



**TRANSMITTAL LETTER**

*LOP*  
*3618*

**FROM:** J. Michael Asport

**DATE:** July 22, 1992

*Susan Hugo*  
**TO:** ~~Ms. Jennifer Eberle~~  
Alameda County Department of  
Environmental Health  
Hazardous Materials Division  
80 Swan Way, Room 200  
Oakland, CA 94621-1426

**VIA:** X First Class Mail  
\_\_\_\_\_ Fax \_\_\_\_\_ pages  
\_\_\_\_\_ UPS (Surface)  
\_\_\_\_\_ Federal Express  
\_\_\_\_\_ Courier

**SUBJECT:** Shell Service Station  
WIC #204-5510-0303  
5755 Broadway  
Oakland, California ~~94606~~ *94618*

*STID 3618*

**JOB:** 81-619-201

**AS:** \_\_\_\_\_ We discussed on the telephone on \_\_\_\_\_  
\_\_\_\_\_ You requested \_\_\_\_\_  
\_\_\_\_\_ We believe you may be interested  
X \_\_\_\_\_ Is required

**WE ARE SENDING:** X Enclosed  
\_\_\_\_\_ Under Separate Cover Via \_\_\_\_\_

Quarterly status report for the subject site

*92 JUL 24 11:17*

**FOR:** \_\_\_\_\_ Your information  
X \_\_\_\_\_ Your use  
\_\_\_\_\_ Your review & comments  
\_\_\_\_\_ Return to you

**PLEASE:** X Keep this material  
\_\_\_\_\_ Return within 2 weeks  
\_\_\_\_\_ Acknowledge receipt

**MESSAGE:** Please call me if you have any questions.

cc: Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, California 94520-9998  
Lester Feldman, California Regional Water Quality Control Board, San Francisco Bay,  
2101 Webster Street, Suite 500, Oakland, California 94612



July 20, 1992

Ms. Jennifer Eberle  
Alameda County Department of  
Environmental Health  
Hazardous Materials Division  
80 Swan Way, Room 200  
Oakland, CA 94621-1426

Re: Shell Service Station  
WIC #204-5510-0303  
5755 Broadway  
Oakland, California 94606  
WA Job #81-619-201

92 JUL 21 8 11:17  
94618

Dear Ms. Eberle:

This letter describes recently completed and anticipated activities at the Shell service station referenced above (Figure 1). This status report satisfies the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Chapter 3, Subchapter 16, Article 5, Section 265.d. Included below are descriptions and results of activities performed in the second quarter 1992 and proposed work for the third quarter 1992.

Second Quarter 1992 Activities:

- EMCON Associates of San Jose, California measured ground water depths and collected ground water samples from the three site wells. EMCON's report describing these activities and presenting the analytic results for ground water is included as Attachment A.
- Weiss Associates (WA) used EMCON's ground water elevation calculations to prepare a ground water elevation contour map (Figure 2).

Anticipated Third Quarter 1992 Activities:

WA will submit a report presenting the results of the third quarter 1992 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results and a ground water elevation contour map.

Ms. Jennifer Eberle  
July 20, 1992

2

Weiss Associates **WA**  
6

Please call if you have any questions.



Sincerely,  
Weiss Associates

A handwritten signature in black ink, appearing to read "J. Michael Asport".

J. Michael Asport  
Technical Assistant

A handwritten signature in black ink, appearing to read "Joseph P. Theisen".

Joseph P. Theisen, C.E.G.  
Senior Hydrogeologist

JMA/JPT:jma

E:\ALL\SHELL\600\619QMJU2.WP

Attachments: Figures  
A - EMCON Associate's Ground Water Monitoring Report

cc: Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, California 94520-9998  
Lester Feldman, Regional Water Quality Control Board - San Francisco Bay Region, 2101  
Webster Street, Oakland, California 94612

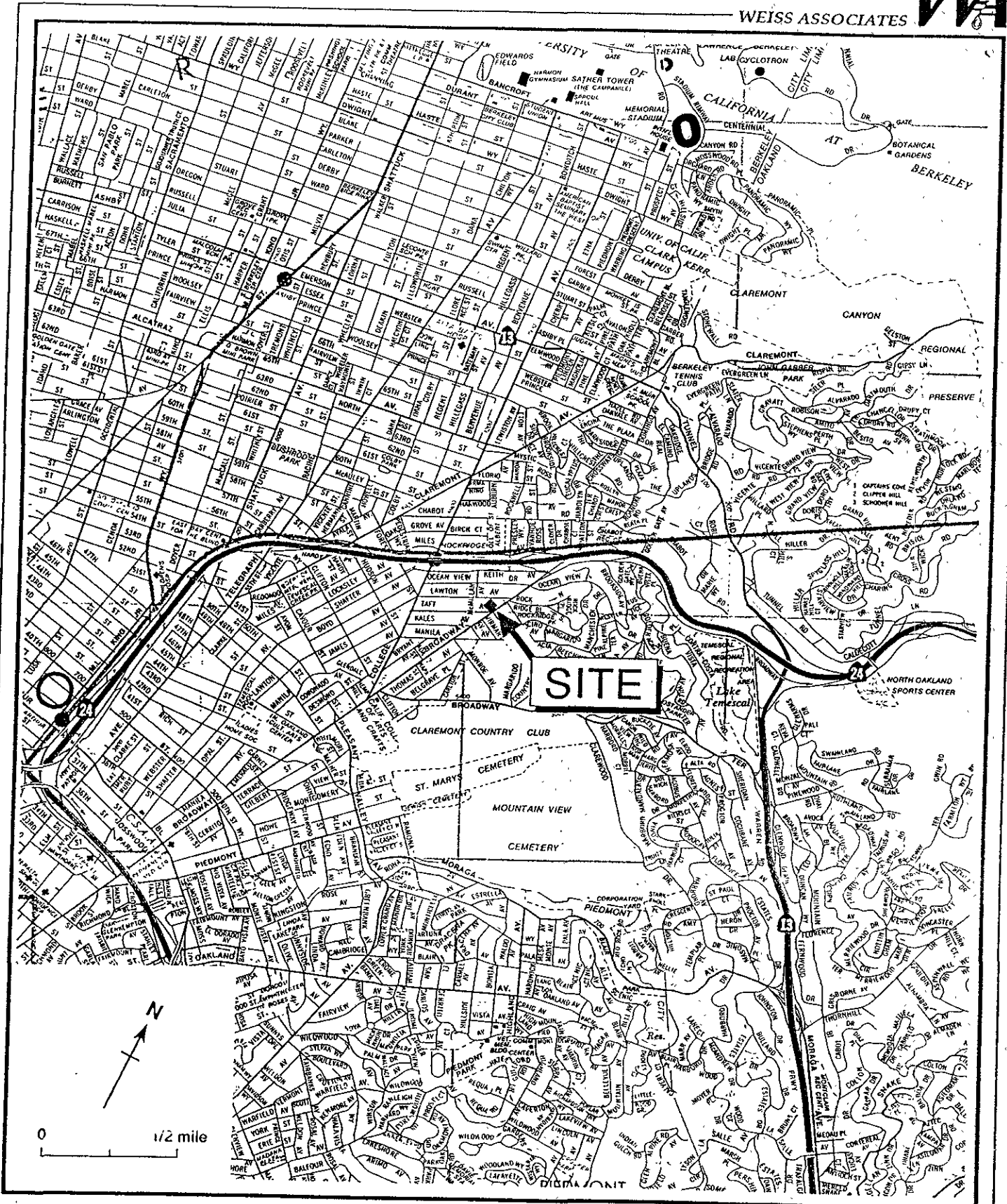


Figure 1. Site Location Map - Shell Service Station WIC #204-5510-0303, 5755 Broadway, Oakland, California

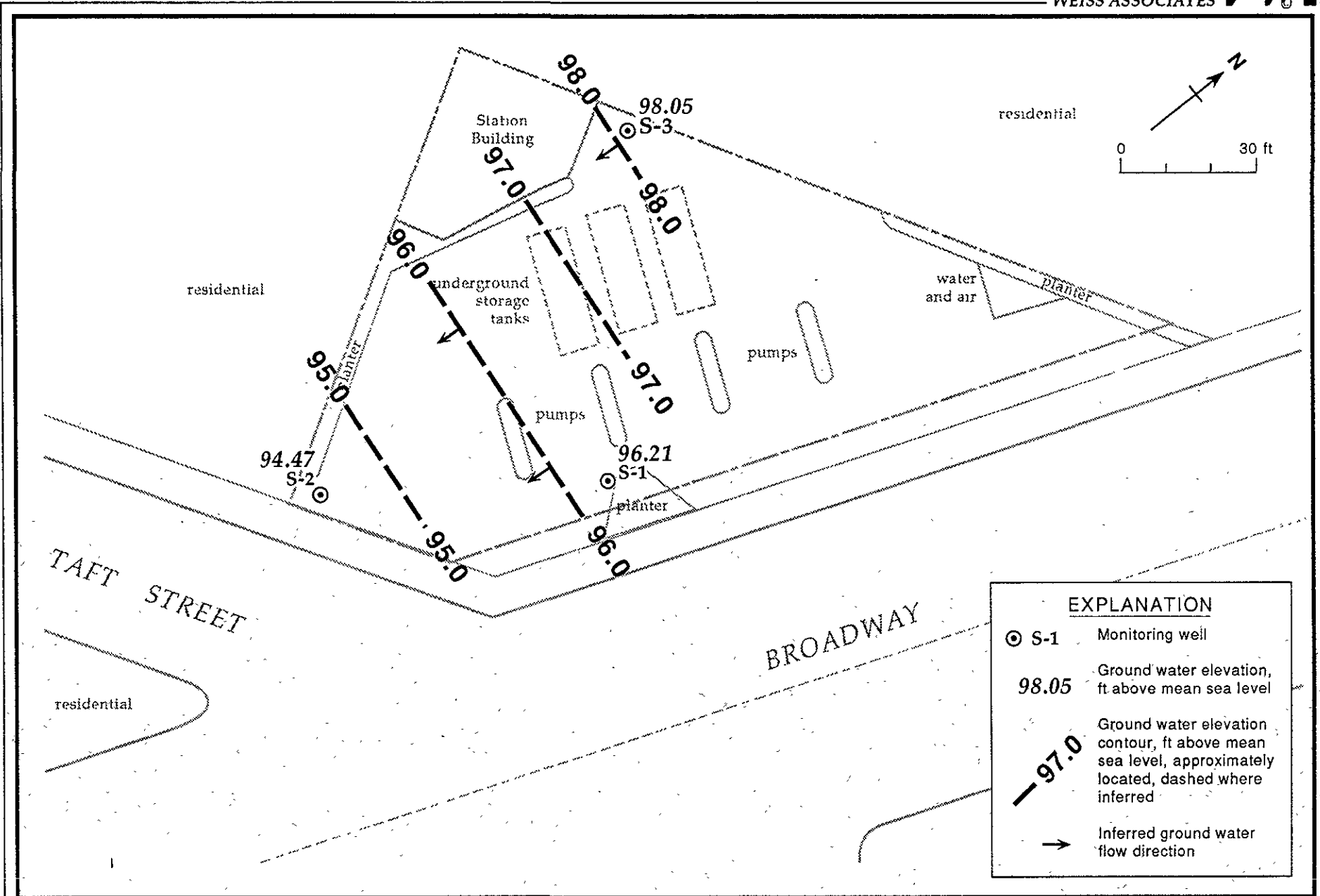


Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - May 28, 1992 - Shell Service Station WIC#204-5510-0303, 5755 Broadway, Oakland, California

**ATTACHMENT A  
GROUND WATER MONITORING REPORT AND ANALYTIC REPORT**



**EMCON**  
ASSOCIATES

Consultants in Wastes  
Management and  
Environmental Control

June 29, 1992  
Project: G67-40.01  
WIC#: 204-5510-0303

Mr. David Elias  
Weiss Associates  
5500 Shellmound Street  
Emeryville, California 94608-2411

Re: Second quarter 1992 ground-water monitoring report, Shell Oil  
Company, 5755 Broadway, Oakland, California

Dear Mr. Elias:

This letter presents the results of the second quarter 1992 ground-water monitoring event for the Shell Oil Company (Shell) site located at 5755 Broadway, Oakland, California (figure 1). Second quarter monitoring was conducted on May 28, 1992. The site is monitored quarterly.

### **GROUND-WATER LEVEL SURVEY**

A water-level survey preceded the purging and sampling of the monitoring wells. The wells included in the survey are identified in figure 2 (supplied by Weiss Associates). During the survey, wells S-1, S-2, and S-3 were measured for depth to water, floating product thickness, and total depth. Depth to water and floating product thickness were measured to the nearest 0.01 foot with an oil/water interface probe. No floating product was observed in the wells. Total depth was measured to the nearest 0.1 foot. Results of the second quarter water-level survey, and available data from four previous surveys, are summarized in table 1.

### **SAMPLING AND ANALYSIS**

Ground-water samples were collected from wells S-1, S-2, and S-3 on May 28, 1992. Prior to sample collection, the wells were purged with polyvinyl chloride bailers. During the purging operation, ground water was monitored for pH, electrical conductivity, and temperature as a function of volume of water removed. Purging continued until these parameters were stable and a minimum of three casing volumes of ground water were removed. All three wells were evacuated to dryness before three casing volumes were removed. The wells were allowed to recharge for up to 24 hours. Samples were collected after the wells had recharged to a level sufficient for sample collection. Field measurements from second quarter monitoring, and available measurements from four previous monitoring events, are summarized in table 1. Purge water from the

G674001B.DOC



monitoring wells was contained in a 55-gallon drum. The drum was identified with a Shell-approved label and secured for on-site storage.

Ground-water samples were collected with a Teflon® bailer, labeled, placed on ice, and transported to a Shell-approved and state-certified analytical laboratory for analysis. Shell chain-of-custody documents accompanied all samples to the laboratory.

All equipment that was placed down a well or that came in contact with ground water was steam cleaned with deionized water prior to use at each well.

Quality control samples for second quarter monitoring included a trip blank. All water samples collected during second quarter monitoring were analyzed for total petroleum hydrocarbons as gasoline (TPH-g), and benzene, toluene, ethylbenzene, and total xylenes (BTEX).

### **ANALYTICAL RESULTS**

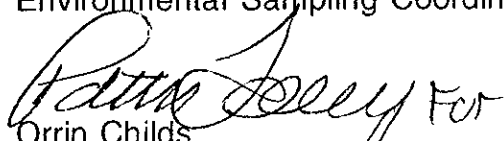
Analytical results for the second quarter 1992 monitoring event, and available results from four previous monitoring events, are summarized in table 2. The original certified analytical report and chain-of-custody document are attached.

If you have any questions, please call.

Very truly yours,

EMCON Associates

  
David Larsen  
Environmental Sampling Coordinator

  
Orrin Childs  
Environmental Sampling Supervisor

DL/OC:dl

Attachments: Table 1 - Monitoring well field measurement data  
Table 2 - Summary of analytical results  
Figure 1 - Site location map  
Figure 2 - Monitoring well locations  
Certified analytical report  
Chain-of-custody document



Table 1  
Monitoring Well Field Measurement Data  
Second Quarter 1992

Shell Station: 5755 Broadway  
Oakland, California  
WIC #: 204-5510-0303

Date: 06/29/92  
Project Number: G67-40.01

Well Designation	Water Level Field Date	TOC Elevation (ft-PSD)	Depth to Water (feet)	Ground-water Elevation (ft-PSD)	Total Well Depth (feet)	Floating Product Thickness (feet)	Water Sample Field Date	pH (std. units)	Electrical Conductivity (micromhos/cm)	Temperature (degrees F)	Turbidity (NTU)
✓ S-1	01/25/91	100.00	3.88	96.12	NR	NR	01/25/91	NR	NR	NR	NR
S-1	06/03/91	100.00	3.51	96.49	NR	NR	06/03/91	NR	NR	NR	NR
S-1	08/30/91	100.00	4.24	95.76	NR	NR	08/30/91	NR	NR	NR	NR
S-1	03/13/92	100.00	2.87	97.13	11.8	ND	03/13/92	7.38	922	63.2	>200
S-1	05/28/92	100.00	3.79	96.21	11.7	ND	05/28/92	6.98	1061	68.8	>200
S-2	01/25/91	98.92	4.52	94.40	NR	NR	01/25/91	NR	NR	NR	NR
S-2	06/03/91	98.92	4.02	94.90	NR	NR	06/03/91	NR	NR	NR	NR
S-2	08/30/91	98.92	4.70	94.22	NR	NR	08/30/91	NR	NR	NR	NR
S-2	03/13/92	98.92	3.47	95.45	9.4	ND	03/13/92	7.18	1140	62.3	>200
S-2	05/28/92	98.92	4.45	94.47	9.4	ND	05/28/92	7.12	1094	68.4	>200
S-3	01/25/91	101.67	3.84	97.83	NR	NR	01/25/91	NR	NR	NR	NR
S-3	06/03/91	101.67	3.25	98.42	NR	NR	06/03/91	NR	NR	NR	NR
S-3	08/03/91	101.67	4.73	96.94	NR	NR	08/30/91	NR	NR	NR	NR
S-3	03/13/92	101.67	2.29	99.38	9.5	ND	03/13/92	7.26	1385	63.2	>200
S-3	05/28/92	101.67	3.62	98.05	9.5	ND	05/28/92	7.15	1181	65.5	>200

TOC = top of casing  
ft-PSD = elevation in feet, relative to project site datum  
std. units = standard pH units  
micromhos/cm = micromhos per centimeter  
degrees F = degrees Fahrenheit  
NTU = nephelometric turbidity units  
NR = Not reported; data not available  
ND = None detected

Table 2  
 Summary of Analytical Results  
 Second Quarter 1992  
 milligrams per liter (mg/L) or parts per million (ppm)

Shell Station: 5755 Broadway  
 Oakland, California  
 WIC #: 204-5510-0303

Date: 06/29/92  
 Project Number: G67-40.01

Sample Designation	Water Sample Field Date	TPH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
S-1	01/25/91	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-1	06/03/91	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-1	08/30/91	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-1	03/13/92	<0.03	0.00052	<0.0003	<0.0003	<0.0003
S-1	05/28/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
S-2	01/25/91	0.45	0.14	0.0018	0.0062	0.015
S-2	06/03/91	0.49	0.15	0.0027	0.0082	0.007
S-2	08/30/91	0.07	0.00037	<0.0003	<0.0003	<0.0003
S-2	03/13/92	1.3	0.21	0.0057	0.034	0.079
S-2	05/28/92	0.10	0.028	<0.0005	<0.0005	<0.0005
S-3	01/25/91	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-3	06/03/91	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-3	08/30/91	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-3	03/13/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
S-3	05/28/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
TB	03/13/92	<0.03	<0.0003	<0.0003	<0.0003	<0.0003
TB	05/28/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

TPH-g = total petroleum hydrocarbons as gasoline

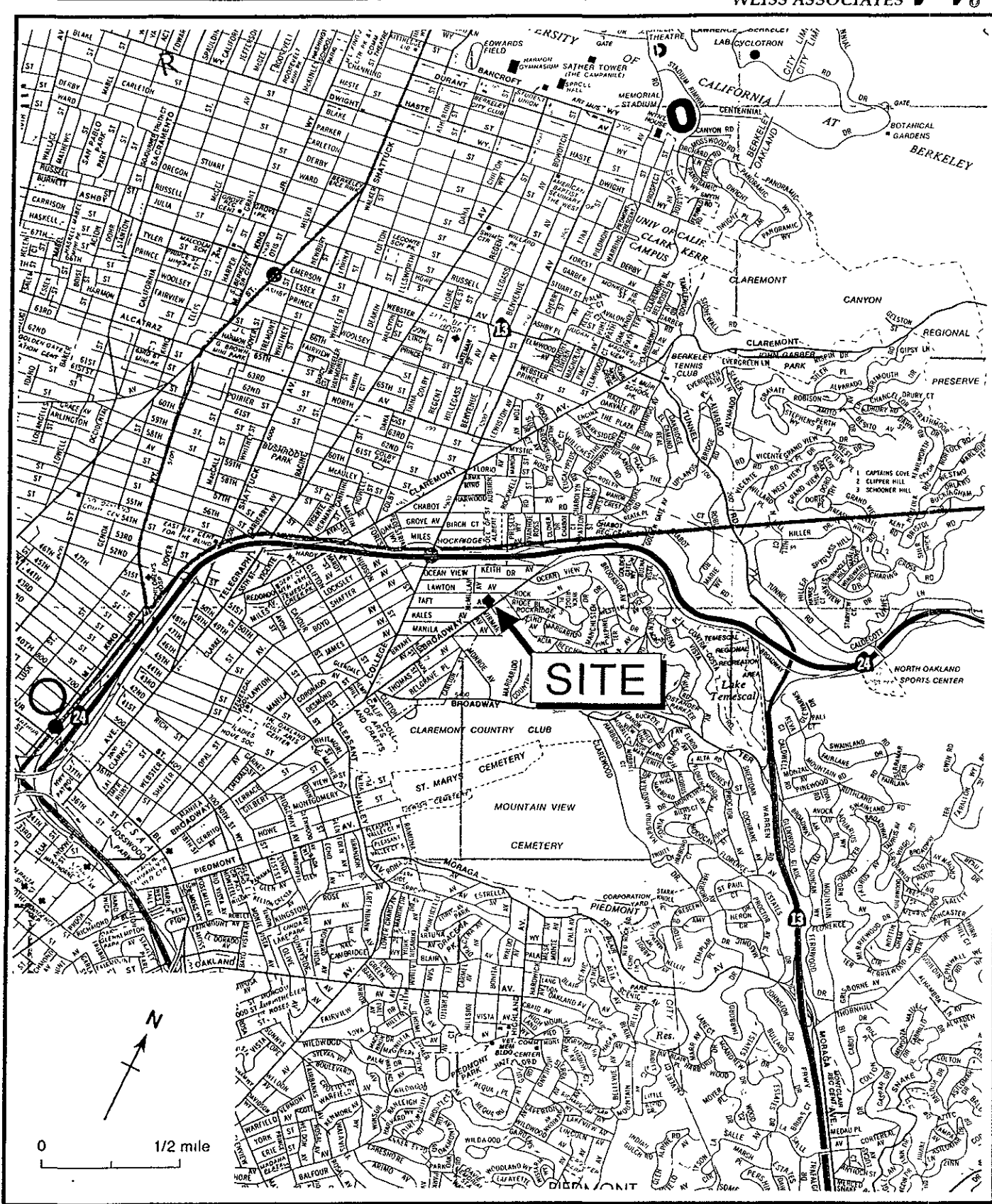


Figure 1. Site Location Map - Shell Service Station WIC #204-5510-0303, 5755 Broadway, Oakland, California

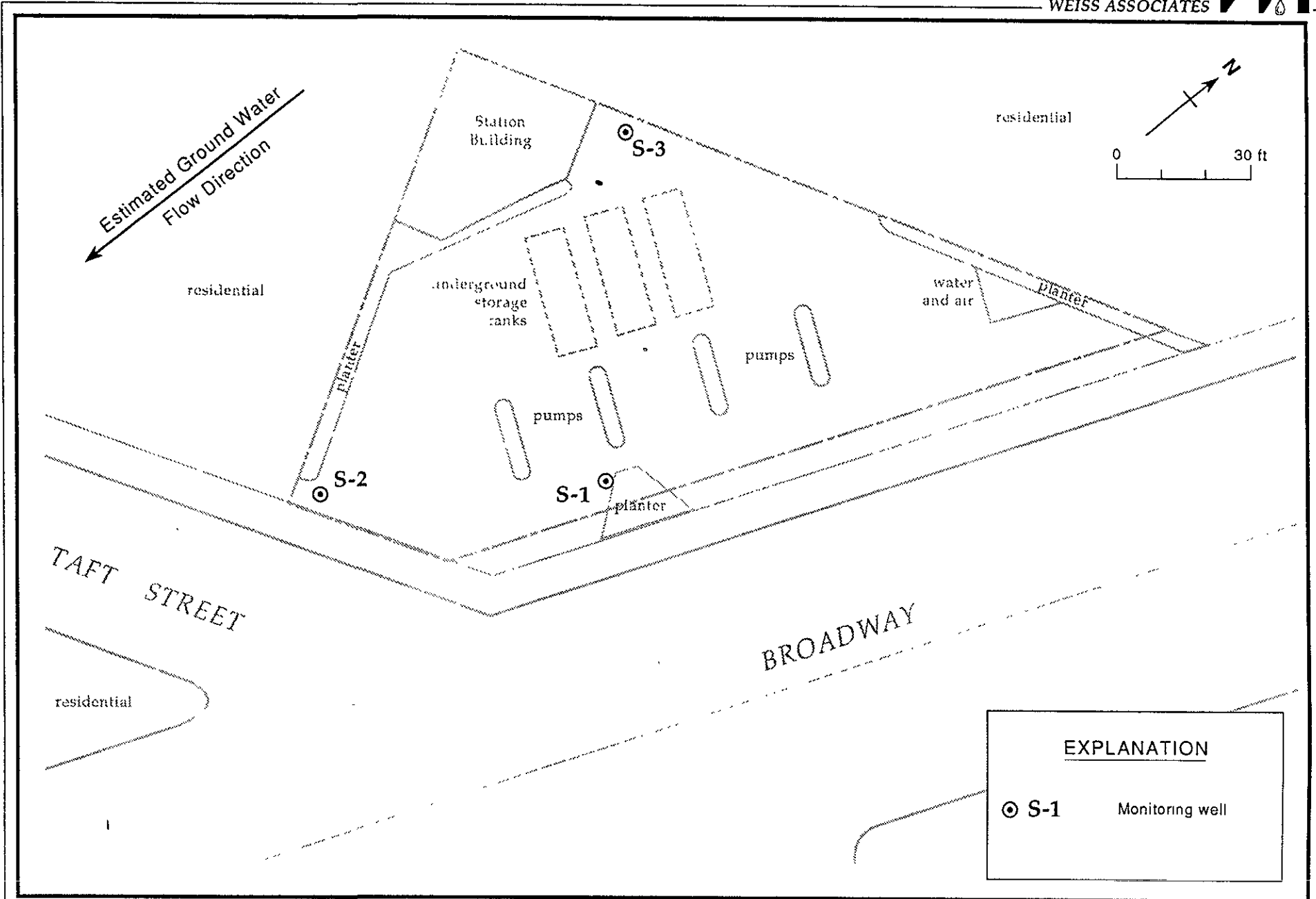


Figure 2. Monitoring Well Locations - Shell Service Station WIC#204-2004-0204, 5755 Broadway, Oakland, California

**ANAMETRIX INC**

Environmental & Analytical Chemistry  
 1764 Chincourse Drive, Suite E, San Jose, CA 95131  
 (408) 432-8197 • Fax (408) 432-8198

**REPORT**

MR. DAVID LARSEN  
 EMCON ASSOCIATES  
 1938 JUNCTION AVE.  
 SAN JOSE, CA 95131

Workorder # : 9205396  
 Date Received : 05/28/92  
 Project ID : G67-40.01  
 Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9205396- 1	S-3
9205396- 2	S-1
9205396- 3	S-2
9205396- 4	TB

This report consists of 4 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  
 Sarah Schoen, Ph.D.  
 Laboratory Director

6-11-92  
 Date

**EMCON ASSOCIATES**

JUN 12 1992

**RECEIVED**

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

MR. DAVID LARSEN  
EMCON ASSOCIATES  
1938 JUNCTION AVE.  
SAN JOSE, CA 95131

Workorder # : 9205396  
Date Received : 05/28/92  
Project ID : G67-40.01  
Purchase Order: MOH-B813  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9205396- 1	S-3	WATER	05/28/92	TPHg/BTEX
9205396- 2	S-1	WATER	05/28/92	TPHg/BTEX
9205396- 3	S-2	WATER	05/28/92	TPHg/BTEX
9205396- 4	TB	WATER	05/28/92	TPHg/BTEX

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

MR. DAVID LARSEN  
EMCON ASSOCIATES  
1938 JUNCTION AVE.  
SAN JOSE, CA 95131

Workorder # : 9205396  
Date Received : 05/28/92  
Project ID : G67-40.01  
Purchase Order: MOH-B813  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Balmer 6/11/92  
Department Supervisor Date

Reggie Dawson 6/11/92  
Chemist Date

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

Anamatrix W.O.: 9205396  
Matrix : WATER  
Date Sampled : 05/28/92

Project Number : G67-40.01  
Date Released : 06/11/92

Reporting Limit	Sample I.D.# S-3	Sample I.D.# S-1	Sample I.D.# S-2	Sample I.D.# TB	Sample I.D.# BUO501E2
COMPOUNDS (mg/L)	-01	-02	-03	-04	BLANK
Benzene	0.0005	ND	ND	0.028	ND
Toluene	0.0005	ND	ND	ND	ND
Ethylbenzene	0.0005	ND	ND	ND	ND
Total Xylenes	0.0005	ND	ND	ND	ND
TPH as Gasoline	0.050	ND	ND	0.10	ND
% Surrogate Recovery	99%	103%	97%	82%	110%
Instrument I.D.	HP4	HP4	HP4	HP4	HP4
Date Analyzed	06/05/92	06/05/92	06/08/92	06/05/92	06/05/92
RLMF	1	1	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 53-147%.

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

Reggie Davison 6/11/92  
Analyst Date

Cheryl Balmer 6/11/92  
Supervisor Date



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

Anametrix W.O.: 9205396  
Matrix : WATER  
Date Sampled : N/A

Project Number : G67-40.01  
Date Released : 06/11/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# BU0801E2 BLANK
Benzene	0.0005	ND
Toluene	0.0005	ND
Ethylbenzene	0.0005	ND
Total Xylenes	0.0005	ND
TPH as Gasoline	0.050	ND
% Surrogate Recovery Instrument I.D. Date Analyzed RLMF		108% HP4 06/08/92 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.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

\_\_\_\_\_  
Analyst Date

Cheryl Balmer 6/11/92  
Supervisor Date

Site Address: 5755 Broadway  
Oakland CA  
WIC#: 204-5510-0303

Serial No.: 296  
LAB: Anametri x  
Page 1 of 1

Shell Engineer: Kurt Miller  
Phone No. (510) 685-3853  
Fax #: 685-3853  
Consultant Name & Address: EMCON Assoc. 1938 Junction Ave. San Jose, CA 95131  
Consultant Contact: David Larsen  
Phone No. (408) 453-2269  
Fax #: 453-2269  
Comments: 3-VOAS (HCl) for gIBTEX

Analysis Required (2)  
9205396  
TPH (EPA 8015 Mod. Gas)  
TPH (EPA 8015 Mod. Diesel)  
BTEX (EPA 8020/602)  
Volatile Organics (EPA 8240)  
Test for Disposal

CHECK ONE (1) BOX ONLY CT/DT TURN AROUND  
Quarterly Monitoring  5461 24 hours   
Site Investigation  5441 48 hours   
Soil for disposal  5442 15 days  (No  
Water for disposal  5443 Other   
Air Sample- Sys O&M  5452 NOTE: Notify La  
Water Sample - Sys O&M  5453 soon as possible o  
Other  24/48 hrs. TAT.

Sampled By: Leela Rath  
Printed Name: LISLERATH

Sample ID	Date	Soil	Water	Air	No. of conds.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITIO COMMENT
① S-3	5-28-92		X		3	X		X			40 ml	HCl	No		
② S-1	5-28-92				3	X		X							
③ S-2	5-28-92				3	X		X							
④ TB	5-28-92		∇		3	X		X							Pebbles

Relinquished By (signature): Leela Rath  
Printed name: Lislerath  
Relinquished By (signature): Simon Hegup  
Printed name: Simon Hegup  
Relinquished By (signature): Aaron Cole  
Printed name: Aaron Cole

Date: 5-28-92 Time: 1507  
Received (signature): Simon Hegup  
Date: 5-28-92 Time: 1620  
Received (signature): Aaron Cole  
Date: 5-28-92 Time: 1620  
Received (signature):  
Date:  
Time:

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS  
Last Revision Date: 10/15/91