

MONITORING
PURGING
DISPOSING
SAMPLING

MPDS

SERVICES, INCORPORATED

95 MAY 15 AM 11:06

May 10, 1995

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

RE: Unocal Service Station #7004
15599 Hesperian Boulevard
San Leandro, California 94579

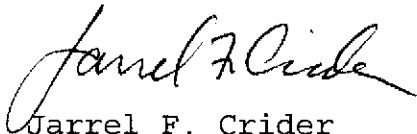
SOS

Per the request of the Unocal Corporation Project Manager, Mr. Adadu Yemane, enclosed please find our report (MPDS-UN7004-06) dated April 28, 1995 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) 277-2383.

Sincerely,

MPDS Services, Inc.


Jarrel F. Crider

/jfc

Enclosure

cc: Mr. Adadu Yemane

95 MAY 15 AM 11:06

MPDS-UN7004-06
April 28, 1995

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

Attention: Mr. Adadu Yemane

RE: Quarterly Data Report
Unocal Service Station #7004
15599 Hesperian Boulevard
San Leandro, California

Dear Mr. Yemane:

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 monitoring wells that were monitored and sampled during this quarter 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 quarter is shown on the attached Figure 1.

Ground water samples were collected on April 5, 1995. Prior to sampling, the wells were each purged of between 9 and 10 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. 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 Table 2. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline and benzene detected in the ground water samples collected this quarter are shown on the attached Figure 2. Copies of the laboratory analytical results and the Chain of Custody documentation 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

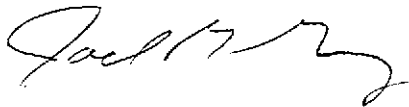
A copy of this report should be sent to the Alameda County Health Care Services, and to Mr. Michael Bakaldin of the City of San Leandro Fire Department.

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

Sincerely,

MPDS Services, Inc.


Sarkis A. Karkarian
Staff Engineer



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

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

/bp

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

cc: Mr. Timothy R. Ross, 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 5, 1995)						
MW1*	24.63	11.76	24.70	0	--	0
MW2*	24.95	12.12	24.75	0	--	0
MW3	24.76	12.03	25.11	0	No	9
MW4*	24.39	11.05	25.94	0	--	0
MW5	25.09	11.72	26.25	0	No	10
MW6*	24.99	12.14	25.97	0	--	0
(Monitored and Sampled on January 5, 1995)						
MW1	21.71	14.68	24.20	0	No	7
MW2	21.77	15.30	24.38	0	No	7
MW3	21.67	15.12	24.70	0	No	7
MW4	21.61	13.83	25.64	0	No	8.5
MW5	21.61	15.20	26.12	0	No	8
MW6	21.71	15.42	25.60	0	No	7.5
(Monitored and Sampled on October 6, 1994)						
MW1*	19.68	16.71	24.20	0	--	0
MW2*	20.75	16.32	24.38	0	--	0
MW3	20.56	16.23	24.68	0	No	6
MW4*	20.44	15.00	25.63	0	--	0
MW5	20.39	16.42	26.10	0	No	7
MW6*	20.55	16.58	25.60	0	--	0
(Monitored and Sampled on July 8, 1994)						
MW1	21.73	14.66	24.20	0	No	7
MW2	21.79	15.28	24.37	0	No	7
MW3	21.59	15.20	24.68	0	No	7
MW4	21.48	13.96	25.64	0	No	8
MW5	21.43	15.38	26.10	0	No	8
MW6	21.58	15.55	25.60	0	No	7

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Well Casing Elevation (feet)**</u>
MW1	36.39
MW2	37.07
MW3	36.79
MW4	35.44
MW5	36.81
MW6	37.13

◆ 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), based on the City of San Leandro Benchmark (elevation = 36.04 feet MSL).

-- Sheen determination was not performed.

TABLE 2

**SUMMARY OF LABORATORY ANALYSES
 WATER**

Date	Well #	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
4/05/95	MW3	18,000	2,100	ND	3,700	690	--
	MW5	ND	ND	ND	ND	ND	--
1/05/95	MW1	ND	ND	ND	ND	ND	--
	MW2	310*	ND	ND	ND	ND	--
	MW3	20,000	2,100	ND	3,200	3,800	--
	MW4	ND	ND	ND	ND	ND	--
	MW5	85	ND	ND	ND	ND	--
	MW6	ND	ND	ND	ND	ND	--
10/06/94	MW1	SAMPLED SEMI-ANNUALLY					
	MW2	SAMPLED SEMI-ANNUALLY					
	MW3	20,000	2,100	26	3,000	900	--
	MW4	SAMPLED SEMI-ANNUALLY					
	MW5	350	1.3	ND	ND	ND	--
	MW6	SAMPLED SEMI-ANNUALLY					
7/08/94	MW1	ND	ND	ND	ND	ND	--
	MW2	140*	ND	ND	ND	ND	--
	MW3	18,000	2,200	25	2,500	860	--
	MW4	ND	ND	ND	ND	ND	--
	MW5	200	ND	ND	ND	ND	--
	MW6	ND	ND	ND	ND	ND	--
4/06/94	MW1	SAMPLED SEMI-ANNUALLY					
	MW2	SAMPLED SEMI-ANNUALLY					
	MW3	24,000	3,100	ND	3,300	820	--
	MW4	SAMPLED SEMI-ANNUALLY					
	MW5	260	1.4	ND	0.88	ND	--
	MW6	SAMPLED SEMI-ANNUALLY					
1/11/94	MW1	ND	ND	ND	ND	ND	--
	MW2	120*	ND	ND	ND	ND	--
	MW3	19,000	3,300	31	3,300	890	--
	MW4	ND	ND	ND	ND	ND	--
	MW5	160	ND	0.79	0.54	ND	--
	MW6	ND	ND	ND	ND	ND	--

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
 WATER

Date	Well #	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
10/06/93	MW3	24,000	4,100	ND	3,600	2,000	ND
	MW5	150	1.1	ND	3.1	0.85	57
7/22/93	MW1	ND	ND	ND	ND	ND	77
	MW2	62*	ND	ND	ND	ND	42
	MW3	16,000	4,500	17	3,600	1,900	440
	MW4	ND	ND	ND	ND	ND	54
	MW5	59**	ND	ND	2.6	ND	42
	MW6	ND	ND	ND	ND	ND	ND
4/20/93 &	MW1	--	--	--	--	--	56
	MW2	--	--	--	--	--	80
4/23/93	MW3	18,000	3,700	11	2,300	1,300	410
	MW4	--	--	--	--	--	65
	MW5	99*	ND	ND	ND	ND	120
	MW6	--	--	--	--	--	ND
1/21/93	MW1	ND	ND	ND	ND	ND	42
	MW2	ND	ND	ND	ND	ND	17
	MW3	12,000	2,800	11	1,600	590	--
	MW4	ND	ND	ND	ND	ND	--
	MW5	100*	ND	ND	ND	ND	160
	MW6	ND	ND	ND	ND	ND	--
10/28/92	MW1	SAMPLED SEMI-ANNUALLY					
	MW2	SAMPLED SEMI-ANNUALLY					
	MW3	15,000	4,400	15	2,400	800	--
	MW4	SAMPLED SEMI-ANNUALLY					
	MW5	ND	ND	ND	ND	ND	45
	MW6	SAMPLED SEMI-ANNUALLY					
7/09/92	MW1	70*	ND	ND	ND	ND	130
	MW2	ND	ND	ND	ND	ND	49
	MW3	13,000	3,200	12	1,900	1,100	--
	MW4	ND	ND	ND	ND	ND	--
	MW5	ND	ND	ND	ND	ND	71
	MW6	ND	ND	ND	ND	ND	--

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>	<u>MTBE</u>
4/14/92	MW1	76*	ND	ND	ND	ND	--
	MW2	45*	ND	ND	ND	ND	--
	MW3	16,000	3,400	19	1,400	1,300	--
	MW4	ND	ND	ND	ND	ND	--
	MW5	86*	ND	ND	ND	ND	--
	MW6	ND	ND	ND	ND	ND	--
1/14/92	MW1	ND	ND	ND	ND	ND	--
	MW2	ND	ND	ND	ND	ND	--
	MW3	13,000	6,600	19	2,600	1,800	--
	MW4	ND	ND	ND	ND	ND	--
	MW5	60*	ND	ND	ND	ND	--
	MW6	ND	ND	ND	ND	ND	--
10/14/91	MW1	ND	ND	ND	ND	ND	--
	MW2	ND	ND	ND	ND	ND	--
	MW3	25,000	6,300	78	2,000	1,400	--
	MW4	ND	ND	ND	ND	ND	--
	MW5	140	0.72	ND	1.3	0.89	--
	MW6	ND	ND	ND	ND	ND	--
7/23/91	MW1	ND	ND	ND	ND	ND	--
	MW2	ND	ND	ND	ND	ND	--
	MW3	17,000	5,500	26	1,800	2,800	--
	MW4	ND	ND	ND	ND	ND	--
	MW5	260	1.2	0.39	10	0.71	--
	MW6	ND	ND	ND	ND	ND	--
5/04/91	MW1	ND	ND	ND	ND	ND	--
	MW2	ND	ND	ND	ND	ND	--
	MW3	34,000	6,100	32	1,200	6,100	--

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

MTBE = Methyl tert butyl ether.

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

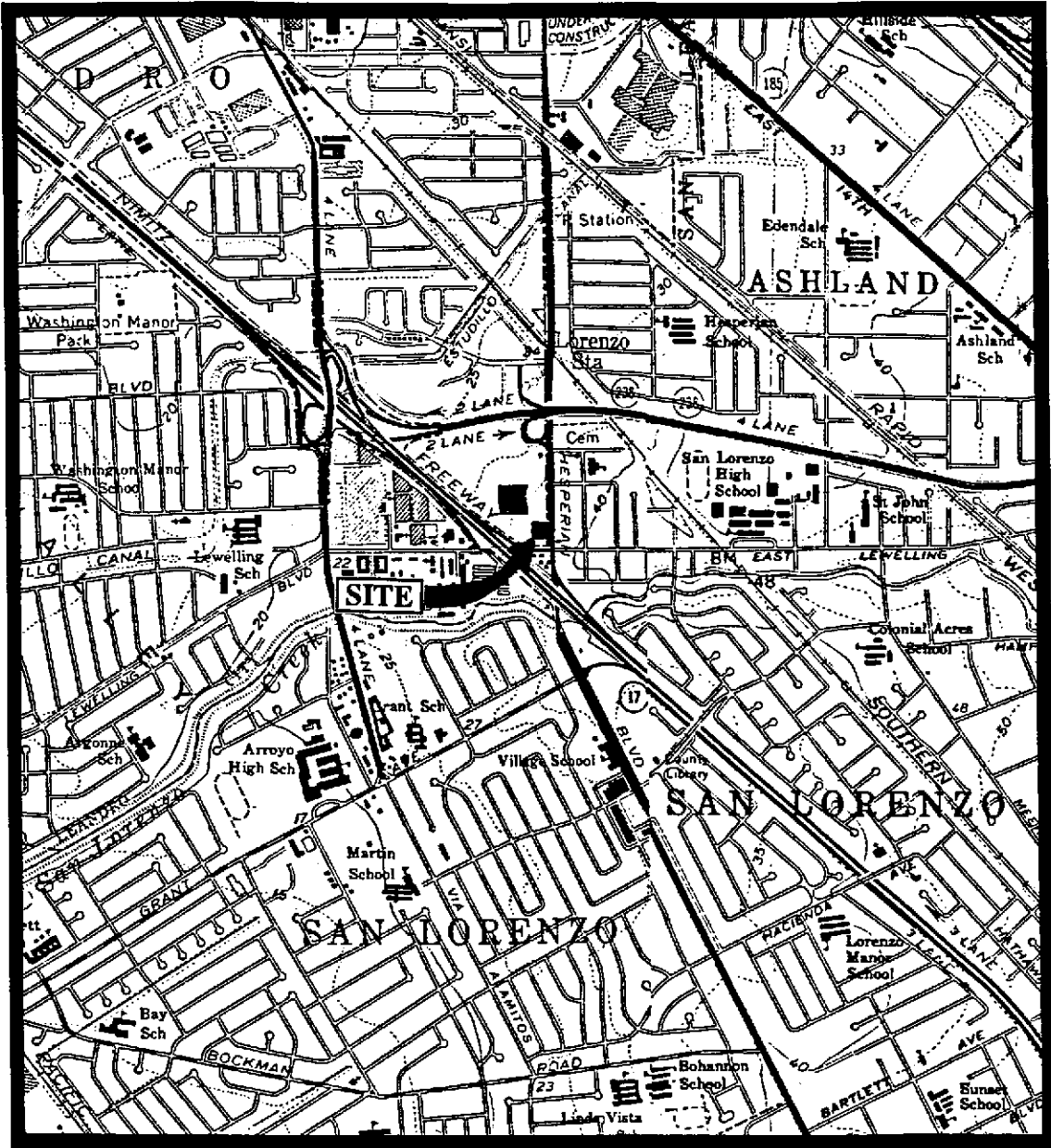
** Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

ND = Non-detectable.

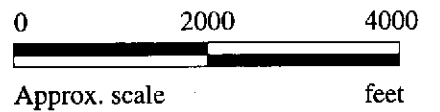
-- Indicates analysis was not performed.

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

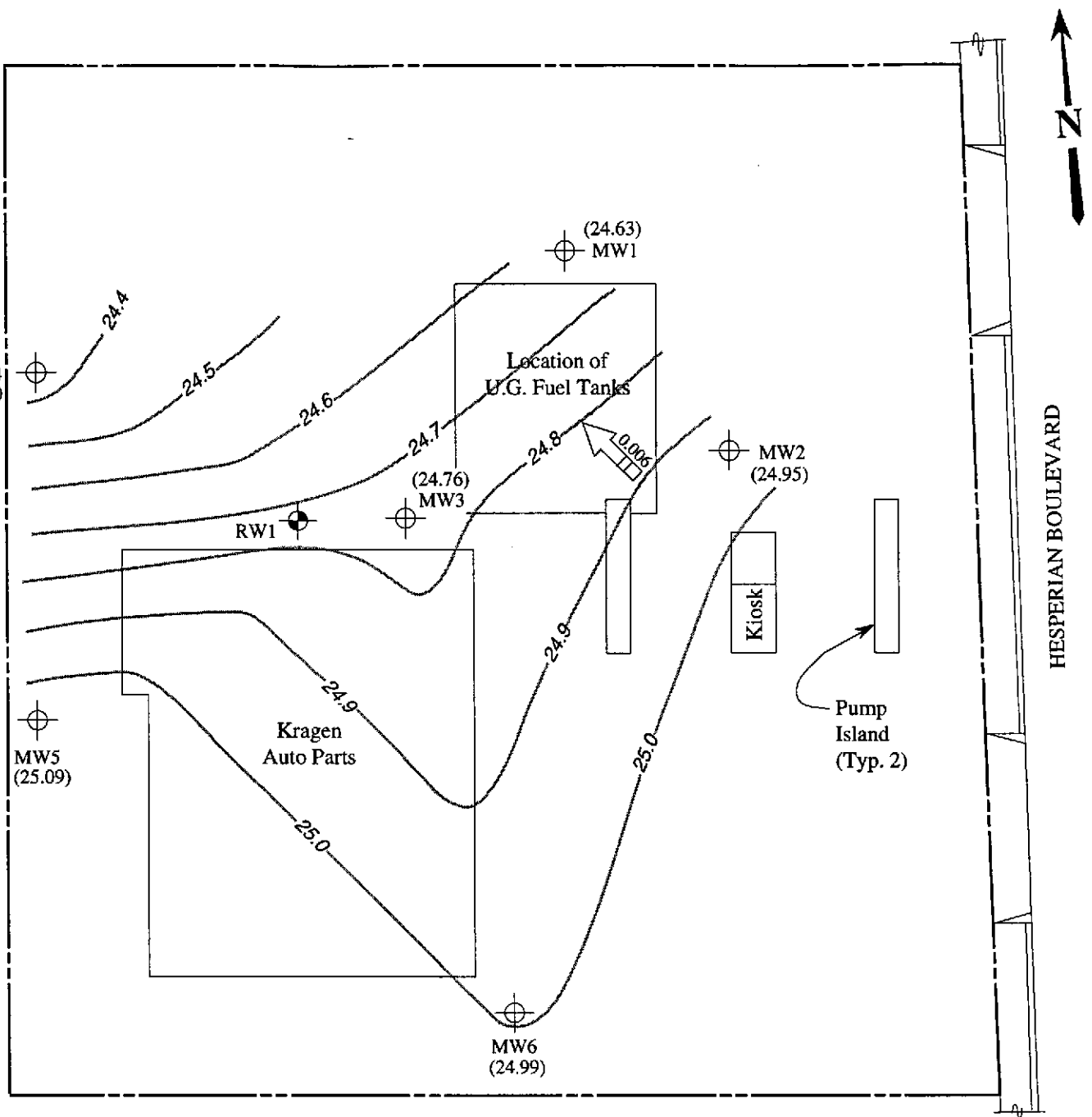
Note: Laboratory analyses data prior to January 11, 1994, were provided by Kaprealian Engineering, Inc.







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

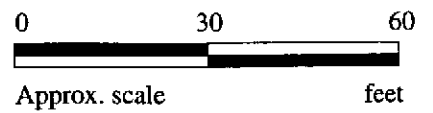


	<p>UNOCAL SERVICE STATION #7004 15599 HESPERIAN BOULEVARD SAN LEANDRO, CALIFORNIA</p>	<p>LOCATION MAP</p>
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LEGEND

-  Monitoring well
-  Aquifer testing well
- () Ground water elevation in feet above Mean Sea Level
-  Direction of ground water flow with approximate hydraulic gradient
-  Contours of ground water elevation

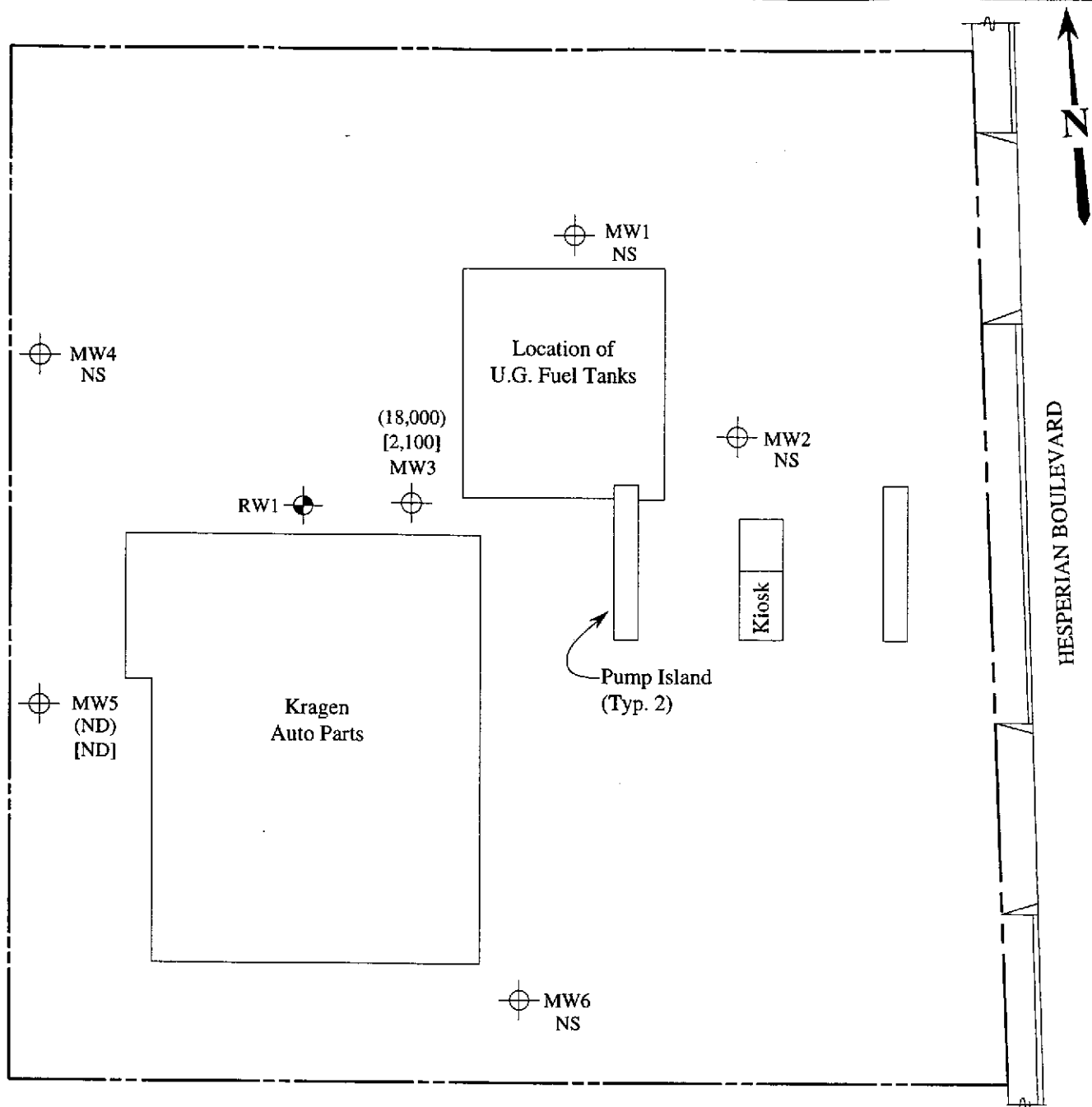


POTENTIOMETRIC SURFACE MAP FOR THE APRIL 5, 1995 MONITORING EVENT

mpds SERVICES, INCORPORATED

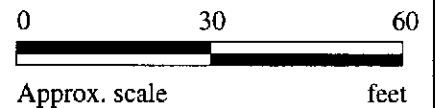
**UNOCAL SERVICE STATION #7004
15599 HESPERIAN BOULEVARD
SAN LEANDRO, CALIFORNIA**

**FIGURE
1**



LEGEND

- ⊕ Monitoring well
- Aquifer testing well
- () Concentration of TPH as gasoline in $\mu\text{g/L}$
- [] Concentration of benzene in $\mu\text{g/L}$
- NS = Not sampled, ND = Non-detectable



PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON APRIL 5, 1995

MPDS SERVICES, INCORPORATED

**UNOCAL SERVICE STATION #7004
15599 HESPERIAN BOULEVARD
SAN LEANDRO, CALIFORNIA**

**FIGURE
2**



MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Sarkis Karkarian	Client Project ID: Unocal #7004, 15599 Hesperian, Matrix Descript: Water Analysis Method: EPA 5030/8015/8020 First Sample #: 504-0169	San Leandro	Sampled: Apr 5, 1995 Received: Apr 5, 1995 Reported: Apr 19, 1995
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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
504-0169	MW-3	18,000	2,100	ND	3,700	690
504-0170	MW-5	ND	ND	ND	ND	ND

Detection Limits:	50	0.50	0.50	0.50	0.50
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Total Purgeable Petroleum Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as ND were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager





Sequoia Analytical

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: Sarkis Karkarian	Client Project ID: Unocal #7004, 15599 Hesperian, Matrix Descript: Water Analysis Method: EPA 5030/8015/8020 First Sample #: 504-0169	San Leandro	Sampled: Apr 5, 1995 Received: Apr 5, 1995 Reported: Apr 19, 1995
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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
504-0169	MW-3	Gasoline	100	4/16/95	HP-2	128
504-0170	MW-5	--	1.0	4/17/95	HP-2	106

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager

5040169.MPD <2>





MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Sarkis Karkarian	Client Project ID: Unocal #7004, 15599 Hesperian, San Leandro Matrix: Liquid QC Sample Group: 5040169-170	Reported: Apr 20, 1995
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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#:	5040171	5040171	5040171	5040171
Date Prepared:	4/16/95	4/16/95	4/16/95	4/16/95
Date Analyzed:	4/16/95	4/16/95	4/16/95	4/16/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	115	115	120	118
Matrix Spike Duplicate % Recovery:	115	110	120	118
Relative % Difference:	0.0	4.4	0.0	0.0

LCS Batch#:	1LCS041695	1LCS041695	1LCS041695	1LCS041695
Date Prepared:	4/16/95	4/16/95	4/16/95	4/16/95
Date Analyzed:	4/16/95	4/16/95	4/16/95	4/16/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	116	114	121	120

% Recovery Control Limits:	71-133	72-128	72-130	71-120
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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, #1271

Signature on File
Alan B. Kemp
Project Manager





MPDS Services 2401 Stanwell Dr., Ste. 300 Concord, CA 94520 Attention: Sarkis Karkarian	Client Project ID: Unocal #7004, 15599 Hesperian, San Leandro Matrix: Liquid QC Sample Group: 5040169-170	Reported: Apr 20, 1995
--	---	------------------------

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#:	5040178	5040178	5040178	5040178
Date Prepared:	4/17/95	4/17/95	4/17/95	4/17/95
Date Analyzed:	4/17/95	4/17/95	4/17/95	4/17/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike				
% Recovery:	120	115	125	123
Matrix Spike Duplicate				
% Recovery:	110	110	120	115
Relative % Difference:	8.7	4.4	4.1	6.7

LCS Batch#:	1LCS041795	1LCS041795	1LCS041795	1LCS041795
Date Prepared:	4/17/95	4/17/95	4/17/95	4/17/95
Date Analyzed:	4/17/95	4/17/95	4/17/95	4/17/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	117	115	125	120

% Recovery Control Limits:	71-133	72-128	72-130	71-120
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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, #1271

Signature on File
Alan B. Kemp
Project Manager



