

MPDS
SERVICES, INCORPORATED

MPDS-UN3292-01
December 30, 1993

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 #3292
15008 E. 14th Street
San Leandro, California

ALCO
HAZMAT
94 JAN 21 AM 10:49

Dear Mr. Ralston:

This 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. The wells are currently monitored and sampled on a quarterly basis. This report covers the work performed by MPDS Services, Inc. from September through November of 1993.

RECENT FIELD ACTIVITIES

The eleven monitoring wells (MW1 through MW11) were monitored twice and were sampled once during the quarter. During monitoring, the wells were checked for depth to water and the presence of free product. Prior to sampling, the wells were also checked for the presence of a sheen. The monitoring data collected this quarter are summarized in Table 1.

Ground water samples were collected from all of the wells on November 23, 1993. Prior to sampling, the wells were each purged of between 5 and 7.5 gallons of water. Samples were collected using a clean Teflon bailer. The samples were decanted into clean VOA vials that were then sealed with Teflon-lined screw caps, labeled, and stored in a cooler, on ice, until delivery to a state-certified laboratory.

HYDROLOGY

The ground water elevations in each monitoring well at the Unocal site during the quarter are summarized in Table 1. The ground water flow directions at the Unocal site during the most recent quarter are shown on the attached Potentiometric Surface Maps, Figures 1 and 2.

ANALYTICAL RESULTS

The ground water samples collected this quarter were analyzed at Sequoia Analytical Laboratory and were accompanied by properly executed Chain of Custody documentation. The samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline by EPA method 5030/modified 8015, and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA method 8020.

The analytical results of all of the ground water samples collected from the monitoring wells to date are summarized in Table 2. The concentrations of TPH as gasoline and benzene detected in the ground water samples collected this quarter are shown on the attached Figure 3. Copies of the laboratory analytical results and the Chain of Custody documentation are attached to this report.

DISTRIBUTION

A copy of this report should be sent to Mr. Scott Seery of the Alameda County Health Care Services Agency, and to the Regional Water Quality Control Board, San Francisco Bay Region.

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.

MPDS-UN3292-01
December 30, 1993
Page 3

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

Sincerely,

MPDS Services, Inc.



Talin Kaloustian
Staff Engineer



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

License No. EG 1633
Exp. Date 6/30/94

/dlh

Attachments: Tables 1 & 2
 Location Map
 Potentiometric Surface Maps - Figures 1 and 2
 Concentrations of Petroleum Hydrocarbons - Figure 3
 Laboratory Analyses
 Chain of Custody documentation

cc: Robert H. Kezerian, Kaprealian Engineering, Inc.

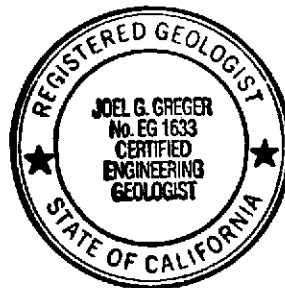


TABLE 1

SUMMARY OF MONITORING DATA

Well #	Ground Water Elevation (feet)	Depth to Water (feet)◆	Product Thickness (feet)	Sheen	Water Purged (gallons)	Total Well Depth (feet)◆
--------	-------------------------------	------------------------	--------------------------	-------	------------------------	--------------------------

(Monitored and Sampled on November 23, 1993)

MW1	24.53	11.84	0	No	5	18.93
MW2	24.65	11.69	0	No	5.5	19.07
MW3	24.64	11.78	0	No	7.5	22.11
MW4	24.60	12.44	0	No	5	19.60
MW5	24.49	11.45	0	No	7.5	22.10
MW6	24.71	10.96	0	No	6.5	20.09
MW7	24.81	11.28	0	No	7	21.18
MW8	24.51	12.38	0	No	5	19.06
MW9	24.49	11.80	0	No	5	19.06
MW10	24.37	11.67	0	No	6	19.86
MW11	24.22	11.28	0	No	5.5	18.98

(Monitored on September 24, 1993)

MW1	25.02	11.35	0	--	50	
MW2	25.20	11.14	0	--	0	
MW3	25.22	11.20	0	--	0	
MW4	25.19	11.85	0	--	0	
MW5	25.00	10.94	0	--	50	
MW6	25.33	10.34	0	--	0	
MW7	25.32	10.77	0	--	0	
MW8	24.89	12.00	0	--	0	
MW9	25.11	11.18	0	--	0	
MW10	24.87	11.17	0	--	0	
MW11	24.67	10.83	0	--	0	

(Monitored and Sampled on August 23, 1993)

MW1	25.45	11.27	0	No	6	
MW2	25.59	11.30	0	No	6	
MW3	25.60	11.24	0	No	8	
MW4	25.54	11.86	0	No	6	
MW5	25.42	10.98	0	No	8	
MW6	25.68	10.35	0	No	7	
MW7	25.75	10.65	0	No	8	
MW8	25.38	11.76	0	No	6	
MW9	25.38	11.54	0	No	6	
MW10	25.27	10.99	0	No	7	
MW11	25.10	10.73	0	No	6	

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

Well #	Ground Water Elevation (feet)	Depth to Water (feet)◆	Product Thickness (feet)	Sheen	Water Purged (gallons)	Total Well Depth (feet)◆
---------------	--	---------------------------------------	---	--------------	---------------------------------------	---

(Monitored on July 23, 1993)

MW1	25.93	10.79	0	--	55	
MW2	26.06	10.83	0	--	0	
MW3	26.10	10.74	0	--	0	
MW4	26.02	11.38	0	--	0	
MW5	25.87	10.53	0	--	55	
MW6	26.16	9.87	0	--	0	
MW7	26.25	10.15	0	--	0	
MW8	25.85	11.29	0	--	0	
MW9	25.85	11.07	0	--	0	
MW10	25.72	10.54	0	--	0	
MW11	25.54	10.29	0	--	0	

(Monitored on June 22, 1993)

MW1	26.39	10.33	0	--	50	
MW2	26.52	10.37	0	--	0	
MW3	26.56	10.28	0	--	0	
MW4	26.49	10.91	0	--	0	
MW5	26.35	10.05	0	--	50	
MW6	26.65	9.38	0	--	0	
MW7	26.74	9.66	0	--	0	
MW8	26.28	10.86	0	--	0	
MW9	26.30	10.62	0	--	0	
MW10	26.14	10.12	0	--	0	
MW11	25.96	9.87	0	--	0	

(Monitored and Sampled on May 21, 1993)

MW1	26.92	9.80	0	No	6.5	
MW2	27.05	9.84	0	No	7	
MW3	27.14	9.70	0	No	9	
MW4	27.08	10.32	0	No	7	
MW5	26.84	9.56	0	No	9	
MW6	27.20	8.83	0	No	8	
MW7	27.24	9.16	0	No	8.5	
MW8	26.74	10.40	0	No	6.5	
MW9	26.76	10.16	0	No	6.5	
MW10	26.63	9.63	0	No	7.5	
MW11	26.43	9.40	0	No	7	

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

Well #	Ground Water Elevation (feet)	Depth to Water (feet)◆	Product Thickness (feet)	Sheen	Water Purged (gallons)	Total Well Depth (feet)◆
(Monitored on April 20, 1993)						
MW1	27.57	9.15	0	--	0	
MW2	27.70	9.19	0	--	0	
MW3	27.82	9.02	0	--	0	
MW4	27.73	9.67	0	--	0	
MW5	27.52	8.88	0	--	0	
MW6	27.91	8.12	0	--	0	
MW7	27.88	8.52	0	--	0	
MW8	27.23	9.91	0	--	0	
MW9	27.30	9.62	0	--	0	
MW10	27.17	9.09	0	--	0	
MW11	26.97	8.86	0	--	0	
(Monitored on March 18, 1993)						
MW1	27.24	9.48	0	--	50	
MW2	27.34	9.55	0	--	0	
MW3	27.34	9.50	0	--	0	
MW4	27.43	9.97	0	--	0	
MW5	27.24	9.16	0	--	50	
MW6	27.29	8.74	0	--	0	
MW7	27.42	8.98	0	--	0	
MW8	27.25	9.89	0	--	0	
MW9	27.37	9.55	0	--	0	
MW10	27.23	9.03	0	--	0	
MW11	27.06	8.77	0	--	0	
(Monitored and Sampled on February 20, 1993)						
MW1	27.71	9.01	0	No	10	
MW2	27.82	9.07	0	No	10	
MW3	27.82	9.02	0	No	10	
MW4	27.81	9.59	0	No	10	
MW5	27.71	8.69	0	No	10	
MW6	27.79	8.24	0	No	10	
MW7	27.85	8.55	0	No	10	
MW8	27.64	9.50	0	No	10	
MW9	27.70	9.22	0	No	10	
MW10	27.69	8.57	0	No	10	
MW11	27.63	8.20	0	No	10	

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Ground Water Elevation (feet)</u>	<u>Depth to Water (feet)◆</u>	<u>Product Thickness (feet)</u>	<u>Sheen</u>	<u>Water Purged (gallons)</u>	<u>Total Well Depth (feet)◆</u>
---------------	--	---------------------------------------	---	--------------	---------------------------------------	---

(Monitored on January 15, 1993)

MW1	26.70	10.02	0	--	50
MW2	26.77	10.12	0	--	0
MW3	26.77	10.07	0	--	0
MW4	26.78	10.62	0	--	0
MW5	26.69	9.71	0	--	50
MW6	26.78	9.25	0	--	0
MW7	26.81	9.59	0	--	0
MW8	26.64	10.50	0	--	0
MW9	26.68	10.24	0	--	0
MW10	26.66	9.60	0	--	0
MW11	26.60	9.23	0	--	0

(Monitored on December 10, 1992)

MW1	23.57	13.15	0	--	50
MW2	23.68	13.21	0	--	0
MW3	23.69	13.15	0	--	0
MW4	23.73	13.67	0	--	0
MW5	23.82	12.58	0	--	50
MW6	23.70	12.33	0	--	0
MW7	23.88	12.52	0	--	0
MW8	23.63	13.51	0	--	0
MW9	23.52	13.40	0	--	0
MW10	23.73	12.53	0	--	0
MW11	23.59	12.24	0	--	0

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Well Cover Elevation (feet)*</u>	<u>Well Casing Elevation (feet)**</u>
MW-1	36.72	36.37
MW-2	36.89	36.34
MW-3	36.84	36.42
MW-4	37.40	37.04
MW-5	36.40	35.94
MW-6	36.03	35.67
MW-7	36.40	36.09
MW-8	37.14	36.89
MW-9	36.92	36.29
MW-10	36.26	36.04
MW-11	35.83	35.50

◆ The depth to water level and total well depth measurements were taken from the top of the well casing. Prior to September 24, 1993, the water level and total well depth measurements were taken from the top of the well cover.

* The elevations of the tops of the well covers have been surveyed relative to Mean Sea Level (MSL), per a Benchmark (elevation = 36.88 MSL) located at the northwest corner of East 14th Street and 150th Avenue.

** Relative to MSL.

-- Sheen determination was not performed.

Note: Monitoring data prior to September 24, 1993, were provided by Kaprealian Engineering, Inc.

TABLE 2

**SUMMARY OF LABORATORY ANALYSES
WATER**

<u>Date</u>	<u>Well #</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>
11/23/93	MW1	18,000	210	63	900	620
	MW2	11,000	80	10	480	20
	MW3	2,300	34	ND	24	5.6
	MW4	720	10	ND	8.7	ND
	MW5	46,000	290	310	4,100	15,000
	MW6	520	ND	1.7	1.9	0.82
	MW7	19,000	310	30	2,500	2,300
	MW8	1,800	ND	3.4	ND	ND
	MW9	2,500	23	2.1	ND	ND
	MW10	18,000	300	10	2,800	110
	MW11	3,400	105	ND	120	43
8/23/93	MW1	24,000	160	110	840	810
	MW2	15,000	110	ND	590	64
	MW3	2,900	25	ND	50	18
	MW4	1,200	5.0	ND	16	ND
	MW5	61,000	340	380	3,600	14,000
	MW6	1,000	9.4	2.3	5.0	2.3
	MW7	33,000	360	ND	2,500	4,300
	MW8	280*	49	4.5	ND	ND
	MW9	3,000	29	ND	ND	ND
	MW10	20,000	230	13	3,200	140
	MW11	5,400	68	ND	230	43
5/21/93	MW1	27,000	150	200	1,200	950
	MW2	9,500	37	ND	470	62
	MW3	2,600	42	ND	43	15
	MW4	1,900	31	ND	20	4.5
	MW5	55,000	ND	160	3,500	12,000
	MW6	940	18	1.0	7.1	2.7
	MW7	22,000	330	37	2,100	2,900
	MW8	2,500	44	ND	ND	ND
	MW9	3,200	32	ND	8.1	ND
	MW10	23,000	250	ND	3,000	240
	MW11	7,100	64	ND	340	120

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

<u>Date</u>	<u>Well #</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>
2/20/93	MW1	19,000	190	ND	880	620
	MW2	1,500	2.9	3.8	9.1	ND
	MW3	1,600	12	18	8.9	12
	MW4	2,400	40	2.1	33	ND
	MW5	17,000	75	ND	1,000	620
	MW6	2,400	43	ND	33	2.0
	MW7	1,800	37	4.6	11	7.7
	MW8	2,200	32	ND	42	5.0
	MW9	2,300	47	ND	32	ND
	MW10	17,000	74	ND	1,000	620
	MW11	18,000	76	ND	1,000	630
11/10/92	MW1	18,000	220	ND	690	830
	MW2	11,000	36	7.2	570	45
	MW3	3,400	37	ND	85	34
	MW4	690	9.1	ND	16	2.8
	MW5	57,000	800	1,800	4,400	18,000
	MW6	490	7.0	1.2	1.7	ND
	MW7	1,800	74	ND	230	350
	MW8	1,800	20	ND	ND	ND
	MW9	4,200	ND	ND	21	23
	MW10	15,000	300	42	3,500	330
	MW11	5,800	130	ND	260	42
8/20/92	MW1	18,000	230	22	640	950
	MW2	13,000	52	ND	660	70
	MW3	4,500	58	ND	65	35
	MW4	1,000	15	ND	11	3.0
	MW5	58,000	660	1,700	4,200	19,000
	MW6	280	8.4	ND	0.51	0.84
	MW7	13,000	460	54	ND	3,100
	MW8	3,500*	67	11	ND	ND
	MW9	3,800*	37	ND	ND	ND
	MW10	15,000	230	ND	1,000	350
	MW11	4,600*	62	ND	ND	54

TABLE 2 (Continued)

**SUMMARY OF LABORATORY ANALYSES
WATER**

<u>Date</u>	<u>Well #</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>
5/19/92	MW1	29,000	650	370	1,100	1,200
	MW2	17,000	140	87	680	170
	MW3	3,400	25	3.6	66	41
	MW4	2,000	20	3.5	42	8.3
	MW5	84,000	760	1,500	4,000	17,000
	MW6	1,300	2.0	2.1	ND	2.7
	MW7	17,000	540	90	1,200	1,900
	MW8	5,300	28	3.3	2.6	2.1
	MW9	8,100	11	ND	25	5.8
3/17/92	MW1	23,000	320	19	1,000	940
	MW2	16,000	110	ND	730	220
	MW3	5,800	66	7.5	100	58
	MW4	1,800	3.7	1.4	90	21
	MW5	81,000	850	1,600	4,800	18,000
12/18/91	MW1	17,000	160	20	1,400	1,600
	MW2	10,000	110	5.1	420	96
	MW3	5,900	54	6.4	110	64
	MW4	2,500	28	2.5	54	22
	MW5	31,000	1,600	3,100	4,800	19,000
9/19/91	MW1	26,000	130	16	1,300	1,800
	MW2	19,000	100	6.8	790	310
	MW3	7,600	ND	13	190	170
	MW4	1,800	0.83	ND	54	46
	MW5	57,000	1,600	2,700	5,200	20,000
5/04/91	MW1	31,000	74	20	920	1,500
	MW2	19,000	6.6	1.4	460	630
	MW3	9,100	2.0	ND	55	180
	MW4	6,300	ND	ND	2.8	61
	MW5	69,000	1,400	2,500	3,500	15,000

TABLE 2 (Continued)

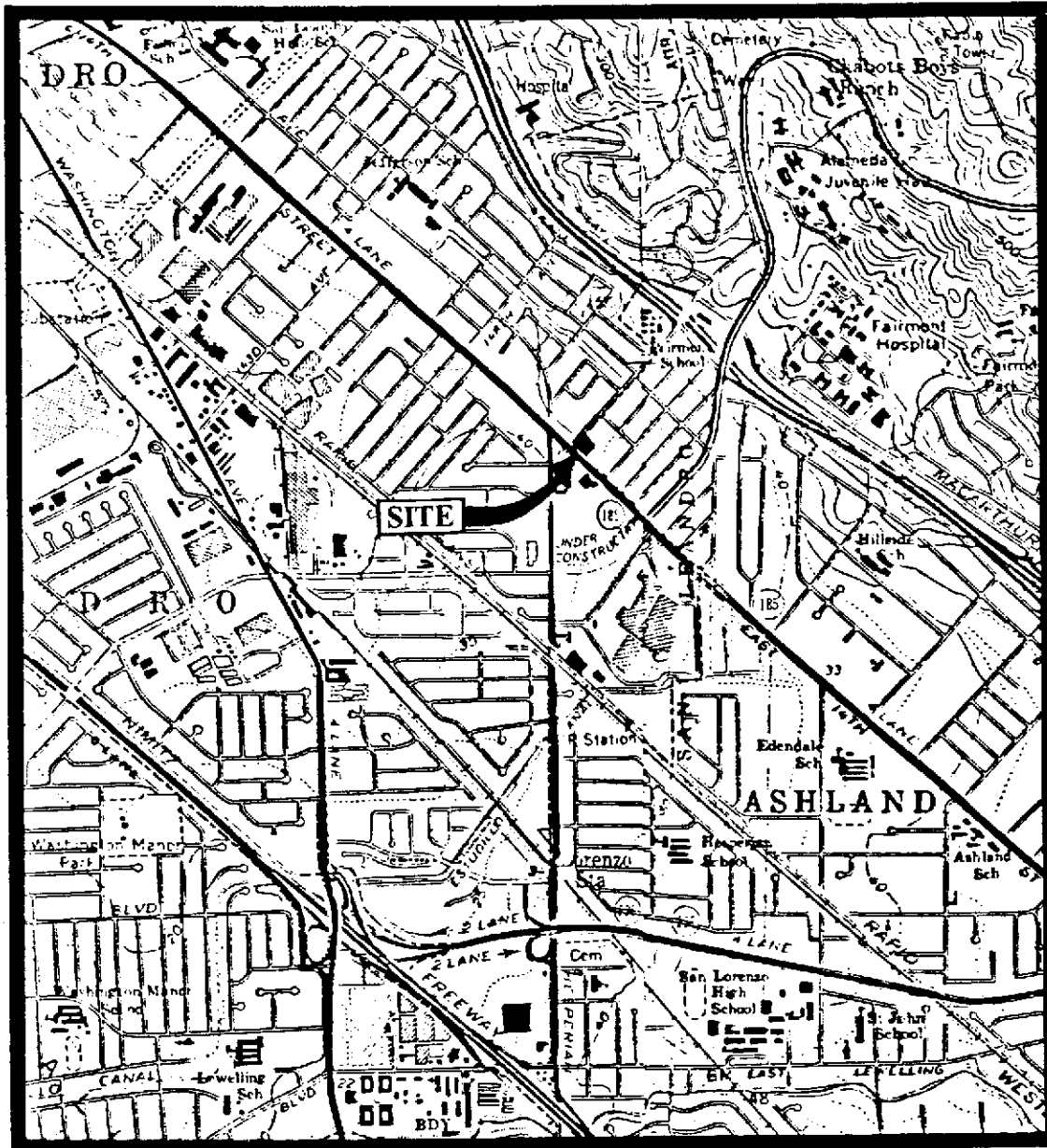
SUMMARY OF LABORATORY ANALYSES
WATER

ND = Non-detectable.

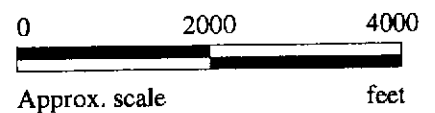
* Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

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

Note: Laboratory analyses data prior to November 23, 1993, were provided by Kaprealian Engineering, Inc.



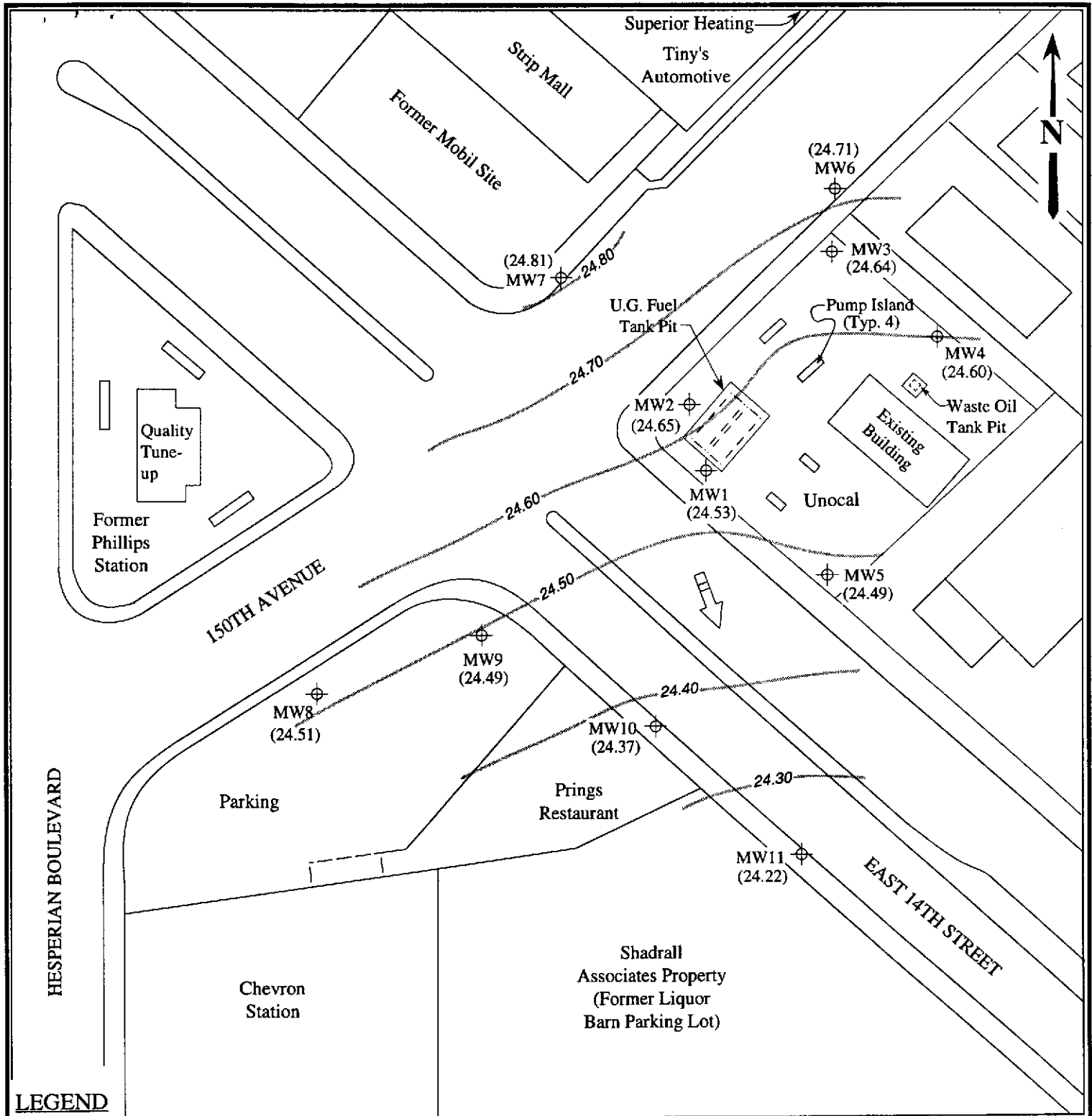
Base modified from 7.5 minute U.S.G.S.
Hayward and San Leandro Quadrangles
(both photorevised 1980)



MPDS
SERVICES, INCORPORATED

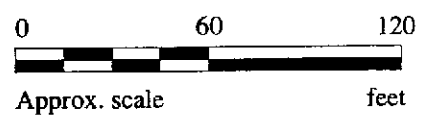
UNOCAL SERVICE STATION #3292
15008 E. 14TH STREET
SAN LEANDRO, CALIFORNIA

LOCATION
MAP



LEGEND

- ⊕ Monitoring well
- () Ground water elevation in feet above Mean Sea Level
- ➔ Direction of ground water flow
- Contours of ground water elevation

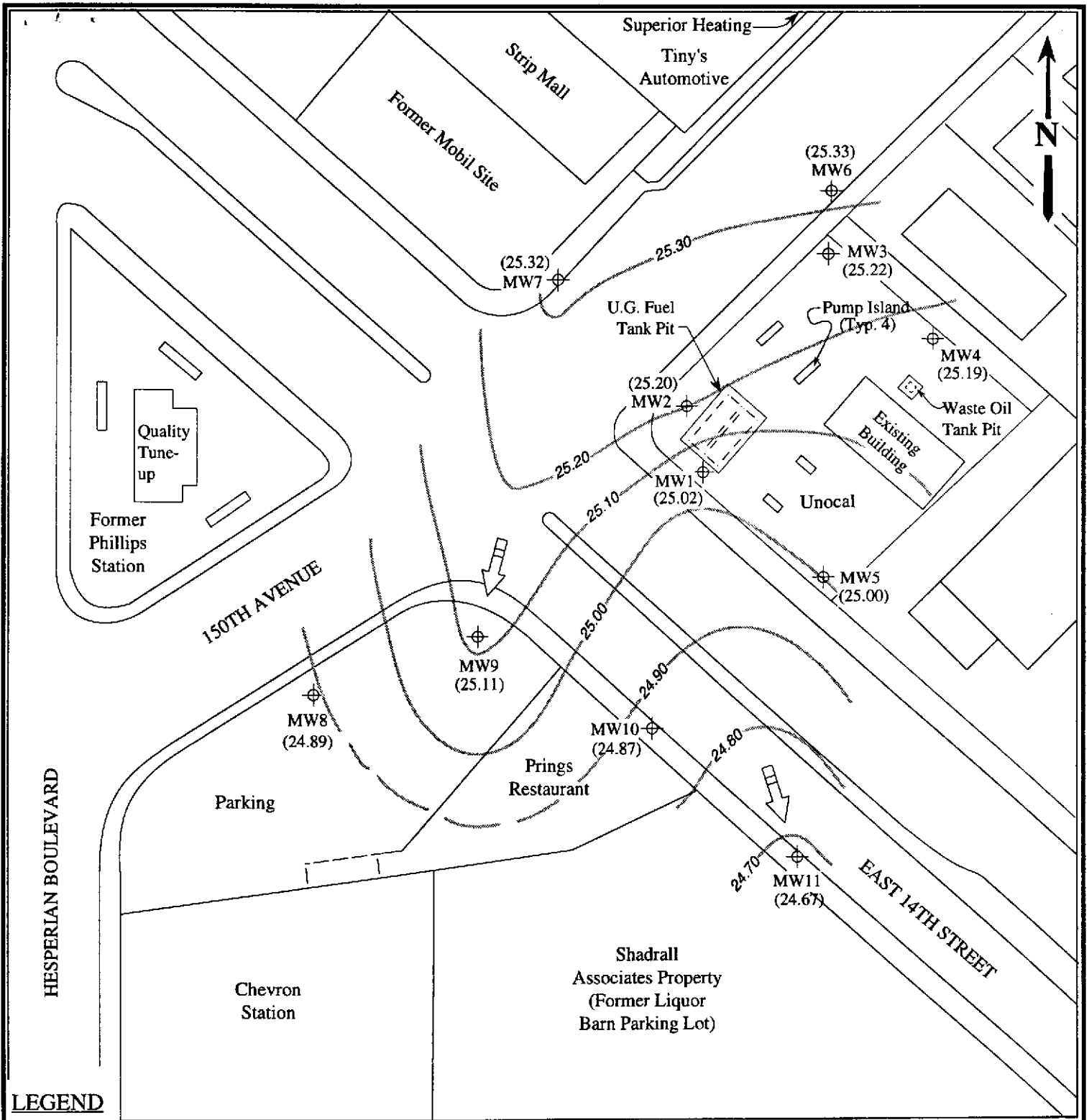


POTENTIOMETRIC SURFACE MAP FOR THE NOVEMBER 23, 1993 MONITORING EVENT

MPDS
SERVICES, INCORPORATED

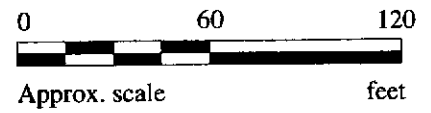
UNOCAL SERVICE STATION #3292
15008 E. 14TH STREET
SAN LEANDRO, CALIFORNIA

FIGURE
1



LEGEND

- ⊕ Monitoring well
- () Ground water elevation in feet above Mean Sea Level
- ➔ Direction of ground water flow
- Contours of ground water elevation

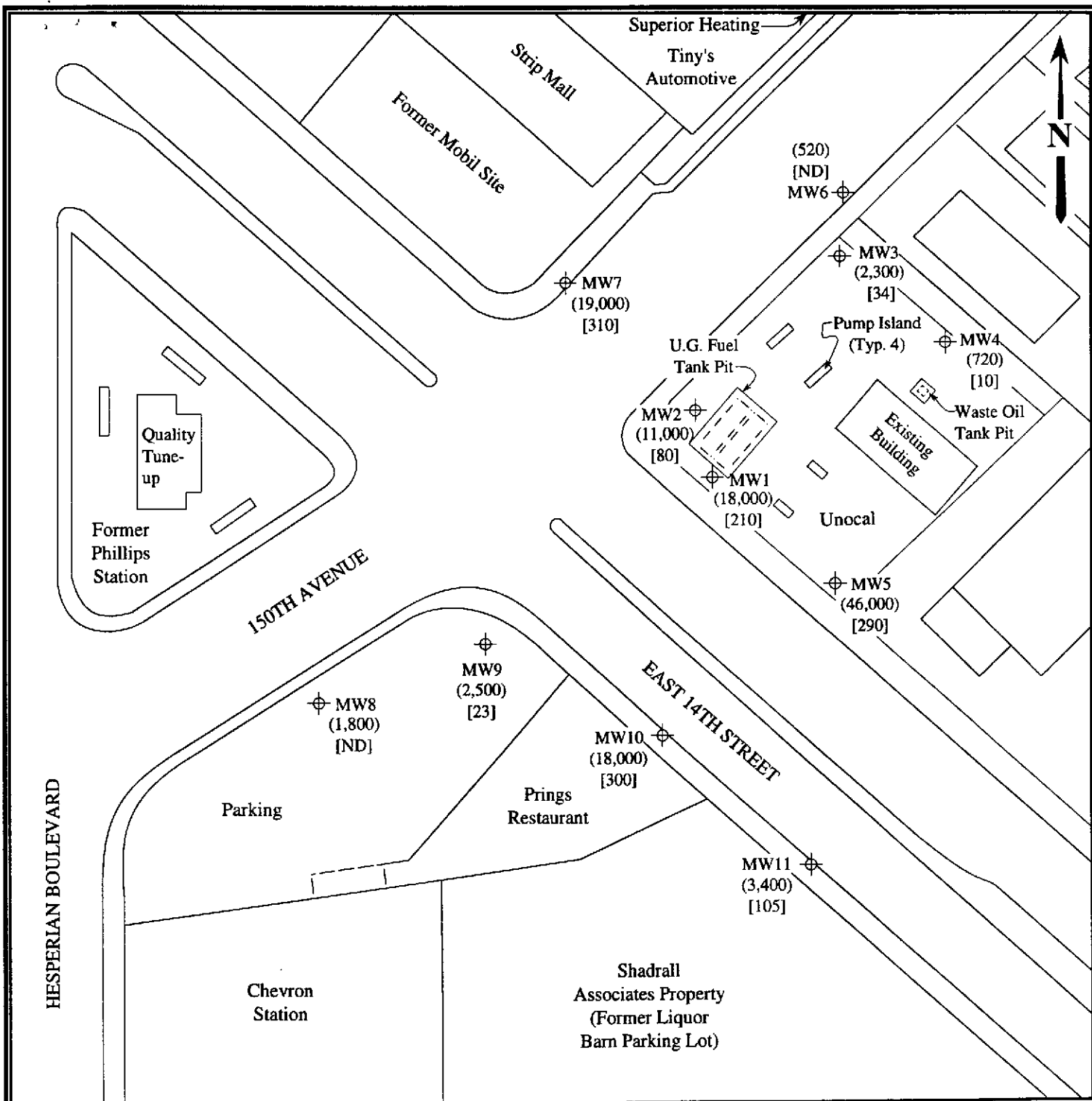


POTENTIOMETRIC SURFACE MAP FOR THE SEPTEMBER 24, 1993 MONITORING EVENT

MPDS
SERVICES, INCORPORATED

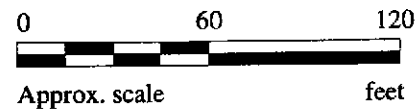
UNOCAL SERVICE STATION #3292
15008 E. 14TH STREET
SAN LEANDRO, CALIFORNIA

FIGURE
2



LEGEND

- ⊕ Monitoring well
- () Concentration of TPH as gasoline in ppb
- [] Concentration of benzene in ppb
- ND = Non-detectable



PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON NOVEMBER 23, 1993

MPDS
SERVICES, INCORPORATED

UNOCAL SERVICE STATION #3292
15008 E. 14TH STREET
SAN LEANDRO, CALIFORNIA

FIGURE
3



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

MPDS Services
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedessian

Client Project ID: Unocal 3292, 15008 East 14th Street
Sample Matrix: Water San Leandro
Analysis Method: EPA 5030/8015/8020
First Sample #: 311-2740

Sampled: Nov 23, 1993
Received: Nov 30, 1993
Reported: Dec 14, 1993

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 311-2740 MW-1	Sample I.D. 311-2741 MW-2	Sample I.D. 311-2742 MW-3	Sample I.D. 311-2743 MW-4	Sample I.D. 311-2744 MW-5	Sample I.D. 311-2745 MW-6
Purgeable Hydrocarbons	50	18,000	11,000	2,300	720	46,000	520
Benzene	0.5	210	80	34	10	290	N.D.
Toluene	0.5	63	10	N.D.	N.D.	310	1.7
Ethyl Benzene	0.5	900	480	24	8.7	4,100	1.9
Total Xylenes	0.5	620	20	5.6	N.D.	15,000	0.82
Chromatogram Pattern:		Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	40	20	2.0	1.0	50	1.0
Date Analyzed:	12/7/93	12/7/93	12/13/93	12/13/93	12/7/93	12/7/93
Instrument Identification:	HP-5	HP-5	HP-4	HP-4	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	91	79	76	71	88	106

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL


Alan B. Kemp
Project Manager



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

MPDS Services
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedessian

Client Project ID: Unocal 3292, 15008 East 14th Street, San Leandro
Matrix: Liquid

QC Sample Group: 3112740-50

Reported: Dec 14, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon

MS/MSD				
Batch#:	3112364	3112364	3112364	3112364
Date Prepared:	12/7/93	12/7/93	12/7/93	12/7/93
Date Analyzed:	12/7/93	12/7/93	12/7/93	12/7/93
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	20µg/L	20µg/L	20µg/L	60µg/L
Matrix Spike				
% Recovery:	116	112	107	106
Matrix Spike Duplicate %				
Recovery:	123	112	101	102
Relative %				
Difference:	5.9	0.0	5.8	3.8

LCS Batch#:	--	--	--	--
Date Prepared:	--	--	--	--
Date Analyzed:	--	--	--	--
Instrument I.D.#:	--	--	--	--
LCS %				
Recovery:	--	--	--	--

% Recovery				
Control Limits:	71-133	72-128	72-130	71-120

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


Alan B. Kemp
Project Manager



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

MPDS Services
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedessian

Client Project ID: Unocal 3292, 15008 East 14th Street, San Leandro
Matrix: Liquid

QC Sample Group: 3112740-50

Reported: Dec 13, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon

MS/MSD Batch#:	3112629	3112629	3112629	3112629
Date Prepared:	12/7/93	12/7/93	12/7/93	12/7/93
Date Analyzed:	12/7/93	12/7/93	12/7/93	12/7/93
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	20µg/L	20µg/L	20µg/L	60µg/L
Matrix Spike % Recovery:	127	108	111	110
Matrix Spike Duplicate % Recovery:	122	104	107	105
Relative % Difference:	4.0	3.8	3.7	4.7

LCS Batch#:	LCS120793	LCS120793	LCS120793	LCS120793
Date Prepared:	12/7/93	12/7/93	12/7/93	12/7/93
Date Analyzed:	12/7/93	12/7/93	12/7/93	12/7/93
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	110	114	116	128

% Recovery Control Limits:	71-133	72-128	72-130	71-120
----------------------------	--------	--------	--------	--------

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

Alan B. Kemp
Project Manager



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

MPDS Services
2401 Starwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedessian

Client Project ID: Unocal 3292, 15008 East 14th Street, San Leandro
Matrix: Liquid

QC Sample Group: 3112740-50

Reported: Dec 13, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon

MS/MSD

Batch#:	3112583	3112583	3112583	3112583
Date Prepared:	12/9/93	12/9/93	12/9/93	12/9/93
Date Analyzed:	12/9/93	12/9/93	12/9/93	12/9/93
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20µg/L	20µg/L	20µg/L	60µg/L
Matrix Spike % Recovery:	91	95	99	99
Matrix Spike Duplicate % Recovery:	94	98	100	99
Relative % Difference:	3.2	3.1	1.0	0.0

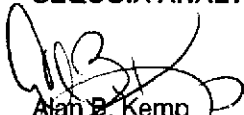
LCS Batch#:	LCS120893	LCS120893	LCS120893	LCS120893
Date Prepared:	12/8/93	12/8/93	12/8/93	12/8/93
Date Analyzed:	12/8/93	12/8/93	12/8/93	12/8/93
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
LCS % Recovery:	100	101	103	103

% Recovery Control Limits:	71-133	72-128	72-130	71-120
-----------------------------------	--------	--------	--------	--------

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


Alan B. Kemp
Project Manager



SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

MPDS Services
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedessian

Client Project ID: Unocal 3292, 15008 East 14th Street, San Leandro
Matrix: Liquid

QC Sample Group: 3112740-50

Reported: Dec 13, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon

MS/MSD

Batch#:	3120534	3120534	3120534	3120534
Date Prepared:	12/13/93	12/13/93	12/13/93	12/13/93
Date Analyzed:	12/13/93	12/13/93	12/13/93	12/13/93
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	30µg/L	30µg/L	30µg/L	90µg/L
Matrix Spike % Recovery:	97	97	97	96
Matrix Spike Duplicate % Recovery:	97	97	97	96
Relative % Difference:	0.0	0.0	0.0	0.0

LCS Batch#:	LCS121393	LCS121393	LCS121393	LCS121393
Date Prepared:	12/13/93	12/13/93	12/13/93	12/13/93
Date Analyzed:	12/13/93	12/13/93	12/13/93	12/13/93
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
LCS % Recovery:	81	99	106	105

% Recovery Control Limits:	71-133	72-128	72-130	71-120
----------------------------	--------	--------	--------	--------

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


Alan B. Kemp
Project Manager

MPDS

Services, Inc.

CHAIN OF CUSTODY

SAMPLER		SITE NAME & ADDRESS							ANALYSES REQUESTED						TURN AROUND TIME:	
STEVE		UNO # 3292 SAN LEANDRO 15008 EAST 14 TH STREET													REGULAR	
WITNESSING AGENCY									TPH-G BTXE							REMARKS
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION								
MW-1	11-23-93			X	X		2	MW	X							3112740 A-B 2741 2742 2743 2744 2745 2746 2747 2748
MW-2	"			X	X		2	"	X							
MW-3	"			X	X		2	"	X							
MW-4	"			X	X		2	"	X							
MW-5	"			X	X		2	"	X							
MW-6	"			X	X		2	"	X							
MW-7	"			X	X		2	"	X							
MW-8	"			X	X		2	"	X							
MW-9	"			X	X		2	"	X							
Relinquished by: (Signature) STEVE		Date/Time 11/30/93 0940		Received by: (Signature) Eva Vonard							The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <input checked="" type="checkbox"/> Y 2. Will samples remain refrigerated until analyzed? <input checked="" type="checkbox"/> Y 3. Did any samples received for analysis have head space? <input checked="" type="checkbox"/> N 4. Were samples in appropriate containers and properly packaged? <input checked="" type="checkbox"/> Y Signature: <u>SV</u> Title: <u>FS</u> Date: <u>11/30/93</u>					
Relinquished by: (Signature)		Date/Time		Received by: (Signature)												
Relinquished by: (Signature)		Date/Time		Received by: (Signature)												
Relinquished by: (Signature)		Date/Time		Received by: (Signature)												

MPDS

Services, Inc.

CHAIN OF CUSTODY

SAMPLER		SITE NAME & ADDRESS							ANALYSES REQUESTED						TURN AROUND TIME:	
STEVE		UNO # 3292 SAN LEANDRO 15008 EAST 14 TH STREET							TPH-G BTXE						REGULAR	
WITNESSING AGENCY		SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP							NO. OF CONT.	SAMPLING LOCATION
MW-1	11-23-93				X	X			2	MW	X				3112740 A-B 2741 2742 2743 2744 2745 2746 2747 2748	
MW-2	"				X	X			2	"	X					
MW-3	"				X	X			2	"	X					
MW-4	"				X	X			2	"	X					
MW-5	"				X	X			2	"	X					
MW-6	"				X	X			2	"	X					
MW-7	"				X	X			2	"	X					
MW-8	"				X	X			2	"	X					
MW-9	"				X	X			2	"	X					
Relinquished by: (Signature) STEVE		Date/Time 11/30/93 0940		Received by: (Signature) Eun Vornard							The following MUST BE completed by the laboratory accepting samples for analysis:					
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							1. Have all samples received for analysis been stored in ice? <input checked="" type="checkbox"/> Y					
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							2. Will samples remain refrigerated until analyzed? <input checked="" type="checkbox"/> Y					
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							3. Did any samples received for analysis have head space? <input checked="" type="checkbox"/> N					
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							4. Were samples in appropriate containers and properly packaged? <input checked="" type="checkbox"/> Y					
											Signature SV		Title FS		Date 11/30/93	