



April 9, 1993

LOP 3618

Susan Hugo
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 #81-619-203

Dear Ms. Hugo:

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 first quarter 1993 and proposed work for the second quarter 1993.

First Quarter 1993 Activities:

- Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths and collected ground water samples from the three site wells. BTS' report describing these activities and the analytic report for the ground water samples are included as Attachment A.
- Weiss Associates (WA) calculated ground water elevations and compiled the analytic data (Tables 1 and 2) and prepared a ground water elevation contour map (Figure 2).
- BTS purged approximately 0.4 gallons of floating hydrocarbons from the tank backfill observation wells.
- WA collected soil samples and installed a horizontal ground water extraction well while assisting with a sanitary sewer line upgrade at the site. The sampling results will be presented in a separate report.

Susan Hugo
April 9, 1993

2

Weiss Associates 

Anticipated Second Quarter 1993 Activities:

WA will submit a report presenting the results of the second quarter 1993 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results, ground water elevations and a ground water elevation contour map.

Conclusion and Recommendations:

WA recommends monitoring dissolved hydrocarbon concentrations in the ground water monitoring wells for at least two quarters to assess whether the December 1992 hydrocarbon release has any long-term impact on ground water. If the hydrocarbon concentrations in well S-2 remain at current levels during the next few quarters, we will assess the need for additional investigation at the site.

Please call if you have any questions.



Sincerely,
Weiss Associates



J. Michael Asport
Technical Assistant



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

JMA/JPT:jma

J:\SHELL\600\QMRPTS\619QMMMA3.WP

Attachments: Figures
Tables
A - Blaine Tech'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, Suite 500, Oakland, California 94612

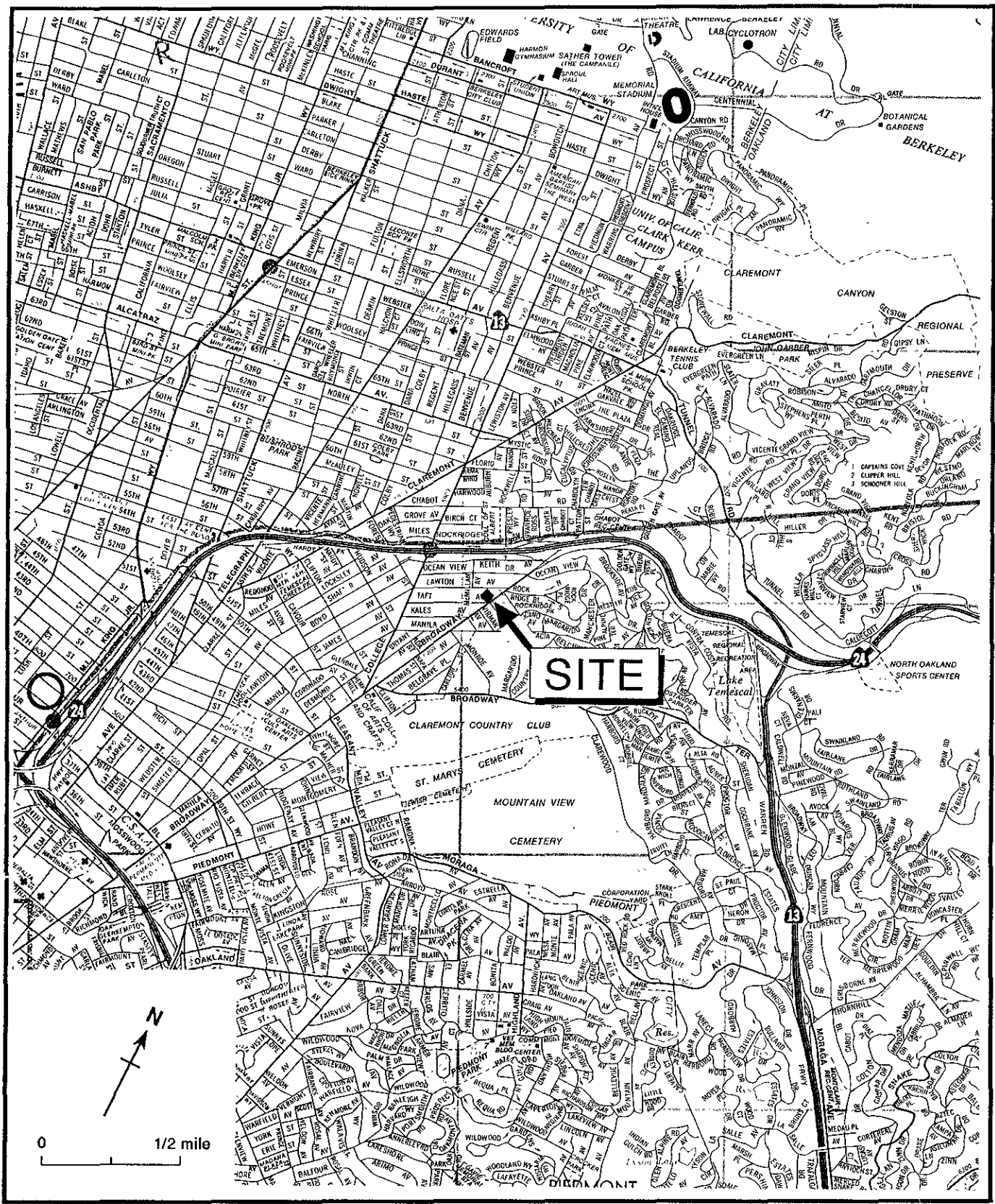


Figure 1. Site Location Map - Shell Service Station WIC #204-5510-0303, 5755 Broadway, Oakland, California

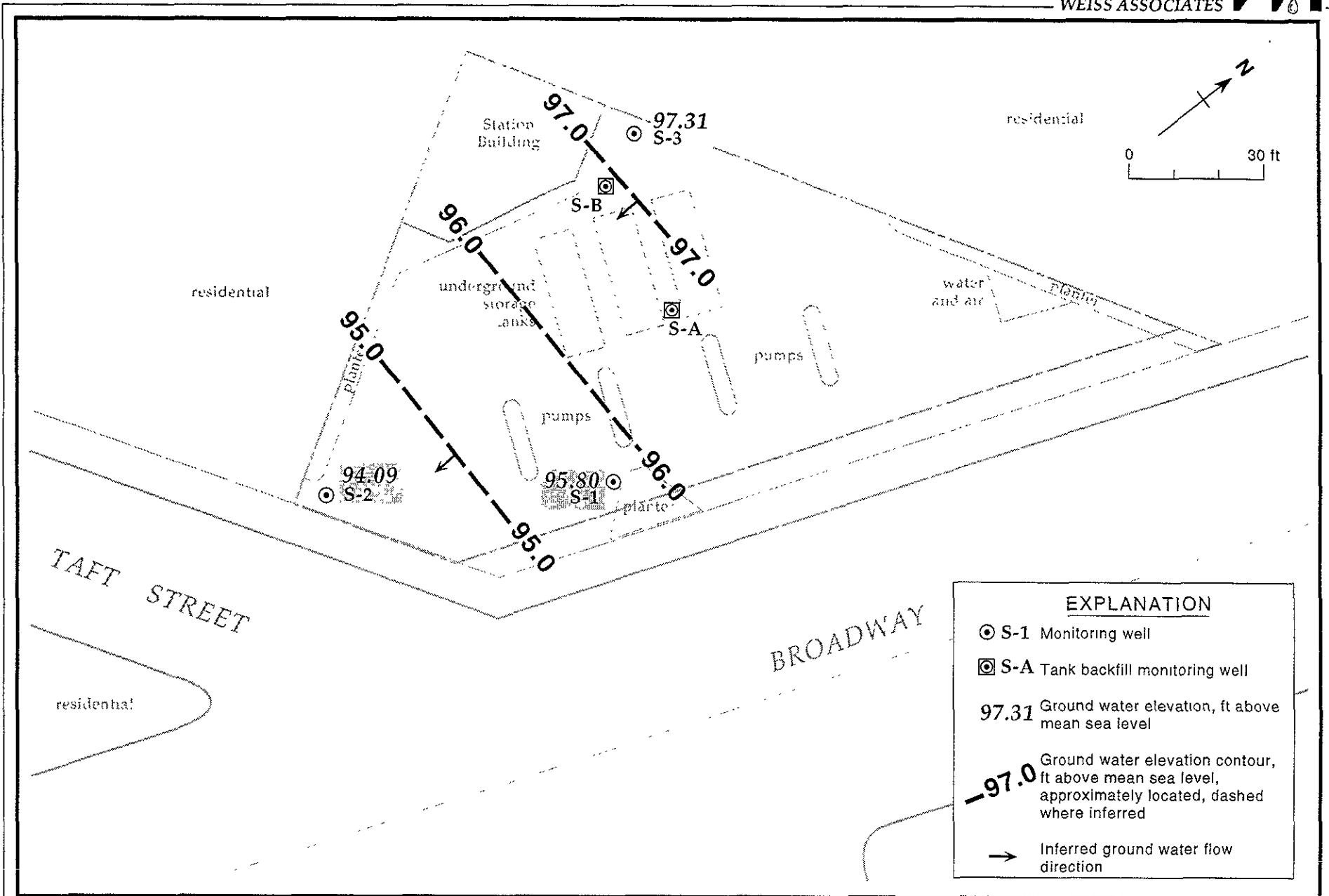


Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - February 10, 1993 - Shell Service Station WIC#204-2004-0204, 5755 Broadway, Oakland, California

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5510-0303, 5755 Broadway, Oakland, California

Well ID	Date	Top-of-Casing Elevation	Depth to Water (ft)	Ground Water Elevation (ft above msl)
S-1	06/03/91	100.00	3.51	96.49
	08/30/91		4.24	95.76
	11/22/91		4.29	95.71
	03/13/92		2.87	97.13
	05/28/92		3.79	96.21
	08/19/92		4.43	95.57
	11/18/92		4.34	95.66
	02/10/93		4.20	95.80
S-2	06/03/91	98.92	4.02	94.90
	08/30/91		4.70	94.22
	11/22/91		4.72	94.20
	03/13/92		3.47	95.45
	05/28/92		4.45	94.45
	08/19/92		4.84	94.08
	11/18/92		4.73	94.19
	02/10/93		4.83	94.09
S-3	06/03/91	101.67	3.25	98.42
	08/03/91		4.73	96.94
	11/22/91		4.81	96.86
	03/13/92		2.29	99.38
	05/28/92		3.62	98.05
	08/19/92		4.66	97.01
	11/18/92		4.51	97.16
	02/10/93		4.36	97.31

Note:

Top of casing elevations referenced to arbitrary elevation of 100 ft

Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5510-0303, 5755 Broadway, Oakland, California

Sample ID	Date	Depth to Water (ft)	TPH-G					X
			-----parts per million (mg/L)-----					
S-1	06/03/91	3.51	<0.03	<0.0003	<0.0003	<0.0003	<0.0003	
	08/30/91	4.24	<0.03	<0.0003	<0.0003	<0.0003		
	11/22/91	4.29	<0.03	0.0023	0.0003	<0.00046		
	03/13/92	2.87	<0.03	<0.00052	<0.0003	<0.0003		
	05/28/92	3.79	<0.05	<0.0005	<0.0005	<0.0005		
	08/19/92	4.43	<0.05	<0.0005	<0.0005	<0.0005		
	11/18/92	4.34	<0.05	<0.0005	<0.0005	<0.0005		
	02/10/93	4.20	0.051	0.0014	<0.0005	<0.0005		
	02/10/93 ^a	4.20	<0.05	0.0012	<0.0005	<0.0005		
S-2	06/03/91	4.02	0.49	0.15	0.0082	0.0027	0.007	
	08/30/91	4.70	0.07	0.00037	<0.0003	<0.0003		
	11/22/91	4.72	1.6	0.110	0.029	0.0093		
	03/13/92	3.47	1.3	0.21	0.034	0.0057		
	05/28/92	4.45	0.10	0.028	<0.0005	<0.0005		
	08/19/92	4.84	0.47	0.042	0.0083	<0.0005		
	11/18/92	4.73	0.49	0.043	0.017	0.039		
	02/10/93	4.83	19	0.710	0.080	0.760		
	02/10/93	4.83	19	0.710	0.080	0.760		
S-3	06/03/91	3.25	<0.03	<0.0003	0.0003	0.0003	0.0003	
	08/30/91	4.73	<0.03	<0.0003	<0.0003	<0.0003		
	11/22/91	4.81	<0.03	<0.0003	<0.0003	<0.0003		
	03/13/92	2.29	<0.03	<0.0003	0.0003	0.0003		
	05/28/92	3.62	<0.05	<0.0005	<0.0005	<0.0005		
	08/19/92	4.66	<0.05	<0.0005	<0.0005	<0.0005		
	11/18/92	4.51	<0.05	<0.0005	<0.0005	<0.0005		
	02/10/93	4.36	0.30	0.0019	0.0024	0.0032		
	02/10/93	4.36	0.30	0.0019	0.0024	0.0032		
Bailer Blank	08/19/92		<0.05	<0.0005	<0.0005	<0.0005		
	11/22/91		<0.05	<0.0005	<0.0005	<0.0005		
Trip Blank	03/13/92		<0.03	<0.0003	<0.0003	<0.0003		
	05/28/92		<0.05	<0.0005	<0.0005	<0.0005		
	08/19/92		<0.05	<0.0005	<0.0005	<0.0005		
	11/18/92		<0.05	<0.0005	<0.0005	<0.0005		
	02/10/93		<0.05	<0.0005	<0.0005	<0.0005		
DTSC MCLs			NE	0.001	0.680	0.10 ^b	1.750	

-- Table 3 continues on next page --



Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5510-0303, 5755 Broadway, Oakland, California (continued)

Abbreviations:

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

B = Benzene by EPA Method 8020

E = Ethylbenzene by EPA Method 8020

T = Toluene by EPA Method 8020

X = Xylenes by EPA Method 602 or 8020

--- = Not analyzed

DTSC MCLs = California Department of Toxic Substances Control maximum
contaminant levels for drinking water

NE = Not established

<n = Not detected at detection limits of n ppm

Notes:

a = Duplicate sample

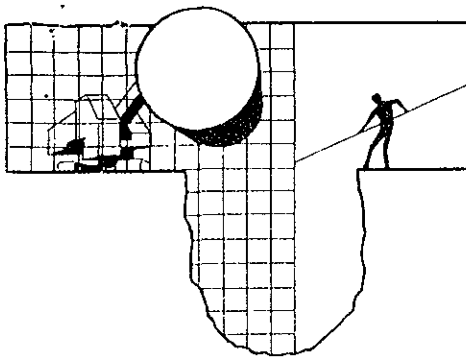
b = DTSC recommended action level for drinking water; MCL not established

Table 3. Floating Hydrocarbon Removal - Shell Service Station WIC #204-5510-0303, 5755 Broadway, Oakland, California

Well ID	Date	Floating Hydrocarbon Thickness (ft)	Volume of Hydrocarbons Removed (gal)	Cumulative Volume of Hydrocarbons Removed (gal)
S-A	02/10/93	0.43	0.40	0.41
S-B	02/10/93	<0.01	0.01	0.01
Total Volume of Hydrocarbons Removed				0.41

ATTACHMENT A

EMCON'S GROUND WATER MONITORING REPORT AND ANALYTIC REPORT



BLAINE TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE, CA 95133
(408) 995-5535
FAX (408) 293-8773

February 23, 1993

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

Attn: Daniel T. Kirk

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

QUARTER:
1st quarter of 1993

QUARTERLY GROUNDWATER SAMPLING REPORT 930210-T-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 the 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.

TABLE OF WELL GAUGING DATA

WELL I.D.	WELL DIAMETER (inches)	DATA COLLECTION DATE	MEASUREMENTS REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLE LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLE LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-1 *	4	02-10-93	TOP OF PIPE	--	NONE	--	--	4.20	11.81
S-2	4	02-10-93	TOP OF PIPE	--	NONE	--	--	4.83	9.44**
S-3	4	02-10-93	TOP OF PIPE	--	NONE	--	--	4.36	9.57
S-4	--	02-10-93	--	FREE PRODUCT	--	<0.01	<40	--	--
S-5	--	02-10-93	--	FREE PRODUCT	--	0.43	1500	--	--

* Sample DUP was a duplicate sample taken from S-1.

** DTB is an approximate measurement due to a bailer that was later found and removed from this well.

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 may be removed in cases where more evacuation is needed to achieve stabilization of water parameters. Less than three case volumes of water may be obtained in cases where the well dewateres 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.

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 site 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. Either the requested analyses or the specific analytes are written on the sample label (e.g. TPH-G, BTEX).

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

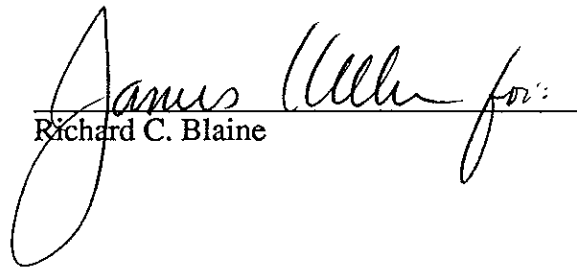
Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. performs no consulting and does not become 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/lpn

attachments: chain of custody
certified analytical report

cc: Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608-2411
ATTN: Kristina Koltavary

50: 12 4/11

9302140

 SHELL OIL COMPANY RETAIL ENVIRONMENTAL ENGINEERING - WEST		CHAIN OF CUSTODY RECORD Serial No: _____		Date: 2-10-93 Page 1 of 1																																																																																																																																									
Site Address: 5755 BROADWAY WIC#: 204 2004 0204 Shell Engineer: DANIEL T. KIRK Phone No.: 510 Fax #: 675-6171 Consultant Name & Address: BLAINE TECH SERVICES Consultant Contact: GLENN BENNETT Phone No.: 408 Fax #: 945-5535 Comments: Sampled by: Francis Thie Printed Name: FRANCIS THIE		Analysis Required 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 _____				LAB: ANAMETRIX <table border="1"> <tr> <th>CHECK ONE (1) BOX ONLY</th> <th>CT/DT</th> <th>TURN AROUND TIME</th> </tr> <tr> <td>Quarterly Monitoring <input checked="" type="checkbox"/></td> <td>6441</td> <td>24 hours <input type="checkbox"/></td> </tr> <tr> <td>Site Investigation <input type="checkbox"/></td> <td>6441</td> <td>48 hours <input type="checkbox"/></td> </tr> <tr> <td>Soil Clarity/Disposal <input type="checkbox"/></td> <td>6442</td> <td>15 days <input checked="" type="checkbox"/> (Normal)</td> </tr> <tr> <td>Water Clarity/Disposal <input type="checkbox"/></td> <td>6443</td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Soil/Air Rem. of Syst. O & M <input type="checkbox"/></td> <td>6452</td> <td></td> </tr> <tr> <td>Water Rem. of Syst. O & M <input type="checkbox"/></td> <td>6453</td> <td></td> </tr> <tr> <td>Other <input type="checkbox"/></td> <td></td> <td></td> </tr> </table>		CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME	Quarterly Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>	Site Investigation <input type="checkbox"/>	6441	48 hours <input type="checkbox"/>	Soil Clarity/Disposal <input type="checkbox"/>	6442	15 days <input checked="" type="checkbox"/> (Normal)	Water Clarity/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>	Soil/Air Rem. of Syst. O & M <input type="checkbox"/>	6452		Water Rem. of Syst. O & M <input type="checkbox"/>	6453		Other <input type="checkbox"/>																																																																																																																
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Relinquished By (signature): [Signature]	Printed Name: PENNY S. CARRIZOSA	Date: 2-11-93	Time: 16:05	Received (signature): [Signature]	Printed Name: Maria Barjas	Date: 2-11-93	Time: 16:05																																																																																																																																						
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THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



MR. GLEN BENNETT
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9302160
Date Received : 02/11/93
Project ID : 204-2004-0204
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9302160- 1	S-1
9302160- 2	S-2
9302160- 3	S-3
9302160- 4	DUP
9302160- 5	TB

This report consists of 5 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

02-25-93

Date

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

MR. GLEN BENNETT
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9302160
Date Received : 02/11/93
Project ID : 204-2004-0204
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9302160- 1	S-1	WATER	02/10/93	TPHg/BTEX
9302160- 2	S-2	WATER	02/10/93	TPHg/BTEX
9302160- 3	S-3	WATER	02/10/93	TPHg/BTEX
9302160- 4	DUP	WATER	02/10/93	TPHg/BTEX
9302160- 5	TB	WATER	02/08/93	TPHg/BTEX

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

MR. GLEN BENNETT
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9302160
Date Received : 02/11/93
Project ID : 204-2004-0204
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Balmer 2/24/93
Department Supervisor Date

Deena Shor 2/25/93
Chemist Date

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

Anamatrix W.O.: 9302160
Matrix : WATER
Date Sampled : 02/08 & 10/93

Project Number : 204-2004-0204
Date Released : 02/25/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# S-1	Sample I.D.# S-2	Sample I.D.# S-3	Sample I.D.# DUP	Sample I.D.# TB
Benzene	0.5	1.4	710	1.9	1.2	ND
Toluene	0.5	ND	760	3.2	ND	ND
Ethylbenzene	0.5	ND	80	2.4	ND	ND
Total Xylenes	0.5	ND	370	5.6	ND	ND
TPH as Gasoline	50	51	19000	300	ND	ND
% Surrogate Recovery		106%	108%	107%	101%	107%
Instrument I.D.		HP4	HP4	HP4	HP4	HP4
Date Analyzed		02/16/93	02/18/93	02/17/93	02/17/93	02/16/93
RLMF		1	50	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 GC/FID 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.

Uma Shas 2/25/93
Analyst Date

Cheryl Balman 2/25/93
Supervisor Date

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

Anamatrix W.O.: 9302160
Matrix : WATER
Date Sampled : N/A

Project Number : 204-2004-0204
Date Released : 02/25/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# BF1601E3	Sample I.D.# BF1701E3	Sample I.D.# BF1801E3
		BLANK	BLANK	BLANK
Benzene	0.5	ND	ND	ND
Toluene	0.5	ND	ND	ND
Ethylbenzene	0.5	ND	ND	ND
Total Xylenes	0.5	ND	ND	ND
TPH as Gasoline	50	ND	ND	ND
% Surrogate Recovery		123%	114%	102%
Instrument I.D.		HP4	HP4	HP4
Date Analyzed		02/16/93	02/17/93	02/18/93
RLMF		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.

Lucia Shor 2/25/93
Analyst Date

Cheryl Balmer 2/25/93
Supervisor Date

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

Sample I.D. : LAB CONTROL SAMPLE	Anamatrix I.D. : LCSW0217
Matrix : WATER	Analyst : <i>IS</i>
Date Sampled : N/A	Supervisor : <i>ct</i>
Date Analyzed : 02/17/93	Date Released : 02/25/93
	Instrument ID : HP4

COMPOUND	SPIKE AMP. (ug/L)	LCS (ug/L)	REC LCS	%REC LIMITS
Benzene	20.0	20.5	102%	52-133
Toluene	20.0	21.0	105%	57-136
Ethylbenzene	20.0	21.0	105%	56-139
TOTAL Xylenes	20.0	20.2	101%	56-141
P-BFB			69%	61-139

* Limits established by Anamatrix, Inc.