MONITORING
PURGING
DISPOSING
SAMPLING

mpds SERVICES, INCORPORATED

August 7, 1996

Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94502

Attention: Ms. Susan Hugo

RE: Unocal Service Station #3538
411 W. MacArthur Boulevard
Oakland, California

Dear Ms. Hugo:

Per the request of the Unocal Corporation Project Manager, Ms. Tina R. Berry, enclosed please find our most recent data report for the above referenced site.

Should you have any questions regarding the reporting of data, please feel free to call our office at (510) 602-5120. Any other questions may be directed to the Project Manager at (510) 277-2321.

Sincerely,

MPDS Services, Inc.

Jarrel F. Crider

Jarrel F. Crider

/dr

Enclosure

cc: Ms. Tina R. Berry

96 AUG 12 PM 3:58

ENVIRONMENTAL
PROTECTION

2401 Stanwell Drive, Suite 300, Concord, CA 94520
TEL: (510) 602-5120 FAX: (510) 689-1918

MONITORING
PURGING
DISPOSING
SAMPLING

MPDS SERVICES, INCORPORATED

MPDS-UN3538-11
August 1, 1996

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

Attention: Ms. Tina R. Berry

RE: Semi-Annual Data Report
Unocal Service Station #3538
411 W. MacArthur Boulevard
Oakland, California

Dear Ms. Berry:

This data report presents the results of the most recent semi-annual 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 semi-annual period are indicated in Table 1. Prior to sampling, the wells were checked for depth to water and the presence of free product or sheen. The monitoring data and the ground water elevations are summarized in Table 1. The ground water flow direction during the most recent semi-annual period is shown on the attached Figure 1.

Ground water samples were collected on July 11, 1996. Prior to sampling, the wells were each purged of between 5 and 11.5 gallons of water. Samples were then collected using a clean Teflon bailer. The samples were decanted into clean VOA vials, which were then sealed with Teflon-lined screw caps, labeled, and stored in a cooler, on ice, until delivery to a state-certified laboratory. Field blank, Trip blank and Equipment 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 and 3. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline and benzene detected in the ground water samples collected this semi-annual period are shown on the attached Figure 2. Copies of the laboratory analytical results and the Chain of Custody documentation are attached to this report.

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

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

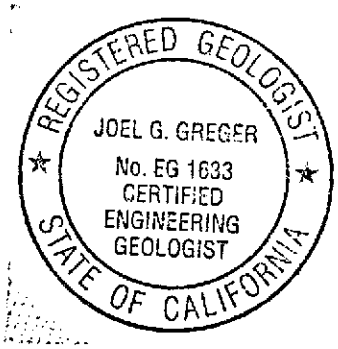
A copy of this report should be sent to Ms. Susan Hugo of the Alameda County Health Care Services Agency.

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.

Haig (Gary) Tejirian
Senior Staff Geologist



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

License No. EG 1633
Exp. Date 8/31/98

/jfc

Attachments: Tables 1, 2 & 3
Location Map
Figures 1 & 2
Laboratory Analyses
Chain of Custody documentation

cc: Mr. Thomas Berkins, 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 July 11, 1996)						
MW1	54.07	18.03	25.93	0	No	5.5
MW2	53.40	17.98	28.00	0	No	7
MW3	53.67	18.19	25.10	0	No	5
MW4	53.83	17.81	28.72	0	No	7.5
MW5	53.64	17.59	30.13	0	No	9
MW6	57.86	13.58	30.06	0	No	11.5
(Monitored and Sampled on April 15, 1996)						
MW1*	54.70	17.40	21.31	0	--	0
MW2	53.77	17.61	27.99	0	No	7.5
MW3	54.08	17.78	25.08	0	No	5
MW4*	54.29	17.35	28.73	0	--	0
MW5*	54.01	17.22	30.14	0	--	0
MW6*	57.44	14.00	30.08	0	--	0
(Monitored and Sampled on January 16, 1996)						
MW1*	54.90	17.20	21.33	0	--	0
MW2	54.80	16.58	28.05	0	No	8
MW3	53.91	17.95	25.15	0	No	6
MW4*	55.19	16.45	28.78	0	--	0
MW5*	54.12	17.11	30.18	0	--	0
MW6*	55.06	16.38	30.11	0	--	0
(Monitored and Sampled on October 26, 1995)						
MW1*	53.43	18.67	27.25	0	--	0
MW2	53.17	18.21	26.93	0	No	6
MW3	53.54	18.32	25.02	0	No	5
MW4*	53.47	18.17	28.74	0	--	0
MW5*	53.13	18.10	30.02	0	--	0
MW6*	53.56	17.88	30.17	0	--	0

Table 1

Summary of Monitoring Data

Well #	Well Casing Elevation (feet)**
MW1	72.10
MW2	71.38
MW3	71.86
MW4	71.64
MW5	71.23
MW6	71.44

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

* Monitored only.

** The elevations of top of well casings are relative to Mean Seal Level (MSL), per the City of Oakland Benchmark #9NW10 (elevation = 75.50 feet MSL).

-- Sheen determination was not performed.

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW1	9/15/89	ND	ND	0.61	ND	ND
	1/23/90	ND	1.5	2.3	ND	4.3
	4/19/90	ND	ND	ND	ND	ND
	7/17/90	ND	ND	ND	ND	ND
	10/16/90	ND	ND	ND	ND	ND
	1/15/91	ND	ND	ND	ND	ND
	4/12/91	ND	ND	ND	ND	ND
	7/15/91	ND	ND	ND	ND	ND
	7/14/92	ND	ND	ND	ND	ND
	7/14/93	ND	2.2	2.1	1.1	6.2
	7/7/94	ND	ND	ND	ND	ND
	10/5/94	SAMPLED ANNUALLY IN JULY				
	7/19/95	ND	ND	ND	ND	ND
	7/11/96	ND	ND	ND	ND	ND
MW2	9/15/89	290	ND	12	ND	ND
	1/23/90	400	73	36	10	40
	4/19/90	3,900	550	5.1	91	390
	7/17/90	490	76	0.59	11	46
	10/16/90	1,400	430	2	48	240
	1/15/91	680	170	0.7	19	81
	4/12/91	2,200	160	4.3	23	62
	7/15/91	2,200	770	12	72	370
	10/15/91	140	44	0.56	1.5	12
	1/15/92	220	37	0.52	1.1	7
	4/14/92	150	6.2	ND	ND	1.4
	7/14/92	130	3.7	ND	ND	ND
	10/12/92	370	3.4	0.56	ND	11
	1/8/93	510†	ND	ND	ND	ND
	4/13/93	410††	42	7.7	6.4	28
	7/14/93	110†	6.5	ND	ND	1.1
	10/14/93	230†	5.3	ND	ND	2.1
	1/12/94	300	7.8	3.8	1.8	10
	4/9/94	120	10	0.88	1.1	4.9
	7/7/94	110†	4.4	ND	ND	ND
	10/5/94	720†	20	ND	ND	3.1
	1/9/95	ND	ND	ND	ND	ND
	4/17/95	93	5.6	0.62	1.7	5.5
	7/19/95	77	32	0.58	1.7	4.1
	10/26/95	54††	13	ND	ND	0.72
	1/16/96‡	120	23	ND	ND	0.99
	4/15/96	340	21	ND	2.2	3.7
	7/11/96	540	34	ND	4.3	12

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW3	9/15/89	32	ND	ND	ND	ND
	1/23/90	450	110	1.2	4.4	11
	4/19/90	3,100	600	27	54	220
	7/17/90	4,000	270	48	130	250
	10/16/90	740	210	1.4	2.5	82
	1/15/91	3,200	460	1.5	120	270
	4/12/91	880	170	1.1	34	110
	7/15/91	9,200	1,300	230	490	1,900
	10/15/91	3,100	390	34	150	390
	1/15/92	3,000	590	14	310	750
	4/14/92	14,000	660	48	560	2,000
	7/14/92	21,000	890	200	1,200	4,300
	10/12/92	3,200	160	10	230	540
	1/8/93	1,100††	48	0.99	0.9	93
	4/13/93	12,000††	290	38	760	2,300
	7/14/93	6,300	190	ND	430	1,000
	10/14/93	2,500	52	ND	110	250
	1/12/94	3,800	78	ND	180	390
	4/9/94	1,800	22	ND	140	280
	7/7/94	110†	4.5	ND	ND	ND
	10/5/94	ND	ND	ND	ND	ND
	1/9/95	ND	0.68	ND	ND	ND
	4/17/95	3,700	80	10	270	510
	7/19/95	15,000	330	27	990	2,400
	10/26/95	14,000	420	180	750	1,600
	1/16/96‡	920	38	ND	30	57
	4/15/96	9,700	240	ND	570	860
	7/11/96	13,000	69	5.5	430	900
MW4	9/15/89	ND	ND	ND	ND	ND
	1/23/90	ND	ND	0.4	ND	ND
	4/19/90	ND	ND	0.48	ND	ND
	7/17/90	ND	ND	ND	ND	ND
	10/16/90	ND	ND	ND	ND	ND
	1/15/91	ND	ND	ND	--	ND
	4/12/91	ND	ND	ND	ND	ND
	7/15/91	ND	ND	ND	ND	ND
	7/14/92	ND	1.3	2.5	ND	1
	7/14/93	ND	ND	ND	ND	ND
	7/7/94	ND	ND	ND	ND	ND
	10/5/94	SAMPLED ANNUALLY IN JULY				
	7/19/95	ND	ND	ND	ND	ND
	7/11/96	ND	ND	ND	ND	ND

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW5	11/30/92	ND	ND	ND	ND	ND
	1/8/93	ND	ND	ND	ND	ND
	4/13/93	ND	ND	ND	ND	ND
	7/14/93	ND	ND	0.57	ND	ND
	10/14/93	ND	ND	ND	ND	ND
	1/12/94	ND	ND	0.84	ND	1.6
	7/7/94	ND	ND	ND	ND	ND
	10/5/94	SAMPLED ANNUALLY IN JULY				
	7/19/95	ND	ND	ND	ND	ND
	7/11/96	ND	ND	ND	ND	ND
MW6	11/30/92	ND	ND	ND	ND	ND
	1/8/93	ND	ND	ND	ND	ND
	4/13/93	ND	ND	ND	ND	ND
	7/14/93	ND	0.99	2.4	ND	1.9
	10/14/93	ND	ND	0.64	ND	ND
	1/12/94	ND	ND	1.2	ND	2.9
	7/7/94	ND	ND	ND	ND	ND
	10/5/94	SAMPLED ANNUALLY IN JULY				
	7/19/95	ND	ND	ND	ND	ND
	7/11/96	ND	ND	ND	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 did not appear to be gasoline.

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

ND = Non-detectable.

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 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 quantificiation range used by Sequoia Analytical Laboratory was C6 - C12.

Laboratory analyses data prior to January 12, 1994, were provided by Kaprealian Engineering, Inc.

Table 3

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Diesel	Total Oil & Grease (mg/L)	Tetrachloroethene*	MTBE
MW1	9/15/89	ND	ND	2.7	--
	1/23/90	ND	1.5	2.1	--
	4/19/90	ND	ND	2.2	--
	7/17/90	ND	ND	1.7	--
	10/16/90	ND	ND	2.0	--
	1/15/91	ND	ND	2.1	--
	4/12/91	ND	ND	2.0	--
	7/15/91	ND	ND	1.8	--
	7/14/92	--	--	1.4	--
	7/14/93	--	--	0.95	--
	7/7/94	--	--	0.83	--
	7/19/95	--	--	0.52	--
	7/11/96**	--	--	0.73	ND
MW2	4/13/93	--	--	--	200
	7/14/93	--	--	--	250
	10/26/95	--	--	--	220
	4/15/96	--	--	--	45
	7/11/96	--	--	--	150
MW3	4/13/93	--	--	--	1,400
	7/14/93	--	--	--	860
	10/26/95	--	--	--	4,800
	4/15/96	--	--	--	3,200
	7/11/96	--	--	--	740
MW4	7/11/96	--	--	--	ND
MW5	7/11/96	--	--	--	ND
MW6	7/11/96	--	--	--	ND

* All EPA method 8010 constituents were non-detectable, except for tetrachloroethene as indicated.

** Chloroform was detected at a concentration of 0.96 µg/L.

-- Indicates analysis was not performed.

MTBE = methyl tert butyl ether.

ND = Non-detectable.

Table 3

Summary of Laboratory Analyses
Water

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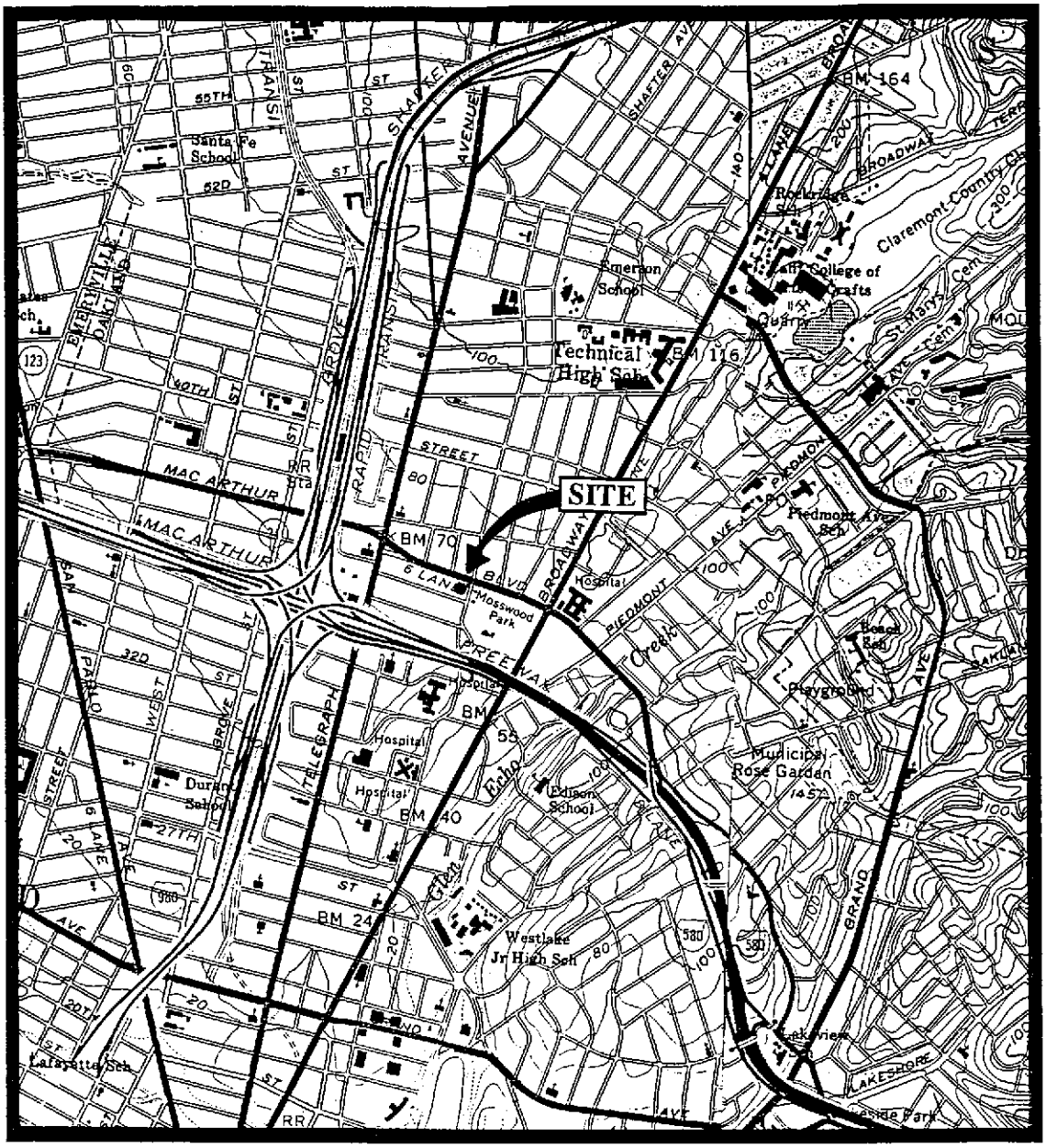
mg/L = milligrams per liter.

Results are in micrograms per liter (µg/L), unless otherwise indicated.

Note: Laboratory analyses data prior to July 14, 1994 were provided by Kaprealian Engineering, Inc.

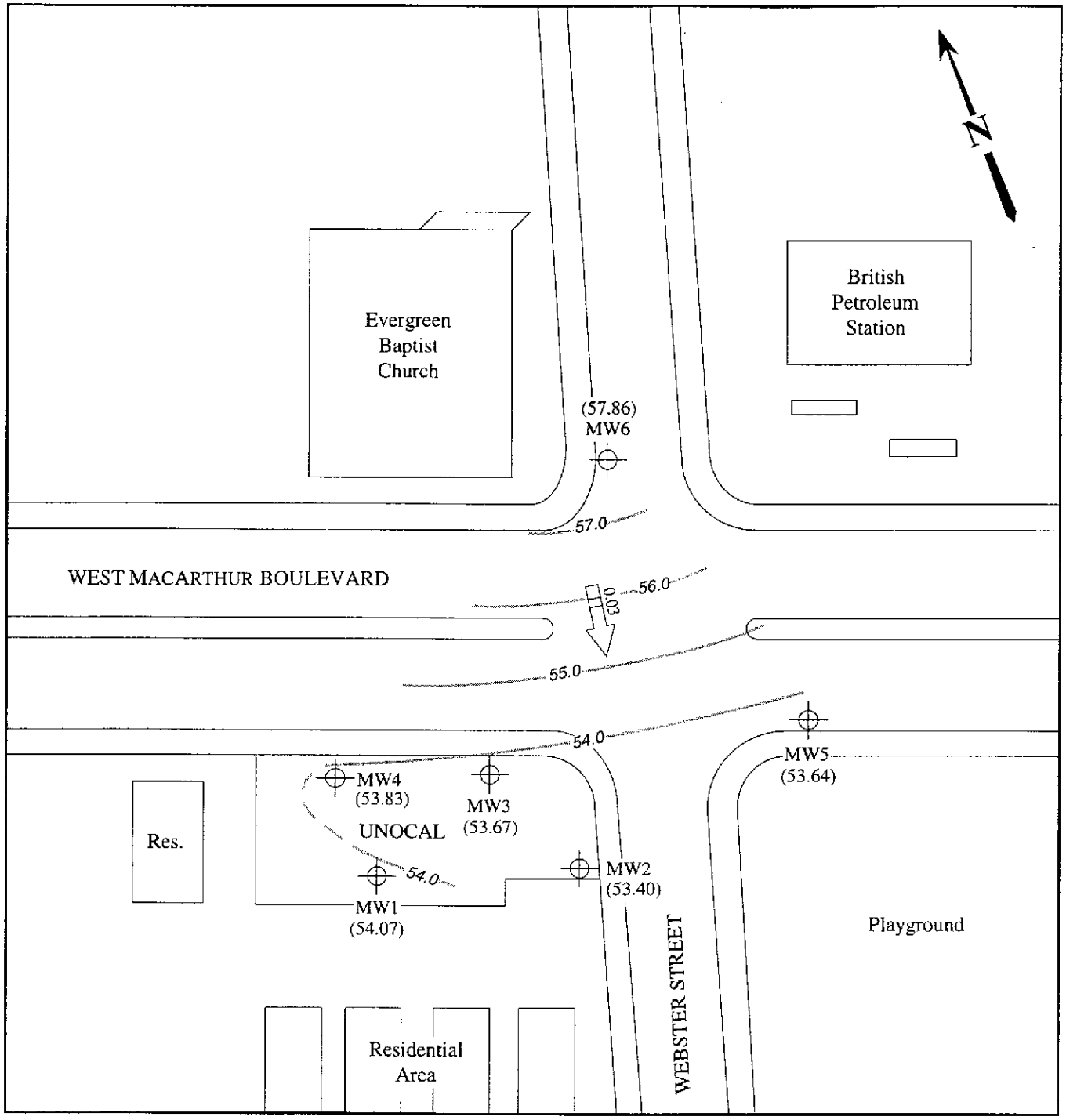


Base modified from 7.5 minute U.S.G.S. Oakland East & West Quadrangles (both photorevised 1980)

0 2000 4000

Approx. scale feet

mpds SERVICES, INCORPORATED	**UNOCAL SERVICE STATION # 3538** **411 W. MACARTHUR BOULEVARD** **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 60 120

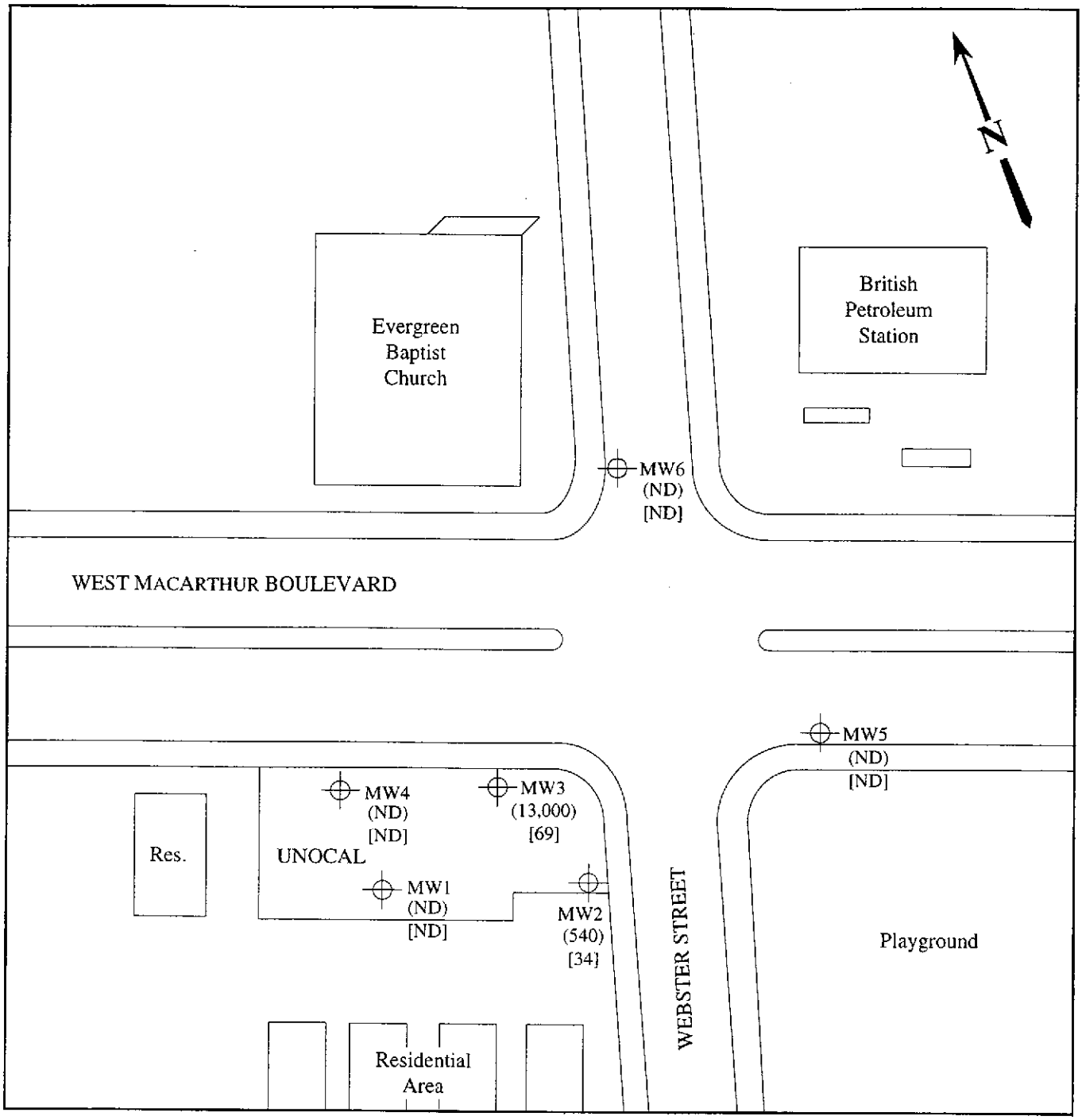
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE JULY 11, 1996 MONITORING EVENT

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION # 3538
411 W. MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

FIGURE
1



LEGEND

- Monitoring well
- ( ) Concentration of TPH as gasoline in µg/L
- [ ] Concentration of benzene in µg/L
- NS Not sampled

0 60 120

Approx. scale feet

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON JULY 11, 1996

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION # 3538
411 W. MACARTHUR BOULEVARD
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 #3538, 411 W. MacArthur Blvd.	Sampled:	Jul 11, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Water Oakland	Received:	Jul 11, 1996
Concord, CA 94520	Analysis Method:	EPA 5030/8015 Mod./8020	Reported:	Jul 25, 1996
Attention: Jarrel Crider	First Sample #:	607-0821		

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
607-0821	MW-1	ND	ND	ND	ND	ND
607-0822	MW-2	540	34	ND	4.3	12
607-0823	MW-3	13,000	69	5.5	430	900
607-0824	MW-4	ND	ND	ND	ND	ND
607-0825	MW-5	ND	ND	ND	ND	ND
607-0826	MW-6	ND	ND	ND	ND	ND
607-0827	ES-1	ND	ND	ND	ND	ND
607-0828	ES-2	ND	ND	ND	ND	ND
607-0829	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

6070821.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 #3538, 411 W. MacArthur Blvd.	Sampled: Jul 11, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Water Oakland	Received: Jul 11, 1996
Concord, CA 94520	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: Jul 25, 1996
Attention: Jarrel Crider	First Sample #:	607-0821	

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
607-0821	MW-1	--	1.0	7/20/96	HP-2	123
607-0822	MW-2	Gasoline	1.0	7/20/96	HP-2	84
607-0823	MW-3	Gasoline	10	7/20/96	HP-2	117
607-0824	MW-4	--	1.0	7/20/96	HP-2	123
607-0825	MW-5	--	1.0	7/20/96	HP-2	128
607-0826	MW-6	--	1.0	7/20/96	HP-2	130
607-0827	ES-1	--	1.0	7/17/96	HP-5	107
607-0828	ES-2	--	1.0	7/17/96	HP-5	94
607-0829	ES-3	--	1.0	7/17/96	HP-5	91

SEQUOIA ANALYTICAL, #1271
& #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
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 #3538, 411 W. MacArthur Blvd.	Sampled:	Jul 11, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water Oakland	Received:	Jul 11, 1996
Concord, CA 94520	Analysis for:	MTBE (Modified EPA 8020)		
Attention: Jarrel Crider	First Sample #:	607-0821	Analyzed:	Jul 20, 1996
			Reported:	Jul 25, 1996

LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
607-0821	MW-1	40	N.D.
607-0822	MW-2	50	150
607-0823	MW-3	40	740
607-0824	MW-4	40	N.D.
607-0825	MW-5	40	N.D.
607-0826	MW-6	40	N.D.

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
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 #3538, 411 W. MacArthur Blvd.	Sampled:	Jul 11, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water, MW-1 Oakland	Received:	Jul 11, 1996
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Jul 16, 1996
Attention: Jarrel Crider	Lab Number:	607-0821	Reported:	Jul 25, 1996

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	**0.50**	**0.96**
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	**0.50**	**0.73**
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.

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

Client Project ID: Unocal #3538, 411 W. MacArthur Blvd. Oakland
Matrix: Liquid
QC Sample Group: 6070821-826
Reported: Jul 25, 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#:	MS072096	MS072096	MS072096	MS072096
Date Prepared:	7/20/96	7/20/96	7/20/96	7/20/96
Date Analyzed:	7/20/96	7/20/96	7/20/96	7/20/96
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:	119	123	137	138
Matrix Spike Duplicate % Recovery:	113	117	129	134
Relative % Difference:	5.2	5.0	6.0	2.9
LCS Batch#:	LCS072096	LCS072096	LCS072096	LCS072096
Date Prepared:	7/20/96	7/20/96	7/20/96	7/20/96
Date Analyzed:	7/20/96	7/20/96	7/20/96	7/20/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	113	114	125	130
% Recovery Control Limits:	60-140	60-140	60-140	60-140

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 #3538, 411 W. MacArthur Blvd. Oakland
Matrix: Liquid
QC Sample Group: 6070821-829
Reported: Jul 25, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill
MS/MSD Batch#:	6070857	6070857	6070857	6070857
Date Prepared:	7/17/96	7/17/96	7/17/96	7/17/96
Date Analyzed:	7/17/96	7/17/96	7/17/96	7/17/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	95	95	95	97
Matrix Spike Duplicate % Recovery:	90	90	90	90
Relative % Difference:	5.4	5.4	5.4	7.1
LCS Batch#:	5LCS071796	5LCS071796	5LCS071796	5LCS071796
Date Prepared:	7/17/96	7/17/96	7/17/96	7/17/96
Date Analyzed:	7/17/96	7/17/96	7/17/96	7/17/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	100	95	100	100
% Recovery Control Limits:	60-140	60-140	60-140	60-140

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 #3538, 411 W. MacArthur Blvd. Oakland
Matrix: Liquid
QC Sample Group: 6070821-829
Reported: Jul 25, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-benzene
Method:	EPA 8010	EPA 8010	EPA 8010
Analyst:	I. Dalvand	I. Dalvand	I. Dalvand
MS/MSD Batch#:	6070371	6070371	6070371
Date Prepared:	7/12/96	7/12/96	7/12/96
Date Analyzed:	7/12/96	7/12/96	7/12/96
Instrument I.D.#:	HP-6	HP-6	HP-6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L
Matrix Spike % Recovery:	111	89	92
Matrix Spike Duplicate % Recovery:	118	99	96
Relative % Difference:	6.1	11	4.3
LCS Batch#:	LCS071696	LCS071696	LCS071696
Date Prepared:	7/12/96	7/12/96	7/12/96
Date Analyzed:	7/12/96	7/12/96	7/12/96
Instrument I.D.#:	HP-6	HP-6	HP-6
LCS % Recovery:	98	101	95
% Recovery Control Limits:	60-140	60-140	60-140

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

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

CHAIN OF CUSTODY

9607166

SAMPLER: STEVE BALIAN
WITNESSING AGENCY:

UNOCAL S/S # 3538 CITY: OAKLAND
ADDRESS: 411 WEST MACARTHUR BLVD

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				REMARKS
MW-1	7-11-96	10:30	X	X		5	WELL	X			X	X	6070821	A-E		
MW-2	"	14:15	X	X		4	"	X				X	6070822	A-D		
MW-3	"	13:35	X	X		4	"	X				X	6070823			
MW-4	"	11:10	X	X		4	"	X				X	6070824			
MW-5	"	12:00	X	X		4	"	X				X	6070825			
MW-6	"	13:00	X	X		4	"	X				X	6070826			

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
STEVE BALIAN	14:55 7-11-96		7/11/96 1455
(SIGNATURE)		(SIGNATURE)	
(SIGNATURE)		(SIGNATURE)	
(SIGNATURE)		(SIGNATURE)	
(SIGNATURE)		(SIGNATURE)	

THE FOLLOWING MUST BE COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:

1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? 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: TITLE: DATE: 7/11/96

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.

mpds SERVICES, INCORPORATED
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Concord, California 94520
Tel: (510) 602-5100, Fax: (510) 689-1918

CHAIN OF CUSTODY

9607166

SAMPLER: STEVE BALIAN
WITNESSING AGENCY:

UNOCAL S/S # 3538 CITY: OAKLAND
ADDRESS: 911 WEST MAC ARTHUR BLV

TURN AROUND TIME: REGULAR

SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	ANALYSES REQUESTED: TPH-GAS BTEX	TPH-DIESEL	TOG	8010	REMARKS
ES1	7-11-96		X	X		1		X	6070827			
ES2	"		X	X		1		X	6070828			
ES3	"		X	X		1		X	6070829			

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
STEVE BALIAN (SIGNATURE)	14:55 7-11-96	(SIGNATURE)	7/11/96 1455
(SIGNATURE)		(SIGNATURE)	
(SIGNATURE)		(SIGNATURE)	
(SIGNATURE)		(SIGNATURE)	
(SIGNATURE)		(SIGNATURE)	

THE FOLLOWING MUST BE COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:

1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? _____
2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? _____
3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? _____
4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? _____

SIGNATURE: TITLE: DATE:

e: 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.