



**GeoStrategies Inc.**

ALCO  
HAZMAT

93 NOV 18 AM 10:49

November 15, 1993

Alameda County Health Agency  
Department of Environmental Health  
80 Swan Way, Room 200  
Oakland, California 94621

Attention: Mr. Barney Chan

Reference: **UNOCAL Service Station No. 5325**  
3220 Lakeshore Avenue  
Oakland, California

✓  
1059

Mr. Chan:

As requested by Mr. David DeWitt of UNOCAL Corporation, we are forwarding a copy of the Quarterly Monitoring Report dated October 12, 1993, for the above referenced location. This report presents the results of the third quarter 1993 groundwater monitoring and sampling.

If you have questions or comments, please call.

**GeoStrategies Inc. by,**

A handwritten signature in black ink, appearing to read 'Cliff M. Garrett'.

Cliff M. Garrett  
Project Manager

CMG\rcm

enclosure

cc: Mr. David DeWitt, UNOCAL Corporation  
Mr. Richard Hiatt, RWOCB - San Francisco Bay Region

814final.ltr

ALCO  
HAZMAT

93 NOV 18 AM 10:49



**GeoStrategies Inc.**

**QUARTERLY MONITORING REPORT**

UNOCAL Service Station #5325  
3220 Lakeshore Avenue  
Oakland, California

781480-16

October 12, 1993



**GeoStrategies Inc.**

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October 12, 1993

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

Attn: Mr. David B. DeWitt

Re: **QUARTERLY MONITORING REPORT**  
UNOCAL Service Station #5325  
3220 Lakeshore Avenue  
Oakland, California

Mr. DeWitt:

This Quarterly Monitoring Report has been prepared by GeoStrategies Inc. (GSI) and presents the results of the 1993 third 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 1990 by GSI.

**CURRENT QUARTER SAMPLING RESULTS**

Depth-to-water measurements were obtained in each monitoring well on August 9, 1993. Static groundwater 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) and are presented in Table 1. Water-level data were used to construct a quarterly potentiometric map (Plate 3). Shallow groundwater flow is to the southeast with an approximate hydraulic gradient of 0.02.

Each well was checked for the presence of floating product. Floating product was not observed in the wells this quarter. Floating product has never been observed in these wells. The field data sheets are included in Appendix A.

781480-16

## **GeoStrategies Inc.**

Unocal Corporation  
October 12, 1993  
Page 2

Groundwater samples were collected on August 9, 1993. Samples were analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-Gasoline) according to EPA Method 8015 (Modified), and for Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) according to EPA Method 8020. The groundwater samples were analyzed by Anametrix Inc., a California State-certified laboratory located in San Jose, California. The laboratory analytical report and Chain-of-Custody form are included in Appendix B. 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. Field methods and procedures were presented in a previous GSI report dated April 28, 1992.

**GeoStrategies Inc.**

Unocal Corporation  
October 12, 1993  
Page 3

If you have any questions, please call.

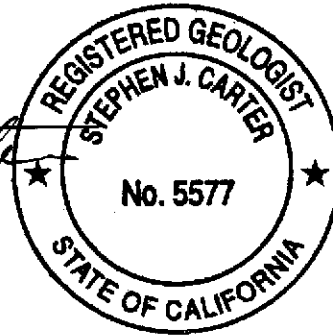
GeoStrategies Inc. by,

*Robert C. Mallory*

*FOR*  
Ellen C. Fostersmith  
Geologist

*Stephen J. Carter*

Stephen J. Carter  
Project Manager  
RG 5577



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

Appendix A: Field Data Sheets

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

QC Review: *CMG*

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	TEMP (F)	CONDUCTIVITY (uMHOS/cm)
U-1	09-Aug-93	3	20.0	5.75	9.06	----	-3.31	5	7.46	69.5	2540
U-2	09-Aug-93	3	20.0	4.94	8.13	----	-3.19	6	7.35	73.6	3660
U-3	09-Aug-93	3	20.0	8.14	12.39	----	-4.25	5	8.15	73.0	1022

- Notes: 1. Static water elevations referenced to Mean Sea Level (MSL). Depth to water measured from surveyed top of well box.  
 2. Physical parameter measurements represent stabilized values.

TABLE 2

## HISTORICAL GROUNDWATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
08-Oct-90	U-1	690.	38.	75.	8.6	130.
07-Jan-91	U-1	250.	22.	16.	4.2	17.
01-Apr-91	U-1	180.	13.	8.6	1.0	15.
03-Jul-91	U-1	140	21	4.3	0.36	17
09-Oct-91	U-1	<30	<0.30	<0.30	<0.30	<0.30
12-Feb-92	U-1	250	<0.30	<0.30	<0.30	<0.30
05-May-92	U-1	230	1.2	<0.5	<0.5	<0.5
20-Aug-92	U-1	400*	1	<0.5	<0.5	0.6
06-Nov-92	U-1	1000	80	1.4	6.7	41
22-Feb-93	U-1	34000	1400	5500	910	7300
07-May-93	U-1	8700	600	240	650	3300
09-Aug-93	U-1	4900**	79	<12.5	83	270
08-Oct-90	U-2	780.	27.	46.	15.	130.
07-Jan-91	U-2	1900.	67.	5.8	58.	69.
01-Apr-91	U-2	1700.	250.	89.	34.	190.
03-Jul-91	U-2	2100	150	25	3.1	290
09-Oct-91	U-2	230	7.1	<0.30	<0.30	11
12-Feb-92	U-2	410	1.9	<0.30	0.36	0.40
05-May-92	U-2	1600	120	52	6.2	290
20-Aug-92	U-2	700	28	6.5	1.3	4.6
06-Nov-92	U-2	620	17	2.1	<0.5	37
22-Feb-93	U-2	3400	2400	2100	1200	5800
07-May-93	U-2	17000	1800	660	1700	4000
09-Aug-93	U-2	5600**	420	<12.5	410	670
08-Oct-90	U-3	<50.	<0.5	<0.5	<0.5	<0.5
07-Jan-91	U-3	<50.	<0.5	<0.5	<0.5	1.8
01-Apr-91	U-3	<50.	1.0	2.9	0.53	5.4
03-Jul-91	U-3	<30	<0.30	<0.30	<0.30	<0.30
09-Oct-91	U-3	<30	<0.30	<0.30	<0.30	<0.30
12-Feb-92	U-3	<30	<0.30	<0.30	<0.30	<0.30
05-May-92	U-3	<50	<0.5	<0.5	<0.5	<0.5
20-Aug-92	U-3	<50	<0.5	<0.5	<0.5	<0.5

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

SAMPLE DATE	SAMPLE POINT	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
06-Nov-92	U-3	<50	<0.5	<0.5	<0.5	<0.5
22-Feb-93	U-3	<50	<0.5	<0.5	<0.5	<0.5
07-May-93	U-3	<50	<0.5	<0.5	<0.5	<0.5
09-Aug-93	U-3	210	5.0	9.7	0.7	4.1

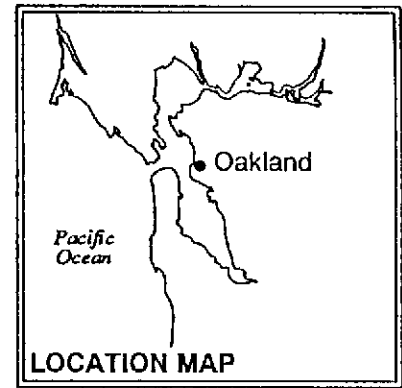
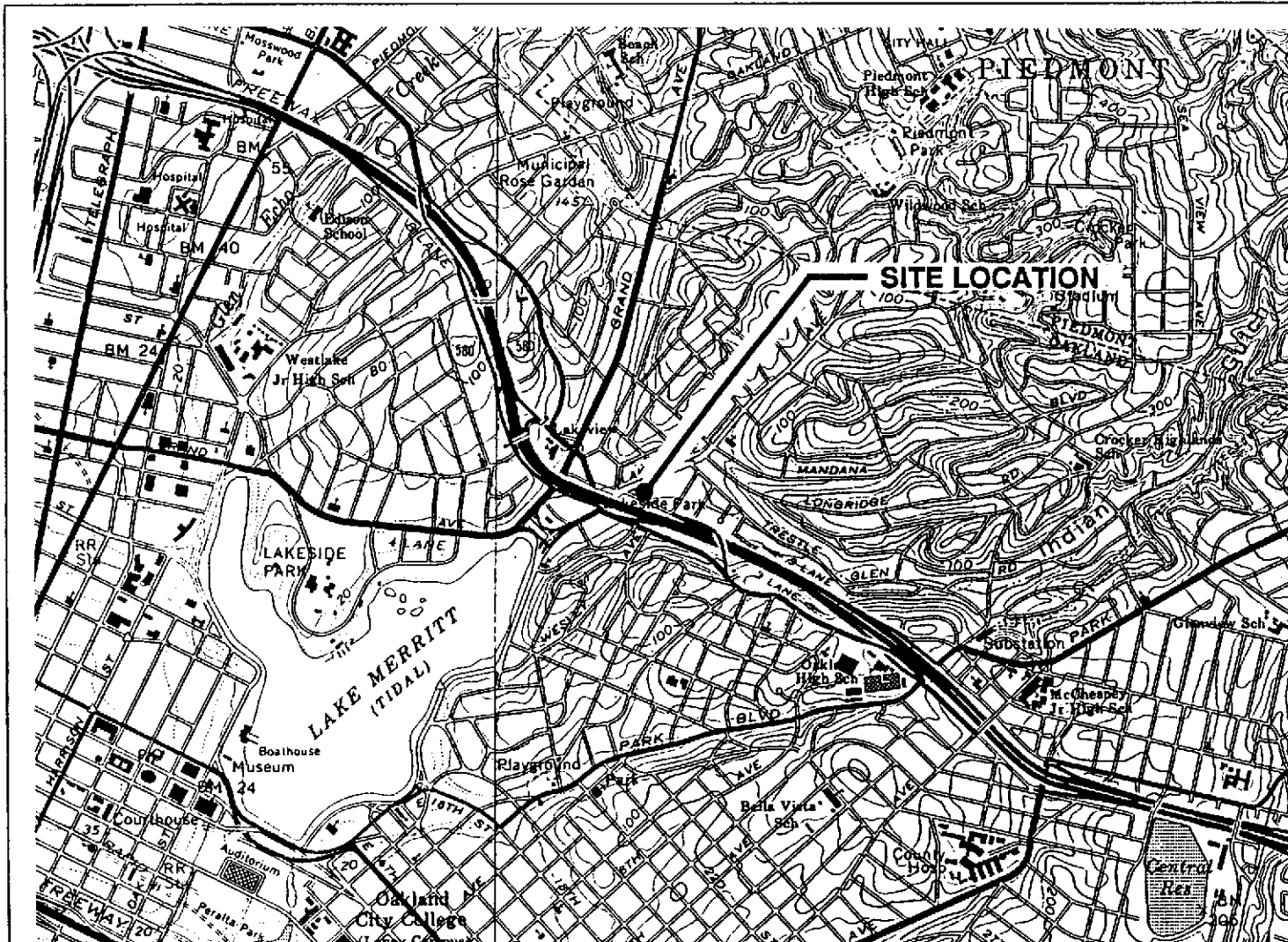
TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline.  
 PPB = Parts Per Billion.

- Notes: 1. All data shown as <x are reported as ND (none detected).  
 2. Laboratory values are reported in units of ug/L, which are generally synonymous with parts per billion.

\* The positive result for gasoline does not appear to have a typical gasoline pattern.

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





Base Map: USGS Topographic Map

Approximate Scale: 1" = 2000'



GeoStrategies Inc.

Vicinity Map  
 UNOCAL Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

PLATE

**1**

JOB NUMBER  
7814

REVIEWED BY RG/CEG

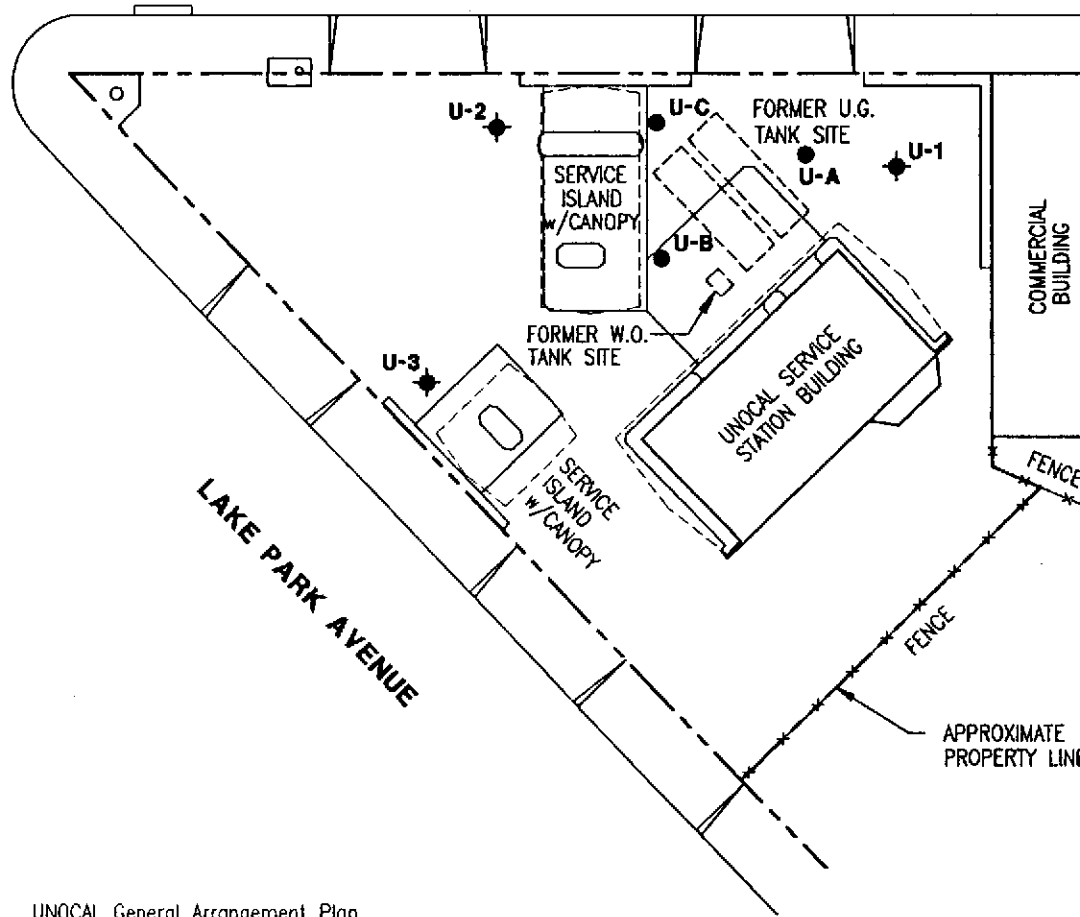
DATE  
6/90

REVISED DATE

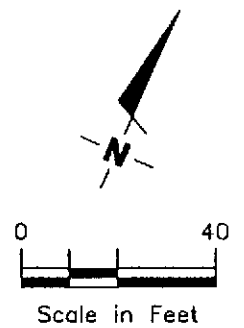
LAKESHORE AVENUE

EXPLANATION

- ◆ Groundwater monitoring well
- Soil boring



Base Map: UNOCAL General Arrangement Plan dated 7-8-66 (Rev. 12-4-84) and field observations



GeoStrategies Inc.

**SITE PLAN**  
UNOCAL Service Station #5325  
3220 Lakeshore Avenue  
Oakland, California

PLATE

**2**

JOB NUMBER  
7814

REVIEWED BY

DATE  
7/93

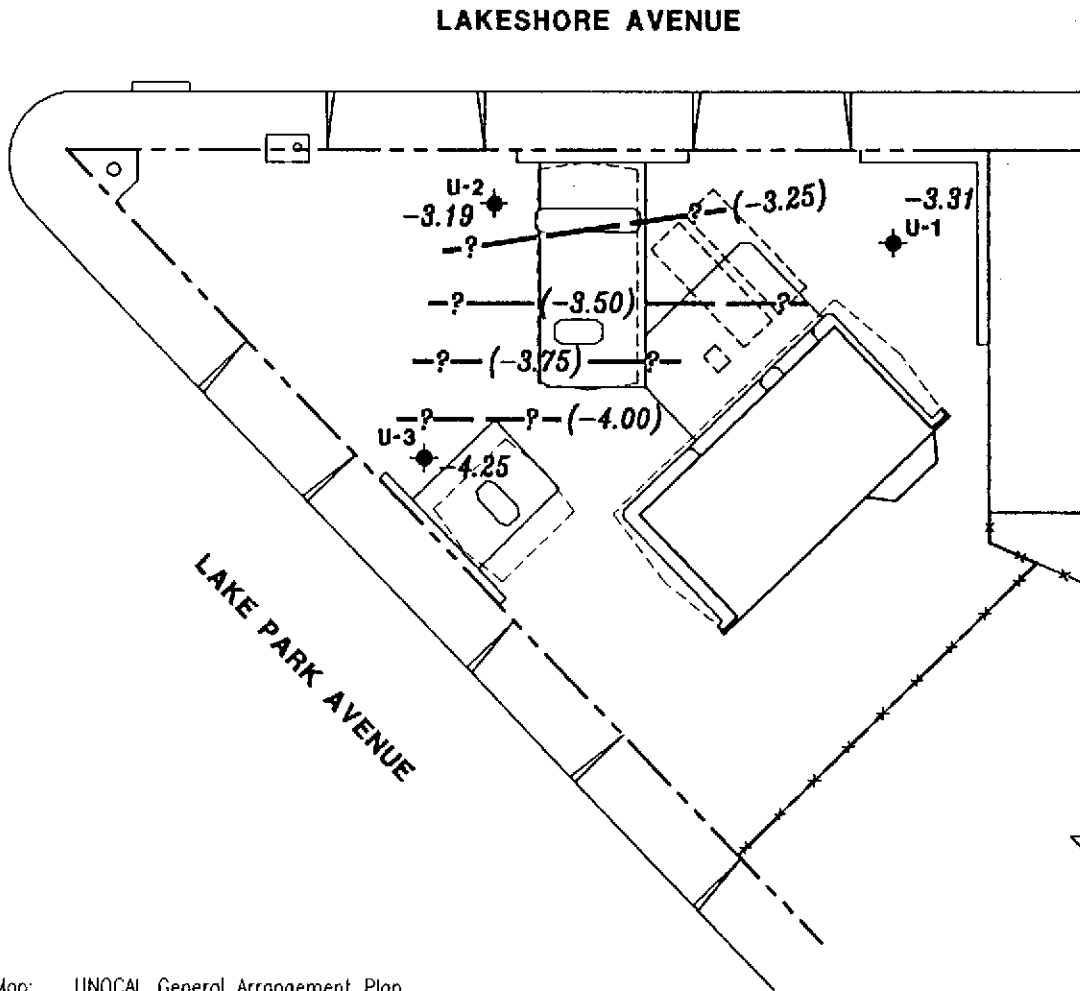
REVISED DATE

**EXPLANATION**

◆ Groundwater monitoring well  
 99.99 Groundwater elevation in feet referenced to Mean Sea Level (MSL) measured on August 9, 1993

--- 99.99 --- Groundwater elevation contour  
 Approximate Gradient = 0.02

NOTES: 1. Contours may be influenced by irrigation practices and/or site construction activities.



Base Map: UNOCAL General Arrangement Plan dated 7-8-66 (Rev. 12-4-84) and field observations



GeoStrategies Inc.

POTENTIOMETRIC MAP  
 UNOCAL Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

PLATE

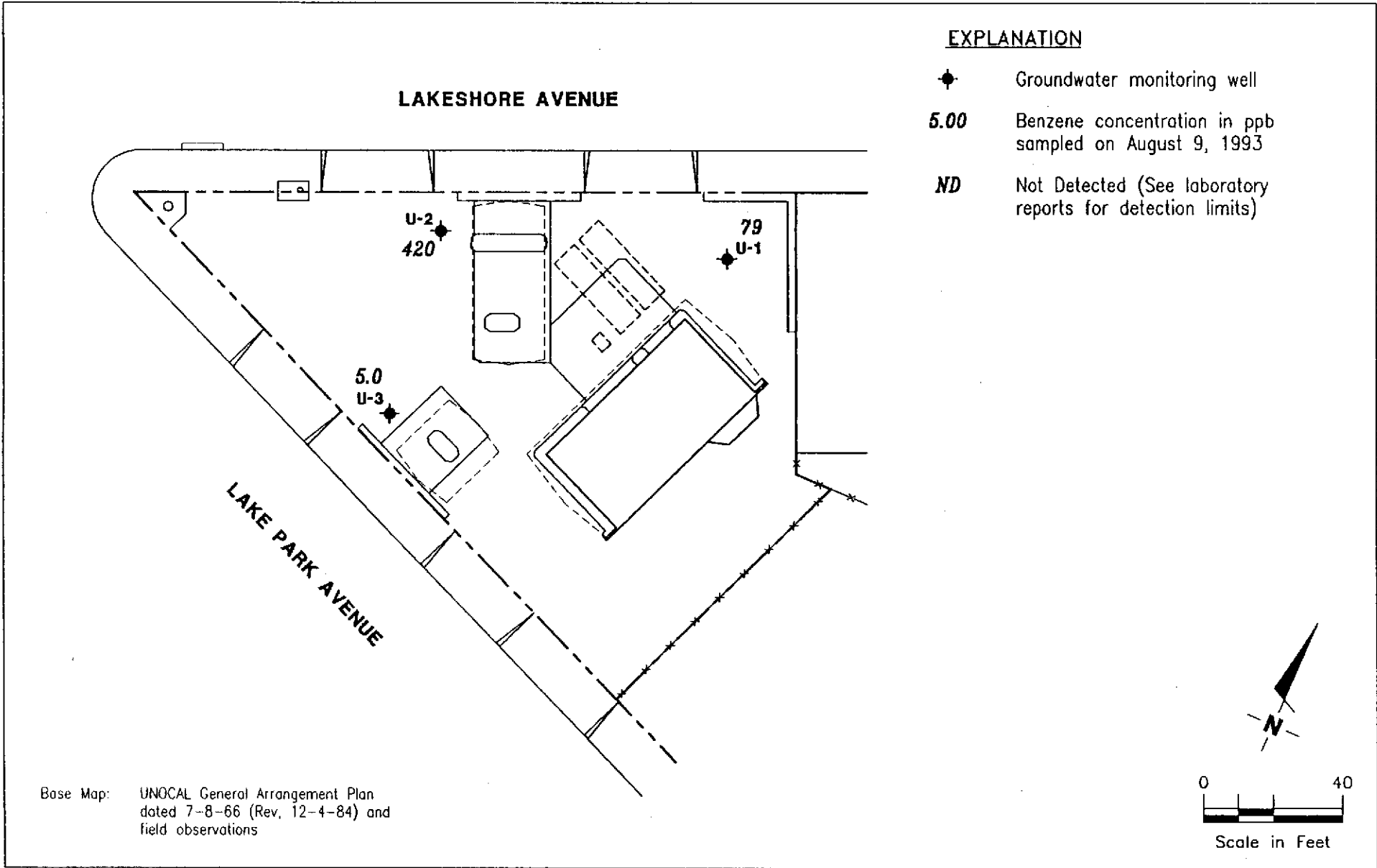
**3**

JOB NUMBER  
 781480-16

REVIEWED BY

DATE  
 10/93

REVISED DATE



GeoStrategies Inc.

**BENZENE CONCENTRATION MAP**  
 UNOCAL Service Station #5325  
 3220 Lakeshore Avenue  
 Oakland, California

PLATE

**4**

JOB NUMBER  
781480-16

REVIEWED BY  
RCM

DATE  
10/93

REVISED DATE



# GETTLER-RYAN INC.

General and Environmental Contractors

## WELL SAMPLING FIELD DATA SHEET

COMPANY Unocal JOB # 3514.01  
 LOCATION 3220 Lakeshore DATE 8-9-93  
 CITY Oakland TIME \_\_\_\_\_

Well ID. U-1 Well Condition OK  
 Well Diameter 3 in. Hydrocarbon Thickness \_\_\_\_\_ ft.  
 Total Depth 26.0 ft.  
 Depth to Liquid- 9.66 ft.  

Volume Factor (VF)	2" = 0.17	6" = 1.50	12" = 5.80
	3" = 0.38	8" = 2.80	
	4" = 0.66	10" = 4.10	

  
 (# of casing volumes) 5 x 10.94 x (VF) .38 = (Estimated Purge Volume) 4.1 2) gal.  
 Purging Equipment DD  
 Sampling Equipment Bailer

Starting Time 15:25 Purging Flow Rate 2.8 gpm.  
 (Estimated Purge Volume) \_\_\_\_\_ gal. / (Purging Flow Rate) \_\_\_\_\_ gpm. = (Anticipated Purging Time) \_\_\_\_\_ min.

Time	pH	Conductivity	Temperature	Volume
<u>15:27</u>	<u>7.80</u>	<u>2400</u>	<u>73.2</u>	<u>9.4</u> gal
<u>15:29</u>	<u>7.54</u>	<u>2330</u>	<u>70.6</u>	<u>8.8</u>
<u>15:31</u>	<u>7.44</u>	<u>2530</u>	<u>69.4</u>	<u>13.2</u>
<u>15:33</u>	<u>7.45</u>	<u>2560</u>	<u>69.6</u>	<u>17.6</u>
<u>15:35</u>	<u>7.45</u>	<del>2570</del> <u>2540</u>	<u>69.5</u>	<u>22.0</u>

Did well dewater? No If yes, time \_\_\_\_\_ Volume \_\_\_\_\_  
 Sampling Time 15:40 Weather Conditions PLC  
 Analysis gas (BTXE) Bottles Used 3 x 40 ml  
 Chain of Custody Number \_\_\_\_\_

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_

# GETTLER-RYAN INC.

General and Environmental Contractors

## WELL SAMPLING FIELD DATA SHEET

COMPANY Unocal JOB # 3814.01  
 LOCATION 3220 Lakeshore DATE 8/16/93  
 CITY Frankland TIME \_\_\_\_\_

Well ID. U-3 Well Condition OK  
 Well Diameter 3 in. Hydrocarbon Thickness \_\_\_\_\_ ft.  
 Total Depth 20' ft. 

Volume Factor (VF)	2" = 0.17	6" = 1.50	12" = 5.80
	3" = 0.38	8" = 2.80	
	4" = 0.66	10" = 4.10	

  
 Depth to Liquid- 12.39 ft.  
 (# of casing volumes) 5 x 7.61 x (VF) .38 = (Estimated Purge Volume) 2.9 14.5 gal.  
 Purging Equipment DD  
 Sampling Equipment Bailer

Starting Time 12:48 Purging Flow Rate 1.5 gpm.  
 (Estimated Purge Volume) \_\_\_\_\_ gal. / (Purging Flow Rate) \_\_\_\_\_ gpm. = (Anticipated Purging Time) \_\_\_\_\_ min.

Time	pH	Conductivity	Temperature	Volume
<u>14:50</u>	<u>8.37</u>	<u>1141</u>	<u>72.1</u>	<u>3</u> gal
<u>14:52</u>	<u>8.26</u>	<u>1078</u>	<u>73.5</u>	<u>6</u>
<u>14:54</u>	<u>8.20</u>	<u>1049</u>	<u>73.0</u>	<u>9</u>
<u>14:56</u>	<u>8.14</u>	<u>1020</u>	<u>73.0</u>	<u>12</u>
<u>14:58</u>	<u>8.15</u>	<u>1022</u>	<u>73.0</u>	<u>15</u>

Did well dewater? No If yes, time \_\_\_\_\_ Volume \_\_\_\_\_  
 Sampling Time 1:01 Weather Conditions PLC  
 Analysis gas (BTXE) Bottles Used 3 x 40 ml  
 Chain of Custody Number \_\_\_\_\_

COMMENTS \_\_\_\_\_

# GETTLER-RYAN INC.

General and Environmental Contractors

## WELL SAMPLING FIELD DATA SHEET

COMPANY Unocal JOB # 3814.01  
 LOCATION 3220 Lakeshore DATE 8-9-93  
 CITY Packland TIME \_\_\_\_\_

Well ID. U-2 Well Condition OK  
 Well Diameter 3 in. Hydrocarbon Thickness \_\_\_\_\_ ft.  
 Total Depth 20.0 ft.  
 Depth to Liquid- 8.13 ft.  

Volume Factor (VF)	2" = 0.17	6" = 1.50	12" = 5.80
	3" = 0.38	8" = 2.80	
	4" = 0.66	10" = 4.10	

  
 (# of casing volumes) 5 x 11.87 x (VF) .38 = (Estimated Purge Volume) 45.22 gal.

Purging Equipment DD  
 Sampling Equipment Bailer

Starting Time 13:09 Purging Flow Rate 2.5 gpm.  
 (Estimated Purge Volume) \_\_\_\_\_ gal. / (Purging Flow Rate) \_\_\_\_\_ gpm. = (Anticipated Purging Time) \_\_\_\_\_ min.

Time	pH	Conductivity	Temperature	Volume
<u>13:08</u>	<u>7.20</u>	<u>2550</u>	<u>75.9</u>	<u>5</u> gal
<u>13:10</u>	<u>7.12</u>	<u>3550</u>	<u>72-8</u>	<u>10</u>
<u>13:12</u>	<u>7.30</u>	<u>3630</u>	<u>73.0</u>	<u>15</u>
<u>13:14</u>	<u>7.40</u>	<u>3670</u>	<u>73.8</u>	<u>20</u>
<u>13:16</u>	<u>7.35</u>	<u>3660</u>	<u>73.6</u>	<u>25</u>

Did well dewater? NO If yes, time \_\_\_\_\_ Volume \_\_\_\_\_  
 Sampling Time 13:21 Weather Conditions PLC  
 Analysis gas (BTXE) Bottles Used 3x40 ml  
 Chain of Custody Number \_\_\_\_\_

COMMENTS \_\_\_\_\_





# Inchcape Testing Services

## Anamatrix Laboratories

1961 Concourse Drive  
 Suite E  
 San Jose, CA 95131  
 Tel: 408-432-8192  
 Fax: 408-432-8198

MR. TOM PAULSON  
 GETTLER RYAN/GEOSTRATEGIES  
 2150 W. WINTON AVENUE  
 HAYWARD, CA 94566

Workorder # : 9308143  
 Date Received : 08/10/93  
 Project ID : 9814.80  
 Purchase Order: 9814.80

The following samples were received at Anamatrix, Inc. for analysis :

ANAMATRIX ID	CLIENT SAMPLE ID
9308143- 1	U-1
9308143- 2	U-2
9308143- 3	U-3
9308143- 4	TB

This report consists of 6 pages not including the cover letter, and is organized in sections according to the specific Anamatrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anamatrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anamatrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anamatrix.

Sarah Schoen, Ph.D.  
 Laboratory Director

08/24/93  
 Date

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. TOM PAULSON  
GETTLER RYAN/GEOSTRATEGIES  
2150 W. WINTON AVENUE  
HAYWARD, CA 94566

Workorder # : 9308143  
Date Received : 08/10/93  
Project ID : 9814.80  
Purchase Order: 9814.80  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9308143- 1	U-1	WATER	08/09/93	TPHgBTEX
9308143- 2	U-2	WATER	08/09/93	TPHgBTEX
9308143- 3	U-3	WATER	08/09/93	TPHgBTEX
9308143- 4	TB	WATER	07/30/93	TPHgBTEX

REPORT SUMMARY  
ANAMETRIX, INC. (408)432-8192

MR. TOM PAULSON  
GETTLER RYAN/GEOSTRATEGIES  
2150 W. WINTON AVENUE  
HAYWARD, CA 94566

Workorder # : 9308143  
Date Received : 08/10/93  
Project ID : 9814.80  
Purchase Order: 9814.80  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as gasoline for samples U-1 and U-2 are primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.

Charles Paulson 8/23/93  
Department Supervisor Date

Charles Burch 8.23.93  
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS  
(GASOLINE WITH BTEX)  
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9308143  
Matrix : WATER  
Date Sampled : 07/30 & 08/09/93

Project Number : 9814.80  
Date Released : 08/23/93

Reporting Limit	Sample I.D.# U-1	Sample I.D.# U-2	Sample I.D.# U-3	Sample I.D.# TB	Sample I.D.# BG1801E2	
COMPOUNDS (ug/L)	-01	-02	-03	-04	BLANK	
Benzene	0.5	79	420	5.0	ND	ND
Toluene	0.5	ND	ND	9.7	ND	ND
Ethylbenzene	0.5	83	410	0.7	ND	ND
Total Xylenes	0.5	270	670	4.1	ND	ND
TPH as Gasoline	50	4900	5600	210	ND	ND
% Surrogate Recovery	114%	89%	95%	98%	96%	
Instrument I.D.	HP4	HP4	HP4	HP12	HP4	
Date Analyzed	08/18/93	08/18/93	08/18/93	08/20/93	08/18/93	
RLMF	25	25	1	1	1	

- ND - Not detected at or above the practical quantitation limit for the method.
- TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
- BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
- RLMF - Reporting Limit Multiplication Factor.

Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Charles Burch 8-23-93  
Analyst Date

Charles Beaman 8/23/93  
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS  
(GASOLINE WITH BTEX)  
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9308143  
Matrix : WATER  
Date Sampled : N/A

Project Number : 9814.80  
Date Released : 08/23/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# BG2001E2 BLANK
Benzene	0.5	ND
Toluene	0.5	ND
Ethylbenzene	0.5	ND
Total Xylenes	0.5	ND
TPH as Gasoline	50	ND
% Surrogate Recovery		94%
Instrument I.D.		HP12
Date Analyzed		08/20/93
RLMF		1

- ND - Not detected at or above the practical quantitation limit for the method.
- TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
- BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
- RLMF - Reporting Limit Multiplication Factor.

Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Charles M. Burch 8.23.93  
Analyst Date

Cheryl Bauman 8/23/93  
Supervisor Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT  
 EPA METHOD 5030 WITH GC/PID  
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 9814.80 U-3  
 Matrix : WATER  
 Date Sampled : 08/09/93  
 Date Analyzed : 08/18/93

Anamatrix I.D. : 08143-03  
 Analyst : *CMB*  
 Supervisor : *ca*  
 Date Released : 08/23/93  
 Instrument I.D.: HP4

COMPOUND	SPIKE AMT (ug/L)	SAMPLE CONC (ug/L)	REC MS (ug/L)	%REC MS	REC MD (ug/L)	%REC MD	RPD	%REC LIMITS
BENZENE	20.0	5.0	28.6	118%	27.8	114%	-3%	45-139
TOLUENE	20.0	9.7	35.0	127%	34.4	123%	-2%	51-138
ETHYLBENZENE	20.0	0.7	24.9	121%	23.7	115%	-5%	48-146
TOTAL XYLENES	20.0	4.1	26.9	114%	27.1	115%	1%	50-139
p-BFB				99%		112%		61-139

\* Quality control established by Anamatrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT  
 EPA METHOD 5030 WITH GC/PID  
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE  
 Matrix : WATER  
 Date Sampled : N/A  
 Date Analyzed : 08/18/93

Anamatrix I.D. : MG1801E3  
 Analyst : *EMB*  
 Supervisor : *CS*  
 Date Released : 08/23/93  
 Instrument I.D.: HP4

COMPOUND	SPIKE AMT. (ug/L)	LCS (ug/L)	REC LCS	%REC LIMITS
Benzene	20.0	19.3	97%	52-133
Toluene	20.0	20.8	104%	57-136
Ethylbenzene	20.0	20.8	104%	56-139
TOTAL Xylenes	20.0	20.0	100%	61-139
P-BFB			91%	61-139

\* Limits established by Anamatrix, Inc.

