MONITORING
PURGING
DISPOSING
SAMPLING

MPDS SERVICES, INCORPORATED

ENVIRONMENTAL PROTECTION

96 MAY 31 PM 1:33

May 29, 1996

MTBE in MW-2.
but not in MW-4 or MW-5

Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, California 94501

RE: Unocal Service Station #6034
4700 First Street
Livermore, California

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

\dr

Enclosure

cc: Ms. Tina R. Berry

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

MONITORING
PURGING
DISPOSING
SAMPLING
MPDS SERVICES, INCORPORATED

MPDS-UN6034-10
May 16, 1996

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

Attention: Ms. Tina R. Berry

RE: Quarterly Data Report
Unocal Service Station #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. Oxygen Release Compound (ORC®) filter socks were present in monitoring well MW2. 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.

A joint monitoring event was conducted with the consultant for the nearby Chevron site on April 17, 1996. The monitoring data collected for the Chevron monitoring wells (provided by Blaine Tech Services, Inc.) are summarized in Table 5. The ground water flow direction in the vicinity of the Unocal and Chevron sites during the most recent quarter is shown on the attached Figure 1.

Ground water samples were collected from the Unocal wells on April 17, 1996. Prior to sampling, the wells were each purged of between 8 and 9 gallons of water. In addition, dissolved oxygen concentrations were also measured and are presented in Table 4. A sample was then collected using a clean Teflon bailer. The sample was 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, Field blank and Trip 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 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 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

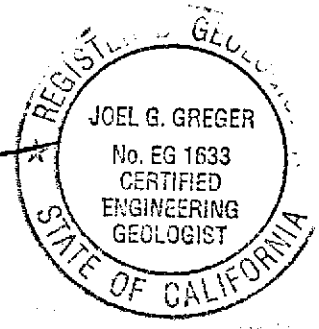
A copy of this report should be sent to the Alameda County Health Care Services Agency.

If you have any questions regarding this report, please do not hesitate to call 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 8/31/96

/jfc

Attachments: Tables 1 through 5
Location Map
Figures 1 & 2
Laboratory Analyses
Chain of Custody documentation

cc: Mr. Mark W. Boyd, Kaprealian Engineering, Inc.

Table 1

Summary of Monitoring Data

Well #	Ground Water Elevation (feet)	Depth to Water (feet)♦	Total Well Depth (feet)♦	Product Thickness (feet)	Sheen	Water Purged (gallons)
(Monitored and Sampled on April 17, 1996)						
MW1	506.17	14.47	27.88	0	No	9
MW2	505.89	13.93	25.65	0	No	8
MW3	506.62	13.04	25.40	0	No	9
MW4	506.53	13.08	25.45	0	No	9
MW5	506.05	14.22	23.57	0	No	8
MW6	505.09	13.66	23.19	0	No	8
MW7	505.62	13.21	23.64	0	No	8
(Monitored and Sampled on January 17, 1996)						
MW1*	505.68	14.96	27.88	0	--	0
MW2	505.47	14.35	25.63	0	No	8
MW3*	505.98	13.68	25.41	0	--	0
MW4*	506.59	13.02	25.46	0	--	0
MW5*	505.79	14.48	23.59	0	--	0
MW6*	WELL WAS OBSTRUCTED BY ROOTS					
MW7*	505.27	13.56	23.65	0	--	0
(Monitored and Sampled on October 17, 1995)						
MW1*	505.81	14.83	27.90	0	--	0
MW2	505.67	14.15	25.63	0	No	8
MW3	506.42	13.24	25.42	0	No	8.5
MW4	506.39	13.22	25.46	0	No	8.5
MW5	505.81	14.46	23.57	0	No	7
MW6	504.85	13.90	23.18	0	No	7
MW7	505.42	13.41	23.62	0	No	7
(Monitored and Sampled on July 18, 1995)						
MW1*	505.86	14.78	27.91	0	--	0
MW2	505.71	14.11	25.64	0	No	8
MW3*	506.47	13.19	25.43	0	--	0
MW4	506.40	13.21	25.50	0	No	8.5
MW5	505.86	14.41	23.60	0	No	6.5
MW6	504.91	13.84	23.17	0	No	6.5
MW7	505.47	13.36	23.65	0	No	7

Table 1

Summary of Monitoring Data

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.

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW1	11/18/89	ND	ND	ND	ND	ND	--
	3/8/90	ND	ND	ND	ND	ND	--
	6/5/90	ND	ND	ND	ND	ND	--
	9/7/90	ND	ND	1.2	ND	ND	--
	12/24/90	ND	ND	ND	ND	0.40	--
	4/10/91	ND	ND	ND	ND	ND	--
	7/10/91	ND	ND	ND	ND	ND	--
	4/21/94	ND	ND	ND	ND	ND	--
	7/21/94	SAMPLED ANNUALLY					
	4/17/95	ND	ND	ND	ND	ND	--
	4/17/96	ND	ND	ND	ND	ND	ND
MW2	11/18/89	53,000	540	500	130	22,000	--
	3/8/90	26,000	230	410	1,300	2,100	--
	6/5/90	31,000	250	460	950	9,200	--
	9/7/90	ND	ND	1.5	ND	ND	--
	12/24/90	32,000	440	340	460	13,000	--
	4/10/91	22,000	170	190	490	6,200	--
	7/10/91	14,000	70	160	570	5,400	--
	10/14/91	11,000	79	130	660	4,700	--
	1/14/92	5,600	36	120	450	2,600	--
	4/6/92	760	6.3	2.1	ND	130	--
	7/7/92	44,000	160	1,100	1,000	17,000	--
	10/16/92	290	2.3	ND	5.1	15	--
	1/14/93	19,000	75	430	900	8,400	--
	4/22/93	49,000	150	1,000	3,000	18,000	--
	7/20/93	25,000	68	94	1,000	6,200	--
	10/20/93	12,000	27	10	100	3,000	--
	1/20/94	20,000	ND	ND	270	3,300	--
	4/21/94	27,000	85	65	880	5,300	--
	7/21/94	31,000	58	29	940	6,200	--
	10/19/94	4,100	16	3.5	8.6	1,100	--
	1/18/95	5,100	6.8	7.3	100	1,500	--
	4/17/95	320	1.3	0.67	6.6	74	--
	7/18/95	12,000	25	24	550	3,700	--
	10/17/95	77,000	60	58	760	8,300	220
	1/17/96	7,000	15	ND	150	1,600	370
	4/17/96	19,000	ND	ND	600	4,900	6,100

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW3	11/18/89	ND	0.35	ND	ND	ND	--
	3/8/90	ND	ND	ND	ND	ND	--
	6/5/90	ND	ND	ND	ND	ND	--
	9/7/90	1,100	11	ND	6.6	16	--
	12/24/90	ND	ND	ND	ND	ND	--
	4/10/91	ND	ND	ND	ND	ND	--
	7/10/91	ND	ND	ND	ND	ND	--
	10/14/91	ND	ND	ND	ND	ND	--
	1/14/92	ND	ND	ND	ND	ND	--
	4/6/92	ND	ND	ND	ND	ND	--
	7/7/92	ND	ND	ND	ND	ND	--
	10/16/92	ND	ND	ND	ND	ND	--
	1/14/93	ND	ND	ND	ND	ND	--
	4/22/93	ND	ND	ND	ND	ND	--
	7/20/93	ND	ND	ND	ND	ND	--
	10/20/93	ND	ND	ND	ND	ND	--
	1/20/94	SAMPLED ANNUALLY					
	4/21/94	ND	ND	ND	ND	ND	--
	7/21/94	SAMPLED SEMI-ANNUALLY					
	10/19/94	ND	ND	0.61	ND	0.51	--
	4/17/95	ND	ND	ND	ND	ND	--
	10/17/95	ND	ND	ND	ND	ND	ND
	1/17/96	SAMPLED ANNUALLY*					
	4/17/96	ND	ND	ND	ND	ND	ND
MW4	11/18/89	990	9.8	10	7.1	4.7	--
	3/8/90	1,200	18	8.4	37	28	--
	6/5/90	1,400	1.2	4.7	24	12	--
	9/7/90	15,000	100	140	210	4,600	--
	12/24/90	1,400	ND	8.7	15	10	--
	4/10/91	950	0.84	4.3	9.6	5.0	--
	7/10/91	830	8.4	19	7.7	7.2	--
	10/14/91	880	3.8	2.2	8.6	5.8	--
	1/14/92	1,500	4.2	7.1	18	9.2	--
	4/6/92	660	1.3	3.8	2.9	4.1	--
	7/7/92	340	ND	2.2	2.4	2.4	--
	10/16/92	300	2.1	ND	4.8	13	--
	1/14/93	920	ND	6.3	12	3.9	--
	4/22/93	1,100	8.8	1.0	7.2	6.0	--
	7/20/93	NOT SAMPLED - SAMPLING ACCESS DENIED					
	10/20/93	640	ND	2.5	2.3	1.9	--
	1/20/94	1,200	ND	2.6	4.7	7.4	--
	4/21/94	380	0.83	1.2	1.2	1.7	--
	7/21/94	320	0.51	1.4	1.0	1.6	--

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW4	10/19/94	750	ND	3.6	4.2	3.4	--
(Cont.)	1/18/95	790	1.5	3.3	1.2	2.6	--
	4/17/95	570	2.8	ND	3.3	3.9	--
	7/18/95	340	1.0	1.9	2.8	2.7	--
	10/17/95	260	1.1	0.57	0.69	1.6	2.0
	1/17/96	SAMPLED SEMI-ANNUALLY					
	4/17/96	720	3.0	2.6	6.1	6.9	ND
MW5	4/10/91	630	35	14	47	30	--
	7/10/91	220	5.1	8.7	9.1	9.7	--
	10/14/91	660	55	4.4	50	66	--
	1/14/92	99	1.0	1.2	ND	0.32	1.2
	4/6/92	240†	ND	ND	0.35	ND	--
	7/7/92	76	0.48	1.1	0.32	1.3	1.5
	10/16/92	180	7.8	1.1	17	6.4	2.0
	1/14/93	91	ND	0.53	1.2	11	--
	4/22/93	94	1.2	ND	ND	1.3	0.82
	7/20/93	89	1.1	0.51	ND	1.8	2.2
	10/20/93	110	0.8	ND	ND	ND	--
	1/20/94	ND	ND	ND	ND	ND	--
	4/21/94	ND	ND	ND	ND	ND	--
	7/21/94	ND	ND	ND	ND	ND	--
	10/19/94	ND	ND	0.71	ND	0.57	--
	1/18/95	ND	ND	ND	ND	ND	--
	4/17/95	ND	ND	ND	ND	ND	--
	7/18/95	ND	ND	ND	ND	1.1	--
	10/17/95	ND	ND	ND	ND	ND	ND
	1/17/96	SAMPLED ANNUALLY*					
	4/17/96	ND	ND	ND	ND	ND	ND
MW6	4/10/91	ND	ND	ND	ND	ND	--
	7/10/91	ND	ND	ND	ND	ND	--
	10/14/91	ND	ND	ND	ND	ND	--
	1/14/92	ND	ND	ND	ND	ND	--
	4/6/92	ND	ND	ND	ND	ND	--
	7/7/92	ND	ND	ND	ND	ND	--
	10/16/92	WELL WAS OBSTRUCTED					
	1/14/93	WELL WAS OBSTRUCTED					
	4/22/93	WELL WAS OBSTRUCTED					
	7/20/93	WELL WAS OBSTRUCTED					
	10/20/93	ND	ND	ND	ND	ND	--
	1/20/94	ND	ND	ND	ND	ND	--
	4/21/94	ND	ND	ND	ND	ND	--
	7/21/94	ND	ND	ND	ND	ND	--

Table 2

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW6	10/19/94	WELL WAS OBSTRUCTED BY ROOTS					
(Cont.)	1/18/95	WELL WAS OBSTRUCTED BY ROOTS					
	4/17/95	ND	ND	ND	ND	ND	--
	7/18/95	ND	ND	ND	ND	ND	--
	10/17/95	ND	ND	ND	ND	ND	2.2
	1/17/96	SAMPLED ANNUALLY*					
	4/17/96	ND	ND	ND	ND	ND	ND
MW7	4/10/91	ND	ND	ND	ND	ND	--
	7/10/91	ND	ND	ND	ND	ND	--
	10/14/91	ND	ND	ND	ND	ND	--
	1/14/92	ND	ND	ND	ND	ND	--
	4/06/92	ND	ND	ND	ND	ND	--
	7/7/92	ND	ND	ND	ND	ND	--
	10/16/92	ND	ND	ND	ND	ND	--
	1/14/93	ND	ND	ND	ND	ND	--
	4/22/93	ND	ND	ND	ND	ND	--
	7/20/93	ND	ND	ND	ND	ND	--
	10/20/93	ND	ND	ND	ND	ND	--
	1/20/94	ND	ND	ND	ND	ND	--
	4/21/94	ND	ND	ND	ND	ND	--
	7/21/94	ND	ND	ND	ND	ND	--
	10/19/94	ND	ND	0.87	ND	0.61	--
	1/18/95	ND	ND	ND	ND	ND	--
	4/17/95	ND	ND	ND	ND	ND	--
	7/18/95	ND	ND	ND	ND	ND	--
	10/17/95	ND	ND	ND	ND	ND	3.5
	1/17/96	SAMPLED ANNUALLY*					
	4/17/96	ND	ND	ND	ND	ND	ND

* Annual sampling beginning April, 1996.

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

ND = Non-detectable.

-- Indicates analysis was not performed.

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

Table 2

Summary of Laboratory Analyses
Water

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 is C6 - C12.

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

Table 3

Summary of Laboratory Analyses
Water

Well #	Date	TPH as Diesel (µg/L)	Total Oil & Grease (mg/L)	Trichloroethene (µg/L)	Chloroform (µg/L)
MW1	4/17/96	100	ND	ND	ND
	4/17/95	ND	ND	ND	0.69
	4/21/94	--	ND	ND	ND
	7/10/91	--	ND	ND	ND
	4/10/91	--	ND	ND	ND
	12/24/90	--	ND	ND	ND
	9/7/90	--	ND	ND	ND
	6/5/90	--	ND	ND	ND
	3/8/90	--	4.7	ND	ND
	11/18/89	--	3.1	0.55	ND

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

mg/L = milligrams per liter.

µg/L = micrograms per liter.

ND = Non-detectable.

-- Indicates analysis was not performed.

Table 4

Summary of Monitoring Data

Well	Date	Dissolved Oxygen Concentrations Before Purging (mg/L)	After Purging (mg/L)
MW2	7/18/95	--	4.22
	10/17/95	--	3.96
	1/17/96	--	5.25
	4/17/96	--	2.59

-- Indicates measurement was not taken.

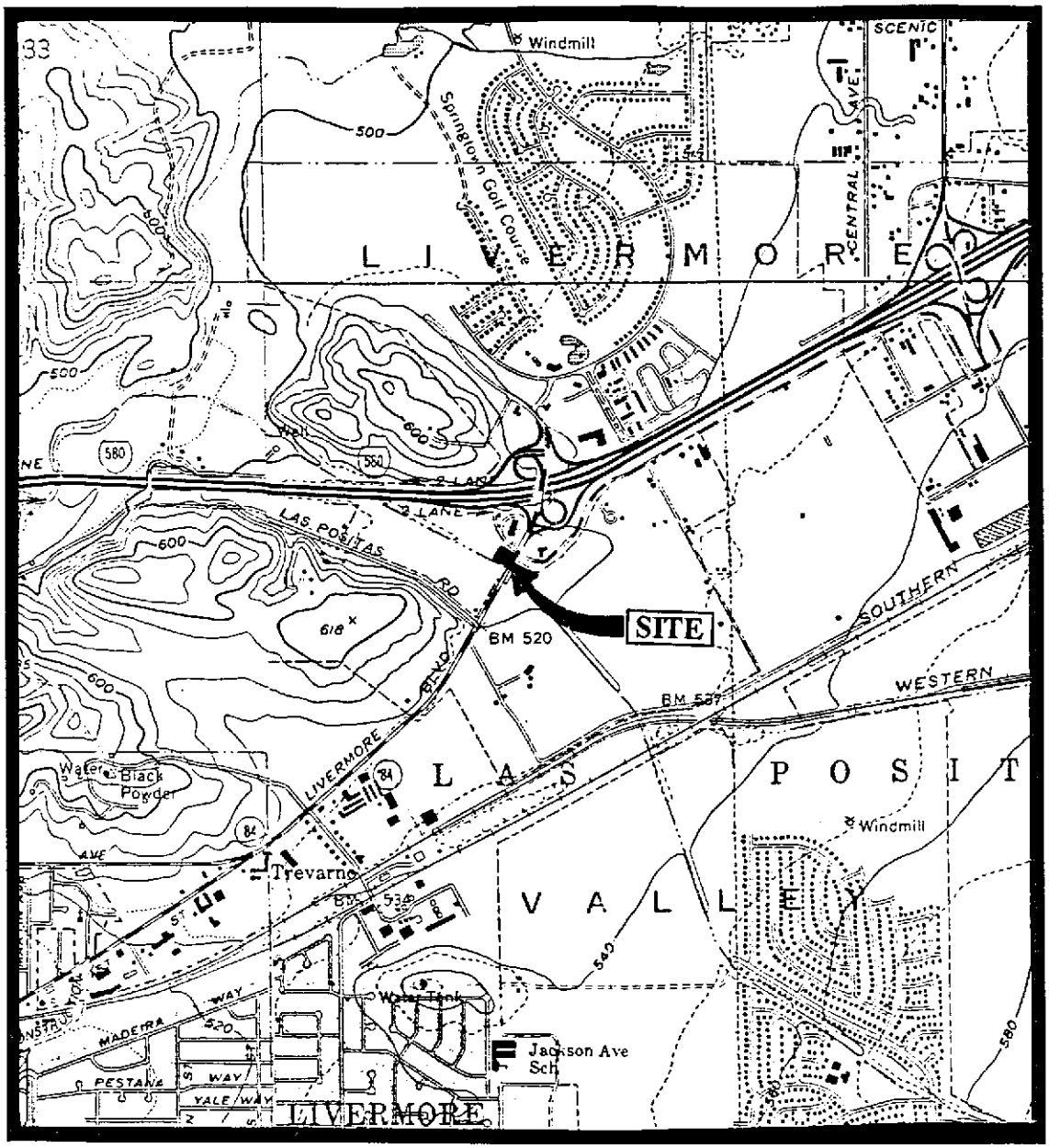
Table 5

Summary of Monitoring Data
Chevron Wells
(Data provided by Blaine Tech Services, Inc.)

Well #	Ground Water Elevation (feet)	Depth to Water (feet)♦	Total Well Depth (feet)♦	Top of Casing Elevation (feet)*
		(Monitored on April 17, 1996)		
C-1	509.52	10.87	18.30	520.39
C-2	509.49	11.27	24.25	520.76
C-5	509.71	11.11	18.96	520.82
C-6	509.15	10.47	21.92	519.62
C-7	509.34	10.96	21.73	520.30
C-8	508.87	10.87	12.40	519.74
C-9	509.67	10.05	22.37	519.72
C-10	507.23	13.18	34.65	520.41
C-11	507.56	12.48	19.53	520.04
C-14	507.91	12.17	12.40	520.08
C-16	INACCESSIBLE - PAVED OVER			
C-17	508.12	12.70	20.01	520.82
C-19	505.56	13.40	24.03	518.96

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

* Relative to Mean Sea Level.

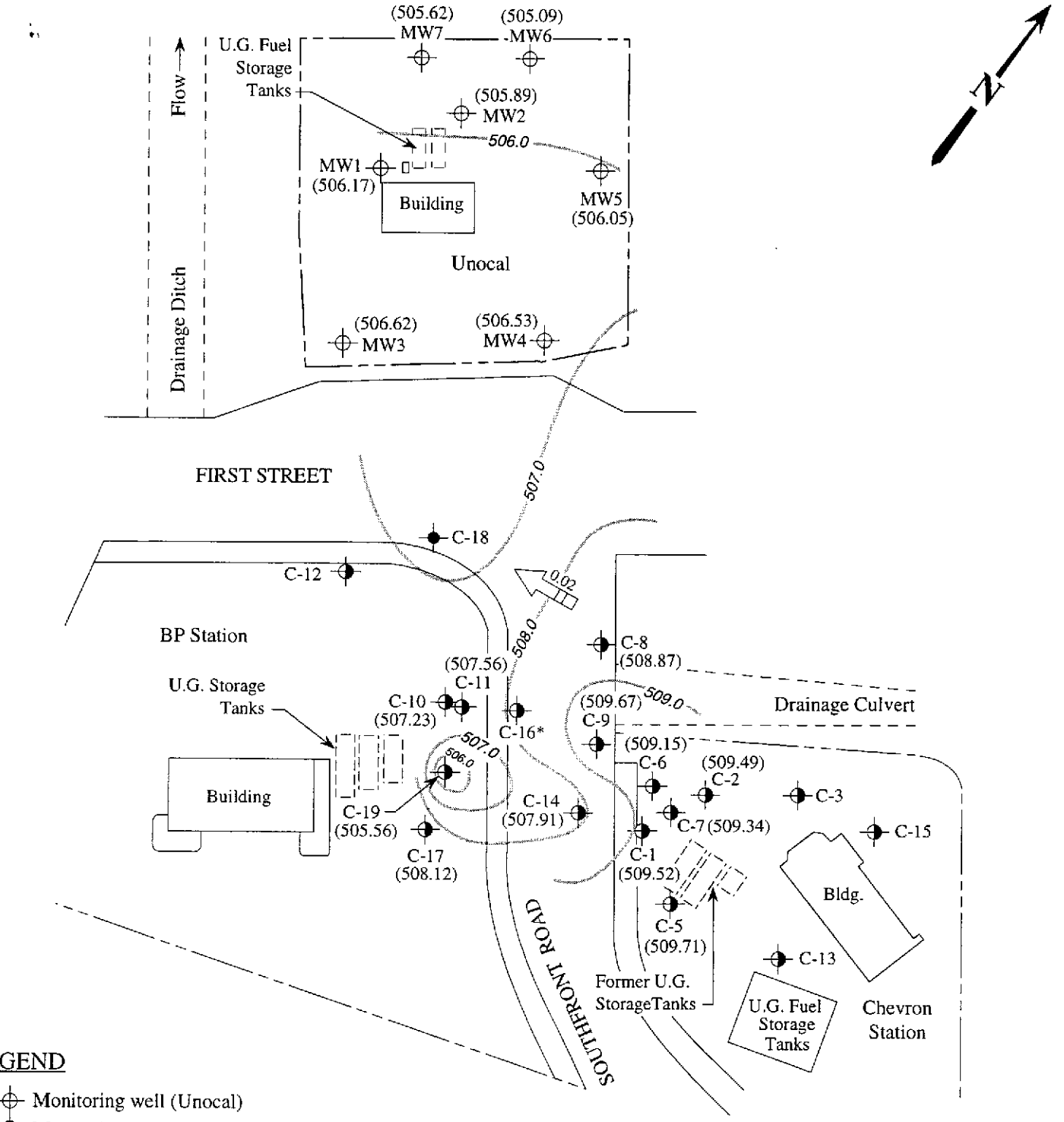


Base modified from 7.5 minute U.S.G.S. Livermore and Altamont Quadrangles (photorevised 1980 and 1981, respectively)

0 2000 4000

Approx. scale feet

mpds SERVICES, INCORPORATED	**UNOCAL SERVICE STATION # 6034** **4700 FIRST STREET** **LIVERMORE, CALIFORNIA**	**LOCATION MAP**



LEGEND

- Monitoring well (Unocal)
- Monitoring well (Chevron, existing)
- Monitoring well (Chevron, abandoned)
- ( ) Ground water elevation in feet above Mean Sea Level
- #.## Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation
- * Well was paved over

0 80 160

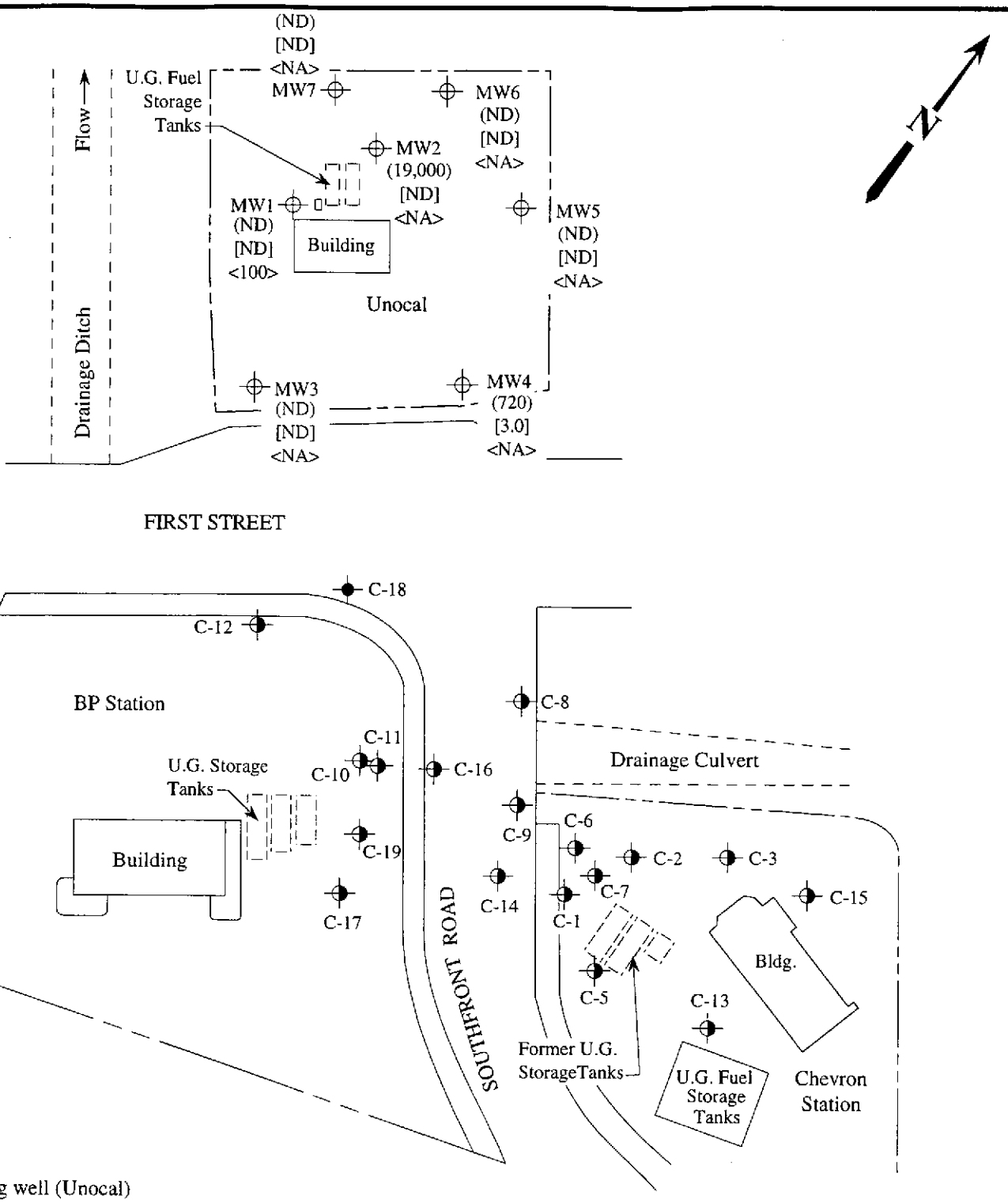
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE APRIL 17, 1996 JOINT MONITORING EVENT

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION # 6034
4700 FIRST STREET
LIVERMORE, CALIFORNIA

FIGURE
1



LEGEND

- Monitoring well (Unocal)
- Monitoring well (Chevron, existing)
- Monitoring well (Chevron, abandoned)
- ( ) Concentration of TPH as gasoline in µg/L
- [ ] Concentration of benzene in µg/L
- ND Non-detectable, NA Not analyzed

0 80 160

Approx. scale feet

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON APRIL 17, 1996

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION # 6034
4700 FIRST STREET
LIVERMORE, 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 #6034, 4700 First St., Livermore	Sampled: Apr 17, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Water	Received: Apr 17, 1996
Concord, CA 94520	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: May 6, 1996
Attention: Jarrel Crider	First Sample #:	604-1436	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Sample Number	Sample Description	Purgeable Hydrocarbons µg/L	Benzene µg/L	Toluene µg/L	Ethyl Benzene µg/L	Total Xylenes µg/L
604-1436	MW-1	ND	ND	ND	ND	ND
604-1437	MW-2	19,000	ND	ND	600	4,900
604-1438	MW-3	ND	ND	ND	ND	ND
604-1439	MW-4	720	3.0	2.6	6.1	6.9
604-1440	MW-5	ND	ND	ND	ND	ND
604-1441	MW-6	ND	ND	ND	ND	ND
604-1442	MW-7	ND	ND	ND	ND	ND
604-1443	ES-1	ND	ND	ND	ND	ND
604-1444	ES-2	ND	ND	ND	ND	ND
604-1445	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

6041436.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 #6034, 4700 First St., Livermore	Sampled:	Apr 17, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Water	Received:	Apr 17, 1996
Concord, CA 94520	Analysis Method:	EPA 5030/8015 Mod./8020	Reported:	May 6, 1996
Attention: Jarrel Crider	First Sample #:	604-1436		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Sample Number	Sample Description	Chromatogram Pattern	DL Mult. Factor	Date Analyzed	Instrument ID	Surrogate Recovery, % QC Limits: 70-130
604-1436	MW-1	--	1.0	4/30/96	HP-2	74
604-1437	MW-2	Gasoline	100	4/30/96	HP-2	97
604-1438	MW-3	--	1.0	4/30/96	HP-2	99
604-1439	MW-4	Gasoline	1.0	4/30/96	HP-2	129
604-1440	MW-5	--	1.0	4/30/96	HP-2	126
604-1441	MW-6	--	1.0	4/30/96	HP-2	126
604-1442	MW-7	--	1.0	4/30/96	HP-2	127
604-1443	ES-1	--	1.0	5/1/96	HP-2	99
604-1444	ES-2	--	1.0	5/1/96	HP-2	100
604-1445	ES-3	--	1.0	5/1/96	HP-2	99

SEQUOIA ANALYTICAL, #1271
& #1894

Signature on File

Alan B. Kemp
Project Manager

6041436.MPD <2>

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MPDS Services	Client Project ID:	Unocal #6034, 4700 First St., Livermore	Sampled: Apr 17, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water	Received: Apr 17, 1996
Concord, CA 94520	Analysis for:	MTBE (Modified EPA 8020)	
Attention: Jarrel Crider	First Sample #:	604-1436	Analyzed: Apr 30, 1996
			Reported: May 6, 1996

LABORATORY ANALYSIS FOR: MTBE (Modified EPA 8020)

Sample Number	Sample Description	Detection Limit µg/L	Sample Result µg/L
604-1436	MW-1	40	N.D.
604-1437	MW-2	50	6,100
604-1438	MW-3	40	N.D.
604-1439	MW4	40	N.D.
604-1440	MW-5	40	N.D.
604-1441	MW-6	40	N.D.
604-1442	MW-7	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

6041436.MPD <3>

Sequoia Analytical

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MPDS Services	Client Project ID:	Unocal #6034, 4700 First St., Livermore	Sampled: Apr 17, 1996
2401 Stanwell Dr., Ste. 300	Sample Matrix:	Water	Received: Apr 17, 1996
Concord, CA 94520	Analysis Method:	EPA 3510/8015 Mod.	Reported: May 6, 1996
Attention: Jarrel Crider	First Sample #:	604-1436	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 604-1436 MW-1
Extractable Hydrocarbons	50	100
Chromatogram Pattern:		Diesel

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Extracted:	4/19/96
Date Analyzed:	4/22/96
Instrument Identification:	HP-3A

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

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MPDS Services	Client Project ID:	Unocal #6034, 4700 First St., Livermore	Sampled: Apr 17, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript:	Soil	Received: Apr 17, 1996
Concord, CA 94520	Analysis Method:	SM 5520 E&F (Gravimetric)	Extracted: Apr 19, 1996
Attention: Jarrel Crider	First Sample #:	604-1436	Analyzed: Apr 19, 1996
			Reported: May 6, 1996

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)	Detection Limit Multiplication Factor
604-1436	MW-1	N.D.	1.0

Detection Limits:	**50**

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

6041436.MPD <5>

Sequoia Analytical

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MPDS Services	Client Project ID:	Unocal #6034, 4700 First St., Livermore	Sampled:	Apr 17, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript:	Water, MW-1	Received:	Apr 17, 1996
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Apr 24, 1996
Attention: Jarrel Crider	Lab Number:	604-1436	Reported:	May 6, 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	N.D.
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	N.D.
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

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

Client Project ID: Unocal #6034, 4700 First St., Livermore
Matrix: Liquid
QC Sample Group: 6041436-445

Reported: May 6, 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#:	MS043096	MS043096	MS043096	MS043096
Date Prepared:	4/30/96	4/30/96	4/30/96	4/30/96
Date Analyzed:	4/30/96	4/30/96	4/30/96	4/30/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	69	102	84	74
Matrix Spike Duplicate % Recovery:	72	108	89	100
Relative % Difference:	4.3	5.7	5.8	30
LCS Batch#:	LCS043096	LCS043096	LCS043096	LCS043096
Date Prepared:	4/30/96	4/30/96	4/30/96	4/30/96
Date Analyzed:	4/30/96	4/30/96	4/30/96	4/30/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	79	110	85	106
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL, #1894

Signature on File

Alan B. Kemp
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

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

Client Project ID: Unocal #6034, 4700 First St., Livermore
Matrix: Liquid
QC Sample Group: 6041436-445

Reported: May 6, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	Oil & Grease
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015	SM 5520
Analyst:	L. Huang	L. Huang	L. Huang	L. Huang	J. Dinsay	D. Newcomb
MS/MSD Batch#:	6041714	6041714	6041714	6041714	BLK041996	BLK041996
Date Prepared:	5/1/96	5/1/96	5/1/96	5/1/96	4/19/96	4/19/96
Date Analyzed:	5/1/96	5/1/96	5/1/96	5/1/96	4/22/96	4/19/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3A	Manual
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L	100 mg/L
Matrix Spike % Recovery:	120	115	120	120	100	87
Matrix Spike Duplicate % Recovery:	110	105	110	110	97	87
Relative % Difference:	8.7	9.1	8.7	8.7	3.4	0.0
LCS Batch#:	2LCS050196	2LCS050196	2LCS050196	2LCS050196	LCS041996	BLK041996
Date Prepared:	5/1/96	5/1/96	5/1/96	5/1/96	4/19/96	4/19/96
Date Analyzed:	5/1/96	5/1/96	5/1/96	5/1/96	4/22/96	4/19/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3A	Manual
LCS % Recovery:	105	105	110	108	90	84
% Recovery Control Limits:	71-133	72-128	72-130	71-120	50-150	60-140

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

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

Client Project ID: Unocal #6034, 4700 First St., Livermore
Matrix: Liquid
QC Sample Group: 6041436-445
Reported: May 6, 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#:	6041378	6041378	6041378
Date Prepared:	4/24/96	4/24/96	4/24/96
Date Analyzed:	4/24/96	4/24/96	4/24/96
Instrument I.D.#:	HP-6	HP-6	HP-6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L
Matrix Spike % Recovery:	85	92	83
Matrix Spike Duplicate % Recovery:	86	93	82
Relative % Difference:	1.2	1.1	1.2
LCS Batch#:	LCS042496	LCS042496	LCS042496
Date Prepared:	4/24/96	4/24/96	4/24/96
Date Analyzed:	4/24/96	4/24/96	4/24/96
Instrument I.D.#:	HP-6	HP-6	HP-6
LCS % Recovery:	83	90	80
% Recovery Control Limits:	28-167	35-146	38-150

SEQUOIA ANALYTICAL, #1271

Signature on File

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Project Manager

Please Note:
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M P D S Services, Inc.
2401 Stanwell Drive, Suite 400, Concord, CA 94520
Tel: (510) 602-5120 Fax: (510) 689-1918

9604322

CHAIN OF CUSTODY

SAMPLER: (JOE) HOVSIA AJEMIAN
WITNESSING AGENCY:
UNOCAL S/S # 6034 CITY: Livermore
ADDRESS: 4700 First St.

ANALYSES REQUESTED

TURN AROUND TIME: Regular

SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-GAS BTEX & MTBE	TPH-DIESEL	TOG	8010					REMARKS
mw-1	4-17-96	8:35 AM	✓	✓		4 VOA 2 Amber	wells	✓	✓	✓	✓		6041436	AF		
mw-2	"	12:48 P.M	✓	✓		2 VOA	"	✓					6041437	AB		
mw-3	"	9:10 AM	✓	✓		"	"	✓					6041438			
mw-4	"	12:00 P.M	✓	✓		"	"	✓					6041439			
mw-5	"	9:50 AM	✓	✓		"	"	✓					6041440			
mw-6	"	10:38 AM	✓	✓		"	"	✓					6041441			
mw-7	"	11:15 AM	✓	✓		"	"	✓					6041442			FR 1 39

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
(SIGNATURE) Joe Ajemian	4-17-96 3:50 P.M	(SIGNATURE)
(SIGNATURE)	4-18 1400	(SIGNATURE)
(SIGNATURE)	4-18 1545	(SIGNATURE) Charlie
(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? Yes
2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? Yes
3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? no
4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? Yes

SIGNATURE: TITLE: DATE: 4/17/96

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

9604.22

SAMPLER: (JOE) HOVSIA AJEMIAN

WITNESSING AGENCY

UNOCAL S/S # 6034 CITY: Livermore

ADDRESS: 4700 First St.

ANALYSES REQUESTED

TURN AROUND TIME: Regular

SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-GAS BTEX	TPH-DIESEL	TOG	8010					REMARKS
ES1	4-17-96					1 VOA		✓		6041443						
ES2	"					"		✓		6041444						
ES3	"					"		✓		6041445						

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:
(SIGNATURE) Joe Ajemian	4-17-96 3:00 P.M.	(SIGNATURE)
(SIGNATURE)	4-18- 1400	(SIGNATURE)
(SIGNATURE)	4-18	(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? Yes
2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? Yes
3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? no
4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? Yes

SIGNATURE: TITLE: DATE: 4/17/96