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ALCO
HAZMAT

94 JUL 12 AM 8:47

Transmittal

Date: July 6, 1994

To: Mr. Lynn Walker
Shell Oil Company
P.O. Box 5278
Concord, California 94520

From: Diane Lundquist

RE: Quarterly Monitoring Report - 2nd Quarter 1994
Former Shell Service Station
461 Eighth Street
Oakland, California

Comments:

Transmitted herewith is the subject report.

If you have any questions, please call (707) 935-4850.

cc: Ms. Jennifer Eberlee, Alameda County Health Care Services Agency
Mr. Richard Hiett, Regional Water Quality Control Board
Mr. Jim Matthews, Shell Oil Company

Enviros, Inc. *19411 Riverside Drive* *Post Office Box 259* *Sonoma* *California 95476* *Tel 707 / 935-4850* *Fax 707 / 935-4855*

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July 6, 1994

Mr. Lynn Walker
Shell Oil Company
P.O. Box 5278
Concord, California 94520

RE: **Quarterly Monitoring Report - Second Quarter 1994**
Former Shell Service Station
461 Eighth Street
Oakland, California
WIC #204-5508-6205

Dear Mr. Walker:

This Quarterly Monitoring Report describes the recently completed activities associated with groundwater monitoring and sampling at the referenced site (Plate 1). This report was prepared to meet quarterly reporting requirements issued by the Regional Water Quality Control Board, San Francisco Bay Region and Alameda County Health Care Services Agency.

This document presents the results of activities performed in the second quarter of 1994.

Executive Summary

- Blaine Tech Services Inc. of San Jose California measured groundwater levels from off-site Wells S-4, S-5, and S-6 on **April 25, 1994.**
- Groundwater samples collected from Well S-6 were transported to Sequoia Analytical of Redwood City, California. A trip blank was prepared and analyzed for quality control purposes.
- Enviros, Inc. (Enviros) evaluated water-level measurement data and chemical analytical results and prepared this report, which includes the Blaine Tech Quarterly Groundwater Sampling Report, a site plan, a groundwater elevation map and a benzene concentration map.
- Well S-4 remains inaccessible for groundwater sampling due to the presence of a chain-link fence surrounding the lot.
- **Well S-5 contained separate-phase hydrocarbons at a measured thickness of 0.35 feet (4.2 inches).**
- Approximately 36 gallons of groundwater and product were evacuated from Well S-5 this quarter by Crosby & Overton. This well **is gauged and evacuated on a monthly basis.**

- Well S-6 contained 61,000 parts per billion (ppb) TPH-G and 16,000 ppb benzene.

Site Conditions

There are currently three off-site groundwater monitoring wells; S-4, S-5, S-6 (Plate 2). These wells were installed in 1981. Wells S-1, S-2, S-3 and S-7 have been destroyed. Quarterly groundwater sampling began in October 1988.

Second Quarter 1994 Sampling Evaluation

Field Activities

Well S-4 was inaccessible for groundwater sampling and was not sampled this quarter.

Depth to groundwater was measured and recorded in Wells S-4, S-5 and S-6 on April 25, 1994. Each well was checked for the presence of separate-phase petroleum hydrocarbons. Field measurements are presented in Table 1. Well S-5 is gauged and evacuated monthly. These data were not available for inclusion in this report and will be included in subsequent quarterly reports.

Monitoring well S-6 was purged prior to sampling. Groundwater samples collected from Well S-6 were analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-G) according to EPA Method 8015 (Modified) and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) according to EPA Method 8020. Additionally, a trip blank was prepared and analyzed for quality control purposes. The second quarter 1994 chemical analytical data for TPH-G and BTEX compounds have been included in the Historical Groundwater Quality Database (Table 2).

Groundwater samples were labeled, entered onto a chain of custody record, stored in a cooler with ice and transported to Sequoia for chemical analysis.

The following field documents are included in this report (Appendix A):

- Blaine Tech Services Inc. Quarterly Groundwater Sampling Report
- Chain-of-Custody Record
- Sequoia Certified Analytical Report

Data Evaluation

The second quarter 1994 groundwater elevation map is presented on Plate 3. Groundwater flow direction and hydraulic gradient were not calculated.

Separate-phase petroleum hydrocarbons were detected in Well S-5 at a measured thickness of 0.35 feet.

Groundwater samples collected from Well S-6 contained 61,000 ppb TPH-G and 16,000 ppb benzene. Toluene, ethylbenzene and xylenes were detected at concentrations ranging from 1,800 ppb to 5,100 ppb. The trip blank was ND for all analyzed constituents. A benzene concentration map is presented on Plate 4.

Chemical analytical data are presented in the Sequoia certified analytical report contained in Appendix A.

Conclusions

Groundwater sampling on Well S-4 is precluded due to the presence of a chain-link fence surrounding the property.

Concentrations of TPH-G and BTEX compounds have remained relatively constant in Well S-6.

On January 25, 1994, Crosby and Overton Inc. vacuumed out approximately 36 gallons of groundwater and product from Well S-5.

A site investigation on the former Shell property will be performed during July, 1994.

Groundwater sampling and monitoring will continue on the established schedule. Evacuation of separate-phase petroleum hydrocarbons from Well S-5 by Crosby and Overton will continue to be performed a monthly frequency.

If you have any questions regarding the contents of this document, please call.

Sincerely,

Enviros, Inc.

Jeffrey L. Peterson
Hydrogeologist

Diane M. Lundquist, P.E.
Senior Engineer
C46725

REGISTERED PROFESSIONAL ENGINEER
DIANE M. LUNDQUIST
NO. C46725
CIVIL
STATE OF CALIFORNIA

Attachments

Table 1. Field Monitoring Data
Table 2. Historical Groundwater Quality Database

Plate 1. Vicinity Map
Plate 2. Site Plan
Plate 3. Groundwater Elevation Map
Plate 4. Benzene Concentration Map

Appendix A

Blaine Tech Services Inc. - Quarterly Groundwater Sampling Report

Distribution List

Mr. Richard Hiett, San Francisco Bay Region, Regional Water Quality Control Board
Ms. Jennifer Eberlee, Alameda County Health Care Services Agency
Mr. Jim Matthews, Shell Oil Company

TABLE 1

FIELD MONITORING DATA

FORMER SHELL SERVICE STATION
461 EIGHTH STREET
OAKLAND, CALIFORNIA
204-5508-6205

WELL NO.	DATE	CASING DIA. (IN.)	TOTAL WELL DEPTH (FT.)	WELL ELEV. (FT.)	PRODUCT THICKNESS (FT.)	DEPTH TO FIRST IMMISCIBLES LIQUID (FT.)	DEPTH TO WATER (FT.)	STATIC WATER ELEV. (FT.)
S-4	25-Apr-94	4	16.69	93.51	0.00	NONE	14.39	86.19
S-5	25-Apr-94	4	---	99.36	0.35	21.62	21.97	77.46
S-6	25-Apr-94	4	36.82	100.58	0.00	NONE	21.68	78.90 ✓

79.12
~~77.39~~
78.90

NOTES

well elev − DTW = static water elev.

Static water elevations referenced to project site datum.

* = Groundwater elevation corrected to include 80 percent of the floating product thickness measured in the well.

GWE − DTW + (.2 × thickness of FP in feet) = static gwe

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
461 EIGHTH STREET
OAKLAND, CALIFORNIA
WIC 204-5508-6205

WELL DESIGNATION	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
S-2	16-Apr-87	47,000	8,200	4,700	---	3,100
S-4	26-Oct-88	130	3.8	13	4	30
	14-Feb-89	<50	0.5	<1	<1	3
	1-May-89			Dry		
	27-Jul-89			Dry		
	5-Oct-89			Dry		
	9-Jan-90			Dry		
	30-Apr-90	<50	<0.5	<0.5	<5	<1
	31-Jul-90			Dry		
	30-Oct-90			Dry		
	6-May-91			Dry		
	27-Jun-91	<50	<0.5	<0.5	<0.5	<0.5
	24-Sep-91			Dry		
	7-Nov-91			Dry		
	13-Feb-92	<50	<0.5	<0.5	<0.5	3
	11-May-92			Dry		
	3-Dec-92			Inaccessible		
	13-May-93			Inaccessible		
	22-Jul-93			Inaccessible		
	20-Oct-93			Inaccessible		
	25-Jan-94			Inaccessible		
	25-Apr-94			Inaccessible		
S-5	16-Apr-87	130,000	15,000	16,000	---	14,000
	26-Oct-88	110,000	20,000	25,000	2,300	10,000
	14-Feb-89	94,000	16,000	21,000	1,800	10,000
	1-May-89	120,000	29,000	35,000	3,100	15,000
	27-Jul-89	110,000	20,000	29,000	2,400	14,000
	5-Oct-89			Floating Product 0.01 ft		
	9-Jan-90			Floating Product 0.01 ft		
	30-Apr-90	100,000	13,000	22,000	2,100	11,000
	31-Jul-90	53,000	8,300	14,000	1,200	7,400
	30-Oct-90			Floating Product 0.03 ft		
	6-May-91			Floating Product 0.13 ft		
	27-Jun-91			Floating Product 0.03 ft		
	24-Sep-91			Floating Product 0.06 ft		
	7-Nov-91			Floating Product 0.25 ft		
	13-Feb-92			Floating Product 0.31 ft		
	11-May-92			Floating Product 0.58 ft		
	3-Dec-92			Inaccessible		
	13-May-93			Floating Product 0.27 ft		

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

FORMER SHELL SERVICE STATION
461 EIGHTH STREET
OAKLAND, CALIFORNIA
WIC 204-5508-6205

WELL DESIGNATION	SAMPLE DATE	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
S-5	22-Jul-93			Floating Product 0.25 ft		
	20-Oct-93			Floating Product 0.23 ft		
	25-Jan-94			Floating Product 0.18 ft		
	25-Apr-94			Floating Product 0.35 ft		
S-6	16-Apr-87	81,000	16,000	9,000	---	6,400
	26-Oct-88	110,000	29,000	18,000	2,500	8,200
	14-Feb-89	54,000	18,000	4,500	1,400	4,000
	1-May-89	93,000	43,000	9,900	3,000	8,000
	27-Jul-89	52,000	20,000	3,200	1,700	5,500
	5-Oct-89	55,000	20,000	2,900	1,600	5,500
	9-Jan-90	76,000	35,000	9,100	2,300	8,600
	30-Apr-90	39,000	13,000	2,300	900	2,800
	31-Jul-90	48,000	20,000	4,600	1,500	4,900
	30-Oct-90	27,000	7,400	900	600	1,400
	6-May-91	35,000	3,900	2,700	2,300	3,500
	27-Jun-91	51,000	19,000	5,600	1,700	6,300
	24-Sep-91	42,000	14,000	4,300	1,200	4,000
	7-Nov-91	39,000	11,000	2,000	800	2,300
	13-Feb-92	64,000	21,000	6,200	1,600	5,100
	11-May-92	57,000	22,000	7,600	2,200	7,700
	3-Dec-92	110,000	26,000	9,400	2,100	8,700
	13-May-93	58,000	21,000	6,800	2,500	9,800
	22-Jul-93	70,000	31,000	14,000	3,000	13,000
	20-Oct-93	48,000	28,000	9,800	3,200	12,000
	25-Jan-94	70,000	23,000	7,500	2,500	8,000
	25-Apr-94	61,000	16,000	4,000	1,800	5,100

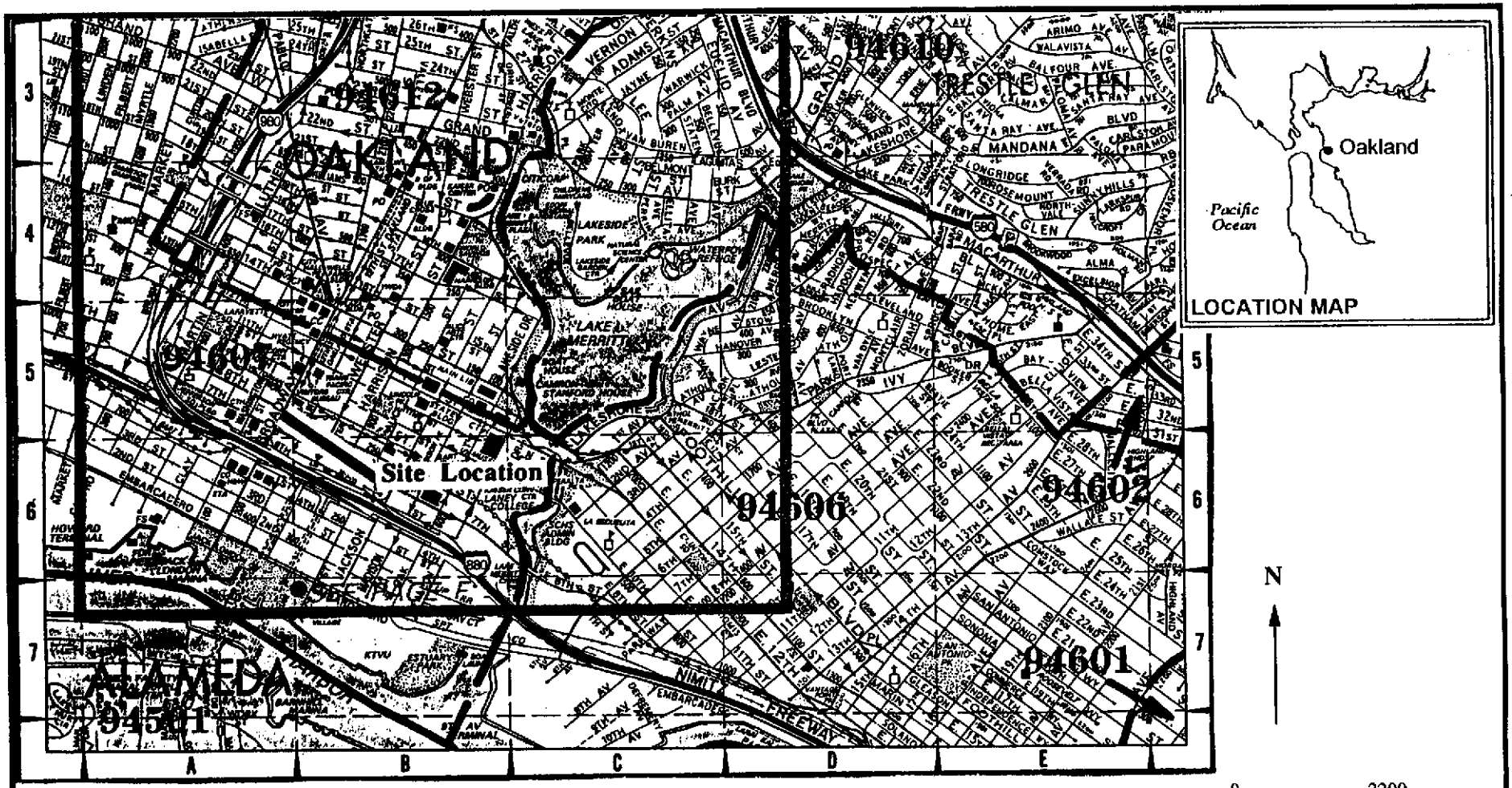
Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015

Benzene, Toluene, Ethylbenzene, and Xylenes analyzed by EPA Method 8020

--- = Ethylbenzene and Xylenes were combined prior to May 1987

<x = Not detected at detection limit of x



Base Map: 1993 Thomas Guide

PLATE

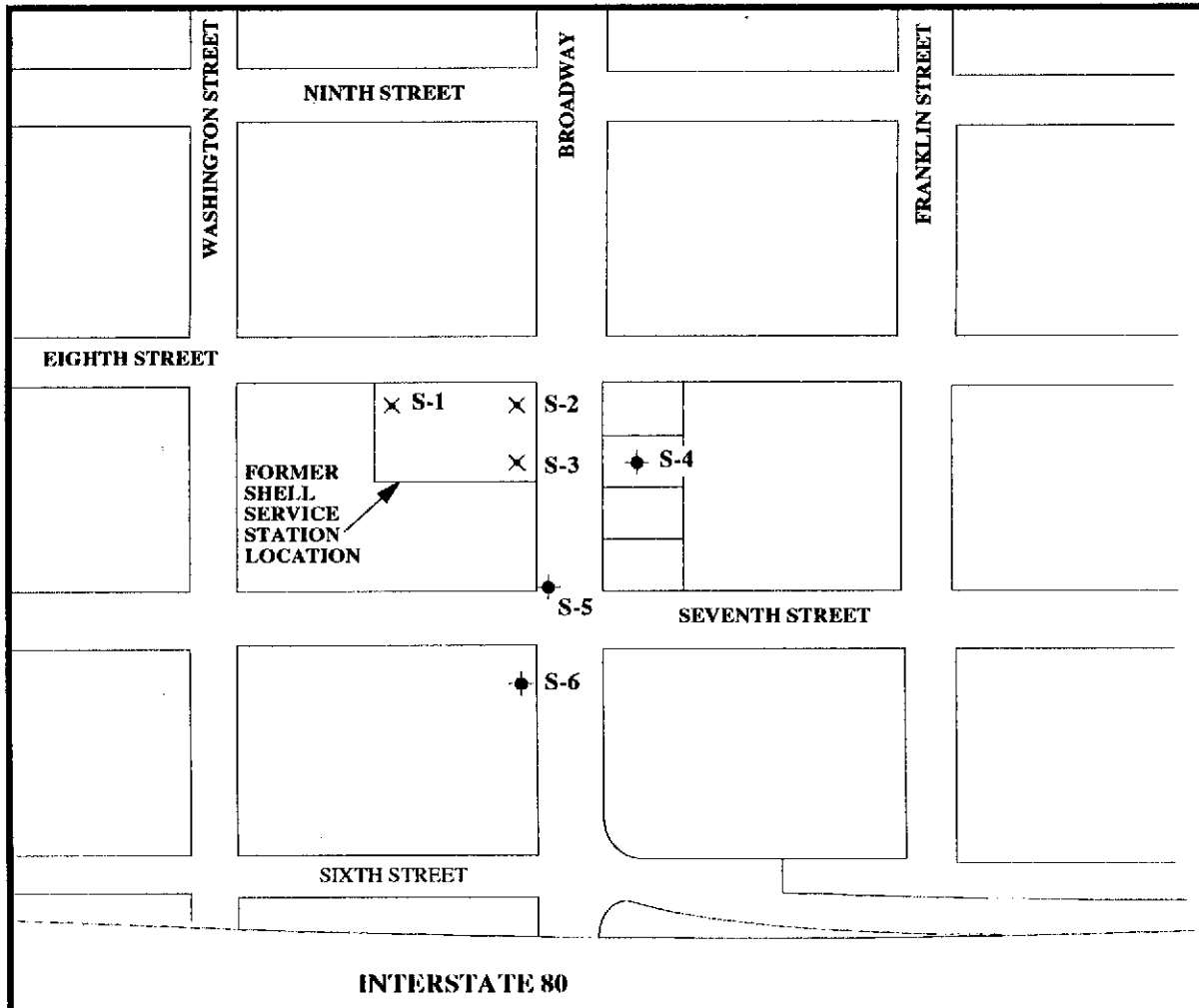
1

VICINITY MAP
Former Shell Service Station
461 Eighth Street
Oakland, California

enviros®
E49307216

Drawn By: CJG Date: 12/6/93

Approved By: _____ Date: 7-6-94



EXPLANATION

- Groundwater Monitoring Well
- Destroyed Well

Note: Well S-7 destroyed in 1987

N

0 200

Scale in Feet

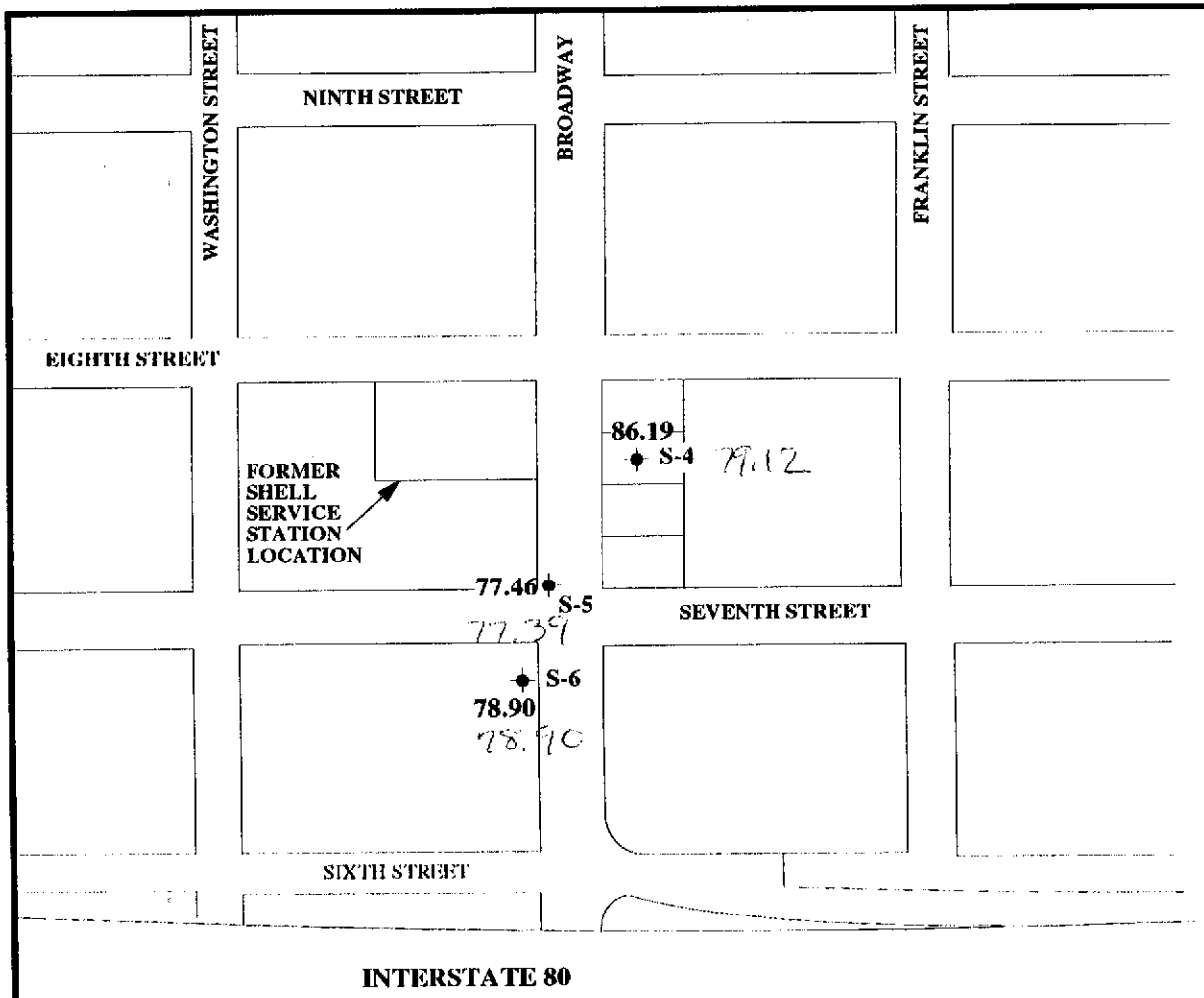
Note: Base Map taken from GeoStrategies Inc. Report dated 10-4-93.

PLATE **2**

SITE PLAN
Former Shell Service Station
461 Eighth Street
Oakland, California

enviros®
E4/9307216

Drawn By: JLP | Date: 6-7-94 | Approved By: [illegible] | Date: 7-6-94



EXPLANATION

Groundwater Monitoring Well

77.46 Groundwater Elevation (Referenced to MSL.)

Note: Water levels measured on 4-25-94

N

0 200

Scale in Feet

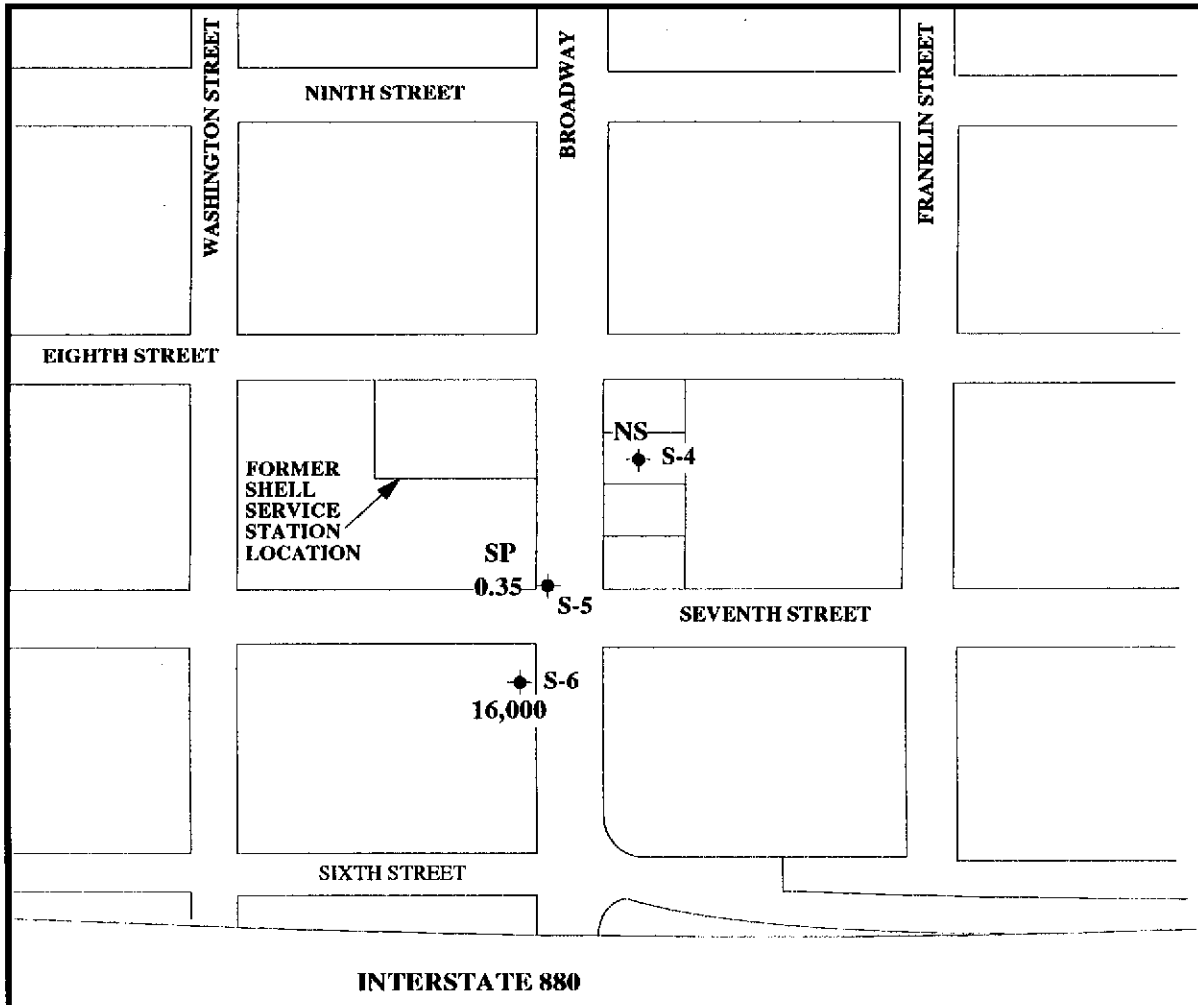
Note: Base Map taken from GeoStrategies Inc. Report dated 10-4-93.

PLATE **3**

GROUNDWATER ELEVATION MAP
Former Shell Service Station
461 Eighth Street
Oakland, California

enviros®
E4/9307216

Drawn By: JLP | Date: 6-3-94 | Approved By: [illegible] | Date: 7-6-94



EXPLANATION

- Groundwater Monitoring Well
- S-6
- 16,000 Benzene Concentrations in parts per billion (ppb)
- SP Separate Phase Product
- NA Not Accessible

Note: Wells sampled on 4-25-94

N

0 200

Scale in Feet

Note: Base Map taken from GeoStrategies Inc. Report dated 10-4-93.

PLATE **4**

BENZENE CONCENTRATION MAP
Former Shell Service Station
461 Eighth Street
Oakland, California

enviros®
E4/9307216

Drawn By: DML Date: 6-3-94

Approved By: AK Date: 7-6-94

Appendix A

Blaine Tech Services Inc.

Quarterly Groundwater Sampling Report

BLAINE
TECH SERVICES INC.

985 TIMOTHY DRI
SAN JOSE, CA 951
(408) 995-55
FAX (408) 293-87

May 16, 1994

Shell Oil Company
P.O. Box 5278
Concord, CA 94520-9998

RECEIVED
MAY 28 1994

Attn: Lynn Walker

SITE:
Shell WIC #204-5508-6200
461 8th Street
Oakland, California

QUARTER:
2nd quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940425-K-1

This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in response to the request of the consultant who is overseeing work at this site on behalf of our mutual client, Shell Oil Company. Data collected in the course of our field work is presented in a TABLE OF WELL GAUGING DATA. The field information was collected during our preliminary gauging and inspection of the wells, the subsequent evacuation of each well prior to sampling, and at the time of sampling.

Measurements taken include the total depth of the well and the depth to water. The surface of water was further inspected for the presence of immiscibles which may be present as a thin film (a sheen on the surface of the water) or as a measurable free product zone (FPZ). At intervals during the evacuation phase, the purge water was monitored with instruments that measure electrical conductivity (EC), potential hydrogen (pH), temperature (degrees Fahrenheit), and turbidity (NTU). In the interest of simplicity, fundamental information is tabulated here, while the bulk of the information is turned over directly to the consultant who is making professional interpretations and evaluations of the conditions at the site.

STANDARD PROCEDURES

Evacuation

Groundwater wells are thoroughly purged before sampling to insure that the sample is collected from water that has been newly drawn into the well from the surrounding geologic formation. The selection of equipment to evacuate each well is based on the physical characteristics of the well and what is known about the performance of the formation in which the well has been installed. There are several suitable devices which can be used for evacuation. The most commonly employed devices are air or gas actuated pumps, electric submersible pumps, and hand or mechanically actuated bailers. Our personnel frequently employ USGS/Middleburg positive displacement pumps or similar air actuated pumps which do not agitate the water standing in the well.

Normal evacuation removes three case volumes of water from the well. More than three case volumes of water are removed in cases where more evacuation is needed to achieve stabilization of water parameters and when requested by the local implementing agency. Less water may be obtained in cases where the well dewaters and does not recharge to 80% of its original volume within two hours and any additional time our personnel have reason to remain at the site. In such cases, our personnel return to the site within twenty four hours and collect sample material from the water which has recharged into the well case.

Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site. Effluent water from purging and on-site equipment cleaning is collected and transported to Shell's Martinez Manufacturing Complex in Martinez, California.

Free Product Skimmer

The column headed, VOLUME OF IMMISCIBLES REMOVED (ml) is included in the TABLE OF WELL GAUGING DATA to cover situations where a free product skimming device must be removed from the well prior to gauging. Skimmers are installed in wells with a free product zone on the surface of the water. The skimmer is a free product recovery device which often prevents normal well gauging and free product zone measurements. The 2.0" and 3.0" PetroTraps fall into the category of devices that obstruct normal gauging. In cases where the consultant elects to have our personnel pull the skimmers out of the well and gauge the well, our personnel perform the additional task of draining the accumulated free product out of the PetroTrap before putting it back in the well. This

recovered free product is measured and logged in the VOLUME OF IMMISCIBLES REMOVED column. Gauging at such sites is performed in accordance with specific directions from the professional consulting firm overseeing work at the site on Shell's behalf.

Sample Containers

Sample material is collected in specially prepared containers which are provided by the laboratory that performs the analyses.

Sampling

Sample material is collected in stainless steel bailer type devices normally fitted with both a top and a bottom check valve. Water is promptly decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA standard for handling volatile organic and semi-volatile compounds.

Following collection, samples are promptly placed in an ice chest containing prefrozen blocks of an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

Sample Designations

All sample containers are identified with a site designation and a discrete sample identification number specific to that particular groundwater well. Additional standard notations (e.g. time, date, sampler) are also made on the label.

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under a standard Shell Oil Company chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of the person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to Sequoia Analytical Laboratory in Redwood City, California. Sequoia Analytical Laboratory is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1210.

Objective Information Collection

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. performs no consulting and does not become involved in the marketing or installation of remedial systems of any kind. Blaine Tech Services, Inc. is concerned only with the generation of objective information, not with the use of that information to support evaluations and recommendations concerning the environmental condition of the site. Even the straightforward interpretation of objective analytical data is better performed by interested regulatory agencies, and those engineers and geologists who are engaged in the work of providing professional opinions about the site and proposals to perform additional investigation or design remedial systems.

Reportage

Submission of this report and the attached laboratory report to interested regulatory agencies is handled by the consultant in charge of the project. Any professional evaluations or recommendations will be made by the consultant under separate cover.

Please call if we can be of any further assistance.

Richard C. Blaine

RCB/lp

attachments: table of well gauging data
chain of custody
certified analytical report

cc: Enviros, Inc.
P.O. Box 259
Sonoma, CA 95476-0259
ATTN: Diane Lundquist

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-4	4/25/94	TOB	–	NONE	–	–	14.39	16.69
S-5	4/25/94	TOB	FREE PRODUCT	21.62	0.35	–	21.97	–
S-6	4/25/94	TOB	ODOR	NONE	–	–	21.68	36.82

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 940925-101

Date: 4/25/94
Page 1 of 1

Site Address: 461 8th Street, Oakland

WIC#: 204-5508-6200

Shell Engineer: Lynn Walker — Phone No.: (510) 675-6149 Fax #: 675-6172

Consultant Name & Address: Blaine Tech Services, Inc., 985 Timothy Drive, San Jose, CA 95133

Consultant Contact: Jim Keller — Phone No.: (408) 995-5535 Fax #: 293-8773

Comments:

Sampled by: KCB

Printed Name: Keith Brown

LAB: Sequoia

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-6	4/25			W		3						X							9404E87-01	3.02
TB	4/25			W		2						X								-02

CHECK ONE (1) BOX ONLY — C/DT — TURN AROUND TIME

- Quarterly Monitoring [X] — 6441 — 24 hours [ ]
- Site Investigation [ ] — 6441 — 48 hours [ ]
- Soil Closure/Disposal [ ] — 6442 — 10 days [X] (Normal)
- Water Closure/Disposal [ ] — 6443 — Other [ ]
- Soil/Air Rem. or Sys. O & M [ ] — 6462
- Water Rem. or Sys. O & M [ ] — 6463
- Other [ ]

NOTE: Notify us as soon as Possible of 24/48 hr. TAT.

Relinquished By (signature):	Keith Brown	Printed Name: Keith Brown	Date: 4/26/94	Received (signature):	SW Right	Printed Name: SW RIGHT	Date: 4/26/94
Relinquished By (signature):	SW Right	Printed Name: SW RIGHT	Time: 2:14	Received (signature):		Printed Name:	Time: 12:14
Relinquished By (signature):		Printed Name:	Date: 4/26/94	Received (signature):		Printed Name:	Date:
			Time: 10:02		Keith E. Gross		Time:
			Date:				Date: 5/26/94
			Time:			Keith E. Gross	Time: 1502

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN OF CUSTODY WITH INVOICE AND RESULTS

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Jim Keller

Project: 940425-K1, Shell, 461 8th St.

Enclosed are the results from 2 water samples received at Sequoia Analytical on April 26,1994. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
4DE8701	Water, S-6	4/25/94	EPA 5030/8015 Mod./8020
4DE8702	Water, TB	4/25/94	EPA 5030/8015 Mod./8020

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Suzanne Chin
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services, Inc.	Client Project ID:	940425-K1, Shell, 461 8th St.	Sampled: Apr 25, 1994
985 Timothy Drive	Sample Matrix:	Water	Received: Apr 26, 1994
San Jose, CA 95133	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: May 4, 1994
Attention: Jim Keller	First Sample #:	4DE8701	Amended: May 19, 1994

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 4DE8701 S-6	Sample I.D. 4DE8702 TB
Purgeable Hydrocarbons	50	61,000	N.D.
Benzene	0.50	16,000	N.D.
Toluene	0.50	4,000	N.D.
Ethyl Benzene	0.50	1,800	N.D.
Total Xylenes	0.50	5,100	N.D.
Chromatogram Pattern:		C4 - C12	--

Quality Control Data

Report Limit Multiplication Factor:	400	1.0
Date Analyzed:	5/1/94	5/1/94
Instrument Identification:	GCHP-3	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	75	77

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Suzanne Chin
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Jim Keller

Client Project ID: 940425-K1, Shell, 461 8th St.
Matrix: Liquid
QC Sample Group: 4DE8701-02

Reported: May 4, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD Batch#:	4DE8603	4DE8603	4DE8603	4DE8603
Date Prepared:	-	-	-	-
Date Analyzed:	5/1/94	5/1/94	5/1/94	5/1/94
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	100	100	100	100
Matrix Spike Duplicate % Recovery:	100	100	100	103
Relative % Difference:	0.0	0.0	0.0	3.0
LCS Batch#:	-	-	-	-
Date Prepared:	-	-	-	-
Date Analyzed:	-	-	-	-
Instrument I.D.#:	-	-	-	-
LCS % Recovery:	-	-	-	-
% Recovery Control Limits:	71-133	72-128	72-130	71-120

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

Suzanne Chin
Project Manager