

MPDS-UN5366-05 March 15, 1995

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

Attention: Mr. Edward C. Ralston

RE: Quarterly Data Report

Unocal Service Station #5366 7375 Amador Valley Boulevard Dublin, California

Dear Mr. Ralston:

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 former Shell service station site on February 15, 1995. The monitoring data collected for the former Shell service station is summarized in Table 4. Monitoring data from the BP and Arco service station wells were unavailable. The ground water flow direction in the vicinity of these sites during the most recent quarter is also shown on the attached Figure 1.

Ground water samples were collected from the Unocal wells on February 15, 1995. Prior to sampling, the Unocal wells were each purged of between 8 and 8.5 gallons of water. 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-UN5366-05 March 15, 1995 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 Tables 2 and 3. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline, TPH as diesel, 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 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

/bp

Attachments: Tables 1 through 4

Location Map Figures 1 & 2

Laboratory Analyses

Chain of Custody documentation

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

TABLE 1
SUMMARY OF MONITORING DATA
UNOCAL MONITORING WELLS

Well #	Ground Water Elevation * (feet)	Depth to Water (feet)◆	Total Well Depth (feet)◆	Product Thickness (feet)	Sheen	Water Purged (gallons)
	(Mon	itored and Sa	mpled Februa	ry 15, 199	5)	
MW1	328.27	7.80	19.52	0	No	8
MW2	329.20	7.58	19.30	0	No	8
MW3	329.36	7.62	18.98	0	No	8
MW4	328.31	8.12	19.44	0	No	8
MW5	328.20	7.76	20.02	0	No	8.5
	(Mon	itored and Sa	mpled Novemb	er 18, 199	4)	
MW1	326.38	9.69	19.49	0	No	7
MW2*	326.83	9.95	19.26	0		0
MW3*	326.83	10.15	18.91	0	~ <b>-</b>	0
MW4 *	326.33	10.10	19.44	0		0
MW5	325.87	10.09	19.99	0	No	7
	(Mo	nitored and S	ampled Augus	st 25, 1994	<b>!</b> )	
MW1	325.49	10.58	19.49	0	No	6.5
MW2*	326.03	10.75	19.27	0		0
MW3 *	326.05	10.93	18.94	0		0
MW4 *	325.49	10.94	19.43	0		0
MW5	325.53	10.43	20.00	0	No	7
	(Mc	onitored and S	ampled on Ma	ay 17, 1994	L)	
MW1	326.81	9.26	19.50	0	No	8
MW2*	327.47	9.31	19.26	0	<b>-</b> -	0
* EWM	327.49	9.49	18.94	0		0
MW4 *	326.80	9.63	19.44	0		0
MW5	326.72	9.24	20.00	0	No	8

#### TABLE 1 (Continued)

### SUMMARY OF MONITORING DATA UNOCAL MONITORING WELLS

Well #	Well Casing Elevation (feet)**
MW1	336.07
MW2	336.78
MW3	336.98
MW4	336.43
MW5	335.96

- 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 have been surveyed relative to Mean Sea Level (MSL), per the County of Alameda Benchmark, standard brass disk in the westerly center island of Amador Valley Boulevard at Village Parkway, 15 feet from the nose and 0.8 feet from the northerly curb, stamped "VL PK AM VY, 1977" (elevation = 337.40 feet MSL).
- -- Sheen determination was not performed.

TABLE 2
SUMMARY OF LABORATORY ANALYSES
UNOCAL MONITORING WELLS
WATER

<u>Date</u>	Wel]	TPH as	<u>Benzene</u>	<u>Toluene</u>	Ethyl- benzene	Xylenes
2/15/95	MWl	2,400	61	ND	87	34
	MW2	ND	ND	$\mathbf{N}\mathrm{D}$	ND	ND
	KMM3	ND	ND	ND	$\mathbf{N}\mathbf{D}$	ND
	MW4	ND	ND	ND	ND	ND
	MW5	Upoo 16,000	2,700	ND	1,700	50
11/18/94	MW1	820	21	ND	19	6.6
	MW2	SAMPLED ANNU	ALLY			
	KWM3	SAMPLED ANNU	ALLY			
	MW4	SAMPLED ANNU	ALLY			
	MW5	18,000	2,400	52	1,600	51
8/25/94	MW1	650	10	1.6	7.7	2.1
	MW5	9,400	3,800	ND	2,200	150
5/17/94	MWl	1,000	41	ND	49	32
	MW2	SAMPLED ANNU	ALLY			
	KWM3	SAMPLED ANNU	ALLY	·		
	MW4	SAMPLED ANNU	ALLY			
	MW5	20,000	4,300	ND	2,300	130
2/11/94	MW1	970	40	3.2	2.8	15
	MW2	ND	ND	ИD	ND	ND
	MW3	ND	ND	ND	ND	ИD
	MW4	ND	ND	ND	ND	$\mathbf{N}\mathbf{D}$
	MW5	18,000	2,400	140	920	3,100
11/11/93	MWl	350	19	2.5	2.7	3.4
8/12/93	MW1	1,000	46	ND	29	6.3
5/10/93	MW1	1,600	39	0.40	25	3.3

TABLE 2 (Continued)

## SUMMARY OF LABORATORY ANALYSES UNOCAL MONITORING WELLS WATER

e de la companya de l		TPH as			Ethyl-	
<u>Date</u>	Well #	<u>Gasoline</u>	Benzene	Toluene	<u>benzene</u>	Xylenes
2/10/93	MW1	3,000	230	ND	340	200
	MW2	ND	ND	ND	ND	ND
	MW3	ND	ND	ND	ND	ND
	MW4	ND	ND	ND	ND	ND
11/10/92	MW1	1,100	49	ND	71	21
8/12/92	MW1	1,700	51	ND	93	21
5/22/92	MW1	2,500	120	ND	230	37
	MW2	ND	ND	ND	ND	ND
2/25/92	MW1	3,900	500	ND	450	400
11/13/91	MW1	860	40	ND	11	2.5
8/12/91	MWl	1,100	68	2.6	210	9.3
5/15/91	MW1	2,100	220	ND	360	27
2/14/91	MW1	1,900	150	2.9	340	43
11/14/90	MW1	2,000	110	0.52	410	16
8/15/90	MW1	2,200	160	ND	570	45
5/18/90	MW1	2,000	140	1.8	460	19
	MW2	<b>N</b> D	ND	ND	ND	ND
	MW3	ND	ND	ND	ND	ND
	MW4	ND	ND	ND	ND	ND
2/06/90	MW1	2,700	170	ND	350	29
2,00,50	MW2	ND	ND	ND		
					ND	ND
	MW3	ND	ND	ND	ND	ND
	MW4	ND	ND	ND	ND	ND

#### TABLE 2 (Continued)

### SUMMARY OF LABORATORY ANALYSES UNOCAL MONITORING WELLS WATER

<u>Date</u>	Well #	TPH as Gasoline	Benzene	<u>Toluene</u>	Ethyl- benzene	Xylenes
10/20/89	MWl	ND	ND	ND	ND	ND
	MW2	ND	ND	ND	ND	ND
	MW3	ND	ND	ND	0.38	ND
	MW4	ND	ND	ND	ND	ND
7/27/89	MWl	1,900	130	6.3	ND	68
	MW2	ND	ND	ND	ND	ND
	MW3	ND	ND	$\mathbf{N}$ D	ND	ND
	MW4	ND	0.34	ND	ND	ИD
5/22/89	мwз	ND	ND	ND	ND	ND
4/28/89	MW1	1,000	97	0.8	170	24
	MW2	ND	ND	ND	ND	ND
	MW3	880	9.6	9.7	19	12.7
	MW4	ND	0.3	ND	ND	ND
1/26/89	MW1	1,900	240	1.8	81	30
	MW2	ND	ND	ND	ND	ND
	MW3	ND	ND	ND	ND	ND
	MW4	ND	0.67	ND	<b>N</b> D	ND
10/28/88	MW1	5,200	150	ND	250	12
	MW2	ND	ND	ND	ND	ND
	MW3		ND	ND	ND	ND
	MW4	ND	ND	ND	ND	ND
7/25/88	MW1	6,100	170	2.1	94	94
•	MW2	ND	$\mathbf{N}$ D	ND	ND	ND
	EWM.		ND	ND	ND	ND
	MW4	ND	ND	ND	ND	ND
4/29/88	MW1	10,000	960	17	870	1,500
_,,	MW2	170	2.7	0.6	ND	13
	MW3	ND	ND	ND	ND	ND
	MW4	ND	ND	ND	ND	ND

#### TABLE 2 (Continued)

### SUMMARY OF LABORATORY ANALYSES UNOCAL MONITORING WELLS WATER

ND = Non-detectable.

-- Indicates that analysis was not performed.

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

Note: Laboratory analyses data prior to February 11, 1994, were provided by Kaprealian Engineering, Inc.

TABLE 3

## SUMMARY OF LABORATORY ANALYSES UNOCAL MONITORING WELLS WATER

<u>Date</u>	Well #	TPH as <u>Diesel</u>	Total Oil & Grease (mg/L)	EPA 8010 <u>Constituents</u>
2/15/95	MW3	ND	ND	
	MW5	2,000*		
11/18/94	MW5	2,000**	<del>-</del>	
8/25/94	MW5	2,000**		
5/17/94	MW5	2,500*		
2/11/94	MW3	ND	ND	
	MW5	2,300*	<b></b>	·- ·-
5/10/93	MW1	730*	- ~	
2/10/93	MW3	200	ND	
5/18/90	мwз	ND	ND	ND
2/06/90	MW3	ND	ND	ND
10/20/89	MW3	ND	2.5	ND
7/27/89	MW3	ND	1.6	ND
5/22/89	MW3		<del>-</del>	
4/28/89	ММЗ	72	ND	ND
1/26/89	MW3	ND	<del>-</del> -	ND
10/28/88	МЖЗ	ND		ND
7/25/88	MW3	ND	<b>-</b>	ND
4/29/88	MW3	ND		ND

#### TABLE 3 (Continued)

### SUMMARY OF LABORATORY ANALYSES UNOCAL MONITORING WELLS WATER

- \* Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a diesel and non-diesel mixture.
- \*\* Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be diesel.

ND = Non-detectable.

-- Indicates analysis was not performed.

mg/L = milligrams per liter.

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

Note: Laboratory analyses data prior to February 11, 1994, were provided by Kaprealian Engineering, Inc.

#### TABLE 4

# SUMMARY OF MONITORING DATA Shell Service Station Wells (Provided by Pacific Environmental Group, Inc.)

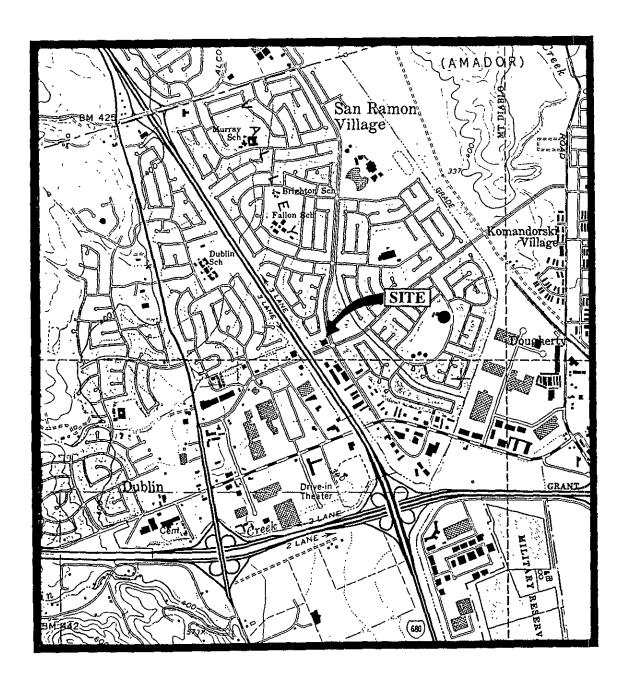
Well #	Ground Water Elevation (feet)	Depth to Water (feet)	Well Casing Elevation(feet)*
	(Monitored on	February 15, 1995)	
MW1	327.99	6.84	334.83
MW2	328.06	8.90	336.96
MW3	328.58	8.35	336.93
MW4	327.65	9.49	337.14
MW5	328.08	6.88	334.96
MW6	328.06	7.36	335.42
MW7	327.83	5.40	333.23
8WM	269.10	66.7	335.80
MW9	327.21	7.36	334.57
MW11	327.74	6.46	334.20
MW12	327.37	5.16	332.53
MW13	327.22	8.42	335.64
RW1	$A \setminus M$	8.20	NA

<sup>\*</sup> Relative MSL.

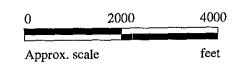
N/A = Not applicable.

NA = Not available.



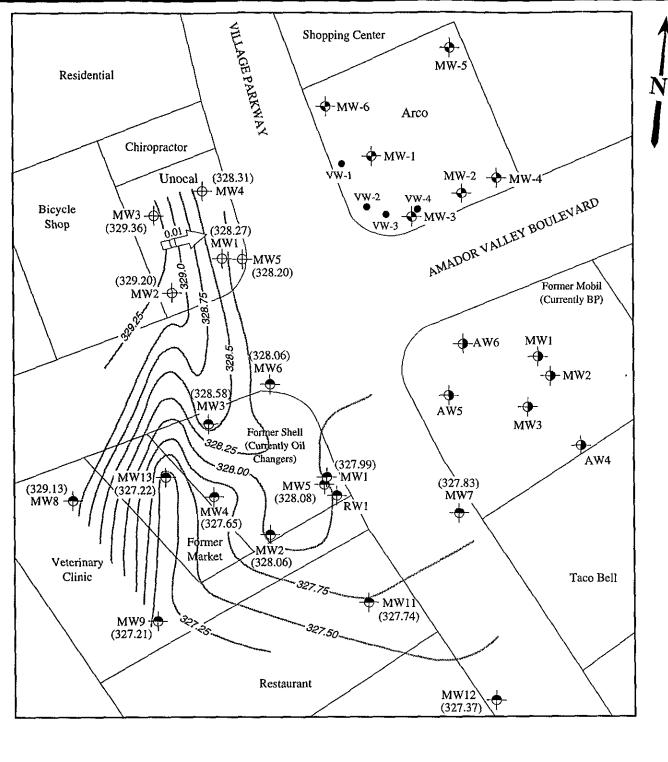


Base modified from 7.5 minute U.S.G.S. Dublin Quadrangle (photorevised 1980)





UNOCAL SERVICE STATION #5366 7375 AMADOR VALLEY BLVD. DUBLIN, CALIFORNIA LOCATION MAP



#### LEGEND

→ Monitoring well (Unocal)

( ) Ground water elevation in feet above Mean Sea Level

- Contours of ground water elevation

Monitoring well (BP)

Direction of ground water flow with approximate hydraulic gradient

Monitoring well (Shell)

Approx. scale

feet

100

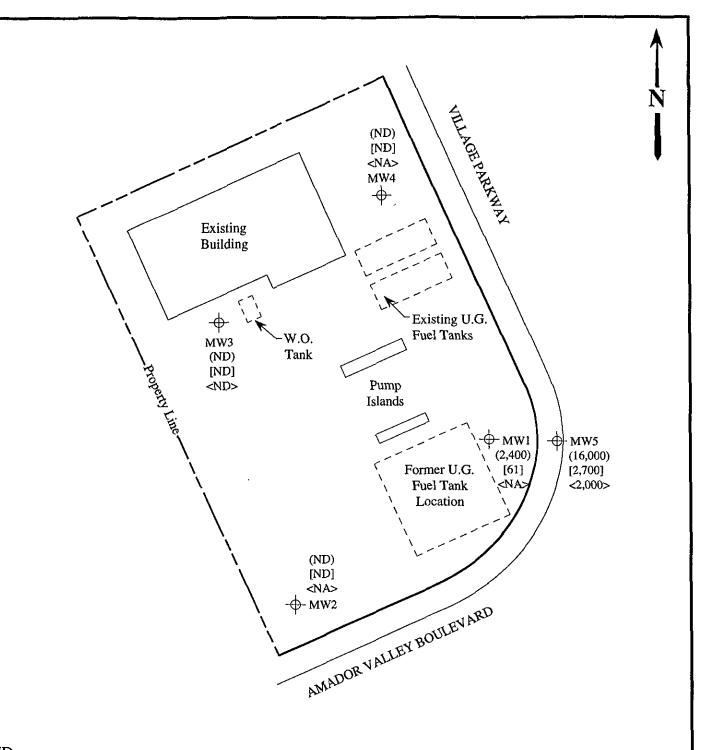
200

Monitoring well (Arco)Vapor extraction well (Arco)

#### POTENTIOMETRIC SURFACE MAP FOR THE FEBRUARY 15, 1995 JOINT MONITORING EVENT



UNOCAL SERVICE STATION #5366 7375 AMADOR VALLEY BLVD. DUBLIN, CALIFORNIA figure 1



#### **LEGEND**

- → Monitoring well
- ( ) Concentration of TPH as gasoline in  $\mu g/L$
- [ ] Concentration of benzene in µg/L
- < > Concentration of TPH as diesel in  $\mu$ g/L

ND = Non-detectable, NA = Not analyzed



### PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON FEBRUARY 15, 1995



UNOCAL SERVICE STATION #5366 7375 AMADOR VALLEY BLVD. DUBLIN, CALIFORNIA

FIGURE



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. 300 Concord, CA 94520 Attention: Sarkis Karkarian

Matrix Descript: Analysis Method:

First Sample #:

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automorphis additions carryer addition Client Project ID: Unocal #5366, 7375 Amador Valley Rd., Water

EPA 5030/8015/8020

Dublin

Sampled: Feb 15, 1995 Feb 15, 1995

Received: Reported: Mar 3, 1995

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

502-0987

Sample Number	Sample Description	Purgeable Hydrocarbons μg/L	<b>Benzene</b> μg/L	<b>Toluene</b> μg/L	Ethyl Benzene μg/L	Total Xylenes µg/L
502-0987	MW 1	2,400	61	ND	87	34
502-0988	MW 2	ND	ND	ND	ND	ND
502-0989	мw з	ND	ND	ND	ND	ND
502-0990	MW 4	ND	ND	ND	ND	ND
502-0991	MW 5	16,000	2,700	ND	1,700	50

Detection limites	<u> </u>	0 E0	0 50	^ ~ ~ ~	0 E0	
Detection Limits:	οŲ	0.50	0.50	V.50	V.QU	
		_				

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** 





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 32401 Stanwell Dr., Ste. 300 Concord, CA 94520

Attention: Sarkis Karkarian

Matrix Descript: Analysis Method:

Client Project ID: Unocal #5366, 7375 Amador Valley Rd., Sampled: Water

EPA 5030/8015/8020

Dublin Reported:

Received:

Feb 15, 1995 Feb 15, 1995 Mar 3, 1995

First Sample #: 502-0987 e le alguna di la 1980 de l'Ambretto de la 1980 a la leggio della di 1980 de grandi di alla de la 1860 de l'Ambretto de l'A

#### 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
502-0987	MW 1	Gasoline	20	2/27/95	HP-4	76
502-0988	MW 2		1.0	2/27/95	HP-2	103
502-0989	MW 3		1.0	2/27/95	HP-2	98
502-0990	MW 4		1.0	2/27/95	HP-2	99
502-0991	MW 5	Gasoline	100	2/27/95	HP-2	99

**SEQUOIA ANALYTICAL, #1271** 

Signature on File

Alan B. Kemp **Project Manager** 





680 Chesapeake Drive 1900 Bates Avenue, Suite L Concord, CA 94520 819 Striker Avenue, Suite 8 Sacramento, CA 95834

Redwood City, CA 94063

(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. 300

Concord, CA 94520 Attention: Sarkis Karkarian Client Project ID: Unocal #5366, 7375 Amador Valley Rd.,

Water

Sample Matrix: Analysis Method: EPA 3510/3520/8015

First Sample #: 502-0989 Sampled: Dublin

Feb 15, 1995

Received: Feb 15, 1995 Reported: Mar 3, 1995

in the community of the

#### TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

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Analyte	Reporting Limit μg/L	Sample I.D. 502-0989 MW 3	Sample I.D. 502-0991 MW 5*	
Extractable Hydrocarbons	50	N.D.	2,000	
Chromatogram Pa	ttern:		Diesel and Unidentified Hydrocarbons <c14< td=""><td></td></c14<>	

#### **Quality Control Data**

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	2/21/95	2/21/95
Date Analyzed:	2/27/95	2/27/95
Instrument Identification:	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 appears to contain diesel and non-diesel mixtures. "Unidentified Hydrocarbons < C14" are probably gasoline.





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Redwood City, CA 94063

(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. 300 Concord, CA 94520 Attention: Sarkis Karkarian

Client Project ID: Matrix Descript: Analysis Method: First Sample #:

 $\gamma_{1}$  ,  $(\alpha_{11}, \beta_{12}, \beta_{13}, \beta_{13}, \beta_{13})$  ,  $(\beta_{12}, \beta_{13}, \beta_{13}, \beta_{13}, \beta_{13}, \beta_{13})$  ,  $(\beta_{11}, \beta_{12}, \beta_{13}, \beta_{13}, \beta_{13}, \beta_{13}, \beta_{13}, \beta_{13}, \beta_{13})$  ,  $(\beta_{11}, \beta_{12}, \beta_{13}, \beta_$ 

Unocal #5366, 7375 Amador Valley Rd., Water

SM 5520 B&F (Gravimetric) 502-0989

Sampled: Dublin Received: Extracted: Feb 15, 1995 Feb 15, 1995 Mar 1, 1995::

Analyzed: Mar 1, 1995 Reported: Mar 3, 1995

#### TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)	Detection Limit Multiplication Factor
502-0989	MW 3	N.D.	1.0

**Detection Limits:** 5.0

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





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. 300 Concord, CA 94520 Attention: Sarkis Karkarian

Unocal #5366, 7375 Amador Valley Rd., Dublin Client Project ID:

Matrix:

QC Sample Group: 5020987-991 Mar 14, 1995-Reported: an over the figure of the constitution of any and the even and also even to be a first 

#### **QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl	Xylenes	
			Benzene		
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	
Analyst:	A. Tuzon	A, Tuzon	A. Tuzon	A. Tuzon	
MS/MSD					
Batch#:	5021234	5021234	5021234	5021234	
Date Prepared:	2/27/95	2/27/95	2/27/95	2/27/95	
Date Analyzed:	2/27/95	2/27/95	2/27/95	2/27/95	
nstrument l.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:	89	95	95	96	
Matrix Spike					
Duplicate %					
Recovery:	95	100	100	101	
Relative %					
Difference:	6.5	5.1	5.1	5.1	

LCS Batch#:	2LCS022795	2LCS022795	2LCS022795	2LCS022795		
Date Prepared: Date Analyzed:	2/27/95 2/27/95	2/27/95 2/27/95	2/27/95 2/27/95	2/27/95 2/27/95		
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4		
LCS % Recovery:	84	92	92	92		
% 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. Concord, CA 94520

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

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MPDS Services

2401 Stanwell Dr., Ste. 300

Concord, CA 94520 Attention: Sarkis Karkarian

Unocal #5366, 7375 Amador Valley Rd., Dublin Client Project ID:

Matrix: Liquid

QC Sample Group: 5020987-991 Reported: Carlo de Companya de Arra de Carlo de C 一声: "数数字是多点式"并 instanting and instrumental instrumental and instrumental and instrumental and instrumental and instrumental a

#### **QUALITY CONTROL DATA REPORT**

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	Oil & Grease	
Method: Analyst:	EPA 8020 A. Tuzon	EPA 8020 A. Tuzon	EPA 8020 A. Tuzon	EPA 8020 A. Tuzon	EPA 8015 Mod K.Wimer	SM 5520 B&F D. Newcomb	
Allalyou	71 102011	76 102011	74 142011	71. [0201]	13.44(1)07	2,11011001110	
MS/MSD Batch#:	5020993	5020993	5020993	5020993	BLK022195	BLK030195	
Date Prepared:	2/27/95	2/27/95	2/27/95	2/27/95	2/21/95	3/1/95	
Date Analyzed:	2/27/95	2/27/95	2/27/95	2/27/95	2/27/95	3/1/95	
nstrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3B		
Conc. Spiked:	20 μg/L	20 μg/L	20 μg/L	60 μg/L	300 μg/L	5000 mg/L	
Matrix Spike % Recovery:	100	95	100	100	72	88	
Matrix Spike Duplicate % Recovery:	100	100	105	100	96	83	
necovery.	100	100	100	100	30	<b></b>	
Relative %							
Difference:	0.0	0.0	4.9	0.0	29	5.8	

LCS Batch#:	1LCS022795	1LCS022795	1LCS022795	1LCS022795	BLK022195	BLK030195	
Date Prepared: Date Analyzed: Instrument I.D.#:	2/27/95 2/27/95 HP-2	2/27/95 2/27/95 HP-2	2/27/95 2/27/95 HP-2	2/27/95 2/27/95 HP-2	2/21/95 2/27/95 HP-3B	3/1/95 3/1/95	
LCS % Recovery:	108	105	110	107	72	88	
% Recovery Control Limits:	71-133	72-128	72-130	71-120	28-122	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.





#### CHAIN OF CUSTODY

				UNOCAL S/S # 5366 CITY: 501321A						TURN AROUND TIME:					
RAY MARANGOSIAN WITNESSING AGENCY			ADDRESS: 7375 ATMANUS VALLE SAMPLE WATER GRAB COMP NO. OF CONT. LOCATION				PALLE PLI)	H-GAS BX	TPH- DIESEL	rog	9				New Count
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	СОМР	NO. OF CONT.	SAMPLING	TP	TI	TO	8010				REMARKS
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mw5	'n	11:4c	1	;;=		3	1	_ر	7						5020991 AL
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RELINQUISI		DATE/		].		ECEIVED BY:		TE/TIME	1		• • • • • • • • • • • • • • • • • • • •				PTING SAMPLES FOR ANALYSES:
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ISIGNATURE!		216 8	51101	1	ATURE	)	2.	110						NALYZED?	
(SIGNATURE)	2	2-16	12:45 pm	(SIGN	ATURE He O (	) Žen	3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE?  13.45 pm  4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED								
(SIGNATURE)				ISIGN	ATURE	以			4. WERE	SAMPLES	in approp	RIATE COI	NTAINERS /	and properly pa	CKAGED7 Yes
(SIGNATURE)	<u> </u>			ISIGN	ATURE	)			SIGNAT	URE:	how	<u> Elle</u>	7	TITLE: Àiren	DATE: 1484 2/15/95