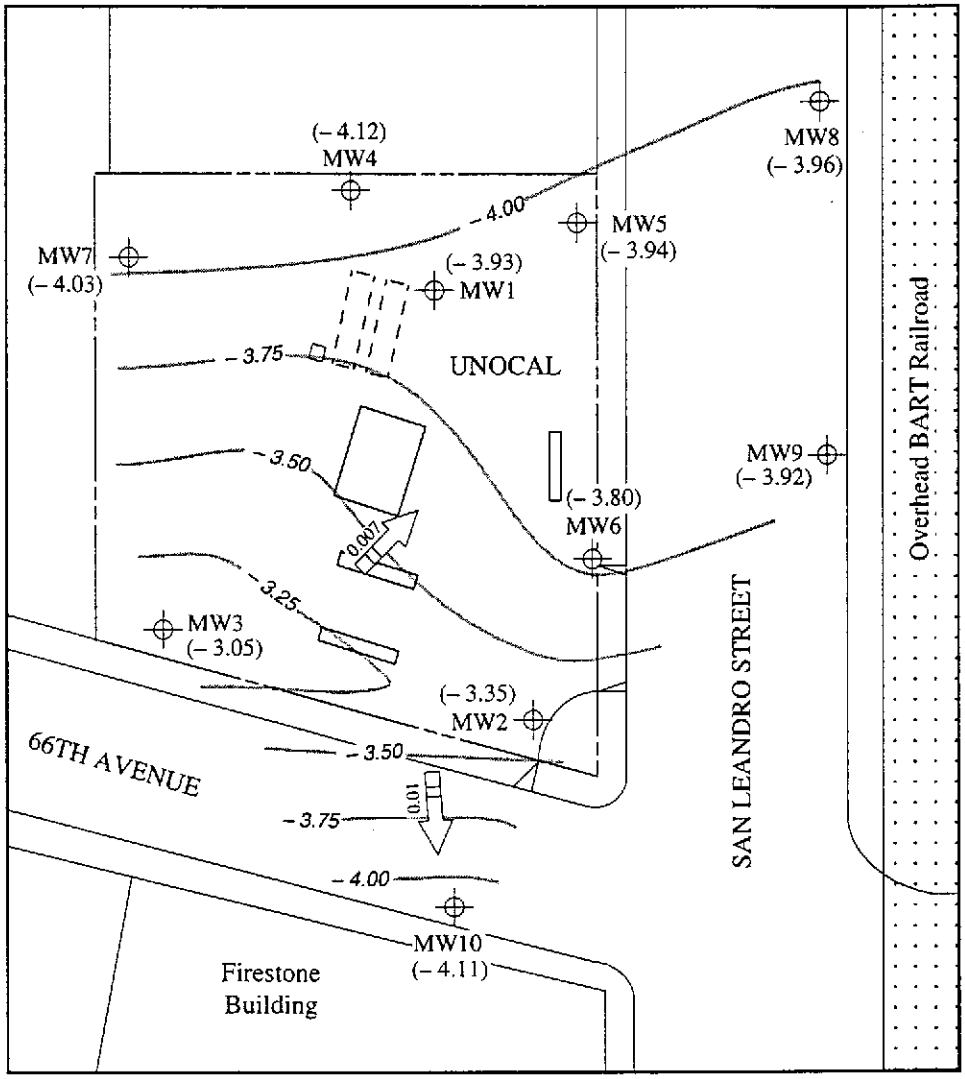
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE OCTOBER 5, 1994 MONITORING EVENT

mpds SERVICES, INCORPORATED

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

FIGURE
2



LEGEND

- Monitoring well
- ( ) Ground water elevation in feet relative to Mean Sea Level
- #.## Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation

0 60 120

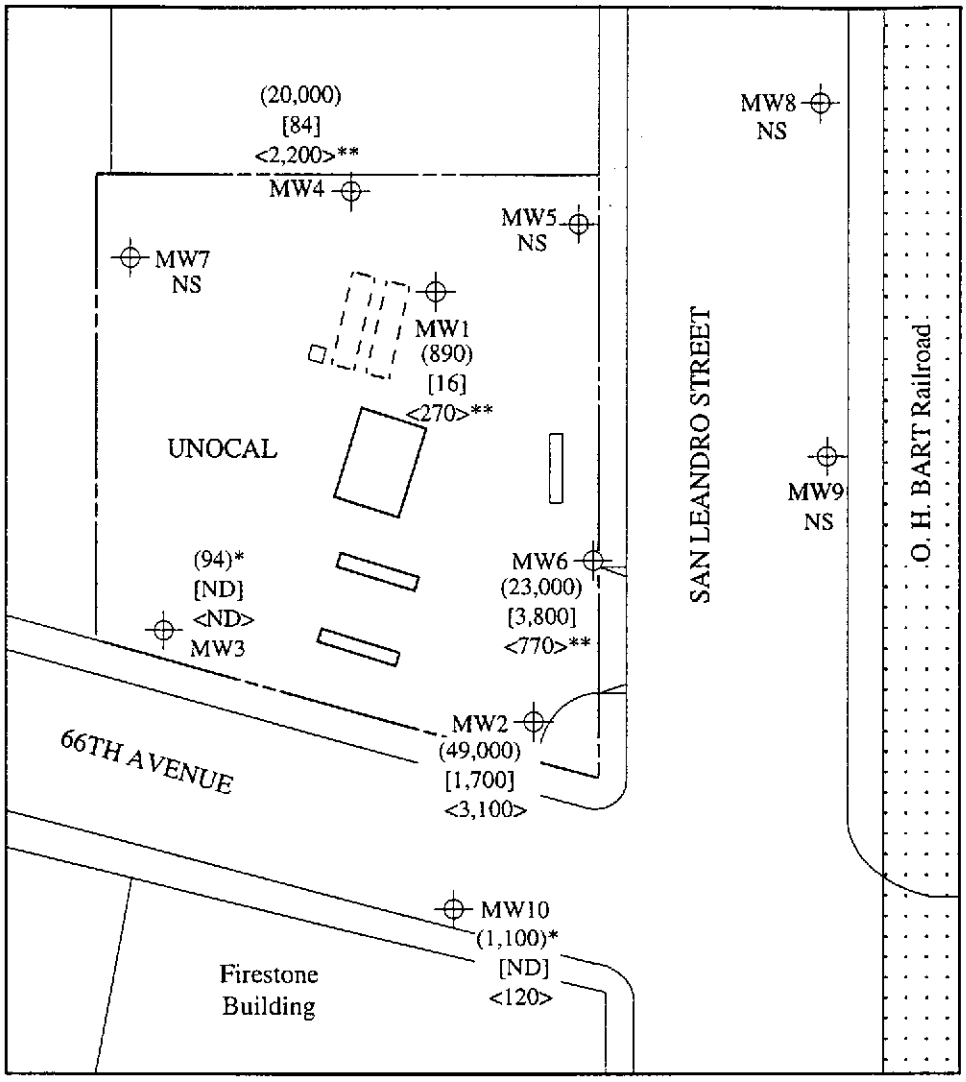
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE SEPTEMBER 1, 1994 MONITORING EVENT

mpds 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, NS = Not sampled

* 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 NOVEMBER 7, 1994

MPDS SERVICES, INCORPORATED

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

FIGURE
4

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

MPDS Services	Client Project ID:	Unocal #3135, 845 66th Ave., Oakland	Sampled:	Nov 7, 1994
2401 Stanwell Dr., Ste. 400	Matrix Descript:	Water	Received:	Nov 7, 1994
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Nov 21, 1994
Attention: Avo Avedissian	First Sample #:	411-0276		

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
411-0276	MW1	890	16	ND	31	21
411-0277	MW2	49,000	1,700	2,000	3,000	10,000
411-0278	MW3	94*	ND	ND	ND	ND
411-0279	MW4	20,000	84	17	1,500	3,000
411-0280	MW6	23,000	3,800	970	1,400	4,700
411-0281	MW10	1,100*	ND	ND	ND	ND

* Hydrocarbons detected did not appear to be gasoline.

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

Sequoia Analytical

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MPDS Services	Client Project ID:	Unocal #3135, 845 66th Ave., Oakland	Sampled:	Nov 7, 1994
2401 Stanwell Dr., Ste. 400	Matrix Descript:	Water	Received:	Nov 7, 1994
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Nov 21, 1994
Attention: Avo Avedissian	First Sample #:	411-0276		

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
411-0276	MW1	Gasoline	4.0	11/11/94	HP-4	85
411-0277	MW2	Gasoline	200	11/9/94	HP-5	86
411-0278	MW3	Discrete Peak*	1.0	11/9/94	HP-5	95
411-0279	MW4	Gasoline	50	11/9/94	HP-5	83
411-0280	MW6	Gasoline	50	11/9/94	HP-5	84
411-0281	MW10	Discrete Peak*	10	11/11/94	HP-4	94

SEQUOIA ANALYTICAL, #1271

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Project Manager

Please Note:
* "Discrete Peak" refers to an unidentified peak in the MTBE range.

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MPDS Services	Client Project ID:	Unocal #3135, 845 66th Ave., Oakland	Sampled: Nov 7, 1994
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	Received: Nov 7, 1994
Concord, CA 94520	Analysis Method:	EPA 3510/3520/8015	Reported: Nov 21, 1994
Attention: Avo Avedissian	First Sample #:	411-0276	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 411-0276 MW1*	Sample I.D. 411-0277 MW2^	Sample I.D. 411-0278 MW3	Sample I.D. 411-0279 MW4*	Sample I.D. 411-0280 MW6*	Sample I.D. 411-0281 MW10^
Extractable Hydrocarbons	50	270	3100	N.D.	2200	770	120
Chromatogram Pattern:		Unidentified Hydrocarbons <C14	Diesel and Unidentified Hydrocarbons <C14 & >C20	--	Unidentified Hydrocarbons <C14	Unidentified Hydrocarbons <C14 & >C20	Diesel and Unidentified Hydrocarbons >C20

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Extracted:	11/9/94	11/9/94	11/9/94	11/9/94	11/9/94	11/9/94
Date Analyzed:	11/10/94	11/10/94	11/10/94	11/10/94	11/10/94	11/10/94
Instrument Identification:	HP-3A	HP-3B	HP-3A	HP-3A	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, #1271

Signature on File

Alan B. Kemp
Project Manager

Please Note:
* This sample does not appear to contain diesel. "Unidentified Hydrocarbons <C14" are probably gasoline; ">C20" refers to unidentified peaks in the total oil and grease range.
^ This sample appears to contain diesel and non-diesel mixtures. "Unidentified Hydrocarbons <C14" are probably gasoline; ">C20" refers to unidentified peaks in the total oil and grease range.

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MPDS Services
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: 4110276-281

Reported: Nov 22, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha
MS/MSD Batch#:	4110438	4110438	4110438	4110438
Date Prepared:	11/11/94	11/11/94	11/11/94	11/11/94
Date Analyzed:	11/11/94	11/11/94	11/11/94	11/11/94
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:	85	90	95	95
Matrix Spike Duplicate % Recovery:	85	95	95	100
Relative % Difference:	0.0	5.4	0.0	5.1
LCS Batch#:	2LCS111194	2LCS111194	2LCS111194	2LCS111194
Date Prepared:	11/11/94	11/11/94	11/11/94	11/11/94
Date Analyzed:	11/11/94	11/11/94	11/11/94	11/11/94
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
LCS % Recovery:	82	90	94	95
% Recovery Control Limits:	71-133	72-128	72-130	71-120

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.

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MPDS Services
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: 4110276-281

Reported: Nov 22, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 Mod
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha	K.V.S.
MS/MSD Batch#:	4110274	4110274	4110274	4110274	BLK110994
Date Prepared:	11/9/94	11/9/94	11/9/94	11/9/94	11/9/94
Date Analyzed:	11/9/94	11/9/94	11/9/94	11/9/94	11/10/94
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Matrix Spike % Recovery:	105	105	110	105	69
Matrix Spike Duplicate % Recovery:	105	105	105	102	66
Relative % Difference:	0.0	0.0	4.6	2.9	4.4
LCS Batch#:	3LCS110994	3LCS110994	3LCS110994	3LCS110994	BLK110994
Date Prepared:	11/9/94	11/9/94	11/9/94	11/9/94	11/9/94
Date Analyzed:	11/9/94	11/9/94	11/9/94	11/9/94	11/10/94
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
LCS % Recovery:	100	100	105	100	69
% Recovery Control Limits:	71-133	72-128	72-130	71-120	28-122

SEQUOIA ANALYTICAL, #1271

Signature On File

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Project Manager

Please Note:
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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: RAY MARANGOSIAN

WITNESSING AGENCY:

UNOCAL S/S # 3135 CITY: OAKLAND

ADDRESS: 845 66TH Ave

TURN AROUND TIME: REGULAR

SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-GAS BTEX	TPH-DIESEL	TOG	8010					REMARKS
MW1	11-7-94	9:45	x	x		3	Well	x	x					4110276		A-C
MW2	"	13:25	x	x		4	"	x	x					4110277		↓
MW3	"	10:20	x	x		4	"	x	x					4110278		↓
MW4	"	11:20	x	x		4	"	x	x					4110279		↓
MW6	"	12:40	x	x		4	"	x	x					4110280		↓
MW10	"	12:18	x	x		4	"	x	x					4110281		↓

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
Ray Marangosian (SIGNATURE)	11-7-94 17:00	[signature] 11/7/94 1700 (SIGNATURE)
CB[signature] (SIGNATURE)	11-8 12:30	[signature] (SIGNATURE)
[signature] (SIGNATURE)		[signature] 11/8/94 1:45 (SIGNATURE)
(SIGNATURE)		(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? yes 16°C
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: [signature] TITLE: Analyst DATE: 11/7/94