MPDS-UN5366-09 March 29, 1996

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. Oxygen Release Compound (ORC) filter socks were installed in well MW5. 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. (263)

A joint monitoring event was conducted with the consultants for the nearby Arco, B.P., and Shell sites on February 26, 1996. The monitoring data collected for the Arco, B.P., and Shell service stations (provided by Emcon, Alisto Engineering Group, and Blaine Tech Services, respectively) are summarized in Tables 5, 6, and 7. The ground water elevation contours at and in the vicinity of these sites during the most recent quarter are also shown on the attached Figure 1.

Ground water samples were collected from the Unocal wells on February 26, 1996. Prior to sampling, the Unocal wells were each purged of between 8.5 and 9 gallons of water. In addition, dissolved oxygen concentrations were also measured and are presented in Table 4. 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. Equipment blank, Trip 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 collected from the Unocal wells 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 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 Ms. Eva Chu 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.

JOEL G. GREGER

No. EG 1633 CERTIFIED ENGINEERING GEOLOGIST

Sincerely,

MPDS Services, Inc.

Haig (Gary) Tejirian Senior Staff Geologist

Joel G. Greger, C.E.G.

Senior Engineering Geologist

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

/bp

Attachments: Tables 1 through 7

Location Map Figures 1 & 2

Laboratory Analyses

Chain of Custody documentation

cc: Robert H. Kezerian, 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)	<u>Sheen</u>	Water Purged (gallons)	
	(Moni	tored and S	ampled Februa	ry 26, 199	6)		
MW1	329.62	6.45	19.48	0	No	9	
MW2	330.39	6.39	19.26	0	No	9	
MW3	330.59	6.39	18.89	0	No	8.5	
MW4	329.68	6.75	19.37	0	No	9	
MW5	328.81	7.15	19.98	0	No	9	
(Monitored and Sampled November 28, 1995)							
MWl	325.62	10.45	19.51	0	No	6.5	
MW2*	326.13	10.65	19.28	0		0	
MW3 *	326.13	10.85	18.95	0		0	
MW4 *	325.62	10.81	19.41	0		0	
MW5	325.63	10.33	20.01	0	No	7	
	(Mor	itored and	Sampled Augus	st 25, 1995))		
MW1	326.39	9.68	19.50	0	No	7	
MW2*	327.02	9.76	19.27	0		0	
MW3 *	326.95	10.03	18.90	0		0	
MW4 *	326.35	10.08	19.41	0		0	
MW5	326.39	9.57	20.00	0	No	7.5	
	(Mc	nitored and	Sampled June	13, 1995)			
MW1	327.25	8.82	19.45	0	No	8	
MW2*	327.81	8.97	19.24	0		0	
MW3 *	327.80	9.18	18.90	0		0	
MW4 *	327.22	9.21	19.40	0		0	
MW5	327.31	8.65	19.68	0	No	8	

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA UNOCAL MONITORING WELLS

Well Casing Elevation (feet)**
336.07
336.78
336.98
336.43
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>	Well #	TPH as <u>Gasolir</u>		<u>Toluene</u>	Ethyl- <u>benzene</u>	Xylenes	MTBE
2/26/96	MW1	1,900	40	ND	84	46	110
, ,	MW2	ND	ND	ND	ND	ND	
	MW3	ND	ND ·	ND	ND	ИD	_ _
	MW4	ND	ND	N D	ND	ND	
	MW5	2,800	75	ND	160	ND	74
11/28/95	MWl▼▼	650	15	ND	21	6.7	
	MW2		ANNUALLY				
	MW3		ANNUALLY				
	MW4		ANNUALLY				
	MW5▼▼	6,400	320	ND	720	ИD	
8/25/95	MM1.▲	530	16	ND	2.2	13	
	MW2		ANNUALLY				
	MW3		ANNUALLY				
	MW4		ANNUALLY				
	MW5▼	3,100	43	ND	590	8.4	
6/13/95	MW1.▲	1,300	28	ND	15	ND	
	MW2		ANNUALLY				
	MM3		ANNUALLY				
	MW4		ANNUALLY	• • • •			
	MW5▲	14,000	2,200	ND	2,200	ND	
2/15/95	MW1	2,400	61	ND	87	34	
	MW2	ND	ND	ND	ND	ND	
	MW3	ND	ND	ND	ND	ND	
	MW4	ND	ND	ND	ND	ND .	
	MW5	16,000	2,700	ND	1,700	50	- -
11/18/94	MW1	820	21	$ exttt{ND}$	19	6.6	
	MW2	SAMPLED	ANNUALLY				
	KWM3	SAMPLED	ANNUALLY				
	MW4	SAMPLED	ANNUALLY				
	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	

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES UNOCAL MONITORING WELLS WATER

<u>Date</u>	Well #	TPH as <u>Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	Ethyl- benzene	Xylenes	MTBE
5/17/94	MW1 MW2 MW3 MW4	1,000 SAMPLED AND SAMPLED AND SAMPLED AND	NUALLY	ND	49	32	
	MW5	20,000	4,300	ND	2,300	130	
2/11/94	MW1 MW2 MW3 MW4 MW5	970 ND ND ND 18,000	40 ND ND ND 2,400	3.2 ND ND ND ND 140	2.8 ND ND ND ND 920	15 ND ND ND 3,100	
11/11/93	MW1	350	19	2.5	2.7	3.4	
8/12/93	MW1	1,000	46	ND	29	6.3	
5/10/93	MWl	1,600	39	0.40	25	3.3	
2/10/93	MW1 MW2 MW3 MW4	3,000 ND ND ND	230 ND ND ND	ND ND ND	340 ND ND ND	200 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 MW2	2,500 ND	120 ND	ND	230 ND	37 ND	<u></u>
2/25/92	MW1	3,900	500	ND	450	400	
11/13/91	MW1	860	40	ND	11	2.5	
8/12/91	MW1	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	

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES UNOCAL MONITORING WELLS WATER

<u>Date</u>	Well #	TPH as <u>Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	Ethyl-	Was I amam	እ <i>ተ</i> ረጠነነት ነማ
Dace	MCTT H	Gasorine	<u>penzene</u>	TOTRETTE	<u>benzene</u>	Xylenes	MTBE
11/14/90	MW1	2,000	110	0.52	410	16	- -
8/15/90	MWl	2,200	160	ND	570	45	~ =
5/18/90	MW1	2,000	140	1.8	460	19	
	MW2	ND	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	
	MW2	ND	ND	MD	ND	ND	
	MW3	ND	ND	\mathbf{N} D	ND	ND	
	MW4	ND	ND	ND	ND	ND	
10/20/89	MW1	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	MW1	1,900	130	6.3	ND	68	
	MW2	ND	ND	ND	ND	ND	
	MW3	ND	ND	ND	ND	ND	
	MW4	ND	0.34	ND	ND	ND	
5/22/89	MW3	ND	ND	МD	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	ND	ND	

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES UNOCAL MONITORING WELLS WATER

<u>Date</u>	Well #	TPH as <u>Gasoline</u>	Benzene	<u>Toluene</u>	Ethyl- <u>benzene</u>	<u>Xylenes</u>	MTBE
10/28/88	MWl	5,200	150	ND	250	12	
	MW2	ND	ND	ND	ND	ND	
	ММЗ		ND	ND	ND	ND	
	MW4	ND	ND	ND	\mathbf{N} D	ND	
7/25/88	MW1 MW2	6,100 ND	170 ND	2.1	94 ND	94 ND	
	MW3	- -	ND	ND ND	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	
	EWM	ND	ND	ND	ND	ND	
	MW4	ND	ND	ND	ND	ND	

- ▼ Sequoia Analytical Laboratory has potentially identified the presence of MTBE at reportable levels in the ground water samples collected from this well.
- Sequoia Analytical Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 $\mu g/L$ in the sample collected from this well.

ND = Non-detectable.

-- Indicates that analysis was not performed.

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

- Note: The detection limit for results reported as ND by Sequoia Analytical Laboratory is equal to the stated detection 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 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>
2/26/96	MW3 MW5	ND 1,600**	ND 	
11/28/95	MW5	3,800**	- -	
8/25/95	MW5	2,300**		
6/13/95	MW5	2,400**		
2/15/95	MW3 MW5	ND 2,000*	ND 	
11/18/94	MW5	2,000**	~ ¬	
8/25/94	MW5	2,000**		
5/17/94	MW5	2,500*		
2/11/94	MW3 MW5	ND 2,300*	ND 	- -
5/10/93	MW1	730*		
2/10/93	МЖЗ	200	ND	
5/18/90	КММ	ND	ND	ND
2/06/90	ММЗ	ND	ŊD	ND
10/20/89	MW3	ND	2.5	ND
7/27/89	MW3	ND	1.6	ND
5/22/89	MW3			
4/28/89	МЖЗ	72	ND	. ND

TABLE 3 (Continued)

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>
1/26/89	MW3	ND		ND
10/28/88	MW3	ND		ND
7/25/88	MW3	ND	- -	ND
4/29/88	MW3	ND		ND

- * 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

Dissolved Oxygen Concentration (DO) Measurement

<u>Date</u>	Well #	DO <u>(mg/L)</u>	
		Before Purging	After Purging
3/26/96	MW1	0.54	0.62
	MW5	0.32	0.39
11/28/95	MW1	3.26	- -
	MW5	2.25	~ ~
8/25/96	MW1	3.20	
	MW5	5.79	~ ~
6/13/95	MW1	2.32	
	MW5	2.80	
5/24/95	MW1	2.32	- -
	MW5	2.80	

⁻⁻ Reading not taken.

mg/L = milligrams per liter.

TABLE 5
SUMMARY OF MONITORING DATA

Well #	Ground Water Elevation (feet)	Depth to Water (feet) •	Well Casing Elevation (feet)*				
ARCO Service Station Wells (Monitored on February 26, 1996) Provided by EMCON							
MW1	329.21	7.35	336.56				
MW2	328.15	6.65	334.80				
MW3	327.11	8.42	335.53				
MW4	327.57	6.65	334.22				
MW5	329.14	6.73	335.87				
MW6	329.24	6.60	335.84				

- ♦ The depth to water level measurements were taken from the top of the well casings.
- * The benchmark used for the survey is a standard Bronze Disk in the westerly center island of Amador Valley and Village Parkway, 15 feet from nose and 0.8 feet +/- from northerly curb. The disk is stamped "VL-PK-AM-VY 1977" (El. = 334.402 feet).

Well #

SUMMARY OF MOD	NITORING DATA	
Ground Water	Depth to	Well Casing
Elevation	Water	Elevation
(feet)	(feet)◆	(feet)*

BP Service Station Wells (Monitored on February 26, 1996) Provided by Alisto Engineering Group

TABLE 6

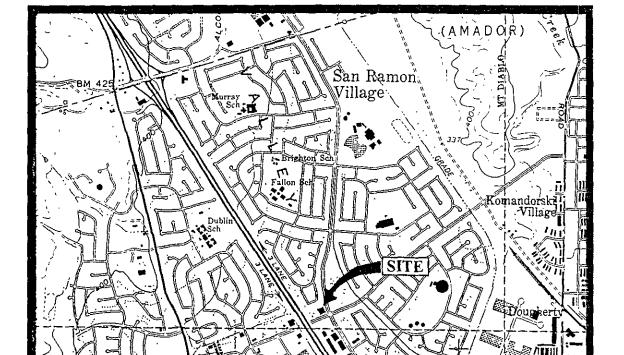
AW5	327.68	7.13	334.81
AW6	329.12	5.78	334.90

- The depth to water level measurements were taken from the top of the well casings.
- * Relative to Mean Sea Level.

TABLE 7
SUMMARY OF MONITORING DATA

Well #	Ground Water Elevation (feet)	Depth to Water (feet)◆	Well Casing Elevation (feet)*
	SHELL Service (Monitored on Fel Provided by Blain	oruary 26, 1996)	
MW1	329.23	5.60	334.83
MW2	329.42	7.54	336.96
MW3	329.89	7.04	336.93
MW4	329.62	7.52	337.14
MMe	329.48	5.94	335.42
MW13	329.88	5.76	335.64

- The depth to water level measurements were taken from the top of the well casings.
- * Relative to Mean Sea Level.





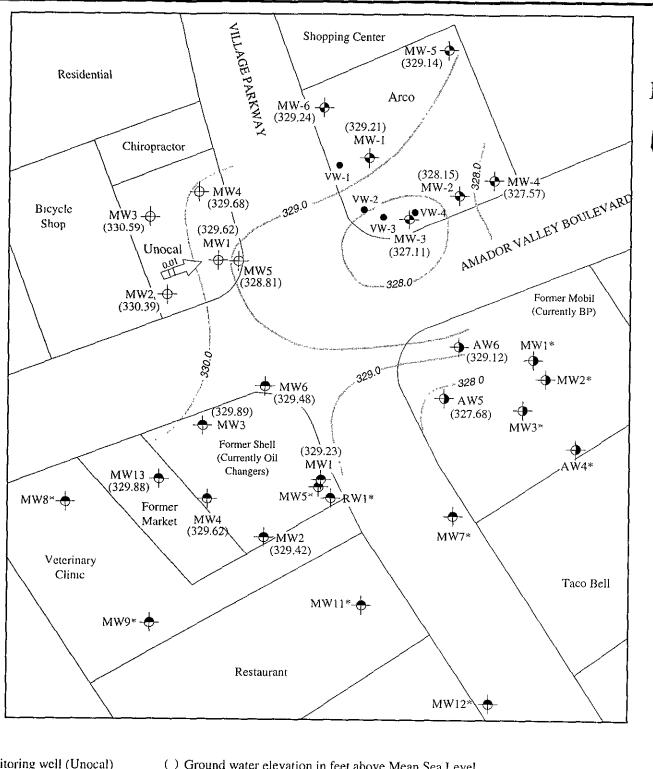
Base modified from 7.5 minute U.S.G.S. Dublin Quadrangle (photorevised 1980)





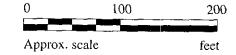
UNOCAL SERVICE STATION #5366 7375 AMADOR VALLEY BLVD. DUBLIN, CALIFORNIA

LOCATION MAP



LEGEND

- Monitoring well (Unocal)
- Monitoring well (BP)
- Monitoring well (Shell)
- Monitoring well (Arco)
- Vapor extraction well (Arco)
- () Ground water elevation in feet above Mean Sea Level
 - Direction of ground water flow with approximate hydraulic gradient
 - Contours of ground water elevation
 - * Not monitored

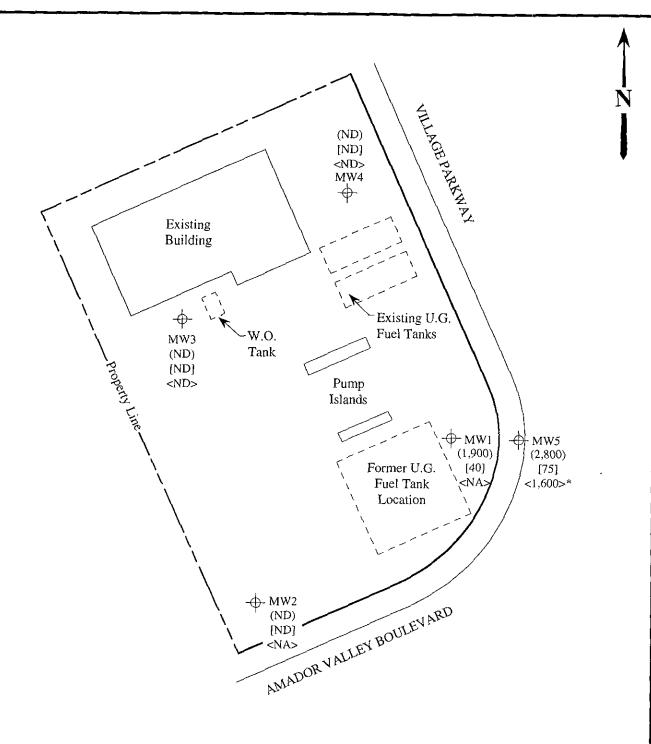


POTENTIOMETRIC SURFACE MAP FOR THE FEBRUARY 26, 1996 JOINT MONITORING EVENT



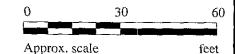
UNOCAL SERVICE STATION #5366 7375 AMADOR VALLEY BLVD. DUBLIN, CALIFORNIA

FIGURE



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
- NS Not sampled
- * The lab reported that the hydrocarbons detected did not appear to be diesel.



PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON FEBRUARY 26, 1996



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

FIGURE

2



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

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

Matrix Descript: Analysis Method:

First Sample #:

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

EPA 5030/8015 Mod./8020 602-1776

Dublin

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Sampled: Feb 26, 1996 Received: Feb 26, 1996 Reported: Mar 14, 1996

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	ΜΤΒΕ μg/L
602-1776	MW-1	1,900	40	ND	84	46	110
602-1777	MW-2	ND	ND	ND	ND	ND	
602-1778	MW-3	ND	ND	ND	ND	ND	
602-1779	MW-4	ND	ND	ND	ND	ND	
602-1780	MW-5	2,800	75	ND	160	ND	74
602-1781	ES-1	ND	ND	ND	ND	ND	
602-1782	ES-2	ND	ND	ND	ND	ND	
602-1783	ES-3	ND	ND	ND	ND	ND	

Detection Limits: 50 0.50 0.50 0.50 40							
	Detection Limits:	50		0.50	0.50	0.50	40
1 = 210 210 210 210 210 210 210 210 210 210	- Colocitori Elimino		0.00	0.00	0100	V.U.	70 1

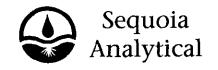
Total Purgeable Petroleum Hydrocarbons are quantitated against a fresh gasoline standard. Analytes reported as ND were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1210

Signature on File

Alan B. Kemp Project Manager





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

nga kinggan bilang bilang mangkaban melang beranggan benggalang pendagan beranggan beranggan

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520

Attention: Jarrel Crider

Matrix Descript: Analysis Method:

First Sample #:

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

Water

EPA 5030/8015 Mod./8020

Feb 26, 1996 Sampled: Dublin Received: Feb 26, 1996

Reported:

Mar 14, 1996

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

602-1776

Sample Number	Sample Description	Chromatogram Pattern	DL Mult. Factor	Date Analyzed	Instrument ID	Surrogate Recovery, % QC Limits: 70-130
602-1776	MW-1	Gasoline	20	3/6/96	GCHP-07	86
602-1777	MW-2		1.0	3/6/96	GCHP-07	79
602-1778	MW-3		1.0	3/7/96	GCHP-22	100
602-1779	MW-4		1.0	3/7/96	GCHP-22	96
602-1780	MW-5	Gasoline	20	3/6/96	GCHP-07	76
602-1781	ES-1		1.0	3/7/96	GCHP-22	93
602-1782	ES-2	~ -	1.0	3/7/96	GCHP-22	98
602-1783	ES-3		1.0	3/7/96	GCHP-22	88

SEQUOIA ANALYTICAL, #1210

Signature on File

Alan B. Kemp Project Manager





680 Chesapeake Drive 404 N. Wiget Lane

Redwood City, CA 94063 Walnut Creek, CA 94598 819 Striker Avenue, Suite 8 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

MPDS Services

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

Sample Matrix:

First Sample #:

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

Water

602-1778

Analysis Method: EPA 5030/8015 Mod.

Dublin

Sampled: Feb 26, 1996 Feb 26, 1996.

Received: Reported:

Mar 14, 1996 :.

TOTAL PURGEABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit μg/L	Sample I. D. 602-1778 MW-3	Sample I.D. 602-1780 MW-5 *
Purgeable Hydrocarbons	50	N.D.	1,600
Chromatogram Pa	ttern:		Unidentified Hydrocarbons < C15

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Analyzed:	2/28/96	2/28/96
Instrument Identification:	2/29/96	2/29/96
Surrogate Recovery: (QC Limits = 70-130%)	HP-3A	HP-3A

Purgeable Hydrocarbons are quantitated against a fresh gasoline 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 < C15" are probably gasoline.





Residence of the control of the cont

Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

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

Matrix Descript: Analysis Method:

First Sample #:

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

SM 5520 B&F (Gravimetric) 602-1778

Sampled: Dublin Received: Extracted:

Feb 26, 1996 Feb 26, 1996 Mar 5, 1996%

Analyzed: Mar 5, 1996. Reported: Mar 14, 1996 1,11

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)	Detection Limit Multiplication Factor
602-1778	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**



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 (415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

MPDS Services

2401 Stanwell Dr., Ste. 300 Concord, CA 94520

Attention: Jarrel Crider

Client Project ID: (

Unocal #5366, 7375 Amador Valley Rd., Dublin

The constitution of the contract of the contra

Matrix: Liquid

QC Sample Group: 6021776-783

Reported:

Mar 14, 1996.

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl	Xylenes	Diesel	Oil &	
			Benzene			Grease	
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015	SM 5520	
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa	J. Dinsay	D. Newcomb	
MS/MSD							
Batch#:	9603129-03F	9603129-03F	9603129-03F	9603129-03F	BLK022896	BLK022296	
Date Prepared:	3/7/96	3/7/96	3/7/96	3/7/96	2/28/96	2/22/96	
Date Analyzed:	3/7/96	3/7/96	3/7/96	3/7/96	2/29/96	2/22/96	
nstrument I.D.#:	GCHP-22	GCHP-22	GCHP-22	GCHP-22	HP-3A	Manual	
Conc. Spiked:	10 μg/L	10 μg/L	10 μg/L	30 µg/L	$300\mu\mathrm{g/L}$	100 mg/L	
Matrix Spike							
% Recovery:	100	100	100	100	80	91	
Matrix Spike Duplicate %							
Recovery:	100	100	99	100	80	85	
Relative %							
Difference:	0.0	0.0	1.0	0.0	0.0	6.8	

LCS Batch#:	BLK030796	BLK030796	BLK030796 BLK030796 LC				
Date Prepared: Date Analyzed: Instrument I.D.#:	3/7/96 3/7/96 GCHP-22	3/7/96 3/7/96 GCHP-22	3/7/96 3/7/96 GCHP-22	3/7/96 3/7/96 GCHP-22	2/28/96 2/29/96 HP-3A	2/22/96 2/22/96 Manual	
LCS % Recovery:	98	97	97	97	87	91	•
% Recovery Control Limits:	71-133	72-128	72-130	71-120	50-150	60-140	

Please Note:

SEQUOIA ANALYTICAL, #1210 & #1271

Signature on File

Alan B. Kemp Project Manager 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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680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8 Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 (415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

MPDS Services

2401 Stanwell Dr., Ste. 300

Concord, CA 94520 Attention: Jarrel Crider Client Project ID: Unocal #5366, 7375 Amador Valley Rd., Dublin

Matrix: Liquid

QC Sample Group: 6021776-783

Reported: I

Mar 14, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl	Xylenes
			Benzene	
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD				
Batch#:	9602J37-07	9602J37-07	9602J37-07	9602J37-07
Date Prepared:	3/6/96	3/6/96	3/6/96	3/6/96
Date Analyzed:	3/6/96	3/6/96	3/6/96	3/6/96
Instrument I.D.#:	GCHP-07	GCHP-07	GCHP-07	GCHP-07
Conc. Spiked:	10 μg/L	10 μg/L	10 μg/L	$30\mu\mathrm{g/L}$
Matrix Spike				
% Recovery:	99	100	99	100
Matrix Spike				
Duplicate %				
Recovery:	97	97	96	97
Relative %				
Difference:	2.0	3.0	3.1	3.4

LCS Batch#:	BLK030696	BLK030696	BLK030696	BLK030696		
Date Prepared:	3/6/96	3/6/96	3/6/96	3/6/96		
Date Analyzed:	3/6/96	3/6/96	3/6/96	3/6/96		
Instrument I.D.#:	GCHP-07	GCHP-07	GCHP-07	GCHP-07		
LCS %						
Recovery:	84	84	82	83		
% Recovery						
Control Limits:	71-133	72-128	72-130	71-120		

The

SEQUOIA ANALYTICAL, #1210

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

9602459

SAMPLER			IUNO	CAL	<u> </u>	CITY 12 181 1	<u> </u>	ANALYSES REQUESTED					TURN AROUND TIME:			
NICHOLAS	S PERROW	!	3/3	* =>	<u> </u>	_ CITT: <u>2013CI</u>	<i></i>	S						TOTAL ANODED TIME.		
WITNESSING AGENCY			ADDR	ESS: 1	737 <u>5</u>	SAMON VALKTED.			TPH- DIESEL	IJ	0	ABA				RE WICH REMARKS
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	СОМР	NO. OF CONT.	SAMPLIN LOCATIO		TP	TOG	8010	E				REMARKS
MW-1	2/26/96	10:15	1	V		4	WEU					1			60	21776 A-I)
MW-2	1/	845	~	س		2	1/									6021777 A,B
MW- 3	11	9:10	~)		4	4	/	/	1						602 177 8 A-P
mw-4	l_I	9:40	<u></u>			て	11	/								6021779 A.B
122-5	/1	11:00	レ	'ر	-	5_	11		سا			1			<u> </u>	6021780 A-E
												ļ				
								_								
RELINQUISH	IED BY:	DATE/T	IME		R	ECEIVED BY:	D	ATE/TIME								NG SAMPLES FOR ANALYSES:
		,		•					1. HAVE	ALL SAMPI	LES RECEIV	ED FOR AN	IALYSIS BE	EN STORE	D ON ICE?	7
(SIGNATURE)	^	5/24 15:0		(SIGNA	ATURE)				2. WILL S	AMPLES R	emain ref	RIGERATED	UNTIL AN	IALYZED? _		N N
(EIGNATURE)				(SIGN/	ATURE))			3. DID AN	Y SAMPLE	S RECEIVE	D FOR ANA	LYSIS HAV	/E HEAD SF	PACE?	
(SIGNATURE)				(SIGN/	ATURE))			4. WERE	SAMPLES I	n appropi	RIATE CON	FAINERS A	nd proper	RLY PACKA	GED?Y
(SIGNATURE)				(SIGN/	ATURE	Canto	2	26 96	SIGNATI	URE:	in D	land	n /	. TITL	.e: 5с	DATE: 226 96



CHAIN OF CUSTODY

9602459

SAMPLER			UNOCAL S/S # 5366 CITY: PUBLIN					ANALYSES REQUESTED								TURN AROUND TIME:
NICHOLAS PERROW WITNESSING AGENCY			UNOCAL S/S # 5366 CITY: PUBLIN ADDREGS: 7375 AMADOR VALKY S WATER GRAB COMP NO. OF CONT. LOCATIO			KIRT NO	H-GAS EX	TPH- DIESEL	Ð	01					TEGUCAL REMARKS	
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	СОМР	NO. OF CONT.	LOCATION	TFBI	TP DI	rog	8010					REMARKS
FS-1 FS-2 FS-3	2/26/96		/	••		IVOA		V		i			6021	781		
ES-2	l j					1 404	[}						6021	782		
たらう	ካ		1			1001		_					6021	783		
								 								
RELINQUISHED BY: DATE/I		IME RECEIVED BY: DA			TE/TIME	THE FOLLOWING MUST BE COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES: 1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE?										
ISLONATURE, 2/26/							2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED?									
(SIGNATURE)		(SIGNATURE)					3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE?									
(SIGNATURE)		(SIGNATURE)					4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKA							AGED?		
(SIGNATURE)		<u> </u>	(SIGNATURE) Mander 2/2				26 96	SIGNATURE: TITLE: DATE:						DATE:		

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 HN03. All other containers are unpreserved.