



July 14, 1993

Scott Seery
Alameda County Department of
Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Re: Shell Service Station
WIC #204-5508-3301
6039 College Avenue
Oakland, California
WA Job #81-618-203

Dear Mr. Seery:

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 1993 and proposed work for the third quarter 1993.

Second Quarter 1993 Activities:

- Blaine Tech Services, Inc. (BTS) of San Jose, California measured depths to ground water in the five site wells and collected ground water samples from four of the five site wells. Well MW-4 contained floating hydrocarbons and was not sampled. BTS' report describing these activities and analytic results for ground water is included as Attachment A.
- Weiss Associates (WA) compiled the ground water elevation and analytic data (Tables 1 and 2) and prepared a ground water elevation contour map (Figure 2). WA also tabulated floating hydrocarbon removal data (Table 3). To date, about 1.65 gallons of floating hydrocarbons have been purged from the subsurface.
- WA finalized an encroachment permit from the City of Oakland and is still pursuing a right-of-entry agreement with the downgradient property owner to drill additional downgradient borings and monitoring wells.

- Since the majority of positive total petroleum hydrocarbons as diesel (TPH-D) responses are attributed by the analytic laboratory to hydrocarbons that are lighter than diesel, WA will no longer analyze for TPH-D.

Anticipated Third Quarter 1993 Activities:

- WA will submit a report presenting the results of third quarter 1993 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results and a ground water elevation contour map.
- Pending receipt of a completed right-of-entry agreement, WA will drill the additional borings/wells to define the extent of hydrocarbon-bearing soil and ground water between source area well MW-4 and clean downgradient well MW-5 as required by the ACDEH.

Conclusions and Recommendations:

WA recommends continued monitoring of dissolved hydrocarbon concentrations in ground water. We will make additional recommendations once the proposed investigation has been completed.

Continued Monitoring

Scott Seery
July 14, 1993

3

Weiss Associates 

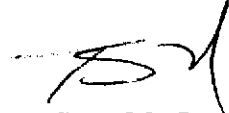
Please call if you have any questions.



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 "N. Scott MacLeod".

N. Scott MacLeod, R.G.
Project Geologist

JMA/NSM:jma

J:\SHELL\600\QMRPTS\618QMJU3.WP

Attachments: Figures
 Table
 A - BTS' Ground Water Monitoring Report

cc: Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, CA 94520
 Tom Callaghan, San Francisco Bay Regional Water Quality Control Board, 2101 Webster Street,
 Oakland, CA 94612

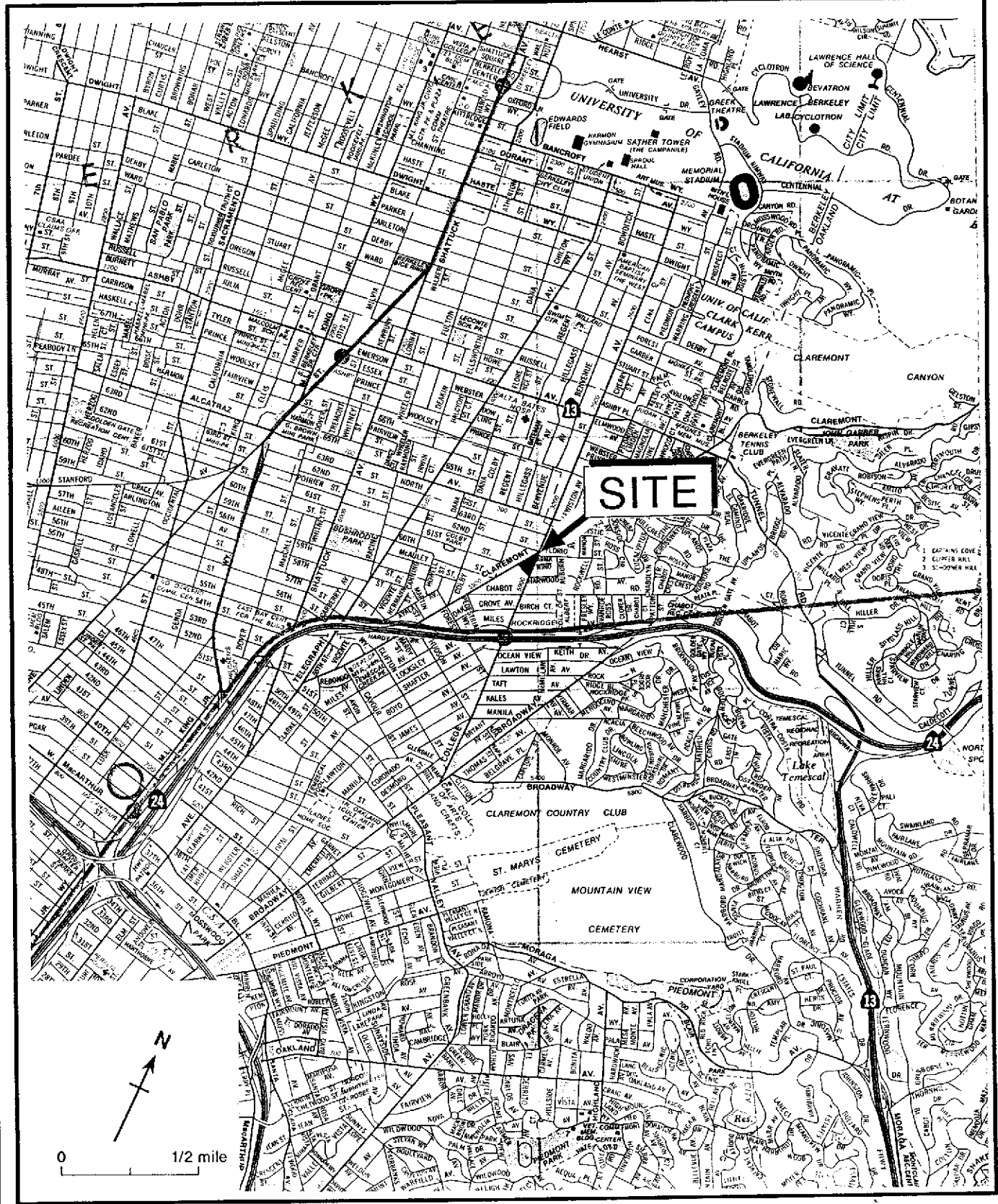


Figure 1. Site Location Map - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

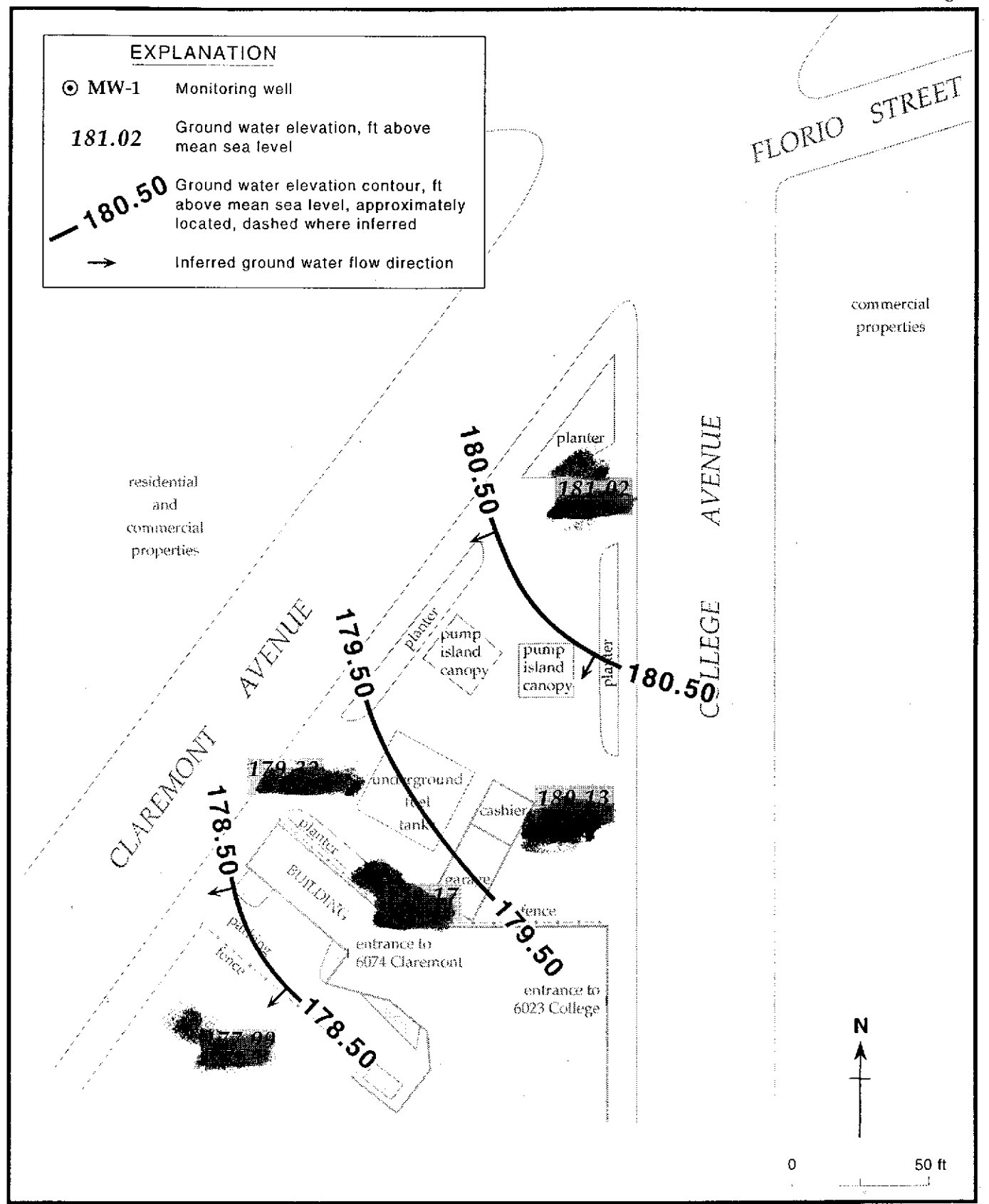


Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - June 10, 1993 - Shell Service Station WIC #204-5510-0303, 6039 College Avenue, Oakland, California

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Floating Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl)
MW-1	06/03/91	195.89	17.82		178.07
	08/30/91		19.87		176.02
	11/22/91		20.58		175.31
	03/18/92		13.55		182.34
	05/28/92		17.08		178.81
	08/19/92		19.07		176.82
	11/17/92		20.11		175.78
	02/12/93		12.10		183.79
	06/10/93		14.87		181.02
	MW-2		06/03/91	194.27	17.00
08/30/91		18.95			175.32
11/22/91		19.55			174.72
03/18/92		12.91			181.36
05/28/92		16.25			178.02
08/19/92		18.21			176.06
11/17/92		19.15			175.12
02/12/93		11.60			182.67
06/10/93		14.14			180.13
MW-3		06/03/91	192.52		15.84
	08/30/91	17.79			174.73
	11/22/91	18.40			174.12
	03/18/92	12.03			180.49
	05/28/92	15.16			177.36
	08/19/92	17.03			175.49
	11/17/92	17.94			174.58
	02/12/93	9.16			183.36
	06/10/93	13.20			179.32
	MW-4	06/03/91		193.37	16.77
08/30/91		18.71			174.66
11/22/91		---			---
03/18/92 ^a		13.15	0.24		180.41
05/28/92 ^a		16.22	0.12		177.25
08/19/92 ^a		18.05	0.09		175.39
11/17/92		18.89			174.48
02/12/93		11.78	<0.01		181.59
06/10/93		14.20			179.17

-- Table 1 continues on next page --

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Floating Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl)
MW-5	08/30/91	190.35	16.74		173.61
	11/22/91		17.27		173.08
	03/18/92		11.28		179.07
	05/28/92 ^b		---		---
	08/19/92		15.99		174.36
	11/17/92		16.84		173.51
	02/12/93		10.30		180.05
	06/10/93		12.36		177.99

Notes:

a = Corrected for floating hydrocarbons by the relation: Corrected ground water elevation = (Top-of-Casing Elevation) - (depth to water) + (0.8 x floating hydrocarbon thickness)

b = Well inaccessible

--- = Data not available

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	B E T X			
						-----parts per million (mg/L)-----			
MW-1	06/03/91	17.82	ND	ND	ND	ND	ND	ND	ND
	08/30/91	19.87	ND	0.52	ND	ND	ND	ND	ND
	11/22/91	20.58	<0.05	<0.05	<0.5	<0.0005	<0.0005	<0.0005	<0.0005
	03/18/92	13.55	<0.03	<0.05	---	<0.0003	<0.0003	<0.0003	<0.0003
	05/28/92	17.08	<0.05	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	08/19/92	19.07	<0.05	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	11/17/92	20.11	<0.05	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	02/12/93	12.10	<0.05	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	06/10/93	14.87	<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
	06/10/93 ^{dup}	14.87	<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
MW-2	06/03/91	17.00	ND	ND	ND	ND	ND	ND	ND
	08/30/91	18.95	ND	ND	ND	ND	ND	ND	ND
	11/22/91	19.55	<0.05	<0.05	<0.5	<0.0005	<0.0005	<0.0005	<0.0005
	03/18/92	12.91	<0.03	---	---	<0.0003	<0.0003	<0.0003	<0.0003
	05/28/92	16.25	<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
	08/19/92	18.21	<0.05	---	---	<0.0005	0.0012	0.0020	0.0019
	11/17/92	19.15	<0.05	---	---	<0.0005	0.0012	0.0020	0.0019
	02/12/93 ^{dup}	11.60	<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
	02/12/93	11.60	<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
	06/10/93	14.14	<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
MW-3	06/03/91	15.84	1.7	0.69	ND	0.26	0.098	0.013	0.024
	08/30/91	17.79	0.87	0.37	0.5	0.044	0.01	0.0061	0.0029
	11/22/91	18.40	0.31	0.14	0.5	0.018	0.0033	0.0012	0.0029
	03/18/92	12.03	67.1	1.9	20	0.62	0.22	0.028	0.038
	05/28/92	15.16	2.3	1.1 ^a	4.6	0.20	0.071	0.009	0.017
	08/19/92	17.03	5.7	1.0 ^a	1.8	0.071	0.052	0.077	0.13
	11/17/92	17.94	3.6	0.16 ^a	1.2	0.016	0.024	0.0086	0.050
	02/12/93	9.16	4.7	0.56 ^a	<0.05	0.82	0.13	0.058	0.077
	06/10/93	13.20	2.2	---	0.94 ^b	0.31	0.089	0.023	0.023
	MW-4	06/03/91	16.77	0.67	1.1	ND	0.24	0.0016	0.0023
08/30/91		18.71	0.57	0.28	2.0	0.064	0.0009	0.0018	0.0009
11/22/91 ^{FHC}		---	---	---	---	---	---	---	---
03/18/92 ^{FHC}		13.15	---	---	---	---	---	---	---
05/28/92 ^{FHC}		16.22	---	---	---	---	---	---	---
08/19/92 ^{FHC}		18.05	---	---	---	---	---	---	---
11/17/92 ^{FHC}		18.89	---	---	---	---	---	---	---
02/12/93 ^{FHC}		11.78	---	---	---	---	---	---	---
06/10/93		14.20	---	---	---	---	---	---	---
MW-5		08/30/91	16.74	ND	0.08	ND	ND	ND	ND

-- Table 2 continues on next page --

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	B	E	T	X
			-----parts per million (mg/L)-----						
	11/22/91	17.27	<0.05	<0.05	<0.5	<0.0005	<0.0005	<0.0005	<0.0005
	03/18/92	11.28	<0.03	<0.05	---	<0.0003	<0.0003	<0.0003	<0.0003
	05/28/92 ^o	---	---	---	---	---	---	---	---
	08/19/92	15.99	<0.05	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	11/17/92	16.84	<0.05	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	02/12/93	10.30	<0.05	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005
	06/10/93	12.36	<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
Bailer	08/19/92		<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
Blank	11/17/92		<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
Trip	06/03/91		ND	---	---	ND	ND	ND	ND
Blank	08/30/91		ND	---	---	ND	ND	ND	ND
	03/18/92		<0.03	<0.05	---	<0.0003	<0.0003	<0.0003	<0.0003
	05/28/92		<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
	08/19/92		<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
	11/17/92		<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
	02/12/93		<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
	06/10/93		<0.05	---	---	<0.0005	<0.0005	<0.0005	<0.0005
DTSC MCLs			NE	NE	NE	0.001	0.680	0.10 ^d	1.750

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
 TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
 TPH-MO = Total petroleum hydrocarbons as motor oil by 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 8020
 NE = Not established
 DTSC MCLs = California Department of Toxic Substances Control maximum contaminant levels for drinking water
 --- = Not analyzed or measured
 <n = Not detected at detection limits of n ppm
 ND = Not detected, detection limit not known
 FHC = Floating hydrocarbons in well, not sampled
 dup = Duplicate sample

Notes:

a = Concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene
 b = Concentration reported as motor oil is due to the presence of a combination of motor oil and a lighter petroleum product of hydrocarbon range C6-C12, possibly gasoline
 c = Well inaccessible and not sampled
 d = DTSC recommended action level; MCL not established



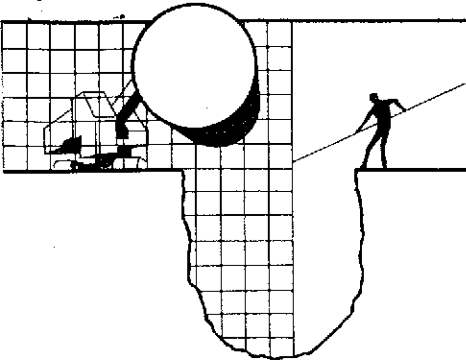
Table 3. Floating Hydrocarbon Removal - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

Well ID	Date	Floating Hydrocarbon Thickness (ft)	Volume of Floating Hydrocarbons Removed (gal).	Cumulative Volume of Hydrocarbons Removed (gal)
MW-4 ^a	01/15/92	---	0.52	0.52
	02/15/92	---	0.52	1.04
	03/18/92	0.24	---	1.04
	04/29/92	---	0.25	1.29
	05/28/92	0.12	0.03	1.32
	08/19/92	0.09	0.16	1.48
	11/17/92	---	0.16	1.64
	02/12/93	<0.01	---	1.64
	06/10/93	0.02	0.01	1.65

a = Petrotrap passive floating hydrocarbon skimmer installed in well

--- = Not measured or no hydrocarbons bailed

ATTACHMENT A
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

June 17, 1993

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

Attn: Daniel T. Kirk

SITE:
Shell WIC # 204-5508-3301
6039 College Ave.
Oakland, California

QUARTER:
2nd quarter of 1993

QUARTERLY GROUNDWATER SAMPLING REPORT 930610-W-2

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)
MW-1	4	06-10-93	TOP OF PIPE	--	NONE	--	--	14.87	24.66
MW-2 *	4	06-10-93	TOP OF PIPE	--	NONE	--	--	14.14	24.43
MW-3	4	06-10-93	TOP OF PIPE	ODOR	NONE	--	--	13.20	24.82
MW-4	4	06-10-93	TOP OF PIPE	FREE PRODUCT	14.18	0.02	50.0	14.20	--
MW-5	4	06-10-93	TOP OF PIPE	--	NONE	--	--	12.36	28.50

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

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

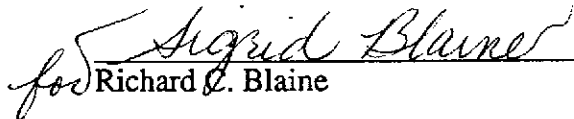
Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc.

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.


for Richard E. Blaine

RCB/cdk

attachments: chain of custody
certified analytical report

cc: Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608-2411
ATTN: Michael Asport

9306169

10/29

18



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: _____

Date: 6/11/93

Page of 1

Silo Address: 6039 College Av Oakland

Analysis Required

LAB: Analytical

WIC#: 204-5508-330

Shell Engineer: Dan Kirk Phone No.:
Fax #:

Consultant Name & Address: Blaine Tech Serv. 995 Timothy St

Consultant Contact: Jim Kella Phone No.:
Fax #: 995-5535

Comments:

Sampled by: [Signature]

Printed Name: DON WERTZ

CHECK ONE (1) BOX ONLY	CT/DI	TURN AROUND TIME
Quality Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	6443	16 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>
Soil/Air Rem. of Sys. O & M <input type="checkbox"/>	6462	NOTE: Hasty Lab as soon as possible of 24/48 hrs, 1A1.
Water Rem. of Sys. O & M <input type="checkbox"/>	6463	
Other <input type="checkbox"/>		

Sample ID	Date	Sludge	Soil	Water	Air	No. of conds.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/802)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	TPH (EPA 8015 Mod. Motor Oil)	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1 MW-5	6/10			X		3						X			400 mL			Groundwater	
2 MW-1				X		3						X							
3 MW-2				X		3						X							
4 MW-3				X		5						X	X		400 mL				
5 MUP				X		3						X			400 mL				
6 TB	6/4			X		2						X			11			trip blank	

Relinquished by (Signature): [Signature]	Printed Name: DON WERTZ	Date: 6/11	Time: 12:00	Received (Signature): [Signature]	Printed Name: Simon Heeghe	Date: 6-11-93	Time: 12:00
Relinquished by (Signature): [Signature]	Printed Name: Simon Heeghe	Date: 6/11/93	Time: 12:15	Received (Signature): [Signature]	Printed Name: Maria Parajds	Date: 6/11/93	Time: 12:15
Relinquished by (Signature):	Printed Name:	Date:	Time:	Received (Signature):	Printed Name:	Date:	Time:



Inchcape Testing Services

Anamatrix Laboratories

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

MR. JIM KELLER
 BLAINE TECH
 985 TIMOTHY STREET
 SAN JOSE, CA 95133

Workorder # : 9306169
 Date Received : 06/11/93
 Project ID : 204-5508-3301
 Purchase Order: MOH-B813

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

ANAMATRIX ID	CLIENT SAMPLE ID
9306169- 1	MW-5
9306169- 2	MW-1
9306169- 3	MW-2
9306169- 4	MW-3
9306169- 5	DUP
9306169- 6	T. BLANK

This report consists of 9 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

06/25/93
 Date

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

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9306169
Date Received : 06/11/93
Project ID : 204-5508-3301
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9306169- 4	MW-3	WATER	06/10/93	TPHd
9306169- 1	MW-5	WATER	06/10/93	TPHgBTEX
9306169- 2	MW-1	WATER	06/10/93	TPHgBTEX
9306169- 3	MW-2	WATER	06/10/93	TPHgBTEX
9306169- 4	MW-3	WATER	06/10/93	TPHgBTEX
9306169- 5	DUP	WATER	06/10/93	TPHgBTEX
9306169- 6	T. BLANK	WATER	06/04/93	TPHgBTEX

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

MR. JIM KELLER
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9306169
Date Received : 06/11/93
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Department : GC
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QA/QC SUMMARY :

- The concentration reported as motor oil for sample MW-3 is due to the presence of a combination of motor oil and a lighter petroleum product of hydrocarbon range C6-C12, possibly gasoline.

Charles Balmer 6/25/93
Department Supervisor Date

Lucia Shor 6/25/93
Chemist Date

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

Anamatrix W.O.: 9306169
Matrix : WATER
Date Sampled : 06/10/93

Project Number : 204-5508-3301
Date Released : 06/25/93

Reporting Limit	Sample I.D.# MW-5	Sample I.D.# MW-1	Sample I.D.# MW-2	Sample I.D.# MW-3	Sample I.D.# DUP	
COMPOUNDS (ug/L)	-01	-02	-03	-04	-05	
Benzene	0.5	ND	ND	ND	310	ND
Toluene	0.5	ND	ND	ND	23	ND
Ethylbenzene	0.5	ND	ND	ND	89	ND
Total Xylenes	0.5	ND	ND	ND	23	ND
TPH as Gasoline	50	ND	ND	ND	2200	ND
% Surrogate Recovery	119%	112%	114%	128%	114%	
Instrument I.D.	HP21	HP21	HP21	HP21	HP21	
Date Analyzed	06/16/93	06/16/93	06/16/93	06/17/93	06/17/93	
RLMF	1	1	1	10	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.

Kamel G. Kamel 6/25/93
Analyst Date

Charles P. Williams 6/25/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
ANAMETRIX, INC. (408) 432-8192

Anamatrix W.O.: 9306169
Matrix : WATER
Date Sampled : 06/10/93
Date Extracted: 06/14/93

Project Number : 204-5508-3301
Date Released : 06/25/93
Instrument I.D.: HP9

Anamatrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)
9306169-04	MW-3	06/17/93	50	940
BU1411F1	METHOD BLANK	06/17/93	50	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.

ND - Not detected at or above the practical quantitation limit for the method.

TPHd - Total Petroleum Hydrocarbons as motor oil is determined by GCFID following sample extraction by EPA Method 3510.

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

Lucia Skov 6/25/93
Analyst Date

Cheryl Balmer 6/25/93
Supervisor Date

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

Sample I.D. : 204-5508-3301 MW-2
 Matrix : WATER
 Date Sampled : 06/10/93
 Date Analyzed : 06/16/93

Anamatrix I.D. : 06169-03
 Analyst :
 Supervisor : *CK*
 Date Released : 06/25/93
 Instrument I.D.: HP21

COMPOUND	SPIKE AMT (ug/L)	SAMPLE CONC (ug/L)	REC MS (ug/L)	%REC MS	REC MD (ug/L)	%REC MD	RPD	%REC LIMITS
BENZENE	20.0	0.0	22.9	115%	19.2	96%	-18%	45-139
TOLUENE	20.0	0.0	24.9	124%	20.3	102%	-20%	51-138
ETHYLBENZENE	20.0	0.0	25.9	130%	21.3	107%	-19%	48-146
TOTAL XYLENES	20.0	0.0	25.3	127%	19.4	97%	-26%	50-139
p-BFB				115%		120%		61-139

* Quality control established by Anamatrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE
 Matrix : WATER
 Date Sampled : N/A
 Date Analyzed : 06/17/93

Anamatrix I.D. : MU1602E1
 Analyst : KK
 Supervisor : CB
 Date Released : 06/23/93
 Instrument I.D.: HP21

COMPOUND	SPIKE AMT. (ug/L)	LCS (ug/L)	REC LCS	%REC LIMITS
Benzene	20.0	23.5	118%	52-133
Toluene	20.0	24.4	122%	57-136
Ethylbenzene	20.0	25.3	127%	56-139
TOTAL Xylenes	20.0	24.7	123%	61-139
P-BFB			116%	61-139

* Limits established by Anamatrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE
 Matrix : WATER
 Date Sampled : N/A
 Date Analyzed : 06/17/93

Anamatrix I.D. : MU1701E1
 Analyst : *KA*
 Supervisor : *UB*
 Date Released : 06/24/93
 Instrument I.D.: HP21

COMPOUND	SPIKE AMT. (ug/L)	REC LCS (ug/L)	%REC LCS	% REC LIMITS
GASOLINE	500	590	118%	67-127
SURROGATE			114%	61-139

* Quality control established by Anamatrix, Inc.

TOTAL EXTRACTABLE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
 EPA METHOD 3510 WITH GC/FID
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
 Matrix : WATER
 Date Sampled : N/A
 Date Extracted: 06/14/93
 Date Analyzed : 06/15/93

Anamatrix I.D. : MU1411F1
 Analyst : *KK*
 Supervisor : *as*
 Date Released : 06/23/93
 Instrument I.D.: HP23

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCSD REC (ug/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1250	1220	98%	1140	91%	-7%	47-130

*Quality control established by Anamatrix, Inc.