



Cal/EPA

**San Francisco Bay
Regional Water
Quality Control
Board**

101 Webster Street
Suite 500
Oakland, CA 94612
(510) 286-1255
AX (510) 286-1380

Mr. Edward Ralston
Unocal
2000 Crow Canyon Place
San Ramon, CA 94583

RECEIVED

JAN 10 1997

January 8, 1997
File No. 2198.17 (KLG)



Pete Wilson
Governor

**Subject: Underground Storage Tank(UST) Case Closure
UNOCAL
14999 Farnsworth, San Leandro, CA**

Dear Mr. Ralston:

This letter confirms the completion of site investigation and remedial action for the underground storage tanks formerly located at the above described location. Enclosed for your records is the Case Closure Summary dated December 10, 1996 for the above referenced site.

Based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, Division 3, Chapter 16, Section 2721(e) of the California Code of Regulations. If a change in land use is proposed, the owner must promptly notify this agency.

Please contact Kevin Graves at (510) 286-0435 if you have any questions regarding this matter.

Sincerely,

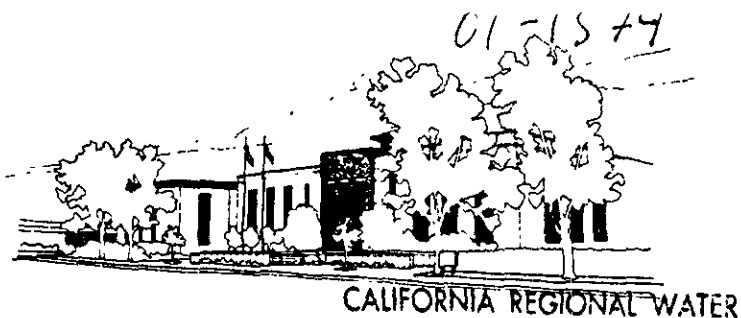
Loretta K. Barsamian
Executive Officer

Stephen I. Morse
Chief, Toxics Division

Enclosure
cc w/encl: Michael Bakaldin, City of San Leandro
Dave Deaner, CSWRCB
RB File# 01--1574

unocal.CLS

City of San Leandro
Civic Center, 835 E. 14th Street
San Leandro, California 94577



December 31, 1996

JAN 06 1997

QUALITY CONTROL BOARD

Mr. Kevin Graves /
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, CA 94612

Dear Mr. Graves:

Request for Case Closure at 14999 Farnsworth, San Leandro, CA

This is a request for case closure for Unocal at 14999 Farnsworth. The case closure is required based on the presence of the site in the Regional Board's leaking underground storage tank database.

Attached is a site closure summary which summarizes the underground storage tank removal and soil and groundwater investigation activities at the site. Based on the results of the soil and groundwater investigation, the City of San Leandro recommends that no further action be required at 14999 Farnsworth and that the Regional Board formally close this case with a case closure letter.

If you have any questions, please call me at (510) 577-3331.

Sincerely,

Michael Bakaldin
Hazardous Materials Coordinator

Attachment

cc: Ed Ralston, Unocal

Ellen M. Corbett, Mayor

City Council: Gordon A. Galvan; Bob Glaze; Garry A. Loeffler;
Joanne M. Lothrop; Julian P. Polvorosa; Shelia Young;

SITE CLOSURE SUMMARY

I. AGENCY INFORMATION

Date: December 31, 1996

Agency Name: City of San Leandro	Address: 835 East 14th Street
City/State/Zip: San Leandro, CA	Phone: (510) 577-3331
Responsible Staff Person: Michael Bakaldin	Title: Hazardous Materials Coordinator

II. SITE INFORMATION

Site Facility Name: UNOCAL				
Site Facility Address: 14999 Farnsworth				
RB LUSTIS Case No.: 01-1574		Local or LOP Case No.:		Priority:
URF Filing Date:		SWEEPS No.:		
Responsible Parties (include addresses and phone numbers)				
Mr. Edward Ralston, Unocal, 2000 Crow Canyon Place, San Ramon, CA 94583				
Tank No.	Size in Gallons	Contents	Closed In-Place/Removed?	Date
1	10,000	Gasoline	Removed	11/21/95
2	10,000	Gasoline	Removed	11/21/95
3	550	Waste Oil	Removed	11/21/95

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown		
Site characterization complete? Yes		Date Approved By Oversight Agency: 12/30/96
Monitoring wells installed? Yes		Number: 3 Proper screened interval? Yes
Highest GW Depth BGS (ft): 6.6		Lowest Depth: 9.9 Flow Direction: SW
Most Sensitive Current Use:		
Most Sensitive Potential Use and Probability of Use		
Are drinking water wells affected? No		Aquifer Name:
Is surface water affected? No		Nearest/Affected SW Name:
Off-Site Beneficial Use Impacts (Addresses/Locations):		
Report(s) on file? Yes		Where is report(s) filed? City of San Leandro

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	2-10,000, 1-550	Removed	11/21/95
Piping			
Free Product	None		
Soil	785 c. y. - gasoline 165 tons - waste oil	Disposed of at BFI in Livermore Disposed of at Forward Inc.	1996 1996
Groundwater	10,000 gallons	Recycling at Unocal refinery	1996
Barrels			

MAXIMUM POLLUTANT CONCENTRATIONS-BEFORE AND AFTER CLEANUP									
POLLUTANT	Soil (ppm)		Water (ppb)		POLLUTANT	Soil (ppm)		Water (ppb)	
	Before	After	Before	After		Before	After	Before	After
TPH (Gas)	1,800	ND	ND	ND	Oil & Grease	28,000	4000	ND	ND
Benzene	5.0	ND	3.6	ND	TPH (Diesel)	5500	1400	1,600	ND
Toluene	3.6	ND	0.82	ND	Total VOCs	2.5	NT	8.4	ND
Ethylbenzene	ND	ND	6.4	ND	MTBE	2.1	NT	NT	7.9
Xylene	6.4	ND	12	ND	Total SVOCs	7.9	NT	NT	ND

Comments: In 1995, two gasoline tanks and one waste oil tank were removed from the former gasoline service station. The gasoline and waste oil tanks appeared to be in good condition with no visible holes but the surrounding soil showed evidence of contamination. Soil sample results confirmed that both gasoline and waste oil contamination was present. The gasoline tank pit was overexcavated on two sides until all detectable gasoline contamination had been removed. Confirmation soil samples were ND for TPHgas and BTEX. The waste oil tank pit was overexcavated in all four directions and down to groundwater at 10 feet bgs. However, confirmatory soil samples still indicated significant TOG and TPHdiesel contamination. The TPHdiesel was reported as an unidentified hydrocarbon. The highest soil sample results collected after tank removal are shown above as the "before" soil concentrations. The highest soil sample results after all soil excavation activities are shown above as the "after" soil concentrations.

UNOCAL had installed three groundwater monitoring wells on the site in 1991. Well U-1 was installed southwest (downgradient) of the gasoline USTs, U-2 southeast of the dispenser islands, and U-3 southwest of the waste oil UST. The wells had been monitored semiannually for TPHgas and BTEX. Historically, the wells had tested ND for TPHgas and BTEX. Prior to overexcavating the waste oil pit, UNOCAL had to destroy well U-3. Prior to its destruction, UNOCAL tested well U-3 for potential waste oil constituents and found trace amounts of TPHgas, TPHdiesel, BTEX, and HVOCs. The highest groundwater readings detected at the site are reported above as the "before" water concentrations. In December of 1996, prior to this request for closure, UNOCAL tested wells U-1 and U-2 for TPHdiesel, TOG, HVOCs, and SVOCs to verify that the groundwater contaminants identified around the waste oil tank were not migrating. The results of that final round of groundwater sampling determined that there was no migration of contaminants away from the immediate area of the former waste oil UST. The highest groundwater readings detected at the site after all investigative and remedial activities are reported above as "after" water concentrations.

(see next page)

Comments (continued):

In May and July of 1996, UNOCAL performed two soil and groundwater investigations to determine the extent of soil and groundwater contamination in the vicinity of the former waste oil tank. The May investigation consisted of the digging of four trenches, each one perpendicular to a pit sidewall, to determine the lateral and vertical extent of soil contamination. The July investigation consisted of the advancement of five soil borings around the pit to further delineate the soil contamination and to determine the extent of groundwater contamination. Based on the soil sampling results it appears that the remaining soil contamination is limited to heavier end hydrocarbons, primarily TOG, and is limited to the capillary fringe within a 10 to 15 foot radius around the former tank. The groundwater contamination is also limited to a small area around the former waste oil tank and the primary contaminant is an unidentified hydrocarbon in the C9 to C24 range.

Please see the attached figures and tables for a complete summary of all sampling locations and sampling results.

No further investigation or remediation is recommended at 14999 Farnsworth by the City of San Leandro for the following reasons:

1. All gasoline contaminated soils were removed from the property. All oil contaminated soils above the capillary fringe zone were removed from the property. The only remaining contaminated soil is between 9 and 10 feet bgs, in the saturated or capillary zones.
2. Soil sample results indicate that only heavier end hydrocarbons are present in the soils immediately surrounding the former waste oil tank.
3. Numerous rounds of groundwater sampling as well as grab groundwater sampling have indicated that only unidentified petroleum hydrocarbons in the C9 to C24 range are present in the groundwater above detection limits. BTEX compounds have generally not been detected.
4. Data from other properties in San Leandro where high concentrations of O & G and TPH as diesel were found in soils in contact with groundwater have shown that the heavier, insoluble petroleum compounds do not readily migrate in groundwater and do not pose a threat to water quality.

Therefore, given the soil and groundwater concentrations of TPH as diesel and Oil & Grease detected at 14999 Farnsworth, there does not appear to be a threat to groundwater.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per Basin Plan? Yes		
Does corrective action protect public health for current land use? Yes		
Site Management Requirements:		
Monitoring Wells Decommissioned: Pending Closure	Number Decommissioned: 1, 2 pending closure	Number Retained: 0
List Enforcement Actions Taken: NONE		
List Enforcement Actions Rescinded:		

V. TECHNICAL REPORTS, CORRESPONDENCE ETC., THAT THIS CLOSURE RECOMMENDATION WAS BASED UPON

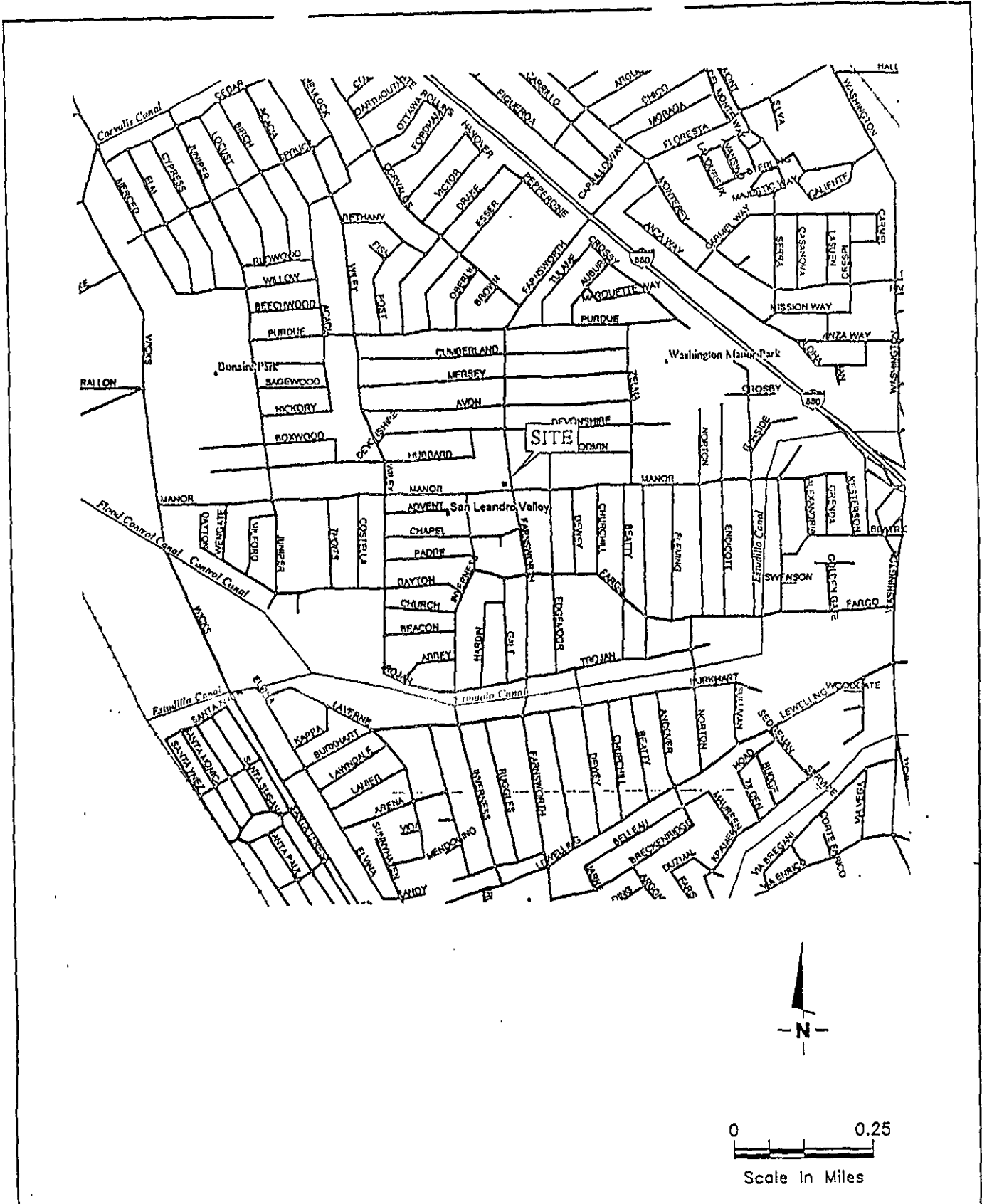
Title:	Date:
Sampling of Groundwater Monitoring Wells Report by Geostrategies	12/16/96
Subsurface Investigation Near Former Waste-Oil UST by Geostrategies	8/22/96
Letter Workplan for Overexcavation by Geostrategies	12/4/95
Semi-Annual Data Reports by MPDS	1994-1996

VI. ADDITIONAL COMMENTS, DATA, ETC.

Based on a review of the data provided to the City of San Leandro, the City recommends that case closure be granted for 14999 Farnsworth.

This document and the related CASE CLOSURE LETTER, shall be retained by the lead agency as part of the official site file.

FIGURES



Source: Street Atlas USA, Delorme (1995).



VICINITY MAP
 Unocal Service Station No. 3690
 14999 Farnsworth Street
 San Leandro, California

FIGURE

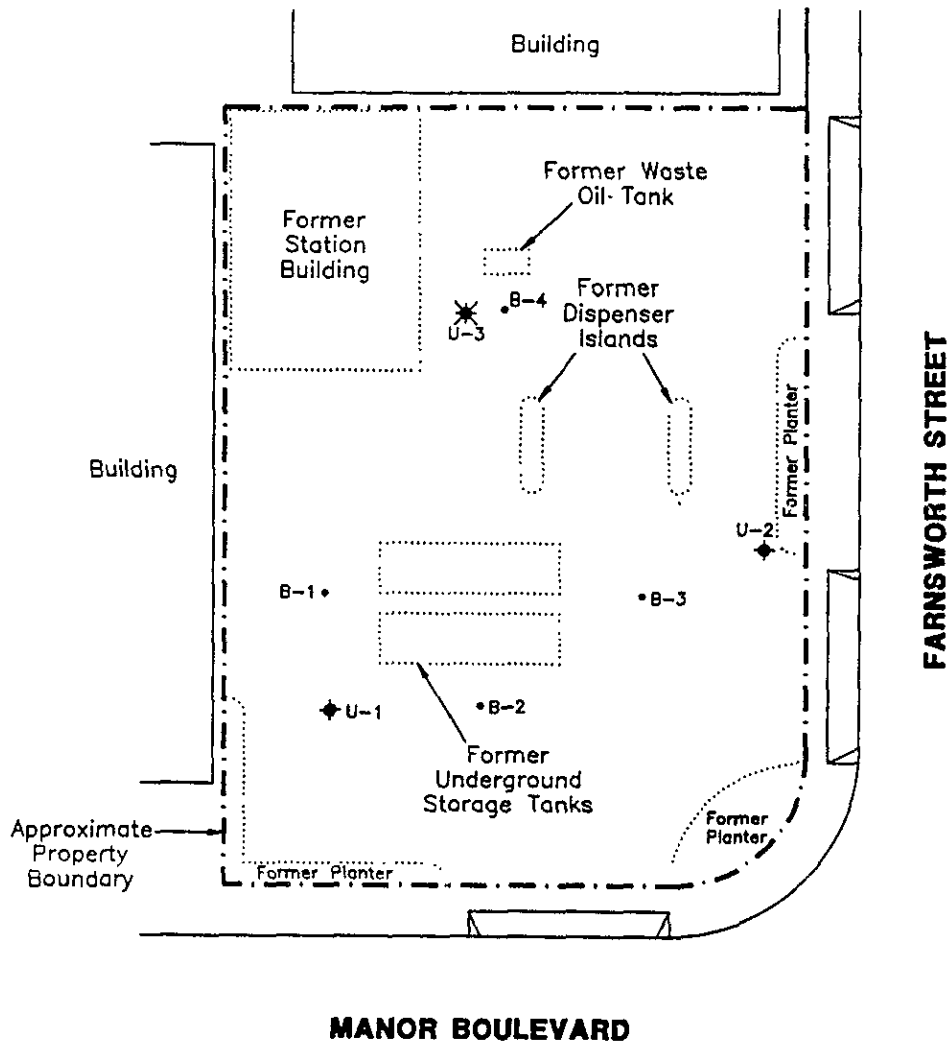
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JOB NUMBER
5819

REVIEWED BY

DATE
4/96

REVISION DATE



EXPLANATION:

- B-4 • Soil Boring
- U-2 ◆ Groundwater Monitoring Well
- U-3 ✱ Abandoned Groundwater Monitoring Well

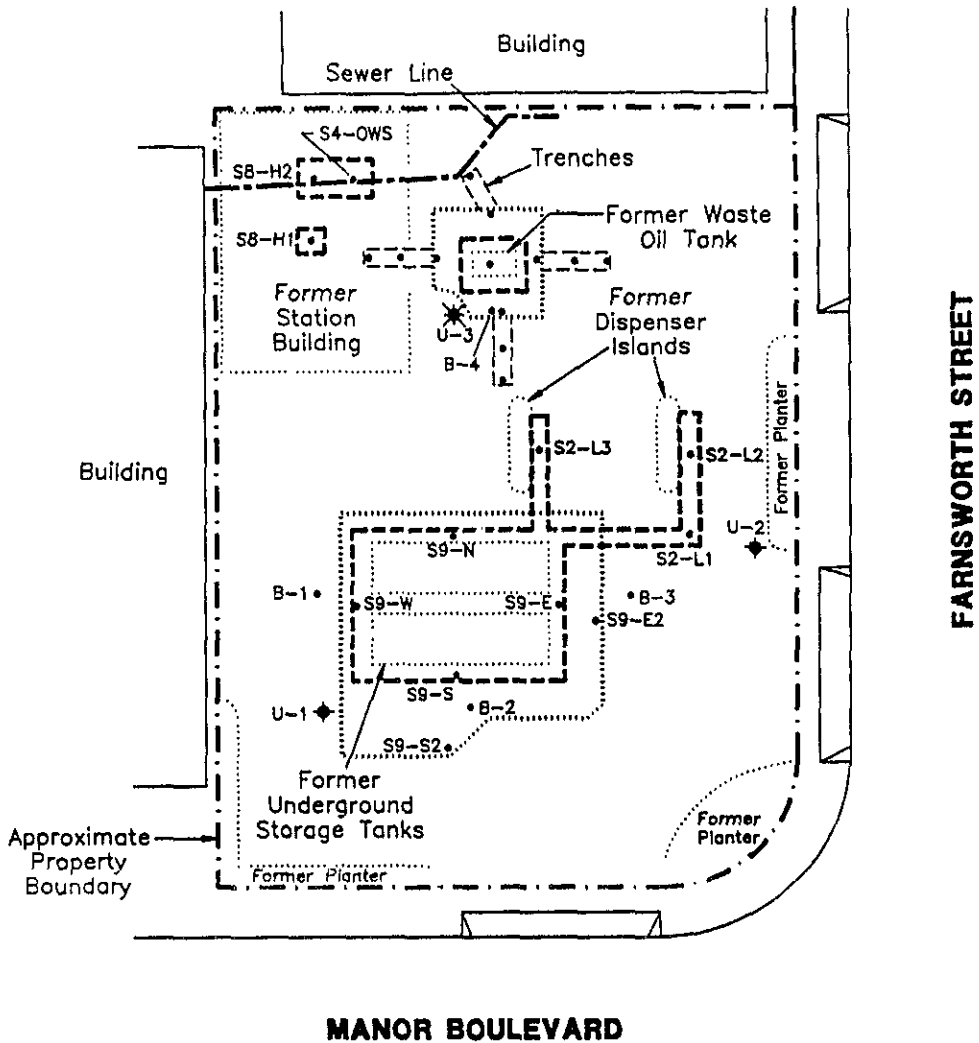


Source: Figure Modified From Drawing Provided By MPDS Services, Inc.



SITE PLAN
 Unocal Service Station No. 3690
 14999 Farnsworth Street
 San Leandro, California

FIGURE
2



EXPLANATION:

- B-4 • Soil Boring
- U-2 ◆ Groundwater Monitoring Well
- U-3 * Abandoned Groundwater Monitoring Well
- S4-H1 • Soil Sample Location
- S8-H1 • Soil Sample Location
- S8-H2 • Soil Sample Location
- S2-L3 • Soil Sample Location
- S2-L2 • Soil Sample Location
- S2-L1 • Soil Sample Location
- S9-N • Soil Sample Location
- S9-W • Soil Sample Location
- S9-E • Soil Sample Location
- S9-S • Soil Sample Location
- S9-S2 • Soil Sample Location
- B-1 • Soil Boring
- B-2 • Soil Boring
- B-3 • Soil Boring
- S9-E2 • Soil Sample Location



Source: Figure Modified From Drawing Provided By MPDS Services, Inc.

FIGURE

3



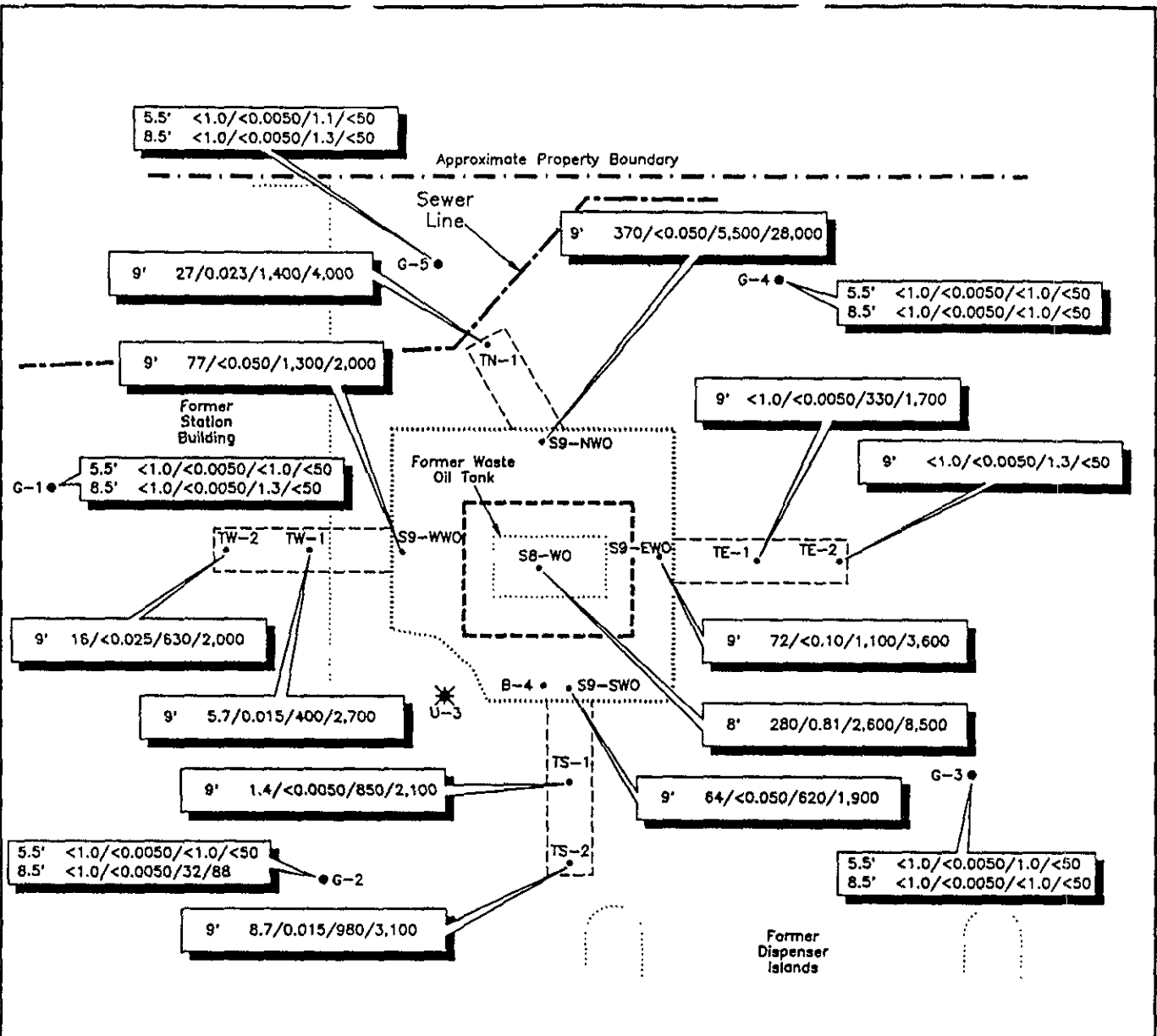
SAMPLE LOCATION MAP
 Unocal Service Station No. 3690
 14999 Farnsworth Street
 San Leandro, California

JOB NUMBER
5819

REVIEWED BY

DATE
4/96

REVISION DATE



EXPLANATION:

- B-4 • Soil Boring
- U-3 * Abandoned Groundwater Monitoring Well
- S8-H1 • Soil Sample Location
- G-5 • Geoprobe Location
- Depth Of Soil Sample And Concentrations Of TPHg/Benzene/TPHd/TOG Measured In Parts Per Million
- Limits Of Excavation 11/21/95
- Limits Of Excavation 1/9/96



Source: Figure Modified From Drawing Provided By MPDS Services, Inc.



SOIL CONCENTRATION MAP
 Unocal Service Station No. 3690
 14999 Farnsworth Street
 San Leandro, California

FIGURE

4

JOB NUMBER
5819

REVIEWED BY

DATE
8/96

REVISION DATE

TABLE 1
Analytical Results of Soil Samples
Former Unocal Station No. 3690
14999 Farnsworth Street
San Leandro, California

Sample Location	Sample ID	Sample Depth (feet)	Date Collected	TPH _g (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)
Former Gasoline Underground Storage Tanks									
Northern Sidewall	S9-N	9	11/21/95	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.35
Western Sidewall	S9-W	9	11/21/95	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.16
Southern Sidewall	S9-S	9	11/21/95	1,800	5.0	3.6	<1.2	6.4	<6.2
Eastern Sidewall	S9-E	9	11/21/95	48	0.30	0.053	0.14	0.077	2.1
Overexcavation of Southern and Eastern Gasoline UST Pit									
Southern Sidewall	S9-E2	9	1/9/96	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NR
Eastern Sidewall	S9-S2	9	1/9/96	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NR
Product Lines									
Base	S2-L1	2	11/21/95	<1.0	<0.0050	0.0090	<0.0050	<0.0050	<0.025
Base	S2-L2	2	11/21/95	1.6	0.12	0.41	0.025	0.065	0.10
Base	S2-L3	2	11/21/95	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025
Explanation:									
(mg/kg) = milligram per kilogram (ppm)									
TPH _g = total petroleum hydrocarbons as gasoline									
MTBE = methyl t-butyl ether									
NR = analyses not requested									

TABLE 1
Analytical Results of Soil Samples
Former Unocal Station No. 3690
14999 Farnsworth Street
San Leandro, California

Sample Location	Sample ID	Date Collected	Depth (feet)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	TPHd (mg/kg)	MTBE (mg/kg)	TOG (mg/kg)	8010	8270
Waste-Oil Tank													
Base	S8-WO	11/21/95	8	280	0.81	2.5	3.5	26	2,600	<2.5	8,500	*	**
Overexcavation of Waste-Oil UST Pit													
West Sidewall	S9-WWO	1/9/96	9	77	<0.050	0.084	0.43	3.3	1300	NR	2000	NR	NR
North Sidewall	S9-NWO	1/9/96	9	370	<0.050	0.92	2.9	25	5500	NR	28000	NR	NR
South Sidewall	S9-SWO	1/9/96	9	64	<0.050	<0.050	0.40	2.9	620	NR	1900	NR	NR
East Sidewall	S9-EWO	1/9/96	9	72	<0.10	<0.10	0.28	2.1	1100	NR	3600	NR	NR

Sample Location	Sample ID	Date Collected	Depth (feet)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
Waste Oil Tank								
Base	S8-WO	11/21/95	8	<0.50	51	11	57	58

Explanation:

(mg/kg) = milligram per kilogram (ppm)

NR = analysis not requested

TPHg = total petroleum hydrocarbons as gasoline

TPHd = total petroleum hydrocarbons as diesel

TPHho = total petroleum hydrocarbons as hydraulic oil

TOG = total oil and grease

8010 = volatile organic compounds

8270 = semi-volatile organic compounds

MTBE = methyl t-butyl ether

* All components not detected except 1,1-dichloroethane (180 ppb), cis-1,2-dichloroethene (400 ppb), tetrachloroethene (630 ppb), 1,1,1-trichloroethane (860 ppb), and trichloroethene (390 ppb).

** All analytes not detected except 2-methylnaphthalene (7,900 ppb).

TABLE 1
Analytical Results of Soil Samples
Former Unocal Station No. 3690
14999 Farnsworth Street
San Leandro, California

Sample ID	Date Collected	Depth (feet)	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	TPHd (mg/kg)	TPHho (mg/kg)	MTBE (mg/kg)	TOG (mg/kg)	8010	8270
Oil/Water Separator													
S4-OWS	11/21/95	4	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	NR	<0.025	<50	ND	ND
Hydraulic Lifts													
S8-H1	11/21/95	8	NR	NR	NR	NR	NR	NR	55	NR	NR	NR	NR
S8-H2	11/21/95	8	NR	NR	NR	NR	NR	NR	<10	NR	NR	NR	NR
Sample ID	Date Collected	Depth (feet)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)						
Oil/Water Separator													
S4-OWS	11/21/95	4	<0.50	51	6.8	51	48						
Explanation:													
(mg/kg) = milligram per kilogram (ppm)													
NR = analysis not requested													
TPHg = total petroleum hydrocarbons as gasoline													
TPHd = total petroleum hydrocarbons as diesel													
TPHho = total petroleum hydrocarbons as hydraulic oil													
TOG = total oil and grease													
8010 = volatile organic compounds													
8270 = semi-volatile organic compounds													
MTBE = methyl t-butyl ether													

TABLE 1
Analytical Results of Soil Samples
Former Unocal Station No. 3690
14999 Farnsworth Street
Sacramento, California

Sample ID	Date Collected	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	Total Lead (mg/kg)	pH	Flash Point (Celsius)	Reactivity
Stockpiled Soil From Gasoline UST Pit and Dispenser Islands										
SS-1A-D	1/12/96	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	21	NR	NR	NR
SS-2A-D	1/12/96	5.3	<0.0050	0.067	0.033	0.070	14	NR	NR	NR
SS-3A-D	1/12/96	1.0	<0.0050	<0.0050	0.012	0.031	10	8.9	>100	ND
SS-4A-D	1/12/96	5.7	<0.0050	<0.0050	<0.0050	0.019	17	NR	NR	NR
SS-5A-D	1/12/96	41	<0.0050	<0.0050	<0.0050	0.16	13	NR	NR	NR
SS-6A-D	1/12/96	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	13	NR	NR	NR
SS-7A-D	1/12/96	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	11	NR	NR	NR

Explanation:

(mg/kg) = milligram per kilogram (ppm)
NR = analyses not requested
ND = less than reporting limit for requested analyses
TPHg = total petroleum hydrocarbons as gasoline

TABLE 2

**Analytical Results of Soil Samples from Trenches near Former Waste-Oil UST and Borings
Former Unocal Service Station No. 3690
14999 Farnsworth Street
San Leandro, California**

Sample #	Date Sampled	Depth (ft)	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)	TPHd (ppm)	TOG (ppm)
Samples from Trenches									
TN-1	5/14/96	9	27 ¹	0.023	<0.010	0.13	0.99	1,400 ^{2,3} [1,600 ²]	4,000 [14]
TW-1	5/14/96	9	16 ¹	<0.025	<0.025	0.04	0.18	630 ^{2,3}	2,000
TW-2	5/14/96	9	5.7 ¹	0.015	0.0079	0.011	0.062	400 ^{4,3}	2,700
TS-1	5/14/96	9	1.4 ¹	<0.0050	<0.0050	<0.0050	0.0081	850 ³	2,100
TS-2	5/14/96	9	8.7 ¹	0.015	<0.0050	0.021	0.035	980 ^{2,3}	3,100
TE-1	5/14/96	9	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	330 ^{5,3}	1,700
TE-2	5/14/96	9	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	1.3 ^{5,3}	<50
Samples from Borings									
G1-5.5	7/11/96	5.5	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0	<50
G1-8.5	7/11/96	8.5	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<2.0 (1.3 ²)	<50
G2-5.5	7/11/96	5.5	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0	<50
G2-8.5	7/11/96	8.5	<1.0	<0.0050	<0.0050	<0.0050	<0.015	30 ^{2,3} (32 ^{2,3})	88
G3-5.5	7/11/96	5.5	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<2.0 (1.0 ⁶)	<50
G3-8.5	7/11/96	8.5	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0	<50
G4-5.5	7/11/96	5.5	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0	<50
G4-8.5	7/11/96	8.5	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<1.0	<50
G5-5.5	7/11/96	5.5	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<2.0 (1.1 ⁵)	<50
G5-8.5	7/11/96	8.5	<1.0	<0.0050	<0.0050	<0.0050	<0.015	<2.0 (1.3 ⁵)	<50

Explanations:

TPHg = Total Petroleum Hydrocarbons as gasoline by EPA Method 8015Mod

TPHd = Total Petroleum Hydrocarbons as diesel by EPA Method 8015Mod with silica gel clean-up

TOG = Total Oil and Grease by Standard Method 5520E&FMod or 5520B&FMod

TABLE 2
Analytical Results of Soil Samples from Trenches and Borings
Former Unocal Service Station No. 3690
14999 Farnsworth Street
San Leandro, California

Explanations cont.:

ft = Feet below ground surface

ppm = Parts per million

[] Results by California Waste Extraction Test with distilled water extractant. Sample ph = 7.9. Sample contained heavy oil.

() Results by EPA Method 8015Mod

¹ Unidentified hydrocarbons in C6-C12 range

² Unidentified hydrocarbons in C9-C24 range

³ Sample contained motor oil.

⁴ Unidentified hydrocarbons in C16-C24 range

⁵ Unidentified hydrocarbons in C14-C24 range

⁶ Unidentified hydrocarbons in C15-C24 range

TABLE 3
Analytical Results of Groundwater Samples from Well U-3 and Borings
 Former Unocal Service Station No. 3690
 14999 Farnsworth Street
 San Leandro, California

Sample #	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	TPHd (ppb)	TOG (ppb)
Groundwater Sample from Well U-3								
U-3	12/12/95	120	4.8	15	5.3	19	(260 ¹)	<5,000
TB	12/12/95	<50	<0.50	<0.50	<0.50	<0.50	NA	NA
Grab Groundwater Samples from Borings								
G1-W	7/11/96	<50	<0.30	<0.30	<0.30	<0.30	56 ² (69 ²)	<5,000
G2-W	7/11/96	<50	<0.30	<0.30	<0.30	<0.30	1,600 ^{2,3} (1,600 ^{2,3})	<5,000
G3-W	7/11/96	<50	<0.30	<0.30	<0.30	<0.30	230 ^{2,3} (180 ^{2,3})	<5,000
G4-W	7/11/96	<50	<0.30	<0.30	<0.30	<0.30	250 ^{2,3} (310 ^{2,3})	<5,000
G5-W	7/11/96	<50	<0.30	<0.30	<0.30	<0.30	290 ^{2,3} (270 ^{2,3})	<5,000

Explanations:

TPHg = Total Petroleum Hydrocarbons as gasoline by EPA Method 8015Mod

TPHd = Total Petroleum Hydrocarbons as diesel by EPA Method 8015Mod with silica gel clean-up

TOG = Total Oil and Grease by Standard Method 5520B&FMod

ppb = Parts per billion

() Results by EPA Method 8015Mod

TB = Trip Blank

NA = Not analyzed

¹ Unidentified hydrocarbons in C14-C24 range

² Unidentified hydrocarbons in C9-C24 range

³ Sample contained motor oil.

Note:

Groundwater sample U-3 was also analyzed for metals (cadmium, chromium, lead, nickel and zinc) by EPA Method 6010 and Purgeable Halocarbons by EPA Method 601. Metals were not detected except zinc (0.061 parts per million). Purgeable Halocarbons were not detected except 1,1-Dichloroethane (2.5 ppb), cis-1,2-Dichloroethene (1.1 ppb), Tetrachloroethene (0.50 ppb), 1,1,1-Trichloroethane (2.1 ppb) and Trichloroethene (2.2 ppb).

Table 1
 Summary of Monitoring Data

Well #	Ground Water Elevation (feet)	Depth to Water (feet)*	Total Well Depth (feet)*	Product Thickness (feet)	Shoen	Water Purged (gallons)
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(Monitored and Sampled on July 23, 1996)

U-1	8.24	8.25	30.32	0	No	15
U-2	7.31	9.17	29.50	0	No	14
U-3	WELL WAS DESTROYED					

(Monitored and Sampled on January 24, 1996)

U-1	8.72	7.77	29.45	0	No	15
U-2	9.42	7.06	30.30	0	No	16
U-3	WELL WAS DESTROYED					

(Monitored and Sampled on July 25, 1995)

U-1	7.12	9.37	29.89	0	No	14
U-2	8.48	8.00	30.34	0	No	16
U-3	8.44	8.88	29.50	0	No	14.5

(Monitored and Sampled on January 24, 1995)

U-1	9.10	7.39	29.49	0	No	15.5
U-2	9.84	6.64	30.34	0	No	16.5
U-3	9.54	7.78	29.89	0	No	15.5

Well #	Well Casing Elevation (feet)*
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U-1	16.49
U-2	16.48
U-3	17.32

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

* The elevations of the top of the well casings have been surveyed relative to Mean Sea Level.

Table 2
 Summary of Laboratory Analyses
 Water

Well #	Date	TPH as			Ethyl-		MTBE
		Gasoline	Benzene	Toluene	Benzene	Xylenes	
7/23/96	U-1	ND	ND	ND	ND	ND	ND
	U-2	ND	ND	ND	ND	ND	7.9
	U-3	WELL WAS DESTROYED					
1/24/96	U-1	ND	ND	ND	ND	ND	✓
	U-2	ND	ND	ND	ND	ND	--
	U-3	WELL WAS DESTROYED					
7/25/95	U-1	ND	ND	ND	ND	ND	--
	U-2	ND	ND	ND	ND	ND	--
	U-3	ND	ND	ND	ND	ND	--
1/24/95	U-1	71**	ND	ND	ND	ND	--
	U-2	ND	ND	ND	ND	ND	--
	U-3	ND	ND	ND	ND	ND	--
7/20/94	U-1	87**	ND	ND	ND	ND	--
	U-2	ND	ND	ND	ND	ND	--
	U-3	ND	3.2	ND	ND	ND	--
1/22/94	U-1	ND	ND	ND	ND	ND	--
	U-2	ND	ND	0.82	ND	2.1	--
	U-3	ND	0.92	ND	ND	ND	--
8/9/93	U-1	110*	ND	ND	ND	ND	--
	U-2	ND	ND	ND	ND	ND	--
	U-3	ND	1.0	ND	ND	ND	--
1/25/93	U-1	ND	13	ND	6.4	12	--
	U-2	ND	ND	ND	ND	ND	--
	U-3	ND	ND	ND	ND	ND	--
11/23/92	U-1	ND	ND	ND	ND	ND	--
	U-2	ND	ND	ND	ND	ND	--
	U-3	ND	2.4	ND	ND	ND	--
8/20/92	U-1	ND	ND	ND	ND	ND	--
	U-2	ND	ND	ND	ND	ND	--
	U-3	ND	3.6	ND	ND	ND	--
5/1/92	U-1	ND	0.8	ND	ND	ND	--
	U-2	ND	ND	ND	ND	ND	--
	U-3	ND	1.2	ND	ND	ND	--

Table 2
 Summary of Laboratory Analyses
 Water

Well #	Date	TPH as Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
2/12/92	U-1	ND	ND	ND	ND	ND	--
	U-2	ND	ND	ND	ND	ND	--
	U-3	ND	1.7	ND	ND	ND	--
9/30/91	U-1	ND	ND	ND	ND	ND	--
	U-2	ND	ND	ND	ND	ND	--
	U-3 ^A	ND	ND	ND	ND	ND	--

✓ Sequoia Analytical Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 µg/L in the sample collected from this well.

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

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

^A Oil and Grease concentrations were non-detectable.

ND = Non-detectable.

-- Indicates analysis was not performed.

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

Note: The detection limit for results reported as ND by Sequoia Analytical Laboratory is equal to the stated detection limit times the dilution factor indicated on the laboratory analytical sheets.

Prior to August 1, 1995, the total purgeable petroleum hydrocarbon (TPH as gasoline) quantification range used by Sequoia Analytical Laboratory was C4 - C12. Since August 1, 1995, the quantification range used by Sequoia Analytical Laboratory is C6 - C12.

Laboratory analyses data prior to January 22, 1994, were provided by GeoStrategies, Inc.

TABLE 1. GROUNDWATER CHEMICAL ANALYTICAL DATA
Former Unocal Station No. 3690
14999 Farnsworth Street
San Leandro, California

Well No.	Date Sampled	Casing Elevation (feet MSL) ¹	Depth to Water (feet)	Groundwater Elevation (feet MSL)	TPHd (ppb)	VOCs (ppb)	SVOCs (ppb)
U-1	12/7/96	16.49	8.27	8.22	<50 ²	ND ³	ND ⁴
U-2	12/7/96	16.48	7.63	8.85	<50	ND	ND
Trip Blank	----	----	----	----	NA	ND	NA

Explanation

feet MSL = in feet relative to mean sea level
 TPHd = Total Petroleum Hydrocarbons as diesel
 VOCs = Volatile Organic Compounds
 SVOCs = Semivolatile Organic Compounds
 ND = none detected
 NA = not analyzed
 ppb = parts per billion, reported as micrograms per liter (µg/L).
 ---- = not applicable

Analytical Laboratory

Sequoia Analytical (ELAP #1210)

Analytical Methods

TPHd = EPA 8015 Mod
 VOCs = EPA 8240
 SVOCs = EPA 8270

¹ Casing elevations from MPDS, Inc. Semi-Annual Data Report, dated February 16, 1995.

² Results shown as <X were reported by laboratory as not present above the stated detection limit.

³ No VOC compounds present above detection limits of 2.0, 5.0, or 10 ppb.

⁴ No SVOC compounds present above detection limits of 5.0 or 10 ppb.