MONITORING
PURGING
DISPOSING
SAMPLING
MPDS SERVICES, INCORPORATED

MPDS-UN0752-10
May 13, 1996

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 #0752
800 Harrison Street
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. Oxygen Release Compound (ORC®) filter socks were installed in all the monitoring wells. 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 quarter is shown on the attached Figure 1.

Ground water samples were collected on April 10, 1996. Prior to sampling, the wells were each purged of between 8.5 and 11.5 gallons of water. In addition, dissolved oxygen concentrations were measured and are presented in Table 6. 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. Trip blank, Equipment blank and Field blank samples (denoted as ES1, ES2 and ES3, respectively) were also collected for quality assurance and control. 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 Tables 2 through 6. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline and benzene detected in the ground water samples collected this quarter are shown on the attached Figure 2. 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

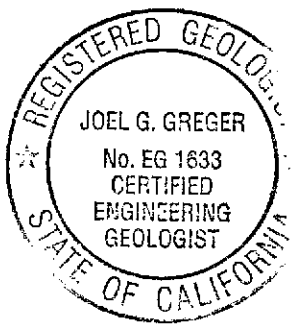
A copy of this report should be sent to Ms. Jennifer Eberle of the Alameda County Health Care Services Agency.

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.

Thomas J. Berkins
Project Engineer



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

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

/bp

Attachments: Tables 1 through 6
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)	Sheen	Water Purged (gallons)
(Monitored and Sampled on April 10, 1996)						
MW1	17.04	17.65	33.90	0	No	11.5
MW2	17.37	17.35	30.45	0	No	9
MW3	16.74	16.40	31.80	0	No	10.5
MW4	16.71	16.00	32.51	0	No	11.5
MW5	16.90	16.05	31.95	0	No	11
MW6	16.60	15.56	31.03	0	No	11
MW7	16.39	15.81	31.95	0	No	11
MW8	16.30	15.70	27.60	0	No	8.5
(Monitored and Sampled on January 3, 1996)						
MW1	15.00	19.69	33.88	0	No	10
MW2	15.32	19.40	30.59	0	No	8
MW3	14.60	18.54	30.74	0	No	8.5
MW4	14.66	18.05	32.50	0	No	10
MW5	14.75	18.20	31.80	0	No	9.5
MW6	14.50	17.66	30.97	0	No	9.5
MW7	14.18	18.02	31.93	0	No	9.5
MW8	14.18	17.82	27.61	0	No	7
(Monitored and Sampled on October 10, 1995)						
MW1	15.09	19.60	33.96	0	No	10
MW2	15.47	19.25	30.75	0	No	8
MW3	14.64	18.50	30.81	0	No	8.5
MW4	14.68	18.03	32.61	0	No	10
MW5	14.80	18.15	32.00	0	No	10.5
MW6	14.48	17.68	31.25	0	No	10
MW7	14.12	18.08	32.16	0	No	10
MW8	14.15	17.85	27.15	0	No	6.5
(Monitored and Sampled on July 14, 1995)						
MW1	16.11	18.58	33.45	0	No	10.5
MW2	16.42	18.30	30.72	0	No	8.5
MW3	15.65	17.49	30.74	0	No	9.5
MW4	15.70	17.01	32.57	0	No	11
MW5	15.77	17.18	31.95	0	No	10.5
MW6	15.53	16.63	31.18	0	No	10
MW7	15.15	17.05	32.22	0	No	10.5
MW8	15.19	16.81	27.27	0	No	7.5

Table 1

Summary of Monitoring Data

Well #	Well Casing Elevation (feet)*
MW1	34.69
MW2	34.72
MW3	33.14
MW4	32.71
MW5	32.95
MW6	32.16
MW7	32.20
MW8	32.00

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

* The elevations of the top of the well casings are relative to Mean Sea Level (MSL), per the City of Oakland benchmark disk stamped "25/A" at the northeast corner of 7th and Harrison (elevation = 28.81 feet MSL).

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW1	6/5/91	47	ND	ND	ND	ND
	9/30/91	ND	ND	ND	ND	ND
	12/30/91	ND	ND	ND	ND	ND
	4/2/92	ND	ND	ND	ND	ND
	6/30/92	ND	ND	ND	ND	ND
	9/15/92	76	1.0	ND	ND	ND
	12/21/92	95	0.69	ND	ND	1.0
	4/28/93	920	3.1	2.3	1.2	9.7
	7/23/93	ND	0.5	0.66	ND	ND
	10/5/93	92**	1.5	ND	ND	0.72
	1/3/94	ND	ND	ND	ND	ND
	4/2/94	ND	ND	ND	ND	ND
	7/5/94	250	4.8	13	1.2	7.3
	10/6/94	540	1.4	ND	0.66	11
	1/2/95	140	ND	ND	ND	ND
	4/3/95	580	3.6	0.75	ND	4.0
	7/14/95	260	2.1	ND	ND	1.2
	10/10/95	220	2.0	ND	25	5.6
	1/3/96	190	2.4	ND	0.71	1.2
	4/10/96	540	8.9	1.7	1.5	7.4
MW2	6/5/91	49	ND	ND	ND	ND
	9/30/91	130	18	0.53	14	9.6
	12/30/91	91	16	0.89	11	1.9
	4/2/92	88	12	0.32	6.3	7.2
	6/30/92	76	9.3	0.76	4.8	6.9
	9/15/92	1,300	91	5.7	80	110
	12/21/92	960	97	3.2	74	96
	4/28/93	1,300	76	1.9	130	87
	7/23/93	66	1.8	ND	2.5	2.0
	10/5/93	120	12	ND	2.1	12
	1/3/94	260	25	ND	5.5	26
	4/2/94	ND	0.65	ND	ND	0.99
	7/5/94	160	16	ND	0.73	10
	10/6/94	170	15	ND	1.4	11
	1/2/95	190	27	ND	0.95	11
	4/3/95	2,400	65	6.6	19	63
	7/14/95	750	270	ND	ND	13
	10/10/95	50	1.6	ND	ND	ND
	1/3/96	ND	ND	ND	ND	ND
	4/10/96	300	42	ND	2.4	9.0

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW3	6/5/91	5,800	1,200	40	140	97
	9/30/91	6,800	1,400	130	290	240
	12/30/91	7,200	2,100	690	410	550
	4/2/92	8,000	1,400	200	300	310
	6/30/92	8,900	1,900	210	430	550
	9/15/92	10,000	1,900	330	400	580
	12/21/92	8,500	1,500	150	310	330
	4/28/93	2,600	220	7.6	41	27
	7/23/93	4,400	660	26	160	82
	10/5/93	9,200	720	88	140	140
	1/3/94	4,900	830	100	170	150
	4/2/94	6,000	800	30	140	110
	7/5/94	25,000**	ND	ND	ND	ND
	10/6/94	49,000*	1,300	200	280	300
	1/2/95	480	1.6	ND	1.4	ND
	4/3/95	8,100**	65	ND	ND	ND
	7/14/95	ND	1,300	ND	ND	ND
	10/10/95	3,100	1,400	36	50	53
	1/03/96	ND	2,300	110	150	140
	4/10/96	940	**38**	33	39	47
MW4	10/19/92	480	0.51	2.1	2.8	6.8
	12/21/92	220*	ND	ND	0.97	0.74
	4/28/93	ND	ND	ND	ND	ND
	7/23/93	85*	ND	ND	ND	ND
	10/5/93	130**	ND	ND	ND	ND
	1/3/94	210	ND	ND	0.76	1.6
	4/2/94	89	ND	ND	ND	ND
	7/5/94	190**	ND	ND	ND	ND
	10/6/94	170	0.85	ND	ND	0.74
	1/2/95	ND	ND	ND	ND	ND
	4/3/95	98**	ND	ND	ND	ND
	7/14/95	ND	ND	ND	ND	ND
	10/10/95	ND	ND	ND	ND	ND
	1/03/96	ND	ND	ND	ND	ND
	4/10/96	ND	ND	ND	ND	ND

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW5	10/19/92	2,700	61	5.0	100	61
	12/21/92	1,700	51	4.7	83	34
	4/28/93	6,700	200	190	250	430
	7/23/93	2,000	122	8.0	68	47
	10/5/93	1,700	70	6.2	54	40
	1/3/94	1,500	44	ND	42	46
	4/2/94	1,800	46	5.1	38	35
	7/5/94	2,200	97	8.4	37	36
	10/6/94	1,600	79	5.7	28	22
	1/2/95	1,700	50	8.6	30	28
	4/3/95	5,400**	190	240	170	420
	7/14/95	3,800	210	100	130	190
	10/10/95	1,300	92	14	15	39
	1/03/96	630	53	4.4	8.3	13
	4/10/96	500	25	18	7.0	20
MW6	10/19/92	3,900	420	12	60	28
	12/21/92	2,300	370	11	39	15
	4/28/93	1,200	54	1.5	11	5.3
	7/23/93	580	19	0.99	3.4	2.7
	10/5/93	1,400	34	ND	5.3	7.3
	1/3/94	1,400	57	ND	8.5	11
	4/2/94	5,300*	ND	ND	ND	ND
	7/5/94	ND	ND	ND	ND	ND
	10/6/94	11,000**	ND	ND	ND	ND
	1/2/95	550	18	0.92	2.0	1.8
	4/3/95	6,600**	ND	ND	ND	ND
	7/14/95	ND	ND	ND	ND	ND
	10/10/95	ND	81	ND	ND	ND
	1/03/96	70	9.9	0.58	ND	0.81
	4/10/96	300	25	4.7	0.94	2.7

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW7	4/28/93	110	2.8	1.3	1.4	1.7
	7/23/93	790	23	3.3	28	5.4
	10/5/93	360	10	1.2	0.91	0.99
	1/3/94	ND	0.93	ND	0.75	1.9
	4/2/94	360	2.0	ND	ND	0.8
	7/5/94	ND	ND	ND	ND	ND
	10/6/94	340	5.6	0.85	ND	1.2
	1/2/95	ND	ND	ND	ND	ND
	4/3/95	570	24	ND	3.4	5.8
	7/14/95	ND	14	ND	ND	ND
	10/10/95	740	170	ND	ND	ND
	1/03/96⩛	360	16	1.3	2.7	1.4
	4/10/96	120	4.1	1.5	ND	0.88
MW8	4/28/93	450	18	1.8	1.8	1.4
	7/23/93	260	5.1	ND	0.6	ND
	10/5/93	120**	1.7	ND	ND	ND
	1/3/94	ND	ND	ND	ND	ND
	4/2/94	150	1.2	ND	ND	ND
	7/5/94	730	17	ND	1.6	ND
	10/6/94	140**	ND	ND	ND	ND
	1/2/95	440	18	0.72	2.0	1.8
	4/3/95	960	11	ND	ND	ND
	7/14/95	280	4.2	2.6	1.1	3.3
	10/10/95	110	1.3	0.62	0.67	ND
	1/03/96⩛	63	ND	0.51	ND	1.8
	4/10/96	ND	1.1	0.61	ND	ND

⩛ Sequoia Analytical Laboratory has identified the presence of **MTBE** at a level above 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 appeared to be a gasoline and non-gasoline mixture.

** Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.

ND = Non-detectable

-- Indicates analysis was not performed.

Table 2

Summary of Laboratory Analyses
Water

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 direction 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 January 3, 1994, were provided by Kaprealian Engineering, Inc.

Table 3

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Diesel	Chloroform	Tetrachloro-ethene	Trichloro-ethene	MTBE
MW1	6/5/91	ND	7.8	2.9	1.3	--
	9/30/91	ND	--	--	--	--
	12/30/91	ND	6.4	2.1	0.9	--
	4/2/92	94	7.1	2.6	1.4	--
	6/30/92	120	9.5	2.2	1.3	--
	9/15/92	ND	12	2.2	1.3	--
	12/21/92	ND	12	1.4	0.83	--
	4/28/93♦	470▲▲	12	0.89	0.85	--
	7/23/93	ND	16	1.3	0.91	--
	10/5/93	57▲	13	1.3	0.66	--
	1/3/94*	ND	18	1.4	0.93	--
	4/2/94	ND	15	1.1	0.68	--
	10/10/95	--	--	--	--	29
	4/10/96	--	--	--	--	50
MW2	10/10/95	--	--	--	--	200
	4/10/96	--	--	--	--	620
MW3	10/10/95	--	--	--	--	190,000
	4/10/96	--	--	--	--	69,000
MW4	1/3/94	--	9.0	1.0	ND	240
	10/10/95	--	--	--	--	120
	4/10/96	--	--	--	--	240
MW5	10/10/95	--	--	--	--	1,100
	4/10/96	--	--	--	--	640
MW6	10/10/95	--	--	--	--	75,000
	4/10/96	--	--	--	--	53,000
MW7	10/10/95	--	--	--	--	13,000
	4/10/96	--	--	--	--	3,200
MW8	1/3/94♦	--	1.5	1.2	ND	51
	10/10/95	--	--	--	--	170
	4/10/96	--	--	--	--	60

Table 3

Summary of Laboratory Analyses
Water

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* A fuel fingerprint analysis was conducted on this sample. Sequoia Analytical Laboratory reported that total extractable petroleum hydrocarbons in this sample were not detected in high enough concentrations to compare with known standards and approximate their makeup.

♦ 1,2-dichloroethane was detected in MW8 at a concentration of 4.0 µg/L on 1/03/94, and 1.1 µg/L in MW1 on 4/28/93.

⩓ 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: - All EPA method 8010 constituents were non-detectable, except as indicated above.

- Laboratory analyses data prior to January 3, 1994, were provided by Kaprealian Engineering, Inc.

Table 4

Summary of Laboratory Analyses
Water

Well #	Date	TOG	Cadmium	Chromium	Lead	Nickel	Zinc
MW1	6/30/92	ND	ND	0.079	0.009	0.1	0.087
MW1	4/2/92	ND	ND	0.015	0.016	ND	0.02
MW1	12/30/91	ND	ND	0.0078	0.0057	ND	0.046
MW1	9/30/91	ND	ND	0.019	ND	ND	0.11
MW1	6/5/91	ND	ND	0.0083	0.011	0.063	0.023

TOG = Total Oil & Grease.

ND = Non-detectable.

Results are in milligrams per liter (mg/L), unless otherwise indicated.

Note: Laboratory analyses data were provided by Kaprealian Engineering, Inc.

Table 5

Summary of Laboratory Analyses
Water

Date	Well #	Heterotrophic Plate Count (CFU/mL)
1/3/96	MW2	>5,700
	MW3	350
	MW4	1,000
	MW5	>5,700
	MW8	>5,700

CFU/mL = Colony Forming Units per milliliter.

Table 6

Summary of Laboratory Analyses
Water

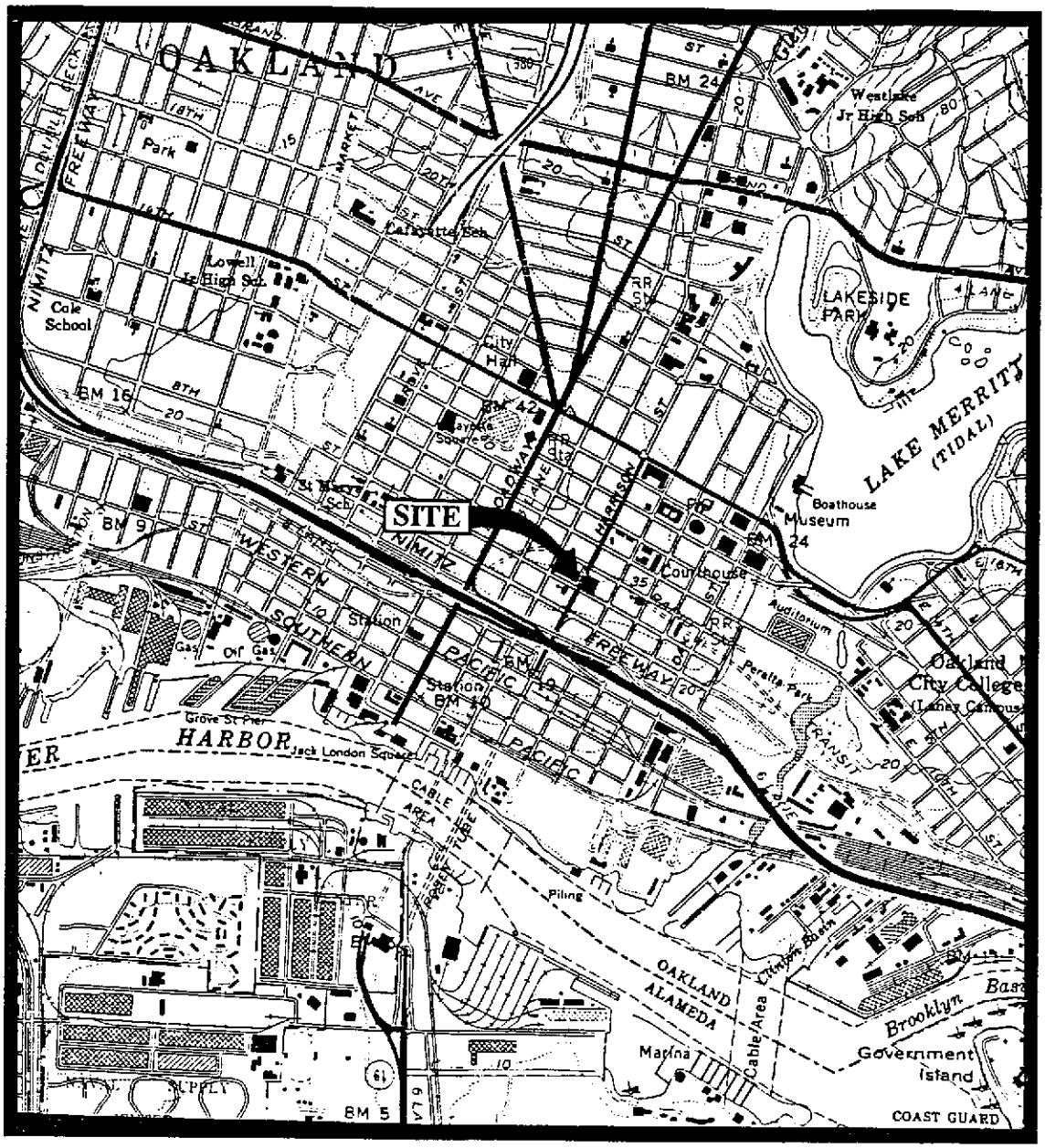
Date	Well #	BOD	Dissolved Oxygen	Bicarbonate Alkalinity	Calcium	Iron	Manganese	Nitrate	Sulfate
4/10/96	MW1	--	3.04	160	21	15	2.6	--	--
	MW2	--	5.88	460	58	60	7.0	--	--
	MW3	--	4.63	360	40	60	3.7	--	--
	MW4	--	5.23	160	25	43	2.0	--	--
	MW5	--	3.73	240	22	18	2.4	--	--
	MW6	--	4.50	240	35	61	3.7	--	--
	MW7	--	5.10	210	44	120	4.8	--	--
	MW8	--	4.80	380	37	63	3.6	--	--
1/3/96	MW2	2.2	1.8	130	27	77	3.0	0.22	97
	MW3	4.3	1.5	430	43	61	5.4	0.23	16
	MW4	ND	1.2	120	20	61	3.3	10	44
	MW5	3.4	2.8	240	31	80	3.3	ND	17
	MW8	ND	1.3	310	37	62	3.3	0.57	20

-- Indicates analysis was not performed.

ND = Non-detectable.

BOD = Biochemical Oxygen Demand

Results are in milligrams per liter (mg/L), unless otherwise indicated.

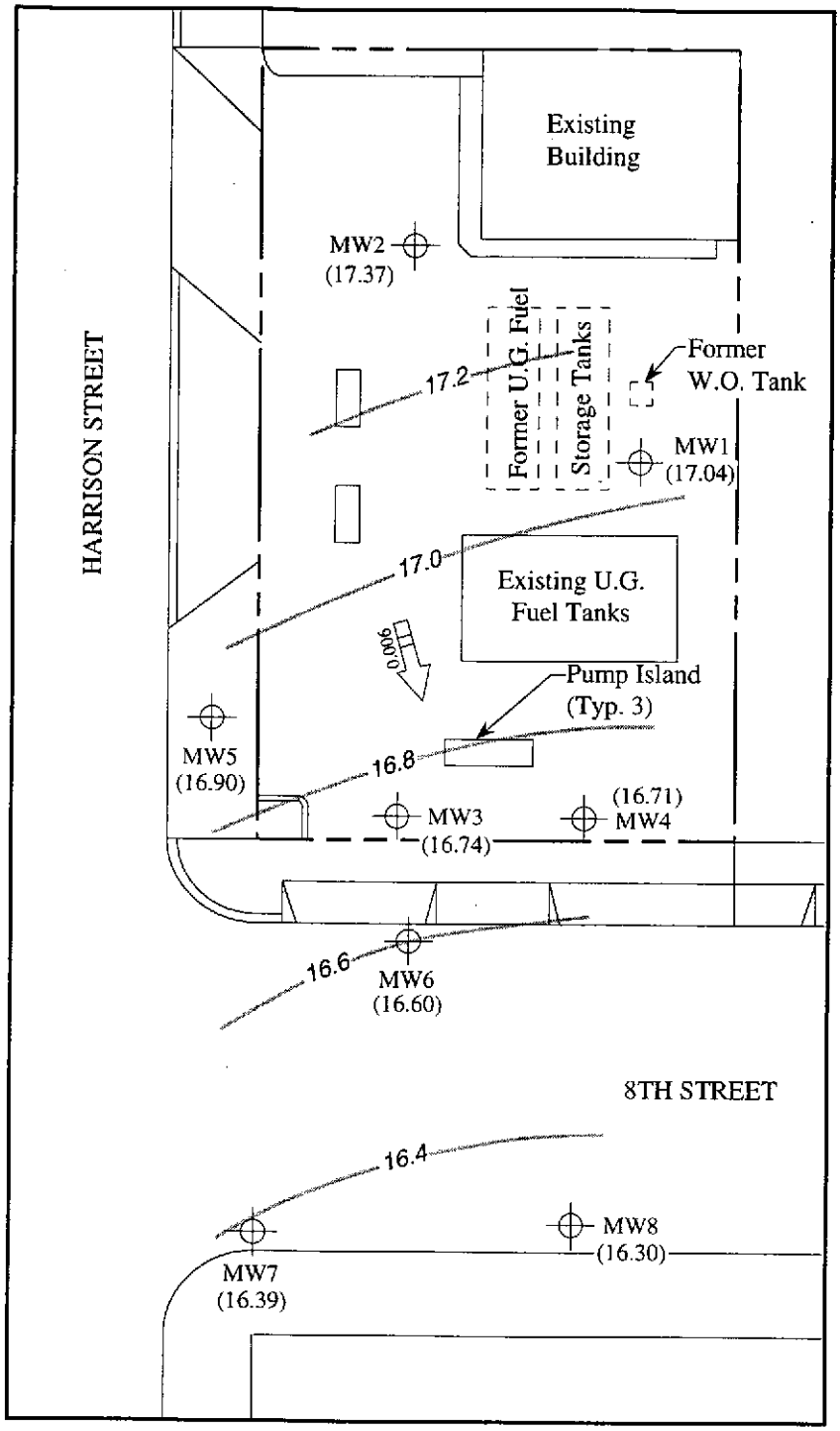


Base modified from 7.5 minute U.S.G.S. Oakland West Quadrangle
(photorevised 1980)

0 2000 4000

Approx. scale feet

mpds SERVICES, INCORPORATED	**UNOCAL SERVICE STATION #0752** **800 HARRISON STREET** **OAKLAND, CALIFORNIA**	**LOCATION MAP**



LEGEND

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

0 30 60

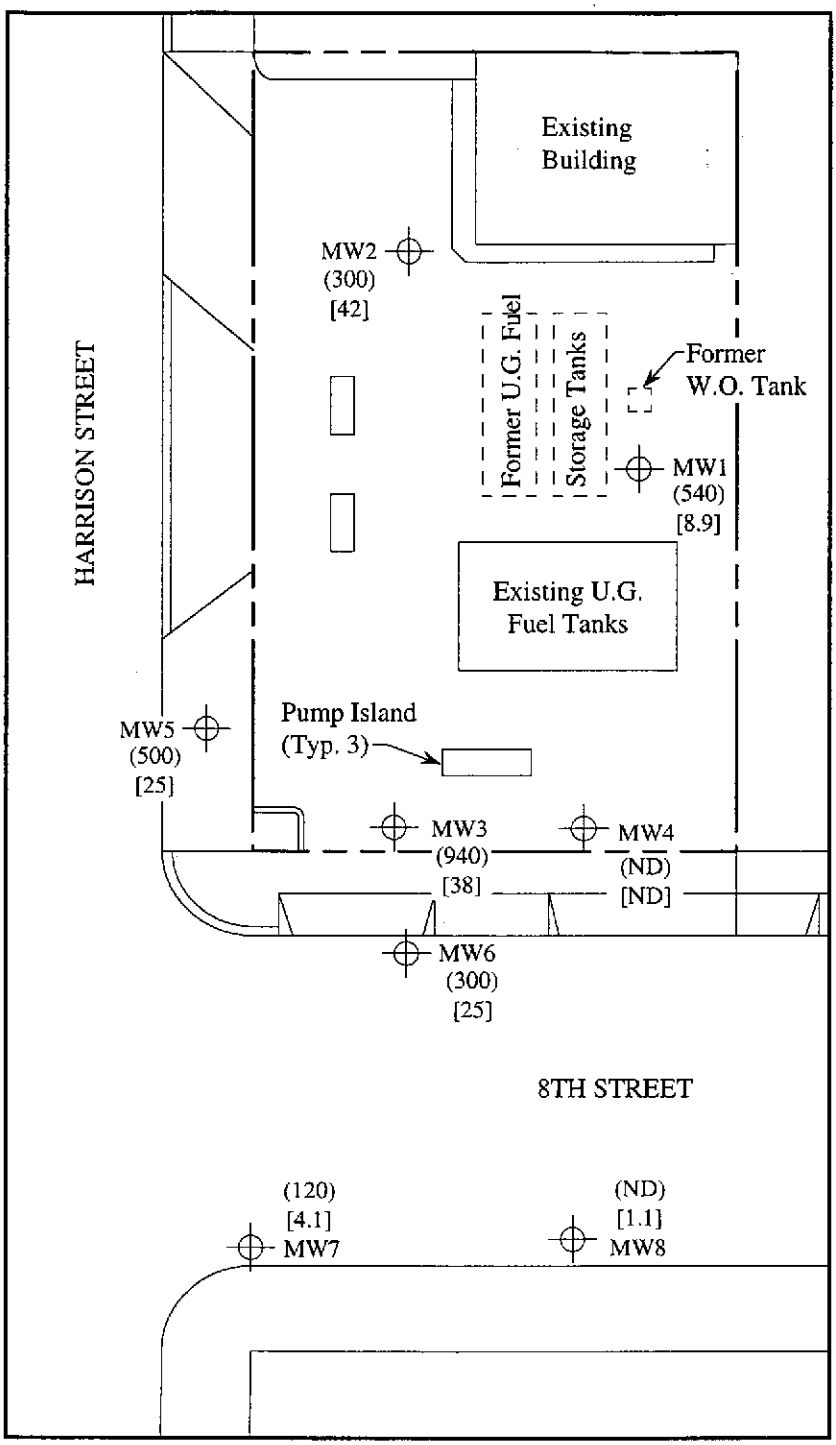
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE APRIL 10, 1996 MONITORING EVENT

MPDS SERVICES, INCORPORATED

UNOCAL SERVICE STATION #0752
800 HARRISON STREET
OAKLAND, CALIFORNIA

FIGURE
1



LEGEND

- Monitoring well
- ( ) Concentration of TPH as gasoline in µg/L
- [ ] Concentration of benzene in µg/L
- ND Non-detectable

0 30 60

Approx. scale feet

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON APRIL 10, 1996

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION #0752
800 HARRISON STREET
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 #0752, 800 Harrison St., Oakland	Sampled: Apr 10, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Water	Received: Apr 10, 1996
Concord, CA 94520	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: May 3, 1996
Attention: Jarrel Crider	First Sample #:	604-0999	

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
604-0999	MW-1	540	8.9	1.7	1.5	7.4
604-1000	MW-2	300	42	ND	2.4	9.0
604-1001	MW-3	940	38	33	39	47
604-1002	MW-4	ND	ND	ND	ND	ND
604-1003	MW-5	500	25	18	7.0	20
604-1004	MW-6	300	25	4.7	0.94	2.7
604-1005	MW-7	120	4.1	1.5	ND	0.88
604-1006	MW-8	ND	1.1	0.61	ND	ND
604-1007	ES-1	ND	ND	ND	ND	ND
604-1008	ES-2	ND	ND	ND	ND	ND
604-1009	ES-3	ND	ND	ND	ND	ND
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
& #1894

Signature on File

Alan B. Kemp
Project Manager

6040999.MPD <1>

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 #0752, 800 Harrison St., Oakland	Sampled:	Apr 10, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Water	Received:	Apr 10, 1996
Concord, CA 94520	Analysis Method:	EPA 5030/8015 Mod./8020	Reported:	May 3, 1996
Attention: Jarrel Crider	First Sample #:	604-0999		

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
604-0999	MW-1	Gasoline	1.0	4/24/96	HP-2	110
604-1000	MW-2	Gasoline	1.0	4/24/96	HP-2	108
604-1001	MW-3	Gasoline	1.0	4/24/96	HP-2	96
604-1002	MW-4	--	1.0	4/24/96	HP-2	105
604-1003	MW-5	Gasoline	1.0	4/24/96	HP-2	107
604-1004	MW-6	Gasoline	1.0	4/24/96	HP-2	123
604-1005	MW-7	Gasoline	1.0	4/24/96	HP-2	104
604-1006	MW-8	--	1.0	4/24/96	HP-2	119
604-1007	ES-1	--	1.0	4/30/96	HP-9	98
604-1008	ES-2	--	1.0	4/30/96	HP-9	94
604-1009	ES-3	--	1.0	4/30/96	HP-9	93

SEQUOIA ANALYTICAL, #1271
& #1894

Signature on File

Alan B. Kemp
Project Manager

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MPDS Services	Client Project ID:	Unocal #0752, 800 Harrison St., Oakland	Sampled:	Apr 10, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received:	Apr 10, 1996
Concord, CA 94520	Analysis for:	MTBE (Modified EPA 8020)		
Attention: Jarrel Crider	First Sample #:	604-0999	Analyzed:	Apr 24, 1996
			Reported:	May 3, 1996

LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
604-0999	MW-1	40	50
604-1000	MW-2	50	620
604-1001	MW-3	1,000	69,000
604-1002	MW-4	40	240
604-1003	MW-5	40	640
604-1004	MW-6	500	53,000
604-1005	MW-7	50	3,200
604-1006	MW-8	40	60

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

SEQUOIA ANALYTICAL, #1894

Signature on File

Alan B. Kemp
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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MPDS Services	Client Project ID:	Unocal #0752, 800 Harrison St., Oakland	Sampled:	Apr 10, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received:	Apr 10, 1996
Concord, CA 94520	Analysis for:	Bicarbonate Alkalinity		
Attention: Jarrel Crider	First Sample #:	604-0999	Analyzed:	Apr 15, 1996
			Reported:	May 3, 1996

LABORATORY ANALYSIS FOR: Bicarbonate Alkalinity

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
604-0999	MW-1	1.0	160
604-1000	MW-2	1.0	460
604-1001	MW-3	1.0	360
604-1002	MW-4	1.0	160
604-1003	MW-5	1.0	240
604-1004	MW-6	1.0	240
604-1005	MW-7	1.0	210
604-1006	MW-8	1.0	380

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

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MPDS Services	Client Project ID:	Unocal #0752, 800 Harrison St., Oakland	Sampled: Apr 10, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received: Apr 10, 1996
Concord, CA 94520	Analysis for:	Calcium	Digested: Apr 15, 1996
Attention: Jarrel Crider	First Sample #:	604-0999	Analyzed: Apr 19, 1996
			Reported: May 3, 1996

LABORATORY ANALYSIS FOR: Calcium

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
604-0999	MW-1	0.010	21
604-1000	MW-2	0.010	58
604-1001	MW-3	0.010	40
604-1002	MW-4	0.010	25
604-1003	MW-5	0.010	22
604-1004	MW-6	0.010	35
604-1005	MW-7	0.010	44
604-1006	MW-8	0.010	37

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

6040999.MPD <5>

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 #0752, 800 Harrison St., Oakland	Sampled: Apr 10, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received: Apr 10, 1996
Concord, CA 94520	Analysis for:	Iron	Digested: Apr 15, 1996
Attention: Jarrel Crider	First Sample #:	604-0999	Analyzed: Apr 19, 1996
			Reported: May 3, 1996

LABORATORY ANALYSIS FOR: Iron

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
604-0999	MW-1	0.010	15
604-1000	MW-2	0.010	60
604-1001	MW-3	0.010	60
604-1002	MW-4	0.010	43
604-1003	MW-5	0.010	18
604-1004	MW-6	0.010	61
604-1005	MW-7	0.010	120
604-1006	MW-8	0.010	63

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, 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	Client Project ID:	Unocal #0752, 800 Harrison St., Oakland	Sampled: Apr 10, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received: Apr 10, 1996
Concord, CA 94520	Analysis for:	Manganese	Digested: Apr 15, 1996
Attention: Jarrel Crider	First Sample #:	604-0999	Analyzed: Apr 19, 1996
			Reported: May 3, 1996

LABORATORY ANALYSIS FOR: Manganese

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
604-0999	MW-1	0.010	2.6
604-1000	MW-2	0.010	7.0
604-1001	MW-3	0.010	3.7
604-1002	MW-4	0.010	2.0
604-1003	MW-5	0.010	2.4
604-1004	MW-6	0.010	3.7
604-1005	MW-7	0.010	4.8
604-1006	MW-8	0.010	3.6

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

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680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Unocal #0752, 800 Harrison St., Oakland
Matrix: Liquid
QC Sample Group: 604-0999 to 6041009
Reported: May 3, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	Z.T.	Z.T.	Z.T.	Z.T.
MS/MSD Batch#:	MS042496	MS042496	MS042496	MS042496
Date Prepared:	4/24/96	4/24/96	4/24/96	4/24/96
Date Analyzed:	4/24/96	4/24/96	4/24/96	4/24/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	114	152	117	117
Matrix Spike Duplicate % Recovery:	96	102	82	97
Relative % Difference:	15	38	35	9.8
LCS Batch#:	LCS042496	LCS042496	LCS042496	LCS042496
Date Prepared:	4/24/96	4/24/96	4/24/96	4/24/96
Date Analyzed:	4/24/96	4/24/96	4/24/96	4/24/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	87	119	110	105
% Recovery Control Limits:	80-120	80-120	80-120	80-120

SEQUOIA ANALYTICAL, #1894

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

Client Project ID: Unocal #0752, 800 Harrison St., Oakland
Matrix: Liquid
QC Sample Group: 604-0999 to 6041009
Reported: May 3, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	L. Huang	L. Huang	L. Huang	L. Huang
MS/MSD Batch#:	6041095	6041095	6041095	6041095
Date Prepared:	4/30/96	4/30/96	4/30/96	4/30/96
Date Analyzed:	4/30/96	4/30/96	4/30/96	4/30/96
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	110	115	120	118
Matrix Spike Duplicate % Recovery:	110	115	115	113
Relative % Difference:	0.0	0.0	4.3	4.3
LCS Batch#:	9LCS043096	9LCS043096	9LCS043096	9LCS043096
Date Prepared:	4/30/96	4/30/96	4/30/96	4/30/96
Date Analyzed:	4/30/96	4/30/96	4/30/96	4/30/96
Instrument I.D.#:	HP-9	HP-9	HP-9	HP-9
LCS % Recovery:	115	125	125	123
% Recovery Control Limits:	70-130	70-130	70-130	70-130

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. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Unocal #0752, 800 Harrison St., Oakland
Matrix: Liquid
QC Sample Group: 604-0999 to 6041009
Reported: May 3, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Bicarbonate Alkalinity	Calcium	Iron	Manganese
Method:	SM 2320	EPA 200.7	EPA 200.7	EPA 200.7
Analyst:	R. Salinas	J. Kelly	J. Kelly	J. Kelly
MS/MSD Batch#:	6041092	6040891	6040891	6040891
Date Prepared:	4/15/96	4/15/96	4/15/96	4/15/96
Date Analyzed:	4/15/96	4/19/96	4/19/96	4/19/96
Instrument I.D.#:	INPH-1	MV-3	MV-3	MV-3
Conc. Spiked:	1000 mg/L	20 mg/L	1.0 mg/L	1.0 mg/L
Matrix Spike % Recovery:	96	150	100	100
Matrix Spike Duplicate % Recovery:	96	100	100	90
Relative % Difference:	0.0	4.9	0.0	3.3
LCS Batch#:	310.1YB04D-3	BLK041596	BLK041596	BLK041596
Date Prepared:	4/15/96	4/15/96	4/15/96	4/15/96
Date Analyzed:	4/15/96	4/19/96	4/19/96	4/19/96
Instrument I.D.#:	INPH-1	MV-3	MV-3	MV-3
LCS % Recovery:	100	100	99	98
% Recovery Control Limits:	70-130	75-125	75-125	75-125

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.

9604215

mpds SERVICES, INCORPORATED
2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: (510) 602-5100, Fax: (510) 689-1918

CHAIN OF CUSTODY

SAMPLER: RAY MARANGOSIAN

WITNESSING AGENCY:

UNOCAL S/S # 0752 CITY: OAKLAND

ADDRESS: 800 Harrison St.

ANALYSES REQUESTED

TURN AROUND TIME: REGULAR

SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-GAS BTEX	TPH-DIESEL	TOG	8010	MTBE	Bicarbonate Method SM 423	12 Reg. Cations Manganese EPA 200.7		REMARKS
MW1	4.10.96	12:05	X	X		4		X		6040999		X	X	X		
MW2	"	10:10	X	X		4		X		6041000		X	X	X		
MW3	"	16:10	X	X		4		X		6041001		X	X	X		
MW4	"	11:15	X	X		4		X		6041002		X	X	X		
MW5	"	15:20	X	X		4		X		6041003		X	X	X		
MW6	"	12:55	X	X		4		X		6041004		X	X	X		
MW7	"	14:35	X	X		4		X		6041005		X	X	X		
MW8	"	13:50	X	X		4		X		6041006		X	X	X		

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
Ray Marangosian	4.10.96 18:15	Tony McAdam	04/10/96 1815
(SIGNATURE)		(SIGNATURE)	4-11
(SIGNATURE)	4-11	(SIGNATURE)	4/11 1620
(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? 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: [signature] TITLE: analyst DATE: 04/10/96

Note: All water containers to be sampled for TPHG/BTEX, 8010 & 8240 are preserved with HCL. All water containers to be sampled for Lead or Metals are preserved with HNO3. All other containers are unpreserved.