Weiss Associates Environmental and Geologic Services

5500 Shellmound Street, Emeryville, CA 94608-2411 Fax: 510-547-5043 Phone: **510-450-6000**

#86

March 10, 1994

Barney Chan
Alameda County Department of
Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621-1426

Re: Shell Service Station
WIC #204-5508-2709
3750 East 14th Street
Oakland, California
WA Job #81-425-104

Dear Mr. Chan:

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 1994 and proposed work for the second quarter 1994.

First Quarter 1994 Activities:

- Blaine Tech Services, Inc. (BTS) of San Jose, California measured depths to ground water and collected ground water samples from the site wells. BTS' report describing these activities including the laboratory analytic report for ground water samples 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).

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Anticipated Second Quarter 1994 Activities:

WA will submit a report presenting the results of the second quarter 1994 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results, ground water elevation measurements and a ground water elevation contour map.

Conclusions and Recommendations

Ground water elevations increased by about 2 ft compared to the fourth quarter sampling event and may explain why TPH-G and benzene concentrations increased in wells MW-3 and MW-4 respectively. We will continue to monitor hydrocarbon concentrations in all the site wells during second quarter 1994.

Please call if you have any questions.

Sincerely,
Weiss Associates

REGISTERED GEOLOGIST
JAMES W. CARMODY
No. EG 1576
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

John Wolf
Technical Assistant

James W. Carmody, C.E.G.
Senior Project Hydrogeologist

JAW/JWC:jaw

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Attachments: A - BTS' Ground Water Monitoring Report

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

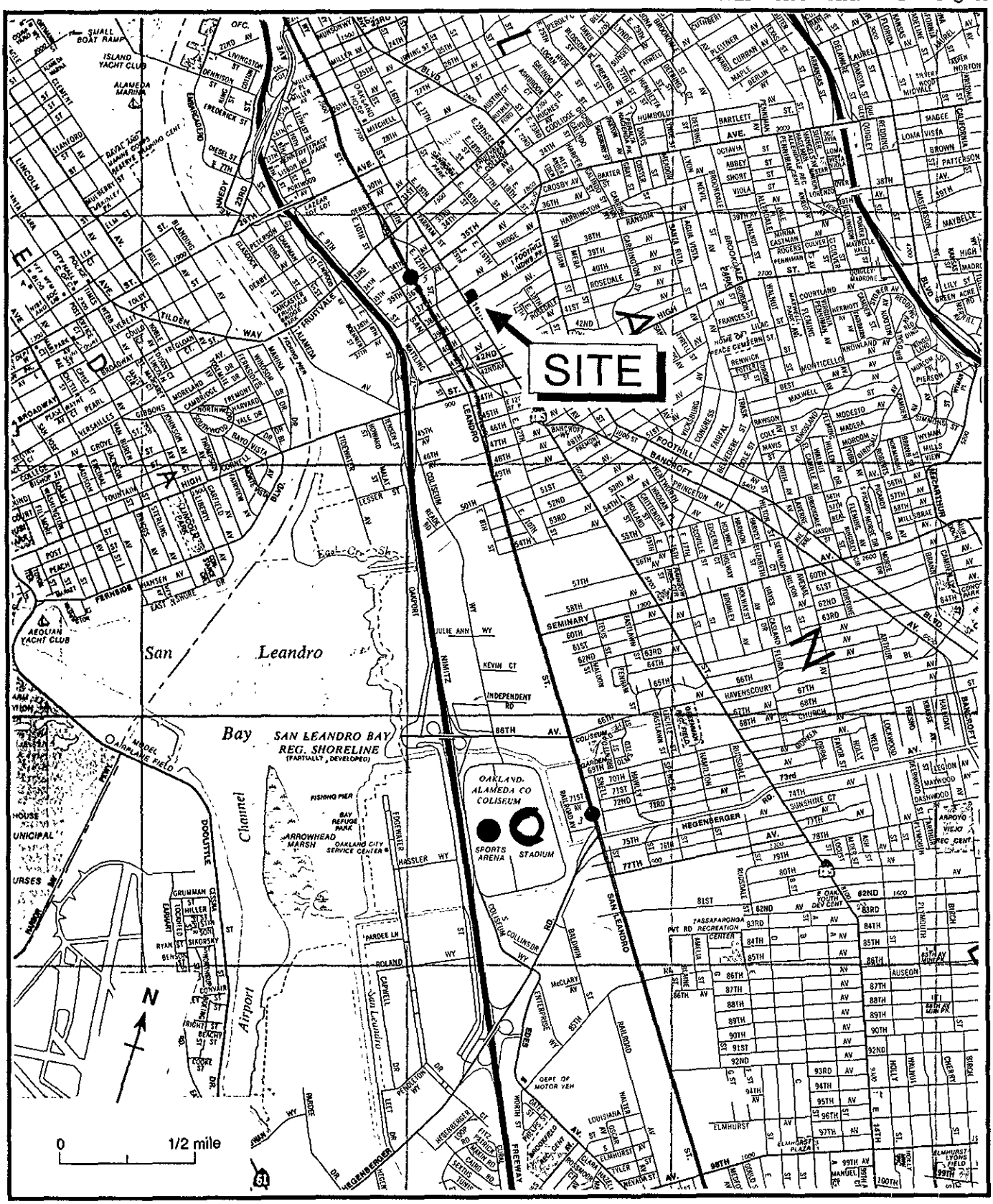
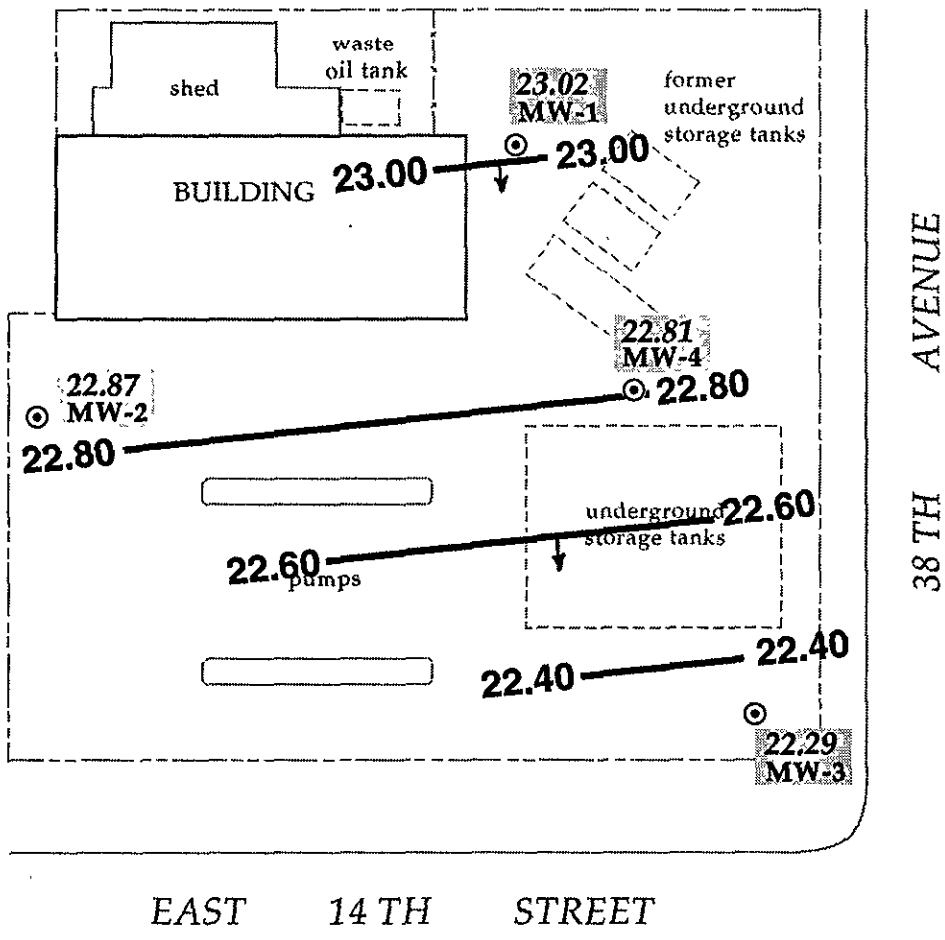
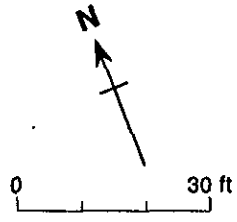


Figure 1. Site Location Map - Shell Service Station WIC #204-5508-2709, 3750 East 14th Street, Oakland, California





EXPLANATION

⊙ MW-1	Existing monitoring well
22.29	Ground water elevation, feet above mean sea level
22.60	Ground water elevation contour, approximately located
→	Inferred ground water flow direction

Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - January 25, 1994 - Shell Service Station WIC #204-5508-2709, 3750 East 14th Street, Oakland, California

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-2709, 3750 East 14th Street, Oakland, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-1	04/11/90	34.67	12.01	22.66
	07/23/90		13.40	21.27
	10/23/90		15.71	18.96
	01/18/91		13.11	21.56
	04/23/91		8.42	26.25
	07/23/91		12.87	21.80
	10/23/91		14.52	20.15
	01/24/92		12.33	22.34
	04/28/92		9.18	25.49
	07/02/92		12.10	22.57
	10/06/92		14.62	20.05
	01/05/93		8.36	26.31
	04/27/93		8.50	26.17
	07/22/93		11.78	22.78
	10/18/93		13.76	20.91
	01/25/94		**11.65**	**23.02**
MW-2	04/11/90	34.75	12.46	22.29
	07/23/90		13.84	20.91
	10/23/90		16.21	18.54
	01/18/91		13.64	21.11
	04/23/91		9.05	25.70
	07/23/91		13.41	21.34
	10/23/91		15.03	19.72
	01/24/92		12.86	21.89
	04/28/92		9.56	25.19
	07/02/92		13.70	21.05
	10/06/92		15.21	19.54
	01/05/93		8.90	25.85
	04/27/93		8.82	25.93
	07/22/93		12.22	22.53
	10/18/93		14.33	20.42
	01/25/94		**11.88**	**22.87**
MW-3	04/11/90	33.12	11.20	21.92
	07/23/90		12.53	20.59
	10/23/90		14.92	18.20
	01/18/91		12.64	20.48
	04/23/91		8.13	24.99
	07/23/91		12.06	21.06

-- Table 1 continues on next page --

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-2709, 3750 East 14th Street, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	10/23/91		13.79	19.33
	01/24/92		11.58	21.54
	04/28/92		8.55	24.57
	07/02/92		11.30	21.82
	10/06/92		13.96	19.16
	01/05/93		8.42	24.70
	04/27/93		7.90	25.22
	07/22/93		10.84	22.28
	10/18/93		13.02	20.10
	01/25/94		**10.83**	**22.29**
MW-4	07/02/92	33.99	11.90	22.09
	10/06/92		14.43	19.56
	01/05/93		8.64	25.35
	04/27/93		8.34	25.65
	07/22/93		11.48	22.51
	10/18/93		13.54	20.45
	01/25/94		**11.18**	**22.81**

Table 2. Analytic Results for Ground Water - Shell Service Station, WIC #204-5508-2709, 3750 East 14th Street, Oakland, California

Sample	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X	TCE	TCA	POG
			<----------parts per billion (µg/L)---------->								
MW-1 (Annually, 2nd Qtr)	04/11/90	12.01	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.4	<0.4	<10
	07/23/90	13.40	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	1.0	<5
	10/23/90	15.71	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<5
	01/18/91	13.11	72	---	1.8	<0.5	<0.5	<0.5	<0.5	0.6	---
	04/23/91	8.42	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	07/23/91	12.87	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	10/23/91	14.52	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	01/24/92	12.33	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--
	04/28/92	9.18	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	07/02/92	12.10	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/06/92	14.62	<50	---	<0.5	1.6	2.5	4.4	---	---	---
	01/05/93	8.36	180	---	<0.5	<0.5	<0.5	0.5	---	---	---
	04/27/93	8.50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/27/93[dup]	8.50	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
MW-2 (Annually, 2nd Qtr)	04/11/90	12.46	<50	<50	<0.5	<0.5	<0.5	<0.5	0.74	<0.4	<10
	07/23/90	13.84	<50	---	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<5
	10/23/90	16.21	<50	---	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	---
	01/18/91	13.64	<50	---	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	---
	04/23/91	9.05	<50	---	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	---
	07/23/91	13.41	<50	---	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	---
	10/23/91	15.03	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	01/24/92	12.86	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	04/28/92	9.56	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	07/02/92	13.70	---	---	---	---	---	---	---	---	---
	10/06/92	15.21	<50	---	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	---
	01/05/93	8.90	---	---	---	---	---	---	---	---	---
	04/27/93	8.82	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
MW-3 (Quarterly)	04/11/90	11.20	290	330	<0.5	0.6	<0.5	0.9	<0.4	<0.4	<10
	07/23/90	12.53	600	---	3.1	13	1.6	15	<0.5	0.6	<5
	10/23/90	14.92	120	130[a]	0.6	<0.5	<0.5	1.1	<0.5	<0.5	<5
	01/18/91	12.64	460	760	6.4	3.2	1.7	1.4	<0.5	<0.5	---
	04/23/91	8.13	530	730[a]	7.1	17	11	18	---	---	---
	07/23/91	12.06	900	770[a]	2.0	<0.5	2.8	4.6	---	---	---
	10/23/91	13.79	800	570[a]	5.6	<0.5	0.7	4.6	---	---	---
	01/24/92	11.58	1,300	830	2.3	3.8	2.3	5.2	---	---	---
	04/28/92	8.55	520	300[a]	0.6	1.2	0.9	3.4	---	---	---
	07/02/92	11.30	1,500	210[a]	39.0	2.0	7.3	18.0	---	---	---
	10/06/92	13.96	950	120[a]	<0.5	16	29	37	---	---	---
	01/05/93	8.42	2,200	---	<0.5	<0.5	<0.5	5.8	---	---	---
	04/27/93	7.90	2,000	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/22/93	10.84	2,500[b]	---	120	65	60	95	---	---	---
	10/18/93	13.02	2,000[b]	---	18	<2.5	<2.5	10	---	---	---
	01/25/94	10.83	11,000[c]	---	<12.5	<12.5	<12.5	<12.5	---	---	---
	01/25/94[dup]	10.83	12,000[c]	---	<12.5	<12.5	<12.5	<12.5	---	---	---

-- Table 2 continues on next page --

Table 2. Analytic Results for Ground Water - Shell Service Station, WIC #204-5508-2709, 3750 East 14th Street, Oakland, California (continued)

Sample	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X	TCE	TCA	POG
			<----------parts per billion (µg/L)---------->								
MW-4 (Quarterly)	07/02/92	11.90	580	---	210	290	<0.5	6.3	---	---	---
	10/06/92	14.43	98	---	2.9	4.2	0.7	9.1	---	---	---
	10/06/92[dup]	---	170	---	2.2	3.8	0.6	12	---	---	---
	01/05/93	8.64	740	---	28	53	<0.5	4.0	---	---	---
	01/05/93[dup]	---	840	---	29	52	<0.5	5.0	---	---	---
	04/27/93	8.34	90	---	1.5	4.2	<0.5	0.8	---	---	---
	07/22/93	11.48	400	---	20	32	3.3	9.4	---	---	---
	07/22/93	11.48	400	---	19	29	4.0	11	---	---	---
	10/18/93	13.54	<50	---	1.9	<0.5	<0.5	0.7	---	---	---
	10/18/93[dup]	13.54	<50	---	1.8	<0.5	<0.5	<0.5	---	---	---
	01/25/94	11.18	2,200	---	39	55	9.0	45	---	---	---
Bailer Blank	07/02/92	---	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/06/92	---	<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
Trip Blank	04/11/90		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/23/90		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/23/90		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/18/91		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/23/91		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/23/91		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/23/91		---	---	---	---	---	---	---	---	---
	01/24/92		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/28/92		---	---	---	---	---	---	---	---	---
	07/02/92		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/06/92		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/05/93		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/27/93		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/22/93		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/18/93		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/25/94		<50	---	<0.5	<0.5	<0.5	<0.5	---	---	---
DTSC MCLs			NE	NE	1.0	680	100[d]	1,750	5.0	200	NE

-- Table 2 continues on next page --

Table 2. Analytic Results for Ground Water - Shell Service Station, WIC #204-5508-2709, 3750 East 14th Street, Oakland, California (continued)

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
B = Benzene by EPA Method 602 or 8020
E = Ethylbenzene by EPA Method 602 or 8020
T = Toluene by EPA Method 602 or 8020
X = Xylenes by EPA Method 602 or 8020
TCE = Trichloroethene by EPA Method 8010/601
TCA = 1,1,1-Trichloroethane by EPA Method 8010/601
POG = Petroleum oil and grease by American Public Health Association Standard Methods 503E
DTSC MCLs = California Department of Toxic Substances Control maximum contaminant levels for drinking water
NE = Not established
--- = Not analyzed
dup = Duplicate sample

Notes:

a = Results due primarily to low boiling hydrocarbons, possibly gasoline or kerosene
b = The concentration reported as gasoline is due to the presence of gasoline and a discrete peak not indicative of gasoline.
c = The concentrations reported as gasoline for samples MW-3 and DUP are primarily due to the presence of a discrete peak not indicative of gasoline.
d = DTSC recommended action level for drinking water, MCL not established

ATTACHMENT A

BTS GROUND WATER MONITORING REPORT

BLAINE
TECH SERVICES INC.

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

February 14, 1994

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

Attn: Daniel Kirk

SITE:
Shell WIC #204-5508-2709
3750 East 14th Street
Oakland, California

QUARTER:
1st Quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940125-A-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 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 removed 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: Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608-2411
ATTN: Michael Asport

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)
MW-1	1/25/94	TOC	--	NONE	--	--	11.65	26.24
MW-2	1/25/94	TOC	--	NONE	--	--	11.88	27.98
MW-3 *	1/25/94	TOC	--	NONE	--	--	10.83	27.73
MW-4	1/25/94	TOC	--	NONE	--	--	11.18	24.48

* Sample DUP was a duplicate sample taken from well MW-3.

1037 9401341 (18)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 9401254 2

Date: 1/25-94
Page 1 of 1

Site Address: 3750 East 14th Street, Oakland

WIC#: 204-5508-2709

Shell Engineer: Dan Kirk — Phone No.: (510) 675-6168 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: Jeff Curtis

Printed Name: JEFF CURTIS

LAB: Anametrix

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
① MW 3	1/25			W		3						X							Ground	
② MW 4	"			"		3						X							Water	
③ Dup	"			"		3						X								
④ EB	"			"		3						X							PLACE EB ON HOLD	
⑤ TRIP Blank	"			"		2						X							~~Water~~	Small bubbles

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

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

NOTE: Notify lab as soon as Possible of 24/48 hrs. TAT.

	Printed Name	Date	Time		Printed Name	Date	Time
Relinquished By (signature):	JEFF CURTIS	1-26-94	1610	Received (signature):	Benny S. Carrizosa	1-26-94	1610
Relinquished By (signature):	Benny S. Carrizosa	1-26-94	1625	Received (signature):	Brandy C. Falcon	1/26/94	1620
Relinquished By (signature):				Received (signature):			

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

Inchcape Testing Services
Anametrix Laboratories

1961 Concourse Drive
Suite E
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 # : 9401341
Date Received : 01/26/94
Project ID : 204-5508-2709
Purchase Order: MOH-B813

The following samples were received at Anametrix for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9401341- 1	MW 3
9401341- 2	MW 4
9401341- 3	DUP
9401341- 4	EB
9401341- 5	T. BLANK

This report consists of 6 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.

Doug Robbins
Laboratory Director

2-9-94
Date

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

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

Workorder # : 9401341
Date Received : 01/26/94
Project ID : 204-5508-2709
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9401341- 1	MW 3	WATER	01/25/94	TPHgBTEX
9401341- 2	MW 4	WATER	01/25/94	TPHgBTEX
9401341- 3	DUP	WATER	01/25/94	TPHgBTEX
9401341- 5	T. BLANK	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 # : 9401341
Date Received : 01/26/94
Project ID : 204-5508-2709
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as gasoline for samples MW3 and DUP are primarily due to the presence of a discrete peak not indicative of gasoline.

Cheryl Balmer 2/8/94
Department Supervisor Date

Lucia Shea 2/9/94
Chemist Date

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

Lab Workorder : 9401341 | Client Project ID : 204-5508-2709

Matrix : WATER | Units : ug/L

Compound Name	Method Reporting Limit*	Client ID MW 3 Lab ID 9401341-01	Client ID MW 4 Lab ID 9401341-02	Client ID DUP Lab ID 9401341-03	Client ID T. BLANK Lab ID 9401341-05	Client ID Lab ID Method Blank
Benzene	0.50	<12.5	39	<12.5	ND	ND
Toluene	0.50	<12.5	9.0	<12.5	ND	ND
Ethylbenzene	0.50	<12.5	55	<12.5	ND	ND
Total Xylenes	0.50	<12.5	45	<12.5	ND	ND
TPH as Gasoline	50	11000	2200	12000	ND	ND
Surrogate Recovery		134%	120%	134%	111%	108%
Instrument ID		HP12	HP12	HP12	HP12	HP12
Date Sampled		01/25/94	01/25/94	01/25/94	01/25/94	N/A
Date Analyzed		02/02/94	02/02/94	02/02/94	02/02/94	02/01/94
RLMF		25	5	25	1	1
Filename Reference		FRJ34101.D	FRJ34102.D	FRJ34103.D	FPJ34105.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.

ND : 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.

Analyst — Date: 2/9/94

Supervisor — Date: 2/9/94

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

Lab Workorder : 9401341 | Client Project ID : 204-5508-2709

Matrix : WATER | Units : ug/L

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		Method Blank				
Benzene	0.50	ND				
Toluene	0.50	ND				
Ethylbenzene	0.50	ND				
Total Xylenes	0.50	ND				
TPH as Gasoline	50	ND				
Surrogate Recovery		113%				
Instrument ID		HP12				
Date Sampled		N/A				
Date Analyzed		02/02/94				
RLMF		1				
Filename Reference		BF0201E1.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.

ND : 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.

Luisa Sloss 2/7/94
Analyst Date

Cheryl Balma 2/4/94
Supervisor Date

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

Instrument ID : HP12
Matrix : LIQUID

Analyst : IS
Supervisor : [illegible]
Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	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.

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

Instrument ID : HP12
Matrix : LIQUID

Analyst : IS
Supervisor : MS
Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Gasoline	500	66%	56-141
Surrogate Recovery		115%	61-139
Date Analyzed		02/03/94	
Multiplier		1	
Filename Reference		MF0202E1.D	

* Limits established by Inchcape Testing Services, Anametrix Laboratories.