enviros

HAZMAT

94 MAR 31 PH 1: 47

Transmittal

Date:

March 28, 1994

To:

Mr. Lynn Walker

Shell Oil Company

P.O. Box 5278

Concord, California 94520

From:

Diane Lundquist

RE:

Quarterly Monitoring Report - 1st 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

94 MAR 31 PM 1:47

March 28, 1994

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

RE:

Quarterly Monitoring Report - First 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 first 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 January 25, 1994. The water samples were transported to Anametrix Laboratories of San Jose, 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 0.18 feet (2.16 inches).
- Approximately 150 gallons of groundwater and product were evacuated from Well S-5 this quarter.
- Well S-6 contained 70,000 parts per billion (ppb) TPH-G and 23,000 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.

First 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 January 25, 1994. Each well was checked for the presence of separate-phase petroleum hydrocarbons. Well S-5 contained 0.18 feet of separate-phase petroleum hydrocarbons. Field measurements are presented in Table 1.

Monitoring well S-6 was purged prior to sampling. Groundwater samples from Well S-6 were collected on January 25, 1994 and 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 first 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 form, stored in a cooler with ice and transported to Anametrix 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
- Anametrix Certified Analytical Report

Data Evaluation

Groundwater elevations for Wells S-4, S-5 and S-6 were measured and recorded. The first 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 0.18 feet.

Groundwater samples collected from Well S-6 contained 70,000 ppb TPH-G and 23,000 ppb benzene. Toluene, ethylbenzene and xylenes were detected at concentrations ranging from 2,500 ppb to 8,000 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 Anametrix certified analytical report contained in Appendix A.

Conclusions

Accessibility to Well S-4 for groundwater sampling 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. Separate-phase petroleum hydrocarbons in Well S-5 have also remained relatively constant.

On January 25, 1994, Crosby and Overton Inc. vacuumed out approximately 150 gallons of groundwater and product from Well S-5.

Negotiations for right-of-entry for site investigation are proceeding between Shell Oil Company and the current property owner.

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 increase to 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

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

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.		CASING DIA. (IN.)	TOTAL WELL DEPTH (FT.)	WELL ELEV (FT.)		DEPTH TO FIRST IMMISCIBLES LIQUID (FT.)	DEPTH TO WATER (FT.)	STATIC WATER ELEV. (FT.)
S-4	25-Jan-94	4	16.64	93.51	0.00	NONE	14.60	85.98
S-5	25-Jan-94	4		99.36	0.18	21.75	21.93	77.47
S-6	25-Jan-94	4	36.79	100.58	0.00	NONE	21.80	78.78

NOTES

Static water elevations referenced to project site datum.

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

TABLE 2 HISTORICAL GROUNDWATER QUALITY DATABASE

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

WELL	SAMPLE	TPH-G	BENZENE	TOLUENE E	THYLBENZEND	XVLENES
DESIGNATION	DATE	(PPB)	(PPB)	(PPB)	(PPB)	(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			Inaccessi	ble	
	13-May-93			Inaccessi	ble	
	22-Jul-93			Inaccessi	ble	
	20-Oct-93			Inaccessi	ble	
	25-Jan-94			Inaccessi	ble	
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 Produ	ct 0.01 ft	
	9-Jan-90			Floating Produ	ct 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 Produ	ct 0.03 ft	
	6-May-91			Floating Produ		
	27-Jun-91			Floating Produ		
1	24-Sep-91			Floating Produ		
	7-Nov-91	w		Floating Produ		4
	13-Feb-92			Floating Produ		
	11-May-92			Floating Produ		*
	3-Dec-92			Inaccess		
	13-May-93			Floating Produ		
	22 -Jul- 93			Floating Produ	ıct 0.25 ft	

TABLE 2 HISTORICAL GROUNDWATER QUALITY DATABASE

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

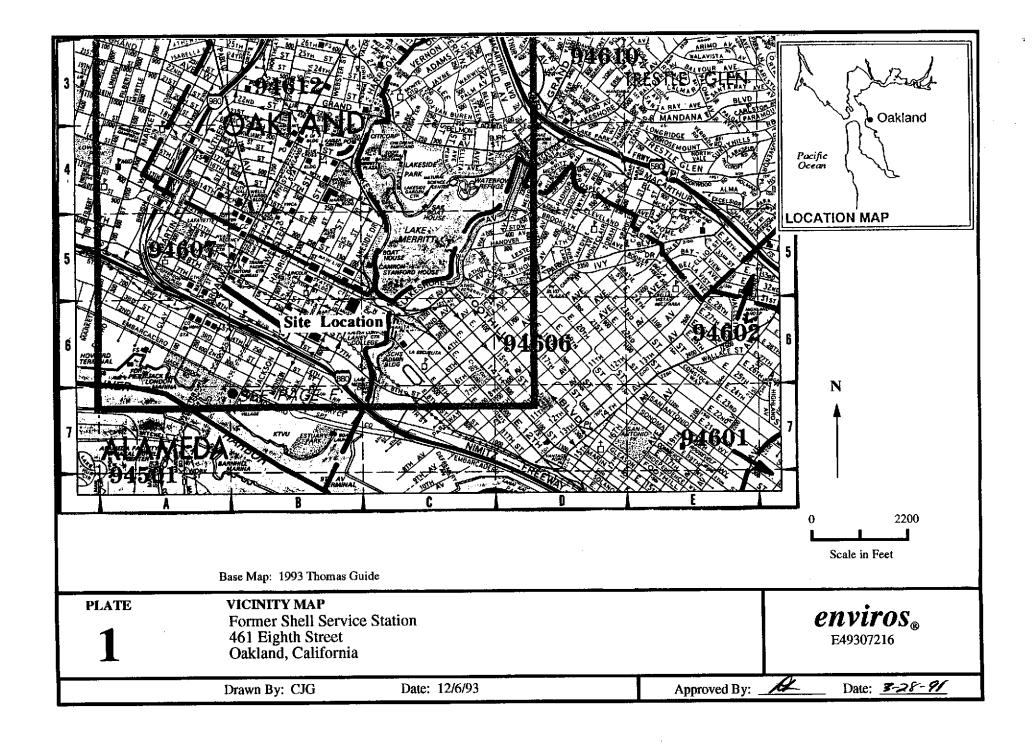
WELL	SAMPLE	TPH-G	BIONZONO	TOLUENE	DITE MERINANENE	XYLENES
DESIGNATION	DATE	(PPB)	(PPB)	(PPB)	(PPB)	(PPB)
S-5	20-Oct-93			Floating Pro	duct 0.23 ft	
	25-Jan-94 ^			Floating Pro	tuet 0.18 th 🛝	
S-6	16-Apr-87	81,000	16,000	9,000		6,400
	26-Oct-88	110,000	29,000	18,000	2,500	8,200
	14-Feb-89	54,000	18,000	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

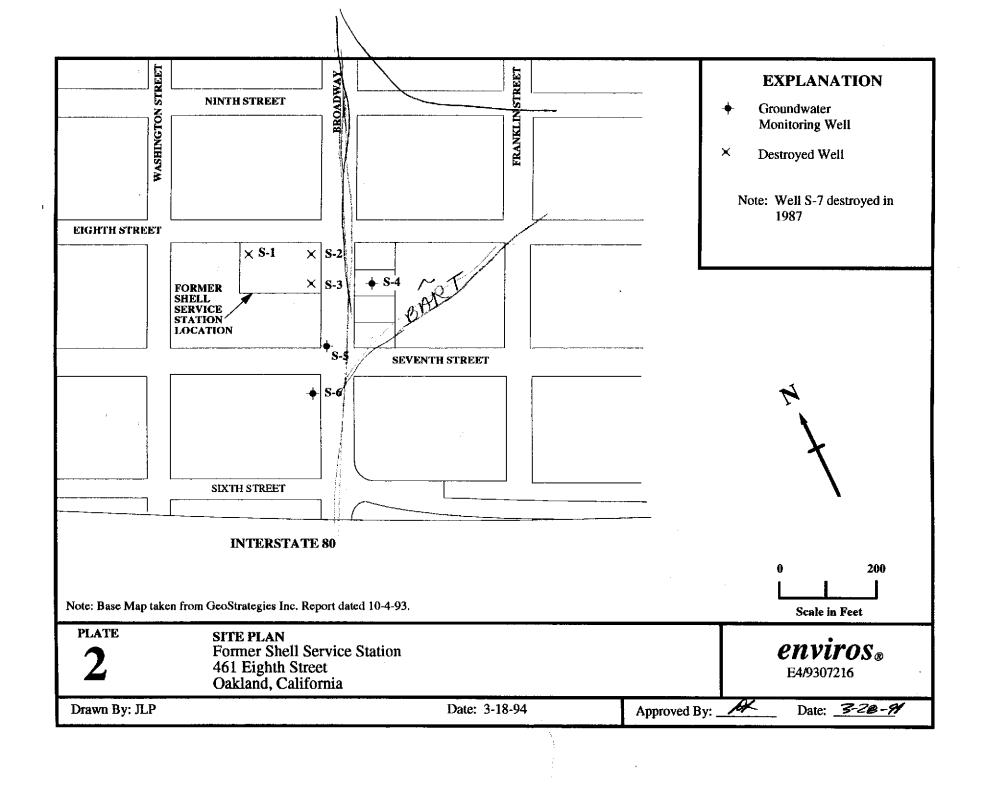
Abbreviations:

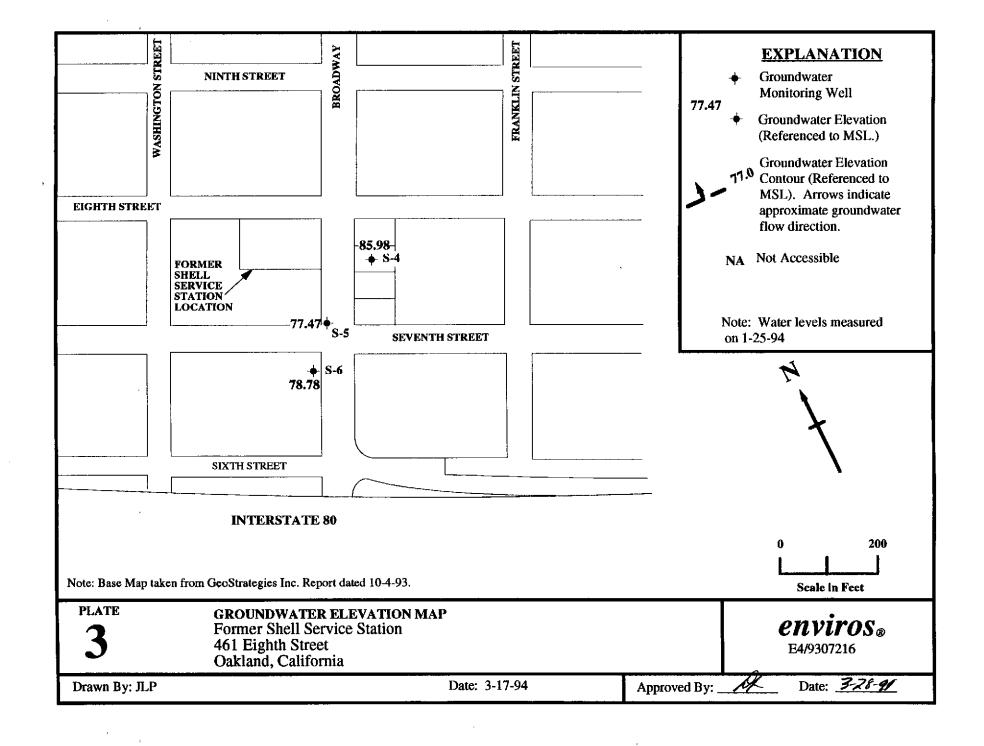
TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015 Benzene, Toluene, Ethylbenzene, and Xylenes analyzed by EPA Method 8020

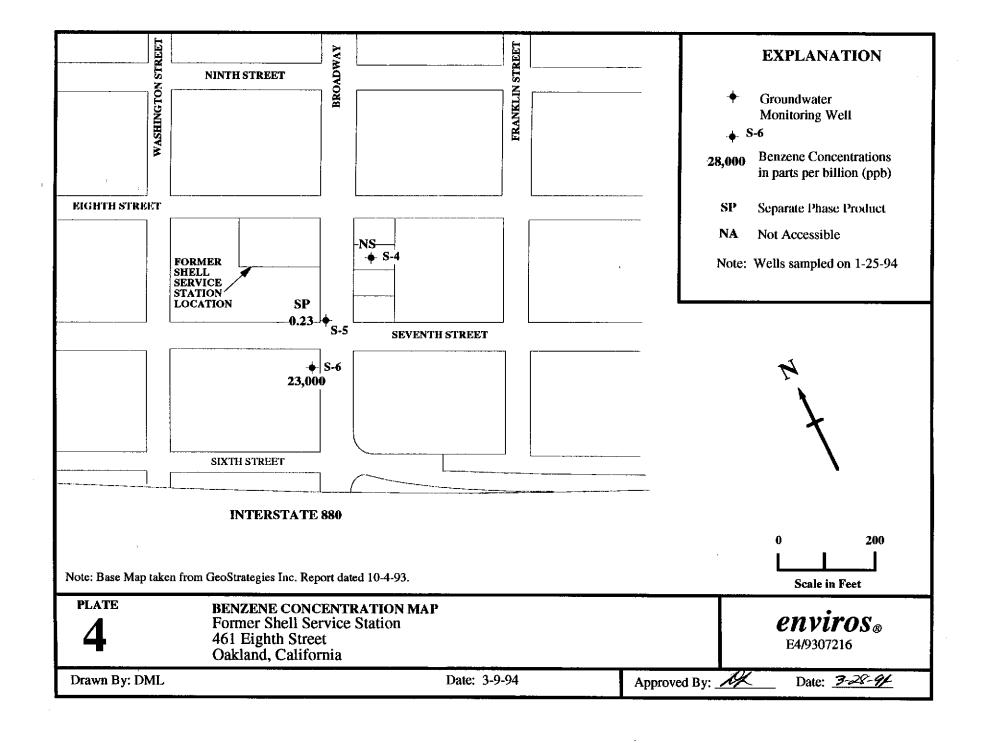
--- = Ethylbenzene and Xylenes were combined prior to May 1987

< x =Not detected at detection limit of x

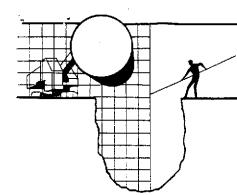








Appendix A Blaine Tech Services Inc. Quarterly Groundwater Sampling Report



BLAINE TECH SERVICES INC.

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

February 14, 1994

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

Attn: Lynn Walker



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

QUARTER: 1st quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940125-A-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 Anametrix, Inc. in San Jose, California. Anametrix, Inc. is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1234.

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	1/25/94	TOB		NONE	_		14.60	16.64
S-5	1/25/94	TOB	FREE PRODUCT	21.75	0.18	VACUMED	21.93	
S-6	1/25/94	TOB	ODOR	NONE	· ·		21.80	36.79

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RETAIL ENVIRO	L COMPANY CONMENTAL ENGINEERING - WEST				CHAIN OF CUSTODY REC						Date Page	1.25-94						
Silo Addross: 461 8th S	Street, Oak	:land					And	alys	is R	equ	ired	1				LAB: Anam	etrix	
WIC#: 204-5508-	-6200													Γ,		CHECK OHE (1) FOX OHLY	C1/D1	TURN ABOUND TIME
Shell Engineer: Lynn Wall Consuliant Name & Address Blaine Tech Services 985 Timorhy Drive, Sa Consuliant Contact: Jim Ka	ker s: , Inc. an Jose, C/ eller	675-61 Fax #: 6 4 95133 Phone N 995-55	lo.: (510) 575-6172 lo.: (408) 335 293-8773	Aod. Gas)	Aod, Dieset).	(602)	cs (EPA 8240)		7H 8015 & BTEX 6020			•		Ţ,		Soit Classity/Disposal Water Classity/Disposal Soit/Air Zenn. or Sys.) 441) 442) 442) 442	24 hours 44 hours 16 days XX (Nerman) Other
Printed Name: Tell Compile ID Date	Sludge Soil	Water	Air No. of conts.	TPH (EPA 8015 Mod	TPH (EPA 8015 Mod.	BTEX (EPA 8020/602)	Volaille Organics	Test for Disposal	Combination IPH			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION		SAMPLE CONDITION/ COMMENTS
5-6 1/25		n	3] !		<i>'</i>	X						,	Carmel	7	
TRIP /20	- ·	u	2						X							wate,		
Relinquished By (signature): Relinquished By (signature): Relinquished By (signature):	Printed Nar	119: Oppo 5, Oppo 119:		Date Date Date Time	0: /6- 0: /-2/ a; /6 0:	10 6-54 20	Rec	gy so	i (yor Tid 1 (yor	ialure 1 1 ialure	(1)):):	fai	cor	<u>ر</u> د	Printe Printe	d Name; 🜙	lcoi	[0-1-1 for 100



1961 Concourse Drive San Jose, CA 95131

Tel: 408-432-8192

Fax: 408-432-8198

MR. JIM KELLER BLAINE TECH 985 TIMOTHY DRIVE SAN JOSE, CA 95133 Workorder # : 9401342 Date Received: 01/26/94

Project ID : 204-5508-6200

Purchase Order: MOH-B813

The following samples were received at Anametrix for analysis:

ANAMETRIX ID	CLIENT SAMPLE ID
9401342- 1	S-6
9401342- 2	TRIP

This report consists of 4 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group which performed the analysis(es) and generated the data.

The results contained within this report relate to only the sample(s) tested. Additionally, these data should be considered in their entirety and Anametrix cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234.

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

Laboratory Director

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

MR. JIM KELLER BLAINE TECH

985 TIMOTHY DRIVE SAN JOSE, CA 95133 Workorder # : 9401342

Date Received: 01/26/94 Project ID: 204-5508-6200

Purchase Order: MOH-B813

Department : GC Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9401342- 1	S-6	WATER	01/25/94	ТРНЭВТЕХ
9401342- 2	TRIP	WATER	01/25/94	TPHgBTEX

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

MR. JIM KELLER BLAINE TECH 985 TIMOTHY DRIVE SAN JOSE, CA 95133 Workorder # : 9401342

Date Received: 01/26/94 Project ID: 204-5508-6200

Purchase Order: MOH-B813

Department : GC Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Lucia Shar 2/4/94 Chemist

Organic Analysis Data Sheet Total Petroleum Hydrocarbons as Gasoline with BTEX ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9401342

Matrix

: WATER

Client Project ID : 204-5508-6200

Units : uq/L

		Client ID	Client ID	Client ID	Client ID	Client ID
	Method	S-6	TRIP			
,	Reporting	Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
Compound Name	Limit*	9401342-01	9401342-02	Method Blank		
Benzene	0.50	23000	ND	ND		
Toluene	0.50	7500	ND	ND		
Ethylbenzene	0.50	2500	ND	ND		
Total Xylenes	0.50	8000	ND	ND		• • • • • • • • • • • • • • • • • • • •
TPH as Gasoline	50	70000	ИD	ND		
Surrogate Recovery		122%	124%	108%		
Instrument ID		HP12	HP12	HP12		
Date Sampled		01/25/94	01/25/94	N/A		
Date Analyzed		02/02/94	02/02/94	02/01/94		
RLMF		500	1	1		
Filename Reference		FPJ34201.D	FPJ34202.D	BF0104E1.D		

^{*} The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

: Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX: Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

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

Lucia Stron 2/4/94 Analyst

Laboratory Control Spike Report Total Petroleum Hydrocarbons as BTEX ITS - Anametrix Laboratories - (408)432-8192

Instrument ID : HP12

Analyst : \mathcal{I}^{g}

Matrix

: LIQUID

Supervisor : 4

Units : ug/L

COMPOUND NAME	SPIKE	LCS	RECOVERY
	AMOUNT	RECOVERY	LIMITS
Benzene	20	85%	52-133
Toluene	20	90%	57-136
Ethylbenzene	20	95%	56-139
Total Xylenes	20	90%	56-141
Surrogate Recovery		102%	61-139
Date Analyzed		02/02/94	
Multiplier		1	
Filename Reference		MF0101E1.D	

^{*} Limits established by Inchcape Testing Services, Anametrix Laboratories.