94 AUG 25 PH 3: 21 A

MPDS-UN6034-03 August 16, 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 #6034

4700 First Street
Livermore, 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 Unocal monitoring wells that were monitored and sampled during this quarter are indicated in Table 1. Prior to sampling, the Unocal wells were checked for depth to water and the presence of free product or sheen. The monitoring data and the ground water elevations for the Unocal wells are summarized in Table 1. The ground water flow direction at the Unocal site during the most recent quarter is shown on the attached Figure 1.

A joint monitoring and sampling event was conducted with the consultant for the nearby Chevron site on July 21, 1994. The monitoring data collected for the monitoring wells (provided by Groundwater Technology, Inc.) are summarized in Table 2. The ground water flow direction at the Chevron site during the most recent quarter is also shown on the attached Figure 1.

Ground water samples were collected from the Unocal wells on July 21, 1994. Prior to sampling, the wells were each purged of between 5.5 and 8 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 collected from the Unocal wells were analyzed at Sequoia Analytical Laboratory and were accompanied by properly

MPDS-UN6034-03 August 16, 1994 Page 2

executed Chain of Custody documentation. The analytical results of the ground water samples collected from the Unocal wells to date are summarized in Table 3. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline and benzene detected in the ground water samples collected from the Unocal wells this quarter are shown on the attached Figure 2. Copies of the laboratory analytical results and the Chain of Custody documentation for the Unocal wells are attached to this report.

### LIMITATIONS

Environmental changes, either naturally-occurring or artificially-induced, may cause changes in ground water levels and flow paths, thereby changing the extent and concentration of any contaminants.

### DISTRIBUTION

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

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

Sincerely,

MPDS Services, Inc.

Sarkis A. Karkarian

Foel M

Staff Engineer

Joel G. Greger, C.E.G.

Senior Engineering Geologist

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

/bp

Attachments: Tables 1, 2 & 3

Location Map Figures 1 & 2

Laboratory Analyses

Chain of Custody documentation

cc: Mr. Thomas J. Berkins, Kaprealian Engineering, Inc.

TABLE 1
SUMMARY OF MONITORING DATA
UNOCAL MONITORING WELLS

	Ground Water Elevation	Depth to Water	Product Thickness		Water Purged	Total Well Depth
<u>Well #</u>	(feet)	_(feet)◆	(feet)	<u>Sheen</u>	(qallons)	<u>(feet)∲</u>
	(Mc	onitored and	Sampled on	July 21,	1994)	
MW1*	505.02	15.62	0	<del>-</del> -	0	27.91
MW2	504.83	14.99	0	No	7.5	25.64
MW3 *	505.32	14.34	0		0	25.41
MW4	505.35	14.26	0	No	8	25.47
<b>MW</b> 5	504.72	15.55	0	No	5.5	23.60
MW 6	504.63	14.12	0	No	6.5	23.35
MW7	504.62	14.21	0	No	6.5	23.65
	(Mo	nitored and	Sampled on	April 21,	1994)	
MW1	505.06	15.58	0	No	8.5	27.93
MW2	504.86	14.96	0	No	7.5	25.65
MW3	505.36	14.30	0	No	8	25.43
MW4	505.48	14.13	0	No	8	25.48
MW5	504.86	15.41	0	No	6	23.61
MW6	504.65	14.10	0	No	6.5	23.27
MW7	504.66	14.17	0	No	6.5	23.66
	(Mon	itored and S	Sampled on J	anuary 20	, 1994)	
MW1*	504.99	15.65	0	<b>-</b> -	0	27.90
MW2	504.80	15.02	0	No	7.5	25.64
MM3 *	505.29	14.37	0		0	25.40
MW4	505.46	14.15	0	No	7.5	25.45
MW5	504.88	15.39	0	No	6	23.58
MW6	504.61	14.14	0	No	6.5	23.25
MW7	504.61	14.22	0	No	6.5	23.64
	(Mon	itored and S	Sampled on C	ctober 20	, 1993)	
MW1*	504.95	15.69	O		0	
MW2	504.74	15.08	0	No	8	
MW3	505.24	14.42	0	No	8	
MW4	505.45	14.16	0	No	8	
MW5	504.71	15.56	0	No	8	
MW6	504.55	14.20	0	No	8	
MW7	504.54	14.29	0	No	8	

### TABLE 1 (Continued)

### SUMMARY OF MONITORING DATA UNOCAL MONITORING WELLS

Well #	Well Casing Elevation (feet)**
MW1	520.64
MW2	519.82
MW3	519.66
MW4	519.61
MW5	520.27
MW6	518.75
MW7	518.83

- 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 Livermore Benchmark No. C-18-5 (elevation = 551.77 feet MSL).
- -- Sheen determination was not performed.

Note: Monitoring data prior to January 20, 1994, were provided by Kaprealian Engineering, Inc.

TABLE 2

### SUMMARY OF MONITORING DATA CHEVRON MONITORING WELLS

(Provided by Groundwater Technology, Inc.)

<u>Well #</u>	Ground Water Elevation (feet)	Depth to Water <u>(feet)</u>	Well Casing Elevation (feet)★
**************************************	(Monitored on	July 21, 1994)	
C-1	506.93	13.46	520.39
C-2	506.93	13.83	520.76
C-3	507.00	14.31	521.31
C-5	507.00	13.82	520.82
C-6	506.78	12.84	519.62
C-7	506.91	13.39	520.30
C-8	506.24	13.50	519.74
C-9	506.77	12.95	519.72
C-10	505.84	14.57	520.41
C-11	505.83	14.21	520.04
C-12	505.70	14.12	519.82
C-13	507.25	14.95	522.24
C-14	506.94	13.14	520.08
C-15	507.06	15.35	522.41
C-16	506.12	13.56	519.68
C-17	506.22	14.60	520.82
C-18	WELL PAVED OVER		518.96
C-19	506.09	14.90	520.99

<sup>\*</sup> Relative Mean Sea Level (MSL).

TABLE 3
SUMMARY OF LABORATORY ANALYSES
WATER

UNOCAL MONITORING WELLS

		-					
<b>T</b> -1-	**= 7 7 11	TPH as	TPH as	Dongono	<u>Toluene</u>	Ethyl- benzene	<u>Xylenes</u>
<u>Date</u>	Well_#	Diesel	<u>Gasoline</u>	<u>Benzene</u>		Detizene	AYTEMES
7/21/94	MWl	SAMPLED	ANNUALLY				
:	MW2	<b></b>	331,798	58	29	940	6,200
	MW3	SAMPLED	SEMI-ANNUALL	Y			
	MW4		320	0.61	1.4	1.0	1.6
	MW5		ND	ND	ND	ND	ND
	MW6		ND	ND	ND	ND	ND
	MW7		ND	ND	ND	ND	ND
4/21/94	MW1*	ND	ND	ND	ND	ND	ND
	MW2		27,000	85	65	880	5,300
	MW3		ND	ND	ND	ND	ND
	MW4		380	0.83	1.2	1.2	1.7
	MW5		ND	ИD	ND	ND	ND
	MW6		ND	ND	ND	ND	ND
	MW7		ND	ND	ND	ND	ND
1/20/94	MW2		20,000	ND	ND	270	3,300
	MW3	SAMPLED	SEMI-ANNUALL	Y			
	MW4		1,200	ND	2.6	4.7	7.4
	MW5		ND	ND	ND	ND	ND
	MW6		ND	ND	ND	ND	ND
	MW7		ND	ИD	ND	ND	ND
10/20/93	MW2		12,000	27	10	100	3,000
	MW3		ND	ND	ND	ND	ND
	MW4		640	ND	2.5	2.3	1.9
	MW5		110	0.80	ND	ND	ND
	MW6		ND	ND	ND	ND	ND
	MW7	- <b>-</b>	ND	ND	ND	ND	ND
7/20/93	MW2	<del>-</del> -	25,000	68	94	1,000	6,200
	ЕWM		ND	ND	ND	ND	ND
	MW4	NOT SAM	PLED - SAMPLI	NG ACCES	S DENIED		
	MW5▲		89	1.1	0.51	ND	1.8
	MW6	WELL WA	S OBSTRUCTED				
	MW7		ND	ND	ND	ND	ND

TABLE 3 (Continued)

# SUMMARY OF LABORATORY ANALYSES WATER UNOCAL MONITORING WELLS

2011.40011111200000000000000000000000000	10030 3000 10000 15000 15030 56 150	pog pri glin (100) (201) (201) (201) (201) (200) (200) (200)				55 5 5 7 <u>122 19</u> 5 <b>3</b> 4 5 5 5 7 4 2 5 5 5 5 7 1	8,001001,011001100100000000000000000000
<u>Date</u>	Well #	TPH as <u>Diesel</u>	TPH as <u>Gasoline</u>	Benzene	Toluene	Ethyl- benzene	<u>Xylenes</u>
<del></del>	·····						
4/22/93	MW2		49,000	150	1,000	3,000	18,000
	MW3		ND	ND	ND	ND	ND
	MW4		1,100	8.8	1.0	7.2	6.0
	MW5▲		94	1.2	ND	ND	1.3
	MW6	WELL WAS	OBSTRUCTED				
	MW7		ND	ND	ND	ND	ND
1/14/93	MW2		19,000	75	430	900	8,400
	МWЗ		ND	ND	ND	ND	ND
	MW4		920	ND	6.3	12	3.9
	MW5▲		91	ND	0.53	1.2	11
	MW6	WELL WAS	OBSTRUCTED				
	MW7		ND	ND	ND	ND	ND
10/16/92	MW2		290	2.3	ND	5.1	15
	MW3		ND	ND	ND	ND	ND
	MW4		300	2.1	ND	4.8	13
	MW5▲		180	7.8	1.1	17	6.4
	MW6	WELL WAS	OBSTRUCTED				
	MW7		ND	ND	ND	ND	ND
7/07/92	MW2		44,000	160	1,100	1,000	17,000
	МWЗ		ND	ND	ND	ND	ND
	MW4		340	ND	2.2	2.4	2.4
	MW5▲		76	0.48	1.1	0.32	1.3
	MW6		ND	ND	ND	ND	ND
	MW7		ND	ND	ND	ND	ND
4/06/92	MW2		760	6.3	2.1	ND	130
	MW3		ND	ND	ND	ND	ND
	MW4		660	1.3	3.8	2.9	4.1
	MW5		240♦	ND	ND	0.35	ND
	MW6		ND	ND	ND	ND	ND
	MW7		ND	ND	ND	ND	ND

TABLE 3 (Continued)

# SUMMARY OF LABORATORY ANALYSES WATER UNOCAL MONITORING WELLS

					0.0000000000000000000000000000000000000		Marking a state of proposed and latest the area.
<u>Date</u>	Wel <u>l #</u>	TPH as <u>Diesel</u>	TPH as <u>Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	Ethyl- <u>benzene</u>	<u>Xylenes</u>
			d page 1966 in Grand (1965) in 1965 in the contract of the Con	mosecularita di visa in a la l		4.5.0	2 600
1/14/92	MW2		5,600	36	120	450	2,600
	MW3		ND	ND	ND	ND	ND 9.2
	MW4		1,500	4.2	7.1	18 ND	
	MW5		99	1.0	1.2	ND	0.32
	MW6		ND	ND	ND	ND	ND
	MW7		ND	ND	ND	ND	ND
10/14/91	MW2		11,000	79	130	660	4,700
	MW3		ND	ND	ND	ND	ND
	MW4		880	3.8	2.2	8.6	5.8
	MW5		660	55	4.4	50	66
	MW6		ND	ND	ND	ND	ND
	MW7		ND	ND	ND	ND	ND
7/10/91	MW1*	ND	ND	ND	ND	ND	ND
,, _ ,,	MW2		14,000	70	160	570	5,400
	MW3	- <b>-</b>	ND	ND	ND	ND	ND
	MW4		830	8.4	19	7.7	7.2
	MW5		220	5.1	8.7	9.1	9.7
	MW6		ND	ND	ND	ND	ND
	MW7		ND	ND	ND	ND	ND
4/10/91	MW1*	ND	ND	ND	ND	ND	ND
<del>4</del> /10/J1	MW2		22,000	170	190	490	6,200
	MW3		ND	ND	ND	ND	ND
	MW4		950	0.84	4.3	9.6	5.0
	MW5		630	35	14	47	30
	MW6	<b>_</b> _	ND	ND	ND	ND	ND
	MW7		ND	ND	ND	ND	ND
		<b>4</b>	3.77	3 ***	ND	NTT.	0.40
12/24/90	MW1*	ND	ND	ND	ND	ND	0.40
	MW2		32,000	440	340	460	13,000
	MW3		ND	ND	ND	ND	ND
	MW4	<del></del>	1,400	NĎ	8.7	15	10

TABLE 3 (Continued)

# SUMMARY OF LABORATORY ANALYSES WATER UNOCAL MONITORING WELLS

		TPH as	TPH as			Ethyl-	
<u>Date</u>	Well #	<u>Diesel</u>	<u>Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>benzene</u>	Xylenes
9/07/90	MW1*	ND	ND	ND	1.2	ND	ND
3, 0,,30	MW2		ND	ND	1.5	ND	ND
	MW3		1,100	11	ND	6.6	16
	MW4		15,000	100	140	210	4,600
6/05/90	MW1*	ND	ND	ND	ND	ND	ND
	MW2		31,000	250	460	950	9,200
	MW3		ND	ND	ND	ND	ND
	MW4		1,400	1.2	4.7	24	12
3/08/90	MW1**	ND	ND	ND	ND	ND	ND
	MW2		26,000	230	410	1,300	2,100
	MW3		ND	ND	ND	ND	ND
	MW4		1,200	18	8.4	37	28
11/18/89	MW1***	400	ND	ND	ND	ND	ND
	MW2		53,000	540	500	130	22,000
	MW3		ND	0.35	ND	ND	ND
	MW4		990	9.8	10	7.1	4.7

### TABLE 3 (Continued)

### SUMMARY OF LABORATORY ANALYSES WATER UNOCAL MONITORING WELLS

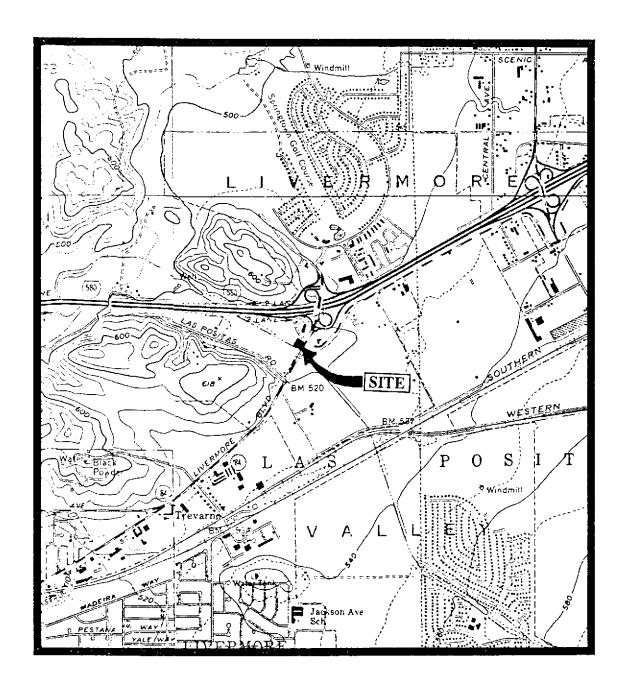
- ♦ Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.
- \* Total Oil & Grease (TOG) and all EPA method 8010 constituents were nondetectable.
- \*\* TOG was detected at 4.7 milligrams per liter (mg/L). All EPA method 8010 compounds were non-detectable.
- \*\*\* TOG was detected at 3.1 mg/L. All EPA method 8010 compounds were non-detectable, except for trichloroethene at 0.55  $\mu$ g/L.
- Methyl tert butyl ether was detected at a concentration of 2.2  $\mu$ g/L on July 20, 1993, 0.82  $\mu$ g/L on April 22, 1993, 1.2  $\mu$ g/L on January 14, 1994, 2.0  $\mu$ g/L on October 16, 1992, and 1.5  $\mu$ g/L on July 7, 1992.

ND = Non-detectable.

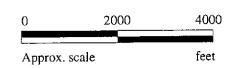
-- Indicates analysis was not performed.

Results are in micrograms per liter  $(\mu g/L)$ , unless otherwise indicated.

Note: Laboratory analyses data prior to January 20, 1994, were provided by Kaprealian Engineering, Inc.

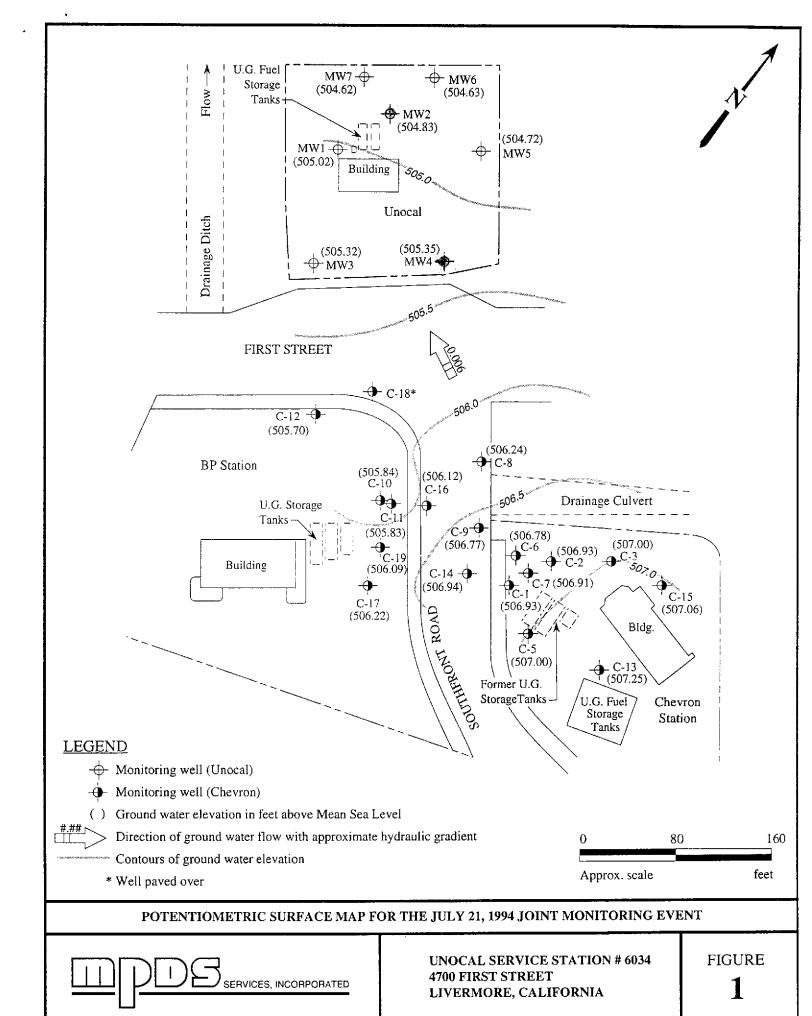


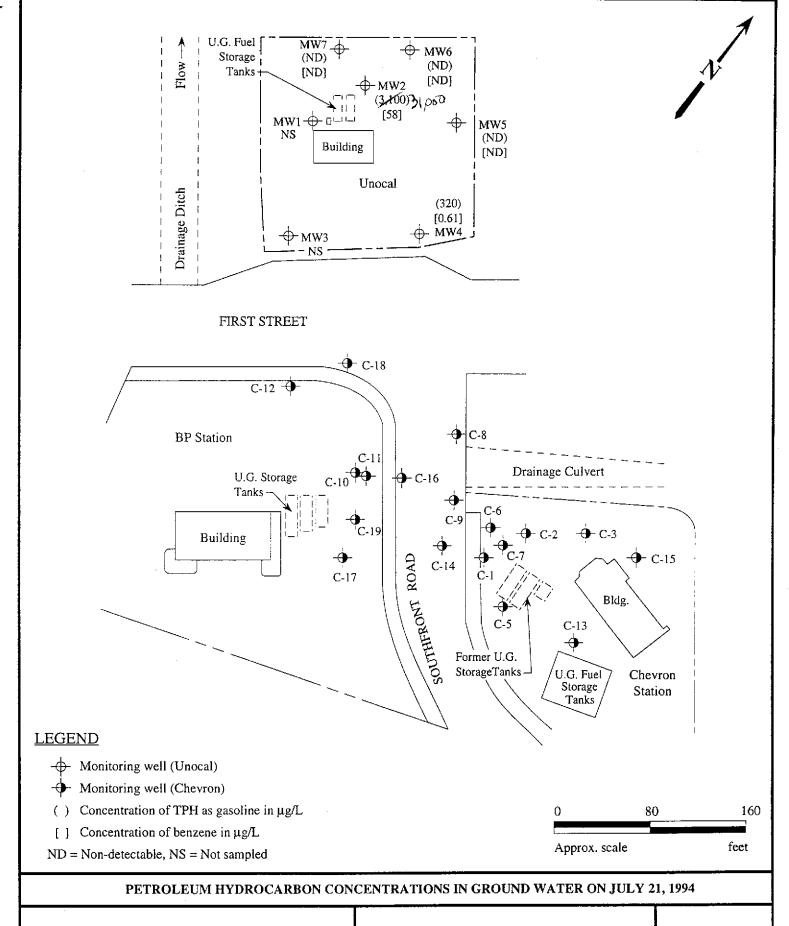
Base modified from 7.5 minute U.S.G.S. Livermore and Altamont Quadrangles (photorevised 1980 and 1981, respectively)





UNOCAL SERVICE STATION # 6034 4700 FIRST STREET LIVERMORE, CALIFORNIA LOCATION MAP







UNOCAL SERVICE STATION # 6034 4700 FIRST STREET LIVERMORE, CALIFORNIA FIGURE



680 Chesapeake Drive 1900 Bates Avenue, Suite L. Concord, CA 94520 819 Striker Avenue, Suite 8

Redwood City, CA 94063 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

MPDS Services

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

Client Project ID: Matrix Descript:

): Unocal #6034, 4700 1st St, Livermore

Water

Analysis Method: EPA 5030/8015/8020 First Sample #: 407-1323

Sampled:

Sampled: Jul 21, 1994

Received: Jul 21, 1994 Reported: Aug 4, 1994

### TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Sample Number	Sample Description	Purgeable Hydrocarbons $\mu \mathrm{g}/\mathrm{L}$	<b>Benzene</b> μg/L	<b>Toluene</b> μg/L	Ethyl Benzene µg/L	Total Xylenes μg/L
407-1323	MW2	31,000	58	29	940	6,200
407-1324	MW4	320	0.51	1.4	1.0	1.6
407-1325	MW5	ND	ND	ND	ND	ND
407-1326	MW6	ND	ND	ND	ND	ND
407-1327	MW7	ND	ND	ND	ND	ND

Detection Limits:	 50	0.50	0.50	0.50	0.50

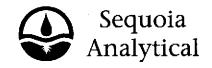
Total Purgeable Petroleum Hydrocarbons are quantitated against a gasoline standard. Analytes reported as ND were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL, #1271** 

Signature on File

Alan B. Kemp **Project Manager** 





680 Chesapeake Drive 1900 Bates Avenue, Suite L. Concord, CA 94520

Redwood City, CA 94063 819 Striker Avenue, Suite 8 Sacramento, CA 95834

(415) 364-9600 (510) 686-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 686-9689 FAX (916) 921-0100

**MPDS Services** 2401 Stanwell Dr., Ste. 400

Concord, CA 94520 Attention: Avo Avedissian Client Project ID: Matrix Descript:

: Unocal #6034, 4700 1st St, Livermore Sampled:

Water

Analysis Method: EPA 5030/8015/8020 First Sample #: 407-1323

Received:

Jul 21, 1994 Jul 21, 1994

Reported: Aug 4, 1994

### 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%)
407-1323	MW2	Gasoline	50	8/1/94	HP-4	78
407-1324	MW4	Gasoline	1.0	8/1/94	HP-4	82
407-1325	MW5		1.0	8/1/94	HP-4	95
407-1326	MW6		1.0	8/1/94	HP-4	91
407-1327	MW7		1.0	8/2/94	HP-2	92

**SEQUOIA ANALYTICAL, #1271** 

Signature on File

Alan B. Kemp Project Manager





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

MPDS Services

2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Avo Avedissian Client Project ID:

Unocal #6034, 4700 1st St, Livermore

Matrix: Liquid

QC Sample Group: 4071323-27

Reported:

Aug 4, 1994

#### QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl	Xylenes
			Benzene	-
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha
MS/MSD				
Batch#:	4071326	4071326	4071326	4071326
Date Prepared:	8/1/94	8/1/94	8/1/94	8/1/94
Date Analyzed:	8/1/94	8/1/94	8/1/94	8/1/94
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20 μg/L	20 μg/L	$20\mu\mathrm{g/L}$	60 μ <b>g</b> /L
Matrix Spike				
% Recovery:	85	95	90	92
Matrix Spike Duplicate %				
Recovery:	80	90	90	95
Relative %				
Difference:	6.1	5.4	0.0	3.2

LCS Batch#:	2LCS080194	2LCS080194	2LCS080194	2LCS080194
Date Prepared:	8/1/94	8/1/94	8/1/94	8/1/94
Date Analyzed:	8/1/94	8/1/94	8/1/94	8/1/94
Instrument i.D.#:	HP-4	HP-4	HP-4	HP-4
LCS %				
Recovery:	97	97	98	100
% 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.





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

MPDS Services

2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Avo Avedissian Client Project ID:

Unocal #6034, 4700 1st St, Livermore

Matrix: Liquid

QC Sample Group: 4071323-27

Reported:

Aug 4, 1994

### **QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl	Xylenes	
			Benzene		
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha	
MS/MSD					
Batch#:	4080033	4080033	4080033	4080033	
Date Prepared:	8/2/94	8/2/94	8/2/94	8/2/94	
Date Analyzed:	8/2/ <del>94</del>	8/2/94	8/2/94	8/2/94	
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:	90	100	100	100	
Matrix Spike Duplicate %					
Recovery:	90	100	100	103	
Relative %					
Difference:	0.0	0.0	0.0	2.9	

LCS Batch#:	1LCS080294	1LCS080294	1LCS080294	1LCS080294
Date Prepared:	8/2/94	8/2/94	8/2/94	8/2/94
Date Analyzed:	8/2/94	8/2/94	8/2/94	8/2/94
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS %				
Recovery:	99	108	109	112
% 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.



### 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 VARTKES TASHDJIAN			UNOCAL S/S # 6034 CITY: Livermore					ANALYSES REQUESTED								TURN AROUND TIME:
WITNESSING AGENCY			S/S # 6034 CITY: Livermore  ADDRESS: 4700 15t. Shr.				TPH-GAS BTEX	TPH-DIESEL	<sub>.</sub>	<u>e</u>		Ī			Regular.	
SAMPLE ID NO.	DATE	TIME	WATER	<b>G</b> FRA)	СОМР	NO. OF CONT.	SAMPLING LOCATION	TPH-G BTEX	TPH	TOG	8010					REMARKS
MWZ	7/21/94	12:40 P.M.	X	Х		2000	MW	X								4071323A
MW4	7	12:05 P.M.	X	Х		۴	٦.	Х								4071324
MW 5	7	10:25 A.M.	X	X		٠,	પ	X					i <u></u>			4071325
MW6	7	11:00	χ	Х		7	ę	X								4071326
MW7	4	11:33 A.M.	X	×		٠	پ	X								4071327 🗸
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								THE FOLLOWING MUST BE COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:								
RELINQUISHED BY:		7/21/94 3; 50 Parks 7/21/94 D-1 2			RECEIVED BY:		1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE?									
					2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED?											
ISIGNATUREI		1000 M			3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE?											
[SIGNATURE]					4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED?  Y   SIGNATURE: TITLE: DATE:											
ISIGNATUREÍ						(SIGNATURE)	· - <b>·</b> -				<del></del>	TI •	TLE: 4 ha	lyst	D	ATE: 7/21/94