



**GeoStrategies Inc.**

**QUARTERLY MONITORING REPORT**

UNOCAL Service Station No. 3690  
14999 Farnsworth Street  
San Leandro, California

781902-4

June 19, 1992



**GeoStrategies Inc.**

2140 WEST WINTON AVENUE  
HAYWARD, CALIFORNIA 94545

(510) 352-4800

June 19, 1992

Unocal Corporation  
P.O. Box 5155  
San Ramon, California 94583

Attn: Mr. Robert A. Boust

Re: QUARTERLY MONITORING REPORT  
Unocal Service Station No. 3690  
14999 Farnsworth Street  
San Leandro, California

Mr. Boust:

This Quarterly Monitoring Report has been prepared by GeoStrategies Inc. (GSI) and presents the results of the 1992 second quarter sampling for the above referenced site (Plate 1).

There are currently three monitoring wells at the site; Wells U-1, U-2 and U-3 (Plate 2). These wells were installed in 1991 by GSI.

**CURRENT QUARTER SAMPLING RESULTS**

Depth to water measurements were obtained in each monitoring well on May 1, 1992. Static ground-water levels were measured from the surveyed top of the well box and recorded to the nearest  $\pm 0.01$  foot. Water-level elevations were referenced to Mean Sea Level (MSL) datum and are presented in Table 1. Water-level data were used to construct a quarterly potentiometric map (Plate 3). Shallow ground-water flow direction is to the west with an approximate hydraulic gradient of 0.01.

Each well was checked for the presence of floating product. Floating product was not observed in the wells this quarter.

# GeoStrategies Inc.

Unocal Corporation  
June 19, 1992  
Page 2

Ground-water samples were collected on May 1, 1992. Samples were analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-Gasoline), according to EPA Method 8015 (Modified) and for Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) according to EPA Method 8020. The ground-water samples were analyzed by National Environmental Testing (NET) Pacific, a California State-certified laboratory located in Santa Rosa, California. The laboratory analytical report and Chain-of-Custody form is included in Appendix A. These data are summarized and included with the historical chemical analytical data presented in Table 2. A chemical concentration map for benzene is presented on Plate 4. Groundwater sampling field methods and procedures were present in a previous GSI report dated April 15, 1992.

If you have any questions, please call.

GeoStrategies Inc. by,

*Ellen C. Fostersmith*

Ellen C. Fostersmith  
Geologist

*Diane M. Lundquist*

Diane M. Lundquist, P.E.  
Senior Engineer  
C 46725



ECF/DML/shl

- Plate 1. Vicinity Map
- Plate 2. Site Plan
- Plate 3. Potentiometric Map
- Plate 4. Benzene Concentration Map

Appendix A: Laboratory Analytical Report and Chain-of-Custody Form

QC Review: *JSP*

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TABLES

TABLE 1

## FIELD MONITORING DATA

WELL NO.	MONITORING DATE	CASING DIA. (IN)	TOTAL WELL DEPTH (FT)	WELL ELEV. (FT)	DEPTH TO WATER (FT)	PRODUCT THICKNESS (FT)	STATIC WATER ELEV. (FT)	PURGED WELL VOLUMES	pH	TEMPERATURE (F)	CONDUCTIVITY (u MHOS/CM)
U-1	1-May-92	2	30.2	17.24	9.67	----	7.57	5	7.45	66.4	696
U-2	1-May-92	2	30.6	16.85	8.40	----	8.45	5	7.48	66.7	497
U-3	1-May-92	2	30.2	17.76	9.89	----	7.87	5	7.35	67.5	777

Notes: 1. Static water elevations referenced to Mean Sea Level (MSL).  
 2. Physical parameter measurements represent stabilized values.

TABLE 2

## HISTORICAL GROUND-WATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)	OIL & GREASE (PPM)
30-Sep-91	U-1	<30	<0.30	<0.30	<0.30	<0.30	N/A
12-Feb-92	U-1	<30	<0.30	<0.30	<0.30	<0.30	N/A
01-May-92	U-1	<50	0.8	<0.5	<0.5	<0.5	N/A
30-Sep-91	U-2	<30	<0.30	<0.30	<0.30	<0.30	N/A
12-Feb-92	U-2	<30	<0.30	<0.30	<0.30	<0.30	N/A
01-May-92	U-2	<50	<0.5	<0.5	<0.5	<0.5	N/A
30-Sep-91	U-3	<30	<0.30	<0.30	<0.30	<0.30	<5.0
12-Feb-92	U-3	<30	1.7	<0.30	<0.30	<0.30	N/A
01-May-92	U-3	<50	1.2	<0.5	<0.5	<0.5	N/A

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline

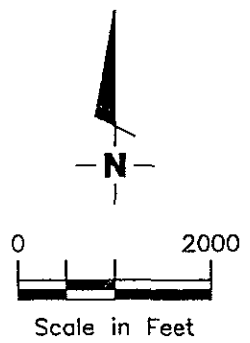
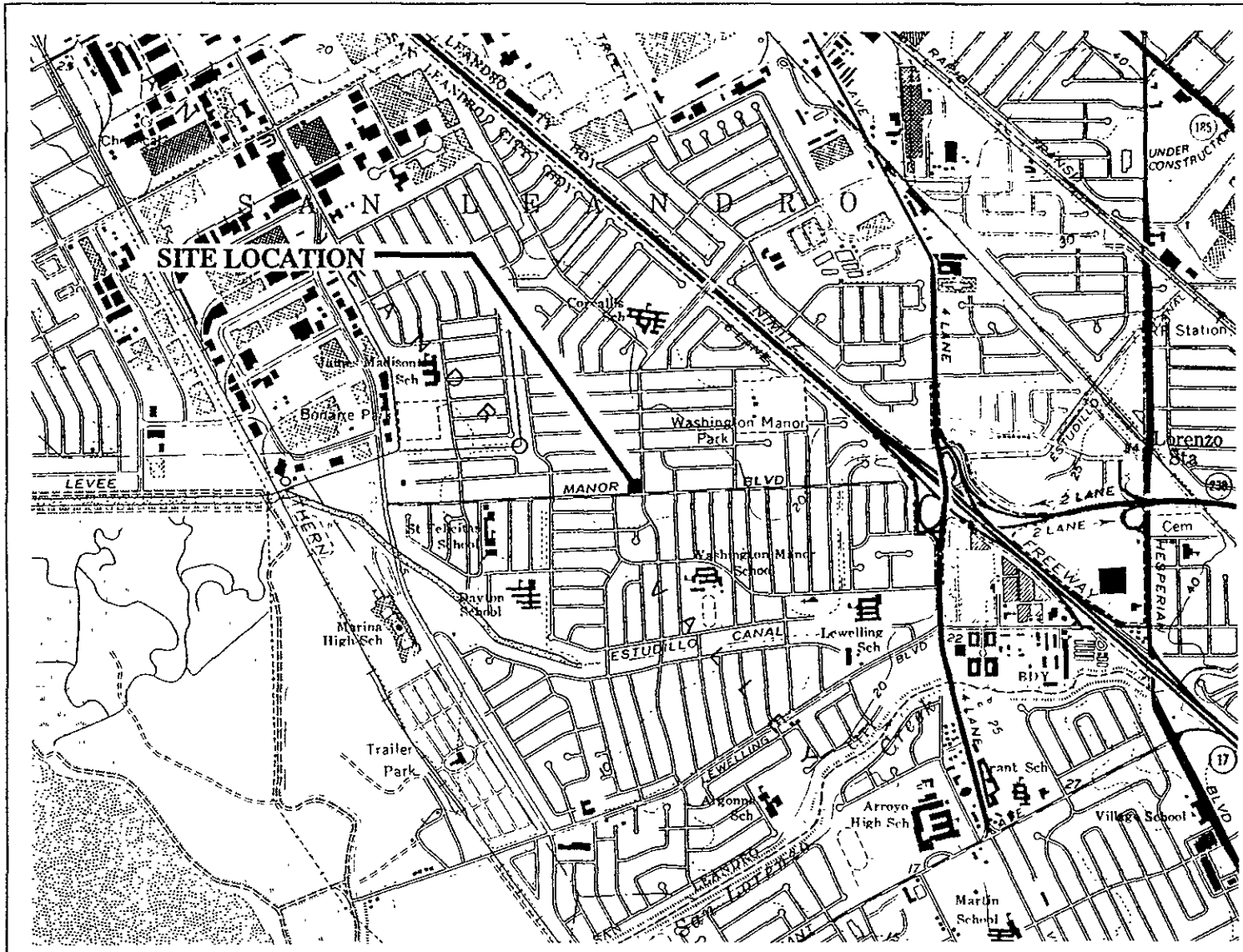
PPB = Parts Per Billion

NOTE 1. All data shown as <X are reported as ND (none detected).

HVOC ?

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ILLUSTRATIONS



Base Map: USGS Topographic Map



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VICINITY MAP  
 UNOCAL Service Station #3690  
 14999 Farnsworth Street  
 San Leandro, California

PLATE

1

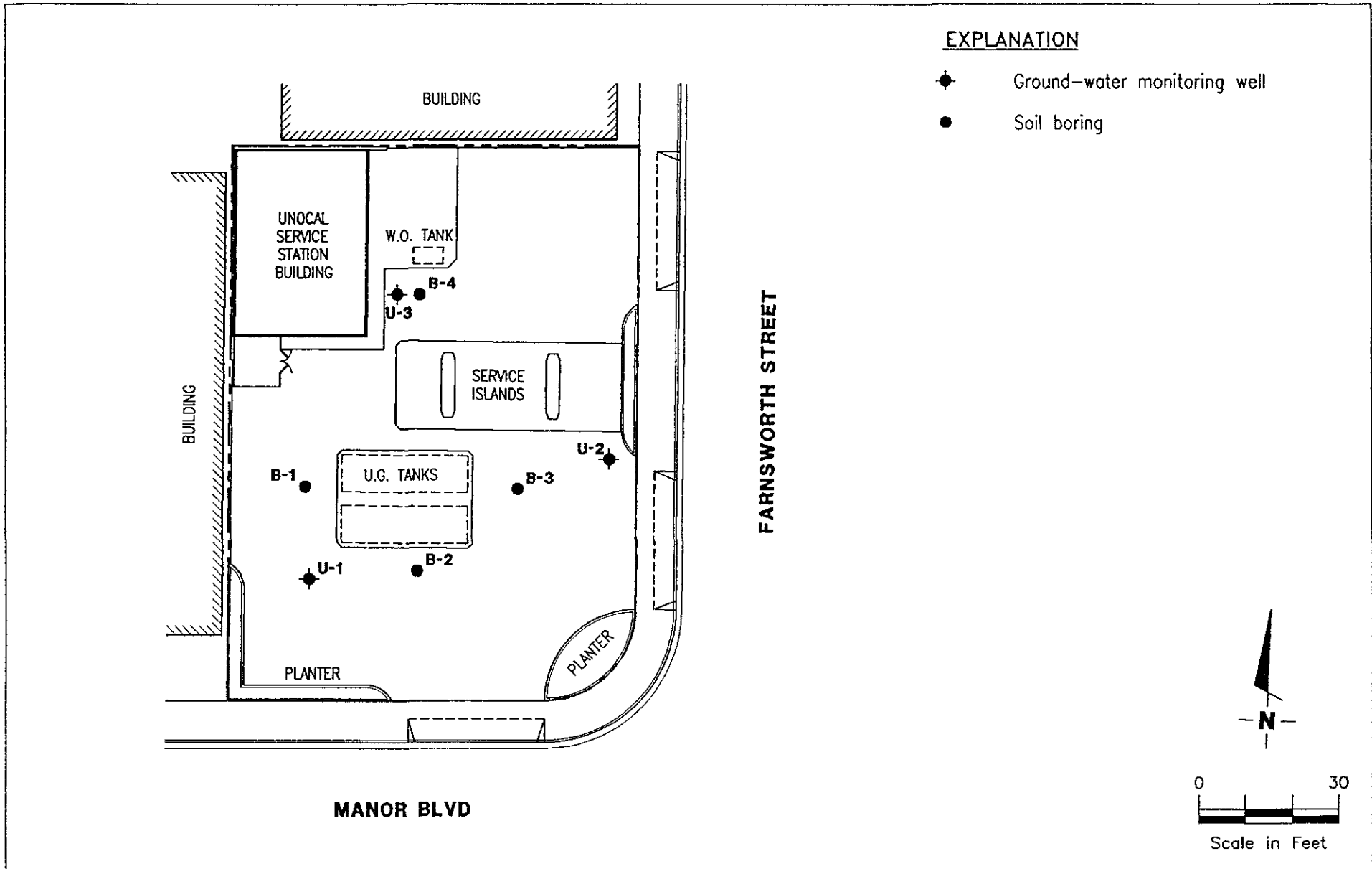
JOB NUMBER  
7819

REVIEWED BY  
ET

DATE  
5/91

REVISED DATE





EXPLANATION

- ⊕ Ground-water monitoring well
- Soil boring



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SITE PLAN  
 UNOCAL Service Station #3690  
 14999 Farnsworth Street  
 San Leandro, California

PLATE

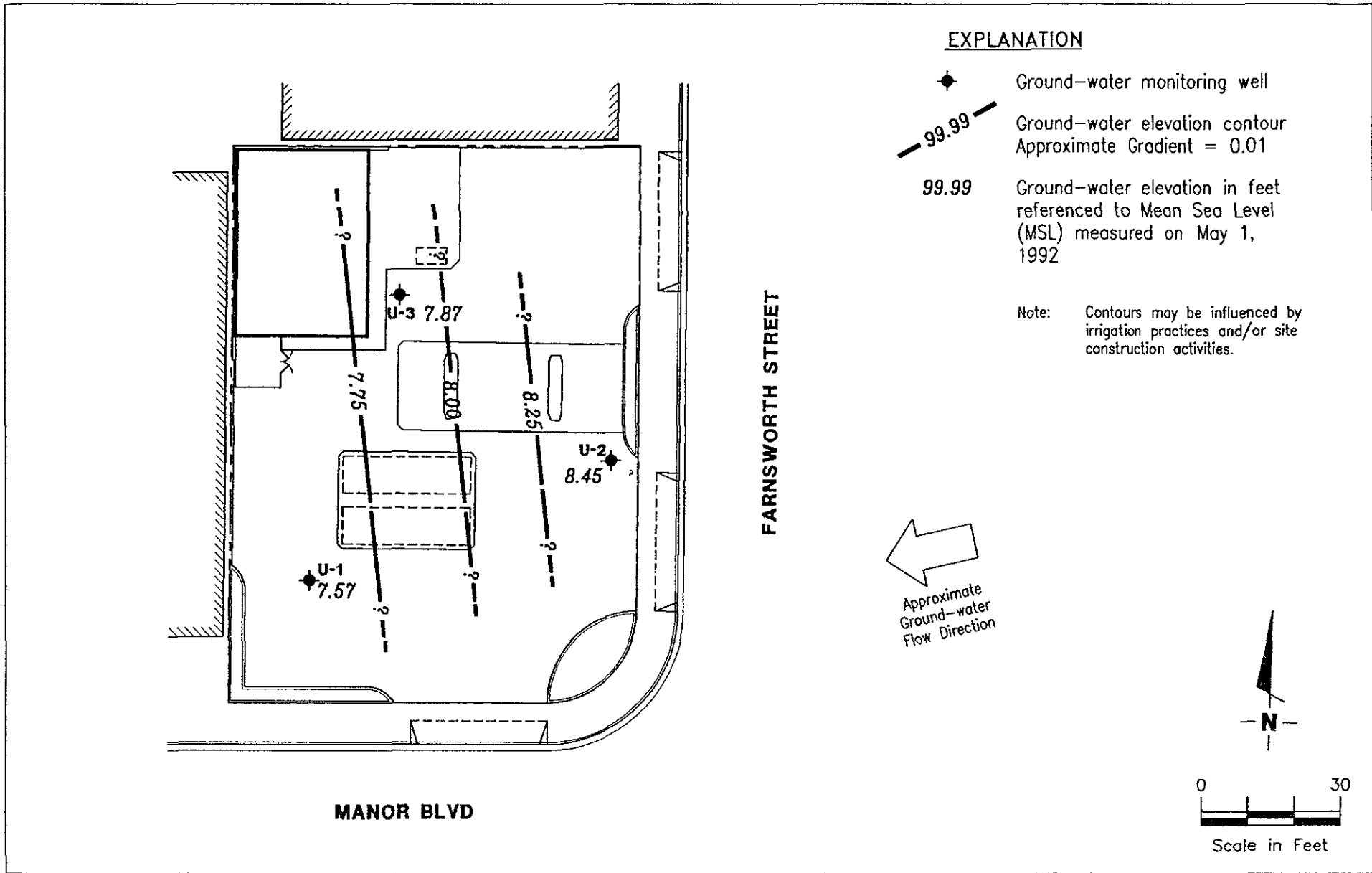
**2**

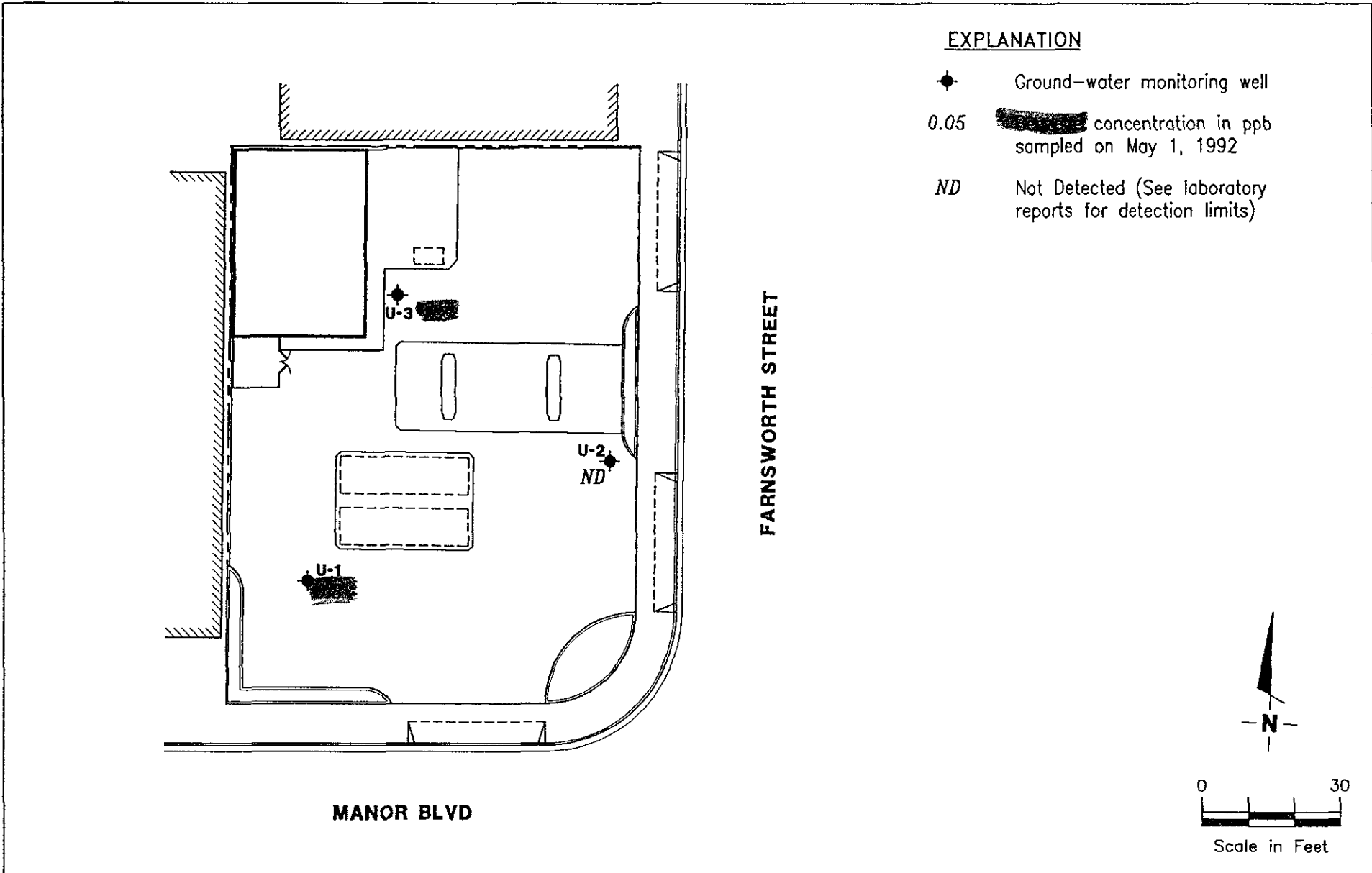
JOB NUMBER  
7819

REVIEWED BY  
*Ray*

DATE  
5/92

REVISED DATE





GeoStrategies Inc.

**BENZENE CONCENTRATION MAP**  
 UNOCAL Service Station #3690  
 14999 Farnsworth Street  
 San Leandro, California

PLATE

**4**

JOB NUMBER  
781902-4

REVIEWED BY  
[Signature]

DATE  
7/92

REVISED DATE

**GeoStrategies Inc.**

APPENDIX A  
LABORATORY ANALYTICAL REPORT  
AND CHAIN-OF-CUSTODY FORM



NATIONAL  
ENVIRONMENTAL  
TESTING, INC.

NET Pacific, Inc.  
435 Tesconi Circle  
Santa Rosa, CA 95401  
Tel: (707) 526-7200  
Fax: (707) 526-9623

Frank Cline  
Gettler-Ryan Inc.  
2150 W. Winton Avenue  
Hayward, CA 94545

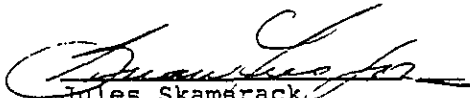
Date: 05/26/1992  
NET Client Acct No: 67900  
NET Pacific Job No: 92.2481  
Received: 05/04/1992

Client Reference Information

Unocal 3690, 24999 Farnsworth St., San Leandro

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

  
Jules Skamarack  
Laboratory Manager

JS:rct  
Enclosure(s)



NET Pacific, Inc

Client No: 67900  
Client Name: Gettler-Ryan Inc.  
NET Job No: 92.2481

Date: 05/26/1992  
Page: 2

Ref: Unocal 3690, 24999 Farnsworth St., San Leandro  
Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	U-1	U-2	Units
			05/01/1992 09:21 121778	05/01/1992 09:45 121779	
TPH (Gas/BTEXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			05-15-92	05-15-92	
DILUTION FACTOR*			1	1	
as Gasoline	5030	50	ND	ND	ug/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			05-15-92	05-15-92	
DILUTION FACTOR*			1	1	
Benzene	8020	0.5	0.8	ND	ug/L
Ethylbenzene	8020	0.5	ND	ND	ug/L
Toluene	8020	0.5	ND	ND	ug/L
Xylenes (Total)	8020	0.5	ND	ND	ug/L
SURROGATE RESULTS			--	--	
Bromofluorobenzene	5030		101	109	% Rec.



NET Pacific, Inc

Client No: 67900  
Client Name: Gettler-Ryan Inc.  
NET Job No: 92.2481

Date: 05/26/1992

Page: 3

Ref: Unocal 3690, 24999 Farnsworth St., San Leandro  
Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	U-3	Trip Blank	Units
			05/01/1992 10:09 121780	121781	
TPH (Gas/BTEXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			05-15-92	05-19-92	
DILUTION FACTOR*			1	1	
as Gasoline	5030	50	ND	ND	ug/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			05-15-92	05-19-92	
DILUTION FACTOR*			1	1	
Benzene	8020	0.5	1.2	ND	ug/L
Ethylbenzene	8020	0.5	ND	ND	ug/L
Toluene	8020	0.5	ND	ND	ug/L
Xylenes (Total)	8020	0.5	ND	ND	ug/L
SURROGATE RESULTS			--	--	
Bromofluorobenzene	5030		103	102	% Rec.



NET Pacific, Inc

Client No: 67900  
Client Name: Gettler-Ryan Inc.  
NET Job No: 92.2481

Date: 05/26/1992  
Page: 4

Ref: Unocal 3690, 24999 Farnsworth St., San Leandro

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verif Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	50	ug/L	99	ND	92	87	6.7
Benzene	0.5	ug/L	102	ND	95	93	2.1
Toluene	0.5	ug/L	96	ND	98	95	3.1
Gasoline	50	ug/L	102	ND	103	96	7.0
Benzene	0.5	ug/L	106	ND	104	101	2.9
Toluene	0.5	ug/L	102	ND	99	98	1.0

COMMENT: Blank Results were ND on other analytes tested.





NET Pacific, Inc

## KEY TO ABBREVIATIONS and METHOD REFERENCES

- < : Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
- \* : Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
- ICVS : Initial Calibration Verification Standard (External Standard).
- mean : Average; sum of measurements divided by number of measurements.
- mg/Kg (ppm) : Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
- mg/L : Concentration in units of milligrams of analyte per liter of sample.
- mL/L/hr : Milliliters per liter per hour.
- MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.
- N/A : Not applicable.
- NA : Not analyzed.
- ND : Not detected; the analyte concentration is less than applicable listed reporting limit.
- NTU : Nephelometric turbidity units.
- RPD : Relative percent difference,  $100 \text{ [Value 1 - Value 2] / mean value}$ .
- SNA : Standard not available.
- ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
- ug/L : Concentration in units of micrograms of analyte per liter of sample.
- umhos/cm : Micromhos per centimeter.

### Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

COMPANY

Unocal SB # 3690

JOB NO.

JOB LOCATION

14999 Farnsworth St

CITY

San Leandro

PHONE NO.

(925) 783-7100

AUTHORIZED

Frank Cline

DATE

5-1-92

P.O. NO.

3819.02

SAMPLE ID	NO. OF CONTAINERS	SAMPLE MATRIX	DATE/TIME SAMPLED	ANALYSIS REQUIRED	SAMPLE CONDITION LAB ID
U-1	3	H <sub>2</sub> O	5-1-92/0921	THC-ga (BNE)	
U-2	↓	↓	↓ 10941-	↓	
U-3	↓	↓	↓ 1009	↓	
trip	2	↓	- 1 -	↓	

RELINQUISHED BY:

*Isabel Sanchez*

5-1-92

1515

RECEIVED BY:

*Refrig #1*

5-1-92

1515

RELINQUISHED BY:

*Refrig #1* 5-4-92 08:00

RECEIVED BY:

*[Signature]* 5-4-92 08:00

RELINQUISHED BY:

*[Signature]* 5-4-92 04:40

RECEIVED BY LAB:

*[Signature]* 5-4-92/14:40

DESIGNATED LABORATORY:

NET

DHS #:

REMARKS:

Normal TAT

DATE COMPLETED

5-1-92

FOREMAN

G. Sanchez



**GeoStrategies Inc.**

2140 WEST WINTON AVENUE  
HAYWARD, CALIFORNIA 94545

(510) 352-4800

92 JUN 23 11 1:24

June 19, 1992

Alameda County Health Agency  
Division of Hazardous Materials  
Department of Environmental Health  
80 Swan Way, Room 200  
Oakland, California 94521

Attention: Ms. Pamela Evans

Reference: UNOCAL Service Station No. 3690

17090 Panamint Street  
San Leandro, California

Ms. Evans:

As requested by Mr. Robert Boust of UNOCAL Corporation, we are forwarding a copy of the Quarterly Monitoring Report for the above referenced location. This report presents the results of the 1992 second quarter groundwater sampling conducted at this site.

If you have any questions or comments, please call.

Sincerely,

David J. Vossler  
Senior Geologist

DJV/cmg

Enclosure

cc: Mr. Robert Boust, UNOCAL Corporation  
Mr. Richard Hiatt, Regional Water Quality Control Board