



December 21, 1994

LOP 3618

Susan Hugo
Alameda County Department of
Environmental Health
Hazardous Materials Division
1131 Harbor Bay Parkway,
Suite 250
Alameda, CA 94502-6577

Re: Shell Service Station
WIC #204-5510-0303
5755 Broadway
Oakland, California 94606
WA Job #81-0619-104

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 2652.d. Included below are descriptions and results of activities performed in the fourth quarter 1994 and proposed work for the first quarter 1995.

Fourth Quarter 1994 Activities:

Hydrocarbon and Ground Water Removal Summary		
<i>Type of Fluid</i>	<i>Hydrocarbon Containing Ground Water Removed this Quarter (Gal)</i>	<i>Total Removed (Gal)</i>
Separate Phase Hydrocarbons	0.0	0.55
Ground Water with dissolved hydrocarbons	16,400	65,238

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ALCO
HAZMAT

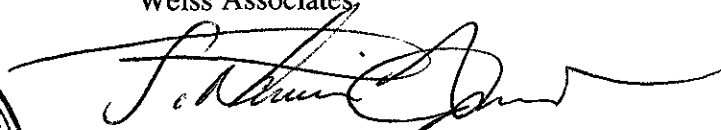
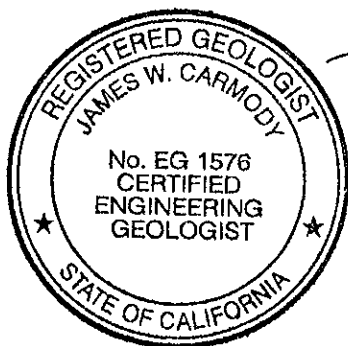
- Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths and collected ground water samples from the site wells. BTS' report describing these activities and the analytic report for the ground water samples are included as Attachment A.
- Weiss Associates (WA) calculated ground water elevations, compiled the analytic data (Tables 1 and 2) and prepared a ground water elevation contour map (Figure 2).

Anticipated First Quarter 1995 Activities:

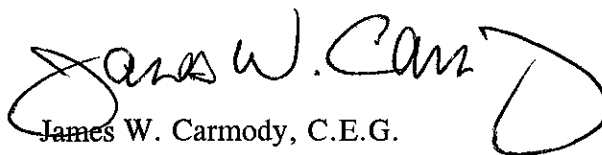
- Separate phase hydrocarbons, if detected, will be removed and its mass will be estimated and reported.
- WA will submit a report presenting the results of the first quarter 1995 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results, relative ground water elevations and a relative ground water elevation contour map.

Please call if you have any questions.

Sincerely,
Weiss Associates



J. Michael Asport
Staff Scientist I



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

Attachments: A - Blaine Tech's Ground Water Monitoring Report

cc: Dan Kirk, Shell Oil Company, P.O. Box 4023, Concord, California 94524
John Jang, Regional Water Quality Control Board - San Francisco Bay Region,
2101 Webster Street, Suite 500, Oakland, California 94612

JW/JWC:jw
WQAR 110C

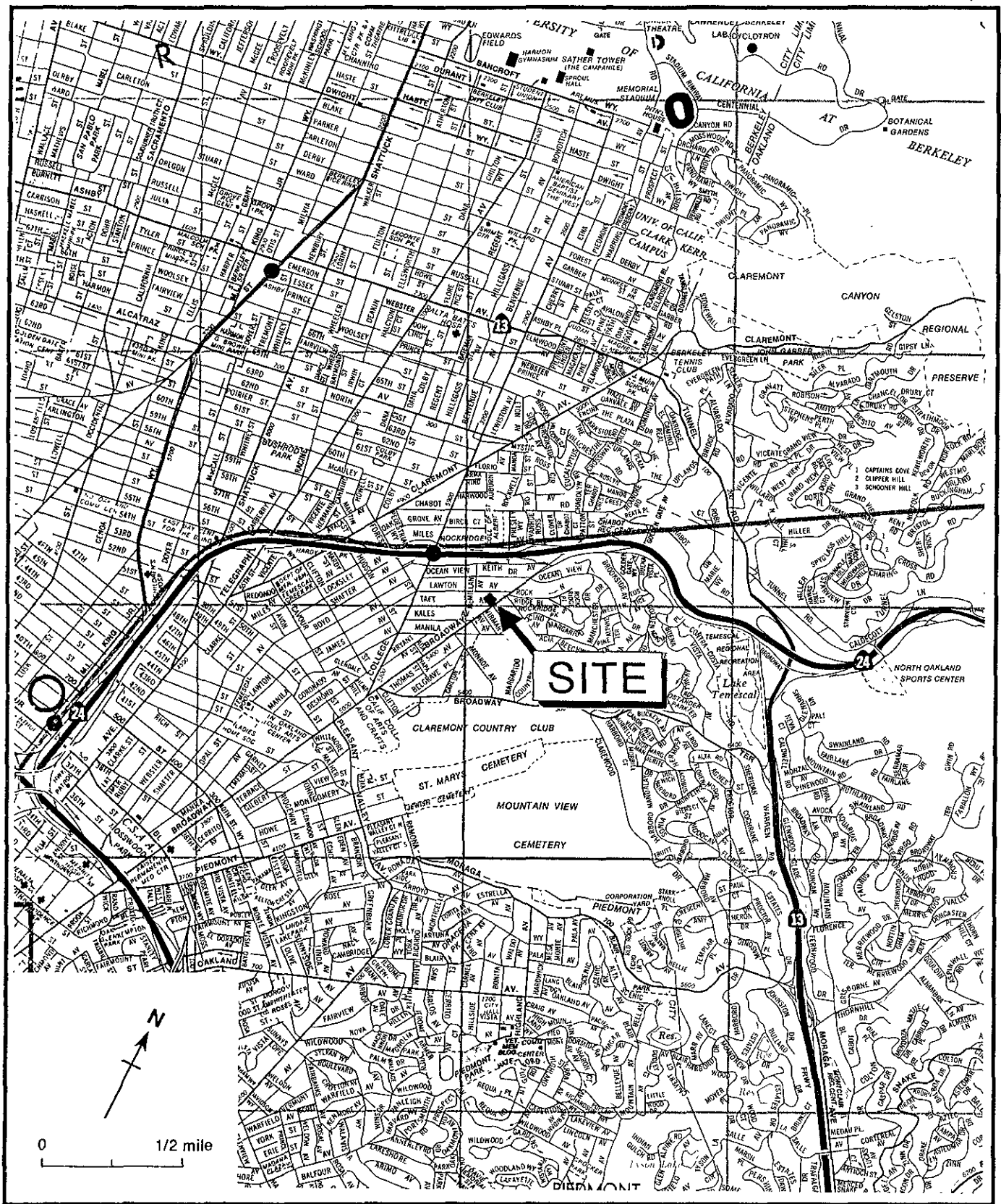
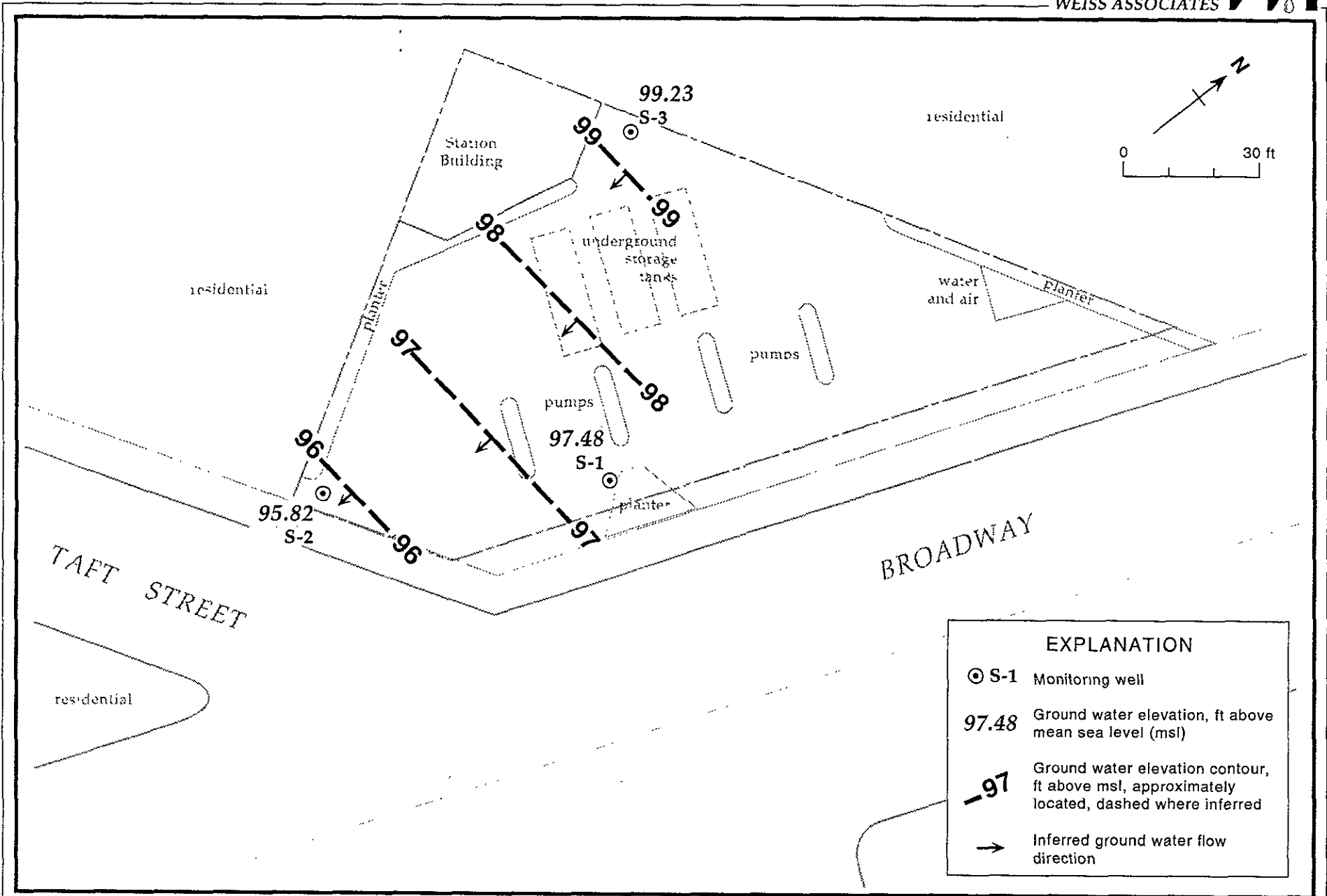


Figure 1. Site Location Map - Shell Service Station WIC #204-5510-0303, 5755 Broadway, Oakland, California



EXPLANATION	
⊙ S-1	Monitoring well
97.48	Ground water elevation, ft above mean sea level (msl)
-97	Ground water elevation contour, ft above msl, approximately located, dashed where inferred
→	Inferred ground water flow direction

Figure 2. Monitoring Well Locations and Relative Ground Water Elevation Contours - November 9, 1994 - Shell Service Station WIC#204-2004-0204, 5755 Broadway, Oakland, California

Table 1. Ground Water Elevations - Shell Service Station WIC #504-5510-0303,
5755 Broadway, Oakland, California

Well ID	Date	Top-of-Casing Elevation ^m	Depth to Water (ft)	Ground Water Elevation (ft above msl)
S-1	01/25/91	100.00	3.88	96.12
	06/03/91		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
	06/11/93		3.39	96.61
	08/03/93		3.69	96.31
	11/02/93		4.26	95.74
	12/16/93 ^a		2.73	97.27
	02/01/94		3.38	96.62
	05/04/94		3.00	97.00
	08/18/94		3.70	96.30
	11/09/94		2.52	97.48
S-2	01/25/91	98.92	4.52	94.40
	06/03/91		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
	06/11/93		3.74	95.18
	08/03/93		4.23	94.69
	11/02/93		4.72	94.20
	12/16/93 ^a		3.00	95.92
	02/01/94		3.48	95.44
	05/04/94		3.26	95.66
	08/18/94		3.98	94.94
	11/09/94		3.10	95.82
S-3	01/25/91	101.67	3.84	97.83
	06/03/91		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

--Table 1 continues on next page--

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

Well ID	Date	Top-of-Casing Elevation*	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	11/18/92		4.51	97.16
	02/10/93		4.36	97.31
	06/11/93		2.91	98.76
	08/03/93		3.70	97.97
	11/02/93 ^b		---	---
	12/16/93 ^a		2.12	99.55
	02/01/94		2.90	98.77
	05/04/94		2.54	99.13
	08/18/94		3.51	98.16
	11/09/94		2.44	99.23

Note:

- * = Top of casing elevations referenced to arbitrary elevation of 100 ft
- a = Depth to water measured by Weiss Associates
- b = Well inaccessible
- NA = Not available

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

Sample ID	Date	Depth to Water (ft)	TPH-G	B	E	T	X
S-1	01/25/91	3.88	<30	<0.3	<0.3	<0.3	<0.3
	06/03/91	3.51	<30	<0.3	<0.3	<0.3	<0.3
	08/30/91	4.24	<30	<0.3	<0.3	<0.3	<0.3
	11/22/91	4.29	<30	2.3	0.3	<0.46	<0.65
	03/13/92	2.87	<30	<0.52	<0.3	<0.3	<0.3
	05/28/92	3.79	<50	<0.5	<0.5	<0.5	<0.5
	08/19/92	4.43	<50	<0.5	<0.5	<0.5	<0.5
	11/18/92	4.34	<50	<0.5	<0.5	<0.5	<0.5
	02/10/93	4.20	51	1.4	<0.5	<0.5	<0.5
	02/10/93 ^{dup}	4.20	<50	1.2	<0.5	<0.5	<0.5
	06/11/93	3.39	<50	<0.5	<0.5	<0.5	<0.5
	08/03/93	3.69	<50	<0.5	<0.5	<0.5	<0.5
	11/02/93	4.26	70 ^a	<0.5	<0.5	<0.5	<0.5
	02/01/94	3.38	60 ^a	<0.5	<0.5	<0.5	<0.5
	05/04/94	3.00	<50	1.1	<0.5	<0.5	<0.5
	08/18/94	3.70	<50	0.6	<0.5	<0.5	<0.5
	08/18/94 ^{dup}	3.70	60 ^b	0.5	<0.5	<0.5	<0.5
	11/09/94	2.52	<50	4.0	<0.5	<0.5	<0.5
S-2	01/25/91	4.52	450	140	6.2	1.8	15
	06/03/91	4.02	490	150	8.2	2.7	7
	08/30/91	4.70	70	0.37	<0.3	<0.3	<0.3
	11/22/91	4.72	1,600	110	29	9.3	150
	03/13/92	3.47	1,300	210	34	5.7	79
	05/28/92	4.45	100	28	<0.5	<0.5	<0.5
	08/19/92	4.84	470	42	8.3	<0.5	4.0
	11/18/92	4.73	490	43	17	39	29
02/10/93	4.83	19,000	710	80	760	370	

—Table 2 continues on next page—



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

Sample ID	Date	Depth to Water (ft)	TPH-G	B	E	T	X
	06/11/93	3.74	33,000	3,100	370	1,600	1,100
	08/03/93	4.23	18,000	1,400	81	130	130
	08/03/93 ^{dup}	4.23	19,000	1,400	86	140	150
	11/02/93	4.72	12,000 ^a	470	31	47	92
	11/02/93 ^{dup}	4.72	13,000 ^a	530	35	47	96
	02/01/94	3.48	31,000 ^a	430	50	46	130
	02/01/94 ^{dup}	3.48	31,000 ^a	300	30	33	100
	05/04/94	3.26	3,900	1,200	53	31	71
	05/04/94 ^{dup}	3.26	4,500	1,200	57	37	110
	08/18/94	3.98	24,000	600	15	8.3	27
	11/09/94	3.10	1,400^a	240	13	9.3	20
	11/09/94^{dup}	3.10	1,800	260	13	8.5	21
S-3	01/25/91	NA	<30	<0.3	<0.3	<0.3	<0.3
	06/03/91	3.25	<30	<0.3	0.3	0.3	0.3
	08/30/91	4.73	<30	<0.3	<0.3	<0.3	<0.3
	11/22/91	4.81	<30	<0.3	<0.3	<0.3	<0.3
	03/13/92	2.29	<30	<0.3	0.3	0.3	0.3
	05/28/92	3.62	<50	<0.5	<0.5	<0.5	<0.5
	08/19/92	4.66	<50	<0.5	<0.5	<0.5	0.5
	11/18/92	4.51	<50	<0.5	<0.5	<0.5	<0.5
	02/10/93	4.36	30	1.9	2.4	3.2	5.6
	06/11/93	2.91	<50	<0.5	<0.5	<0.5	<0.5
	06/11/93 ^{dup}	2.91	<50	<0.5	<0.5	<0.5	<0.5
	08/03/93	3.70	<50	<0.5	<0.5	<0.5	<0.5
	11/02/93 ^c	---	---	---	---	---	---
	02/01/94	2.90	<50	<0.5	<0.5	<0.5	<0.5
	05/04/94	2.54	<50	<0.5	<0.5	<0.5	<0.5

--Table 2 continues on next page--



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

Sample ID	Date	Depth to Water (ft)	TPH-G	B	E	T	X
	08/18/94	3.51	<50	<0.5	<0.5	<0.5	<0.5
	11/09/94	2.44	<50	<0.5	<0.5	<0.5	<0.5
Bailer	08/19/92		<50	<0.5	<0.5	<0.5	<0.5
Blank	11/22/91		<50	<0.5	<0.5	<0.5	<0.5
Trip	03/13/92		<50	<0.3	<0.3	<0.3	<0.3
Blank	05/28/92		<50	<0.5	<0.5	<0.5	<0.5
	08/19/92		<50	<0.5	<0.5	<0.5	<0.5
	11/18/92		<50	<0.5	<0.5	<0.5	<0.5
	02/10/93		<50	<0.5	<0.5	<0.5	<0.5
	08/03/93		<50	<0.5	<0.5	<0.5	<0.5
	11/02/93		<50	<0.5	<0.5	<0.5	<0.5
	02/01/94		<50	<0.5	<0.5	<0.5	<0.5
	05/04/94		<50	<0.5	<0.5	<0.5	<0.5
	11/9/94		<50	<0.5	<0.5	<0.5	<0.5
DTSC MCLs			NE	1	680	100 ^d	1750

—Table 2 continues on next page—



Table 2. Analytic Results for Ground Water, 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
NA = Not available
NE = Not established
<n = Not detected at detection limits of n ppb
dup = Duplicate sample

Notes:

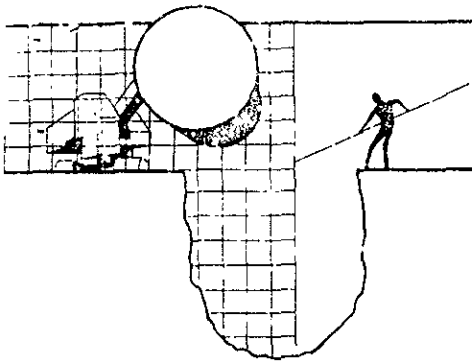
a = Concentrations reported as gasoline are primarily due to presence of a discrete peak not
indicative of gasoline.
b = This positive result has an atypical pattern for gasoline
c = Wells inaccessible.
d = DTSC recommended action level for drinking water; MCL not established

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

Well ID	Date	Separate Phase Hydrocarbon Thickness (ft)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)
T-1	02/10/93	<0.01	0.01	0.01
	06/11/93	<0.01	0.01	0.02
	08/03/93	0.01	0.01	0.03
	11/02/93	0.02	0.03	0.06
	02/01/94	0.00	0.01	0.07
	05/04/94	0.00	0.00	0.07
	08/18/94	0.00	0.00	0.07
T-2	02/10/93	0.43	0.40	0.40
	06/11/93	<0.01	0.01	0.41
	08/03/93	0.01	0.01	0.41
	11/02/93	0.02	0.02	0.43
	02/01/94	0.00	0.01	0.44
	05/04/94	0.00	0.00	0.44
	08/18/94	0.00	0.00	0.44
T-3	08/03/93	0.03	0.02	0.02
	11/02/93	0.02	0.01	0.03
	02/01/94	0.03	0.01	0.04
	05/04/94	0.00	0.00	0.04
	08/18/94	0.00	0.00	0.04
			Total Volume of Hydrocarbons Removed:	0.55

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

December 1, 1994

Shell Oil Company
P.O. Box 4023
Concord, CA 94524

Attn: Daniel T. Kirk

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

QUARTER:
4th quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 941109-M-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 in cases where more evacuation is needed to achieve stabilization of water parameters when requested by the local implementing agency. Less water may be removed 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. Effluent water from purging and on-site 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 National Environmental Testing, Inc. in Santa Rosa, California. NET is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #178.

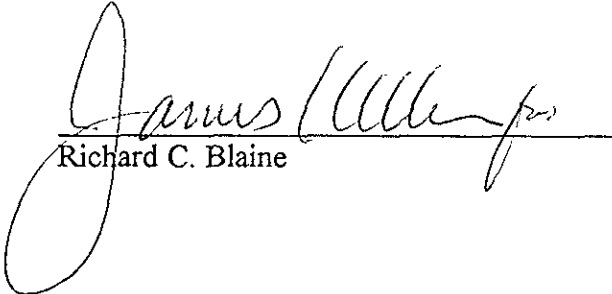
Objective Information Collection

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)
S-1	11/9/94	TOC	--	NONE	--	--	2.52	11.48
S-2 *	11/9/94	TOC	--	NONE	--	--	3.10	9.40
S-3	11/9/94	TOC	--	NONE	--	--	2.44	9.52
T-1	11/9/94	TOC	SHEEN	--	--	--	1.94	13.40
T-2	11/9/94	TOC	SHEEN	--	--	--	1.10	12.95
T-3	11/9/94	TOC	SHEEN	--	--	--	0.00	8.72

* Sample DUP was a duplicate sample taken from well S-2.

#3804



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 941109-M1

Date: _____
Page 1 of 1

Silo Address: 5755 Broadway, Oakland

WIC#: 204-5510-0303

Shell Engineer: Dan Kirk Phone No.: (510) 675-6168
Fax #: 675-6160

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: Mike Myers
Printed Name: MIKE MYERS

Analysis Required

LAB: NET

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	E411	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	E411	48 hours <input type="checkbox"/>
Soil Clarity/Disposal <input type="checkbox"/>	E412	14 days <input checked="" type="checkbox"/> (Normal)
Water Clarity/Disposal <input type="checkbox"/>	E443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	E452	NOTE: Notify Lab as soon as possible of 24/48 hr. TAT.
Water Rem. or Sys. O & M <input type="checkbox"/>	E443	
Other <input type="checkbox"/>		

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-1	11-9			W		3						X						
S-2	11-9					3						X						
S-3	11-9					3						X						
EB	11-9					3						X						
DUP	11-9					3						X						
TB	11-9			↓		2						X						

11/10/94
GP Lumber
Seal Intact -
GSP

Relinquished by (Signature): <u>Mike Myers</u>	Printed Name: <u>MIKE MYERS</u>	Date: <u>11/10</u> Time: <u>9:40</u>	Received (Signature): <u>GP Lumber</u>	Printed Name: <u>GP LUMBER</u>	Date: <u>11/10</u> Time: <u>9:20</u>
Relinquished by (Signature): <u>GP Lumber</u>	Printed Name: <u>GP LUMBER</u>	Date: <u>11/10</u> Time: <u>1:10</u>	Received (Signature): <u>YANU ROSER</u>	Printed Name: <u>YANU ROSER</u>	Date: <u>11/11/94</u> Time: <u>08:20</u>
Relinquished by (Signature):	Printed Name:	Date:	Received (Signature):	Printed Name:	Date:



NATIONAL
ENVIRONMENTAL
TESTING, INC.

Santa Rosa Division
435 Tesconi Circle
Santa Rosa, CA 95401
Tel (707) 526-7200
Fax (707) 526-9623

Jim Keller
Blaine Tech Services
985 Timothy Dr.
San Jose, CA 95133

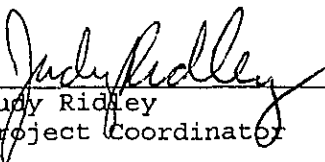
Date: 11/21/1994
NET Client Acct. No: 1821
NET Pacific Job No: 94.05452
Received: 11/11/1994

Client Reference Information

Shell 5755 Broadway, Oakland/941109-M1

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:



Judy Ridley
Project Coordinator



Jim Hoch
Operations Manager

Enclosure(s)





Client Name: Blaine Tech Services
 Client Acct: 1821
 NET Job No: 94.05452

Date: 11/21/1994
 ELAP Cert: 1386
 Page: 2

Ref: Shell 5755 Broadway, Oakland/941109-M1

SAMPLE DESCRIPTION: S-1

Date Taken: 11/09/1994

Time Taken:

NET Sample No: 222395

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						11/18/1994	2308
DILUTION FACTOR*	1						11/18/1994	2308
as Gasoline	ND		50	ug/L	5030		11/18/1994	2308
Carbon Range:	--						11/18/1994	2308
METHOD 8020 (GC,Liquid)	--						11/18/1994	2308
Benzene	4.0	C	0.5	ug/L	8020		11/18/1994	2308
Toluene	ND		0.5	ug/L	8020		11/18/1994	2308
Ethylbenzene	ND		0.5	ug/L	8020		11/18/1994	2308
Xylenes (Total)	ND		0.5	ug/L	8020		11/18/1994	2308
SURROGATE RESULTS	--						11/18/1994	2308
Bromofluorobenzene (SURR)	114			% Rec.	5030		11/18/1994	2308

C : Confirmed by second column or GC/MS.

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services

Date: 11/21/1994

Client Acct: 1821

ELAP Cert: 1386

NET Job No: 94.05452

Page: 3

Ref: Shell 5755 Broadway, Oakland/941109-M1

SAMPLE DESCRIPTION: S-2

Date Taken: 11/09/1994

Time Taken:

NET Sample No: 222396

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE, Liquid)								
METHOD 5030/M8015	--						11/18/1994	2308
DILUTION FACTOR*	10						11/18/1994	2308
as Gasoline	1,400	G-	500	ug/L	5030		11/18/1994	2308
Carbon Range:	C5-C12						11/18/1994	2308
METHOD 8020 (GC, Liquid)	--						11/18/1994	2308
Benzene	240		5.0	ug/L	8020		11/18/1994	2308
Toluene	9.3		5.0	ug/L	8020		11/18/1994	2308
Ethylbenzene	13		5.0	ug/L	8020		11/18/1994	2308
Xylenes (Total)	20		5.0	ug/L	8020		11/18/1994	2308
SURROGATE RESULTS	--						11/18/1994	2308
Bromofluorobenzene (SURR)	92			% Rec.	5030		11/18/1994	2308

G- : The positive result has an atypical pattern for Gasoline analysis

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety



Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 94.05452

Date: 11/21/1994
ELAP Cert: 1386
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Ref: Shell 5755 Broadway, Oakland/941109-M1

SAMPLE DESCRIPTION: S-3

Date Taken: 11/09/1994

Time Taken:

NET Sample No: 222397

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE, Liquid)								
METHOD 5030/M8015	--						11/18/1994	2311
DILUTION FACTOR*	1						11/18/1994	2311
as Gasoline	ND		50	ug/L	5030		11/18/1994	2311
Carbon Range:	--						11/18/1994	2311
METHOD 8020 (GC, Liquid)	--						11/18/1994	2311
Benzene	ND		0.5	ug/L	8020		11/18/1994	2311
Toluene	ND		0.5	ug/L	8020		11/18/1994	2311
Ethylbenzene	ND		0.5	ug/L	8020		11/18/1994	2311
Xylenes (Total)	ND		0.5	ug/L	8020		11/18/1994	2311
SURROGATE RESULTS	--						11/18/1994	2311
Bromofluorobenzene (SURR)	94			% Rec.	5030		11/18/1994	2311

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 94.05452

Date: 11/21/1994
ELAP Cert: 1386
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Ref: Shell 5755 Broadway, Oakland/941109-M1

SAMPLE DESCRIPTION: EB

Date Taken: 11/09/1994

Time Taken:

NET Sample No: 222398

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE, Liquid)								
METHOD 5030/M8015	--						11/18/1994	2311
DILUTION FACTOR*	1						11/18/1994	2311
as Gasoline	ND		50	ug/L	5030		11/18/1994	2311
Carbon Range:	--						11/18/1994	2311
METHOD 8020 (GC, Liquid)	--						11/18/1994	2311
Benzene	ND		0.5	ug/L	8020		11/18/1994	2311
Toluene	ND		0.5	ug/L	8020		11/18/1994	2311
Ethylbenzene	ND		0.5	ug/L	8020		11/18/1994	2311
Xylenes (Total)	ND		0.5	ug/L	8020		11/18/1994	2311
SURROGATE RESULTS	--						11/18/1994	2311
Bromofluorobenzene (SURR)	86			% Rec.	5030		11/18/1994	2311

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 94.05452

Date: 11/21/1994
ELAP Cert: 1386
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Ref: Shell 5755 Broadway, Oakland/941109-M1

SAMPLE DESCRIPTION: DUP
Date Taken: 11/09/1994
Time Taken:
NET Sample No: 222399

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE, Liquid)								
METHOD 5030/M8015	--						11/18/1994	2311
DILUTION FACTOR*	1						11/18/1994	2311
as Gasoline	1,800		50	ug/L	5030		11/18/1994	2311
Carbon Range:	C5-C12						11/18/1994	2311
METHOD 8020 (GC, Liquid)	--						11/18/1994	2311
Benzene	260	FC	0.5	ug/L	8020		11/18/1994	2309
Toluene	8.5		0.5	ug/L	8020		11/18/1994	2311
Ethylbenzene	13		0.5	ug/L	8020		11/18/1994	2311
Xylenes (Total)	21		0.5	ug/L	8020		11/18/1994	2311
SURROGATE RESULTS	--						11/18/1994	2311
Bromofluorobenzene (SURR)	95			% Rec.	5030		11/18/1994	2311

FC : Compound quantitated at a 10X dilution factor.

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 94.05452

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Ref: Shell 5755 Broadway, Oakland/941109-M1

SAMPLE DESCRIPTION: TB

Date Taken: 11/09/1994

Time Taken:

NET Sample No: 222400

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE, Liquid)								
METHOD 5030/M8015	--						11/18/1994	2311
DILUTION FACTOR*	1						11/18/1994	2311
as Gasoline	ND		50	ug/L	5030		11/18/1994	2311
Carbon Range:	--						11/18/1994	2311
METHOD 8020 (GC, Liquid)	--						11/18/1994	2311
Benzene	ND		0.5	ug/L	8020		11/18/1994	2311
Toluene	ND		0.5	ug/L	8020		11/18/1994	2311
Ethylbenzene	ND		0.5	ug/L	8020		11/18/1994	2311
Xylenes (Total)	ND		0.5	ug/L	8020		11/18/1994	2311
SURROGATE RESULTS	--						11/18/1994	2311
Bromofluorobenzene (SURR)	87			% Rec.	5030		11/18/1994	2311

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



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Client Acct: 1821
NET Job No: 94.05452

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Ref: Shell 5755 Broadway, Oakland/941109-M1

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials
	Standard % Recovery	Standard Amount Found	Standard Amount Expected			
TPH (Gas/BTXE,Liquid)						
as Gasoline	101.0	1.01	1.00	mg/L	11/18/1994	aal
Benzene	102.0	5.10	5.00	ug/L	11/18/1994	aal
Toluene	103.4	5.17	5.00	ug/L	11/18/1994	aal
Ethylbenzene	108.8	5.44	5.00	ug/L	11/18/1994	aal
Xylenes (Total)	106.0	15.9	15.0	ug/L	11/18/1994	aal
Bromofluorobenzene (SURR)	100.0	100	100	% Rec.	11/18/1994	aal
TPH (Gas/BTXE,Liquid)						
as Gasoline	93.0	0.93	1.00	mg/L	11/19/1994	lss
Benzene	89.4	4.47	5.00	ug/L	11/19/1994	lss
Toluene	88.2	4.41	5.00	ug/L	11/19/1994	lss
Ethylbenzene	94.4	4.72	5.00	ug/L	11/19/1994	lss
Xylenes (Total)	100.0	15.0	15.0	ug/L	11/19/1994	lss
Bromofluorobenzene (SURR)	106.0	106	100	% Rec.	11/19/1994	lss

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services
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METHOD BLANK REPORT

Parameter	Method		Units	Date Analyzed	Analyst Initials
	Blank	Reporting			
	Amount Found	Limit			
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	11/18/1994	aal
Benzene	ND	0.5	ug/L	11/18/1994	aal
Toluene	ND	0.5	ug/L	11/18/1994	aal
Ethylbenzene	ND	0.5	ug/L	11/18/1994	aal
Xylenes (Total)	ND	0.5	ug/L	11/18/1994	aal
Bromofluorobenzene (SURR)	93		% Rec.	11/18/1994	aal
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	11/19/1994	lss
Benzene	ND	0.5	ug/L	11/19/1994	lss
Toluene	ND	0.5	ug/L	11/19/1994	lss
Ethylbenzene	ND	0.5	ug/L	11/19/1994	lss
Xylenes (Total)	ND	0.5	ug/L	11/19/1994	lss
Bromofluorobenzene (SURR)	77		% Rec.	11/19/1994	lss

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services
 Client Acct: 1821
 NET Job No: 94.05452

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 ELAP Cert: 1386
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Ref: Shell 5755 Broadway, Oakland/941109-M1

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike			Spike Amount	Sample Conc.	Matrix Spike		Units	Date Analyzed	Analyst Initials
	Matrix Spike % Rec.	Spike Dup % Rec.	RPD			Matrix Spike Conc.	Spike Dup. Conc.			
TPH (Gas/BTXE,Liquid)										
as Gasoline	96.0	94.0	2.1	1.00	ND	0.96	0.94	mg/L	11/18/1994	aal
Benzene	101.5	103.7	2.1	27.1	ND	27.5	28.1	ug/L	11/18/1994	aal
Toluene	99.7	99.0	0.7	98.2	ND	97.9	97.2	ug/L	11/18/1994	aal
TPH (Gas/BTXE,Liquid)										
as Gasoline	98.0	93.0	5.2	1.00	ND	0.98	0.93	mg/L	11/18/1994	dfw
Benzene	97.8	98.9	1.1	26.9	ND	26.3	26.6	ug/L	11/18/1994	dfw
Toluene	115.5	97.0	17.3	97.8	ND	113	94.9	ug/L	11/18/1994	dfw
TPH (Gas/BTXE,Liquid)										
as Gasoline	112.0	96.0	15.3	1.00	ND	1.12	0.96	mg/L	11/19/1994	lss
Benzene	112.8	102.3	9.8	17.2	ND	19.4	17.6	ug/L	11/19/1994	lss
Toluene	114.8	100.2	13.6	64.8	ND	74.4	64.9	ug/L	11/19/1994	lss

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



KEY TO ABBREVIATIONS and METHOD REFERENCES

- < : Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
- * : Reporting Limits are a function of the dilution factor for any given sample. Actual reporting limits and results have been multiplied by the listed dilution factor. Do not multiply the reporting limits or reported values by the dilution factor.
- dw : Result expressed as dry weight.
- mean : Average; sum of measurements divided by number of measurements.
- mg/Kg (ppm) : Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
- mg/L : Concentration in units of milligrams of analyte per liter of sample.
- mL/L/hr : Milliliters per liter per hour.
- MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.
- N/A : Not applicable.
- NA : Not analyzed.
- ND : Not detected; the analyte concentration is less than the applicable listed reporting limit.
- NTU : Nephelometric turbidity units.
- RPD : Relative percent difference, $100 \text{ [Value 1 - Value 2] / mean value}$.
- SNA : Standard not available.
- ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
- ug/L : Concentration in units of micrograms of analyte per liter of sample.
- umhos/cm : Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, Rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, Rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986., Rev. 1, December 1987.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

COOLER RECEIPT FORM

Project: Q41109-M1 Log No: 3804
Cooler received on: 11/11/94 and checked on 11/11/94 by [Signature]
(signature)

- Were custody papers present?..... YES NO
- Were custody papers properly filled out?..... YES NO
- Were the custody papers signed?..... YES NO
- Was sufficient ice used?..... YES NO TEMP.: 0.4°C
- Did all bottles arrive in good condition (unbroken)?..... YES NO
- Did bottle labels match COC?..... YES NO
- Were proper bottles used for analysis indicated?..... YES NO
- Correct preservatives used?..... YES NO
- VOA vials checked for headspace bubbles?..... YES NO

Note which voas (if any) had bubbles:*

Sample descriptor:	Number of vials:
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

*All VOAs with headspace bubbles have been set aside so they will not be used for analysis..... YES NO

List here all other jobs received in the same cooler:

Client Job #	NET log #
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

(coolerrec)