

MPDS
SERVICES, INCORPORATED

ALCO
HAZMAT

94 FEB 10 PM 2:04

February 8, 1994

Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

Attention: Ms. Pamela Evans ✓ *Juliet Shinn*

RE: Unocal Service Station #5760
376 Lewelling Boulevard
San Lorenzo, California

Dear Ms. Evans:

Per the request of the Project Manager, Ms. Tina R. Berry of Unocal Corporation, enclosed please find our report (MPDS-UN5760-01) dated January 13, 1994, 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.

Deanna L. Harding
Deanna L. Harding
Technical Assistant

/dlh

Enclosure

cc: Ms. Tina R. Berry

StId 1746

February 22, 1995

Tina Berry
Unocal Corporation
2000 Crow Canyon Place, Suite 400
San Ramon, CA 94583

Subject: Investigations at Unocal Service Station 5760 located
at 376 Lewelling Blvd., San Lorenzo, CA

Dear Ms. Berry:

This office has recently reviewed the Quarterly Summary Report for Fourth Quarter 1994, dated January 9, 1995, submitted by Pacific Environmental Group, Inc. (Pacific). We are, also, in receipt of Pacific's letter to you, dated February 1, 1995, with the attached revised implementation schedule for the Remedial Action Implementation Plan.

It appears that the extent of ground water contamination emanating from the subject site has yet to be delineated in the downgradient direction. The TPHg analyses of ground water samples taken from monitoring wells U-6 and U-9, the two most downgradient wells, have been consistently reported with ambiguous results (i.e. gasoline and non-gasoline mixture, not gasoline, or not indicative of gasoline). You are required to complete additional tests to further identify the constituents in the groundwater collected from U-6 and U-9. These analyses can be reported to this office by including the results in the First or Second Quarterly Monitoring Report for 1995. If these constituents are determined to be attributable to the site, then additional groundwater investigations will be required downgradient from U-9 to determine the extent of the contaminant plume.

As required by the California Code of Regulations, Title 23, please include an "Evaluation of Results" section in subsequent monitoring reports you submit to this office. We look forward to receiving the results and monitoring reports for the remedial system installation by June 1995.

If you have questions or comments, please call me at (510)567-6755.

Sincerely,

Amy Leech
Hazardous Materials Specialist

Berry

Re: 376 Lewelling Blvd.

May 2, 1995

Page 2 of 2

cc: Robert Giattino
Pacific Environmental Group, Inc.
2025 Gateway Place, Suite 440
San Jose, CA 95110

Ed Howell - files(ALL)

MPDS

SERVICES, INCORPORATED

MPDS-UN5760-01
January 13, 1994

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 Station Service #5760
376 Lewelling Boulevard
San Lorenzo, California

Dear Ms. Berry:

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. in December of 1993.

RECENT FIELD ACTIVITIES

The nine monitoring wells (U-1 through U-9) were monitored and sampled once during the quarter, except for well U-1, which was not sampled due to the presence of free product. Prior to sampling, the wells were checked for depth to water and the presence of free product or sheen. The monitoring data collected this quarter are summarized in Table 1.

Ground water samples were collected from all of the monitoring wells (except well U-1) on December 2, 1993. Prior to sampling, the wells were each purged of between 8 and 16 gallons of water. During purging operations, the field parameters pH, temperature, and electrical conductivity were recorded and are presented in Table 2. Once the field parameters were observed to stabilize and a minimum of four casing volumes had been removed from each well, samples were then 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 elevation in each monitoring well at the Unocal site on December 2, 1993, is summarized in Table 1. The ground water flow direction at the Unocal site during the most recent quarter is shown on the attached Potentiometric Surface Map, Figure 1.

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 3. The concentrations of 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.

DISTRIBUTION

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

LIMITATIONS

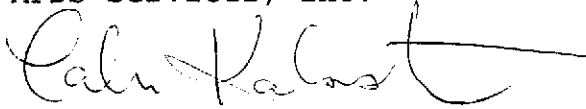
Environmental changes, either naturally-occurring or artificially-induced, may cause changes in ground water levels and flow paths, thereby changing the extent and concentration of any contaminants.

MPDS-UN5760-01
January 11, 1994
Page 3

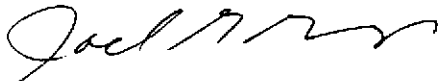
If you have any questions regarding this report, please do not hesitate to call at (510) 602-5120.

Sincerely,

MPDS Services, Inc.

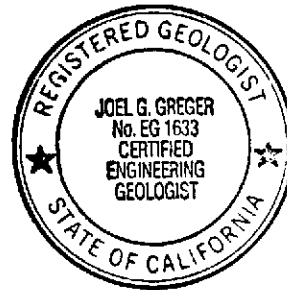


Talin Kaloustian
Staff Engineer



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

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



/dlh

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

cc: Mr. Cliff Garratt, GeoStrategies, 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)♦
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(Monitored and Sampled on December 2, 1993)

U-1*	21.84	18.36	<0.01	N/A	0	29.93
U-2	22.03	19.23	0	No	16	29.87
U-3	21.71	17.55	0	No	12	25.03
U-4	21.79	18.46	0	No	14	27.85
U-5	21.65	17.66	0	No	8	28.26
U-6	21.60	16.08	0	No	8.5	28.05
U-7	21.50	15.61	0	No	14	35.20
U-8	21.77	16.80	0	No	9	29.77
U-9	21.38	15.93	0	No	8.5	28.18

(Monitored and Sampled on September 9, 1993)

U-1	22.74	17.77	0			
U-2	22.94	18.68	0			
U-3	22.60	17.04	0			
U-4	23.64	16.89	0			
U-5	22.71	16.90	0			
U-6	22.38	15.56	0			
U-7	22.26	15.23	0			
U-8	22.56	16.38	0			
U-9	22.09	15.79	0			

(Monitored and Sampled on June 4, 1993)

U-1	23.79	16.72	0			
U-2	24.03	17.59	0			
U-3	24.16	15.48	0			
U-4	23.80	16.73	0			
U-5	23.56	16.05	0			
U-6	23.49	14.45	0			
U-7	23.32	14.17	0			
U-8	23.68	15.26	0			
U-9	23.21	14.67	0			

TABLE 1 (Continued)

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Well Cover Elevation (feet)**</u>	<u>Well Casing Elevation (feet)***</u>
U-1	40.51	40.20
U-2	41.62	41.26
U-3	39.64	39.26
U-4	40.53	40.25
U-5	39.61	39.31
U-6	37.94	37.68
U-7	37.49	37.11
U-8	38.94	38.57
U-9	37.88	37.31

◆ The depth to water level and total depth measurements were taken from the top of the well casing. Prior to December 2, 1993, the water level and total well depth measurements were taken from the top of the well covers.

* Monitored only.

** The elevation of the top of the well covers have been surveyed relative to Mean Sea Level (MSL).

*** Relative to MSL.

N/A = Not Applicable.

Note: Monitoring data prior to December 2, 1993, were provided by GeoStrategies, Inc.

TABLE 2

RECORD OF THE TEMPERATURE, CONDUCTIVITY, AND pH VALUES
IN THE MONITORING WELLS DURING PURGING AND PRIOR TO SAMPLING

(Measured on December 2, 1993)

Well #	Gallons per Casing Volume	Time	Gallons Purged	Casing Volumes Purged	Temper- ature (°F)	Conductivity ([μmhos/cm] x1000)	pH
U-2	3.93	9:55	4	1.02	66.4	5.70	7.50
			8	2.04	67.4	6.03	7.37
			12	3.05	68.0	5.80	7.29
		10:08	16	4.07	68.2	5.67	7.26
U-3	2.76	14:55	3	1.09	72.2	11.60	6.87
			6	2.17	72.6	12.02	6.78
		15:03	9	3.26	72.8	11.94	6.80
		WELL DEWATERED	15:15	12	4.35	72.6	11.85
U-4	3.47	10:40	3.5	1.01	70.5	12.95	7.04
			7	2.02	70.7	13.15	6.93
			10.5	3.03	70.7	13.21	6.85
		10:52	14	4.03	70.6	13.11	6.84
U-5	1.80	11:25	2	1.11	70.3	11.28	7.27
			4	2.22	70.4	11.47	7.13
			6	3.33	70.5	11.61	7.04
		11:34	8	4.44	70.7	11.72	7.01
U-6	2.03	14:20	2	0.99	70.3	8.74	7.17
			4	1.97	70.5	8.99	7.02
			6	2.96	70.7	9.13	6.93
			14:27	8	3.94	70.6	9.14
			8.5	4.19			

TABLE 2 (Continued)

RECORD OF THE TEMPERATURE, CONDUCTIVITY, AND pH VALUES
 IN THE MONITORING WELLS DURING PURGING AND PRIOR TO SAMPLING

(Measured on December 2, 1993)

Well #	Gallons per Casing Volume	Time	Gallons Purged	Casing Volumes Purged	Temper- ature (°F)	Conductivity ([μmhos/cm] x1000)	pH
U-7	3.33	12:05	3.5	1.05	68.0	7.15	7.27
			7	2.10	67.8	7.16	7.18
			10.5	3.15	67.6	7.21	7.13
		12:16	14	4.20	67.6	7.24	7.13
U-8	2.20	13:02	2	0.91	67.4	7.23	7.33
			4	1.82	67.6	7.65	7.17
			6	2.73	67.7	7.69	7.13
		13:10	8	3.64	67.9	7.75	7.12
		9	4.09				
U-9	2.08	13:45	2	0.96	68.5	9.40	7.11
			4	1.92	68.7	9.97	7.01
			6	2.88	68.9	9.06	6.94
		13:53	8	3.85	69.0	9.15	6.92
		8.5	4.09				

TABLE 3

**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>
12/02/93	U-1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				
	U-2	ND	ND	ND	ND	ND
	U-3	110,000	3,200	7,700	5,600	26,000
	U-4	ND	ND	ND	ND	2.6
	U-5	ND	ND	ND	ND	ND
	U-6	2,100	12	1.6	21	1.1
	U-7	ND	ND	ND	ND	ND
	U-8	ND	ND	ND	ND	ND
	U-9	ND	ND	ND	ND	ND
9/09/93	U-1	67,000	2,900	18,000	6,200	32,000
	U-2	ND	ND	ND	ND	ND
	U-3	110,000	2,800	10,000	6500	31,000
	U-4	ND	ND	ND	ND	ND
	U-5	ND	ND	ND	ND	ND
	U-6	6,300++	29	ND	120	34
	U-7	ND	ND	ND	ND	ND
	U-8	ND	ND	ND	ND	ND
	U-9	1,200+	ND	ND	ND	ND

TABLE 3 (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>
6/04/93	U-1	35,000	1,300	5,700	900	9,200
	U-2	ND	ND	ND	ND	ND
	U-3	92,000	2,900	8,700	4,300	20,000
	U-4	ND	ND	ND	ND	ND
	U-5	ND	ND	ND	ND	ND
	U-6	13,000	100	38	450	320
	U-7	ND	ND	ND	ND	ND
	U-8	ND	ND	ND	ND	ND
	U-9	2,100+	ND	ND	ND	ND
2/12/93	U-1	70,000	2,200	8,400	3,100	18,000
	U-2	ND	ND	ND	ND	ND
	U-3	80,000	3,700	9,400	3,700	18,000
	U-4	ND	ND	ND	ND	ND
	U-5	ND	ND	ND	ND	ND
	U-6	2,600	27	ND	120	51
	U-7	ND	ND	ND	ND	ND
	U-8	ND	ND	ND	ND	ND
11/20/92	U-1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				
	U-2	ND	ND	ND	ND	ND
	U-3	50,000	3,200	4,700	1,900	10,000
	U-4	ND	ND	2.5	ND	ND
	U-5	ND	ND	ND	ND	ND
	U-6	WELL WAS INACCESSIBLE				
	U-7	ND	ND	ND	ND	ND

TABLE 3 (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>
8/06/92	U-1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				
	U-2	ND	ND	ND	ND	ND
	U-3	140,000	5,100	13,000	5,000	23,000
	U-4	ND	ND	ND	ND	ND
	U-5	ND	ND	ND	ND	ND
	U-6	9,200	160	ND	360	150
	U-7	ND	ND	ND	ND	ND
	U-8	ND	ND	ND	ND	ND
4/07/92	U-1	**				
	U-2	ND	ND	ND	ND	ND
	U-3	97,000	6,100	16,000	5,400	28,000
	U-4	ND	ND	ND	ND	ND
	U-5	ND	ND	ND	ND	ND
	U-6	6,600	90	ND	820	1,200
	U-7	ND	ND	ND	ND	ND
	U-8	ND	ND	ND	ND	ND
3/05/92	U-1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				
	U-2	ND	ND	0.36	ND	ND
	U-3	160,000	5,300	15,000	5,400	26,000
	U-4	ND	ND	ND	ND	ND
12/04/91	U-1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				
	U-2	ND	ND	ND	ND	ND
	U-3	75,000	2,500	6,100	1,900	11,000
	U-4	ND	ND	ND	ND	ND

TABLE 3 (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>
9/19/91	U-1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				
	U-2	ND	ND	ND	ND	ND
	U-3	61,000	3,300	9,700	2,800	15,000
	U-4	ND	ND	ND	ND	ND
6/03/91	U-1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				
	U-2	ND	ND	ND	ND	ND
	U-3	130,000	5,800	19,000	4,600	24,000
	U-4	ND	ND	ND	ND	ND
3/04/91	U-1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				
	U-2	ND	ND	0.9	ND	2.6
	U-3	84,000	1,400	10,000	2,900	17,000
	U-4	ND	ND	ND	ND	ND
1/18/91	U-3	51,000	1,700	3,100	1,500	7,500
	U-4	ND	ND	ND	ND	ND
12/05/90	U-1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT				
	U-2	ND	ND	ND	ND	ND
	U-3	69,000	1,900	3,500	1,600	9,800
	U-4	ND	ND	ND	ND	ND
8/24/90	U-1	27,000	1,200	1,800	1,400	5,500
8/23/90	U-2	ND	ND	ND	ND	ND
	U-3	110,000	4,400	13,000	2,800	17,000
	U-4	ND	ND	1.0	ND	1.8

TABLE 3 (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>
6/05/90	U-1	46,000	2,300	5,500	2,500	11,000
3/20/90	U-1	36,000	2,100	5,500	1,900	9,300
2/09/88	U-1	93,000	3,600	11,000	--	20,000

** Product Skimmer installed in well

+ The concentration reported as gasoline is primarily due to the presence of a discrete hydrocarbon peak not indicative of standard gasoline.

++ The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.

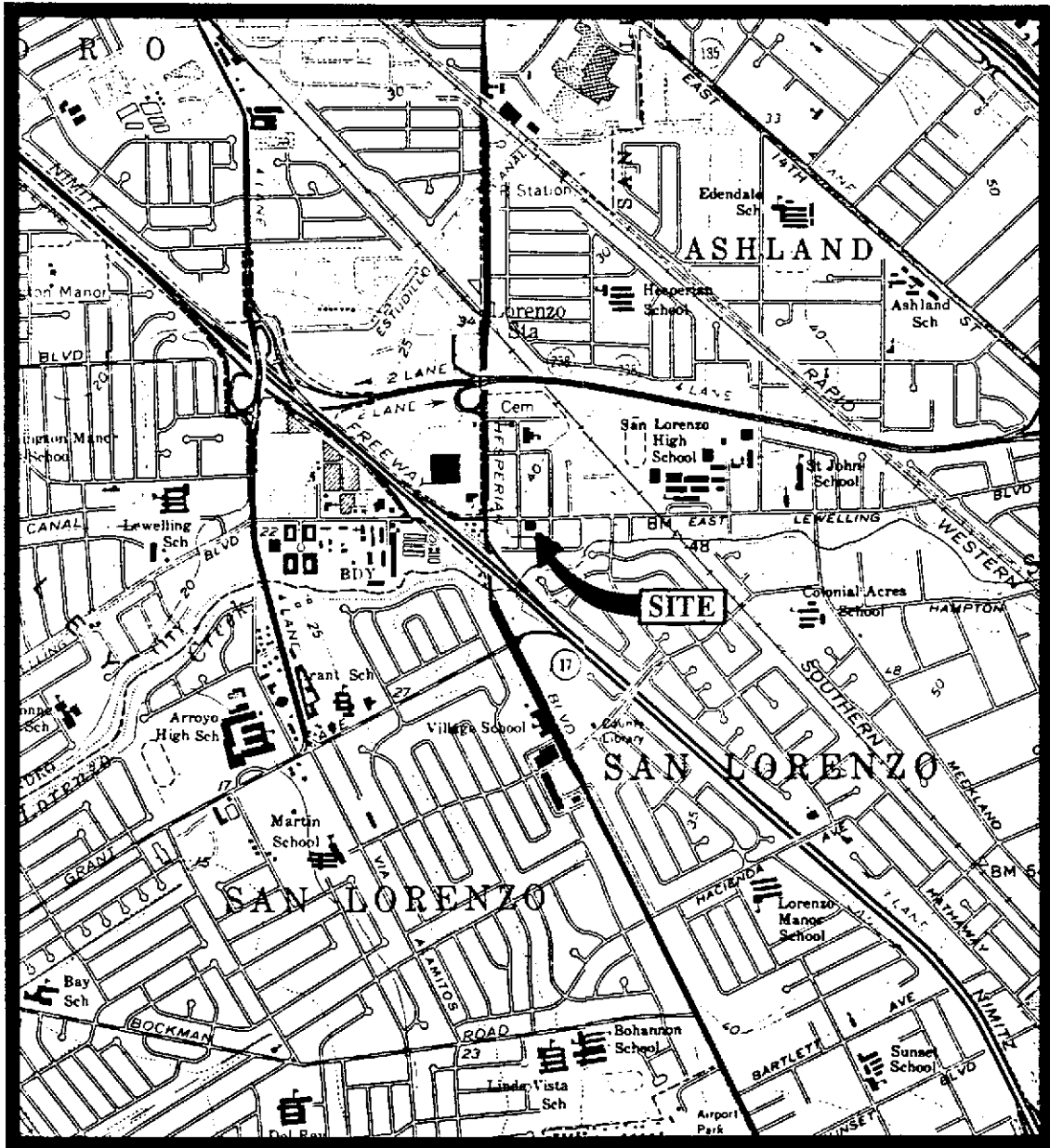
ND = Non-detectable.

-- Indicates that analysis was not performed.

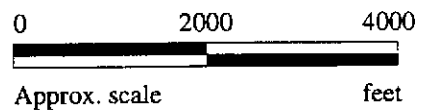
Results are in micrograms per liter ($\mu\text{g/L}$), unless otherwise indicated.

Notes: - Ethylbenzene and xylenes were combined prior to March 1990.

- Laboratory analyses data prior to December 2, 1993, were provided by GeoStrategies, Inc.



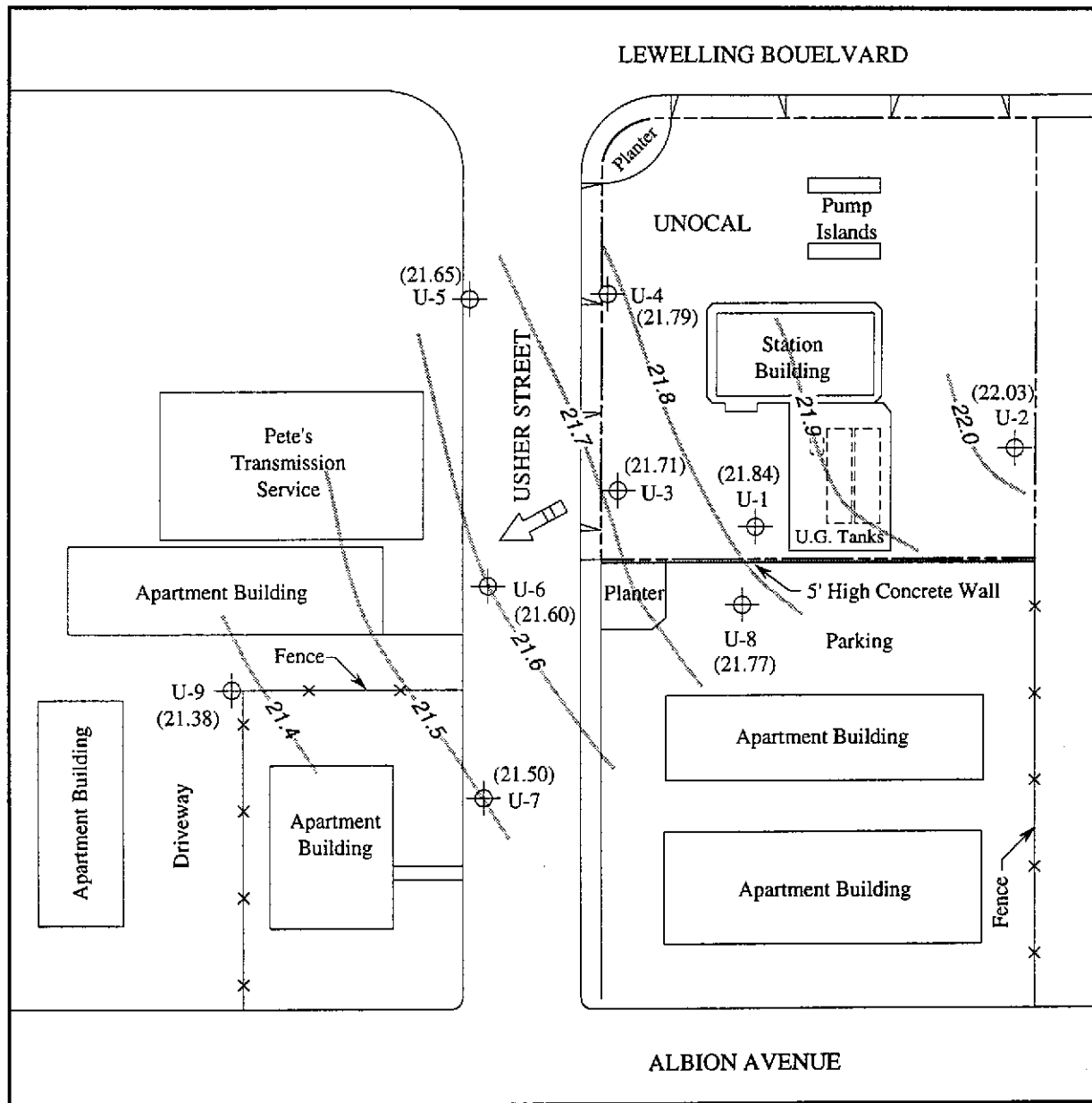
Base modified from 7.5 minute U.S.G.S.
Hayward and San Leandro Quadrangles
(both photorevised 1980)



MPDS
SERVICES, INCORPORATED

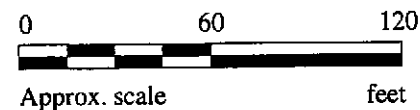
UNOCAL SERVICE STATION #5760
376 LEWELLING BOULEVARD
SAN LORENZO, CALIFORNIA

LOCATION
MAP



LEGEND

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

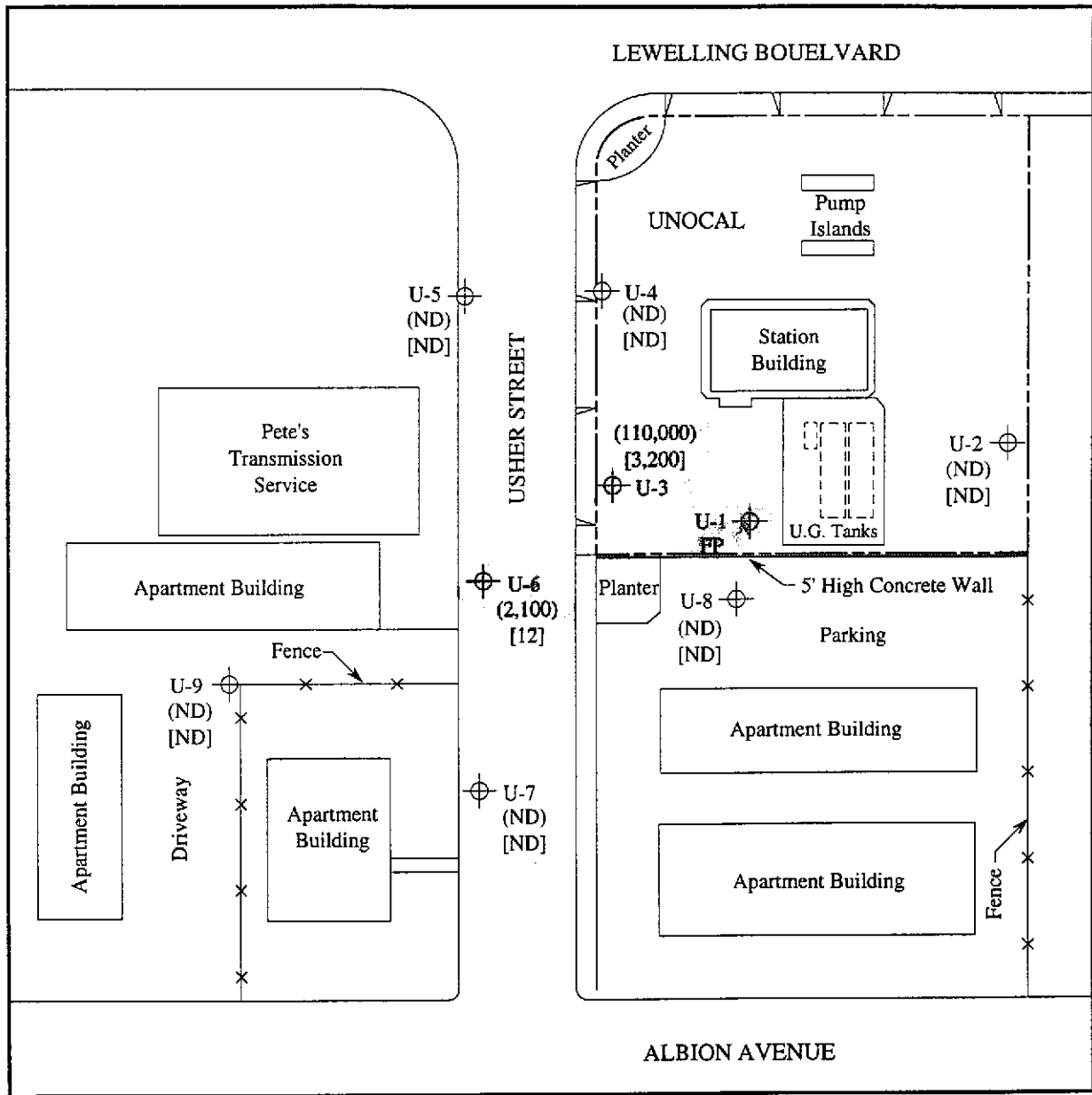


POTENTIOMETRIC SURFACE MAP FOR THE DECEMBER 2, 1993 MONITORING EVENT

MPDS
SERVICES, INC.

UNOCAL SERVICE STATION #5760
376 LEWELLING BOULEVARD
SAN LORENZO, CALIFORNIA

FIGURE
1



LEGEND

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



PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON DECEMBER 2, 1993

MPDS
SERVICES, INC.

UNOCAL SERVICE STATION #5760
376 LEWELLING BOULEVARD
SAN LORENZO, CALIFORNIA

FIGURE
2



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 5760, 376 Lewelling Blvd., Sample Matrix: Water Analysis Method: EPA 5030/8015/8020 First Sample #: 312-0361	San Lorenzo Received: Dec 2, 1993 Reported: Dec 17, 1993
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TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

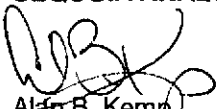
Analyte	Reporting Limit µg/L	Sample I.D. 312-0361 U 2	Sample I.D. 312-0362 U 3	Sample I.D. 312-0363 U 4	Sample I.D. 312-0364 U 5	Sample I.D. 312-0365 U 6	Sample I.D. 312-0366 U 7
Purgeable Hydrocarbons	50	N.D.	110,000	N.D.	N.D.	2,100	N.D.
Benzene	0.5	N.D.	3,200	N.D.	N.D.	12	N.D.
Toluene	0.5	N.D.	7,700	N.D.	N.D.	1.6	N.D.
Ethyl Benzene	0.5	N.D.	5,600	N.D.	N.D.	21	N.D.
Total Xylenes	0.5	N.D.	26,000	2.6	N.D.	1.1	N.D.
Chromatogram Pattern:		--	Gasoline	--	--	Gasoline	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	200	1.0	1.0	1.0	1.0
Date Analyzed:	12/13/93	12/13/93	12/13/93	12/13/93	12/13/93	12/13/93
Instrument Identification:	ML #2	ML #2	ML #2	ML #2	ML #2	ML #2
Surrogate Recovery, %: (QC Limits = 70-130%)	96	100	104	109	114	98

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	Client Project ID: Unocal 5760, 376 Lewelling Blvd.,	Sampled: Dec 2, 1993
2401 Stanwell Dr., Ste. 400	Sample Matrix: Water San Lorenzo	Received: Dec 2, 1993
Concord, CA 94520	Analysis Method: EPA 5030/8015/8020	Reported: Dec 17, 1993
Attention: Avo Avedessian	First Sample #: 312-0367	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

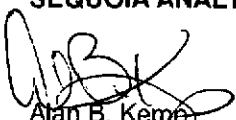
Analyte	Reporting Limit µg/L	Sample I.D. 312-0367 U 8	Sample I.D. 312-0368 U 9	Sample I.D. Method Blank
Purgeable Hydrocarbons	50	N.D.	N.D.	
Benzene	0.5	N.D.	N.D.	
Toluene	0.5	N.D.	N.D.	
Ethyl Benzene	0.5	N.D.	N.D.	
Total Xylenes	0.5	N.D.	N.D.	
Chromatogram Pattern:		--	--	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Analyzed:	12/13/93	12/13/93	12/13/93
Instrument Identification:	ML #2	ML #2	ML #2
Surrogate Recovery, %: (QC Limits = 70-130%)	98	100	103

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 5760, 376 Lewelling Blvd., San Lorenzo
Matrix: Liquid

QC Sample Group: 3120361-368

Reported: Dec 17, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J.D.	J.D.	J.D.	J.D.

MS/MSD

Batch#:	3120361	3120361	3120361	3120361
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.#:	ML #2	ML #2	ML #2	ML #2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	84	93	103	104
Matrix Spike Duplicate % Recovery:	100	107	119	119
Relative % Difference:	17	14	14	13


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.#:	ML #2	ML #2	ML #2	ML #2
LCS % Recovery:	110	106	114	112

% 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


Alan B. Kemp
Project Manager

MPDS

Services, Inc.

CHAIN OF CUSTODY

SAMPLER		SITE NAME & ADDRESS							ANALYSES REQUESTED						TURN AROUND TIME:	
Vartkes		Unocal # 5760 / San Lorenzo 376 Lewelling Blvd.							TPHG BTEX							Regular
WITNESSING AGENCY		SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP								NO. OF CONT.
		U12	12/2/93		X	X			2	Monitoring well		3120361 A-B 0362 0363 0364 0365 0366 0367 0368				
		U13	"		X	X			2	" "						
		U14	"		X	X			2	" "						
		U15	"		X	X			2	" "						
		U16	"		X	X			2	" "						
		U17	"		X	X			2	" "						
		U18	"		X	X			2	" "						
		U19	"		X	X			2	" "						

Relinquished by: (Signature) <i>H. Parker</i>	Date/Time 12/2/93 4:40	Received by: (Signature) <i>Stenson</i>	The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in 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? Yes Yes No Yes
Relinquished by: (Signature)	Date/Time 12/3/93 3:20	Received by: (Signature) <i>Melissa Crosser</i>	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	

Signature: *LMS* Title: _____ Date: 12/2/93