



March 3, 1995

Jennifer Eberle
Alameda County Department
of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

ENVIRONMENTAL
PROTECTION
95 MAR 15 PM 1:11

Re: Shell Service Station
WIC #204-5510-0204
350 Grand Avenue
Oakland, California
WA Job #81-0701-105

Dear Ms. Eberle:

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 first quarter 1995 and proposed work for the second quarter 1995.

First Quarter 1995 Activities:

- 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 and compiled the analytic data (Tables 1 and 2) and prepared a ground water elevation contour map (Figure 2) and a benzene concentration in ground water map (Figure 3).
- Shell installed overfill containment boxes on the fillpipes of the four existing underground storage tanks.

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Anticipated Second Quarter 1995 Activities:

- WA will submit a report presenting the results of the second quarter 1995 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results, ground water elevations and a ground water elevation contour map.
- ~~WA will install at least one of the ground water monitoring wells.~~

Conclusions and Recommendations:

In January 1994, ground water ~~was sampled~~ beneath the site, which is consistent with the historic ground water flow direction. Except for the TPH-D concentration in well S-1, all hydrocarbon concentrations remained within historical range.

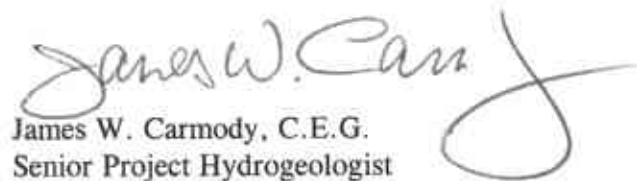
Quarterly monitoring will continue at this site.

Please call if you have any questions.

Sincerely,
Weiss Associates



Grady S. Glasser
Technical Assistant



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

Attachments: A - BTS 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

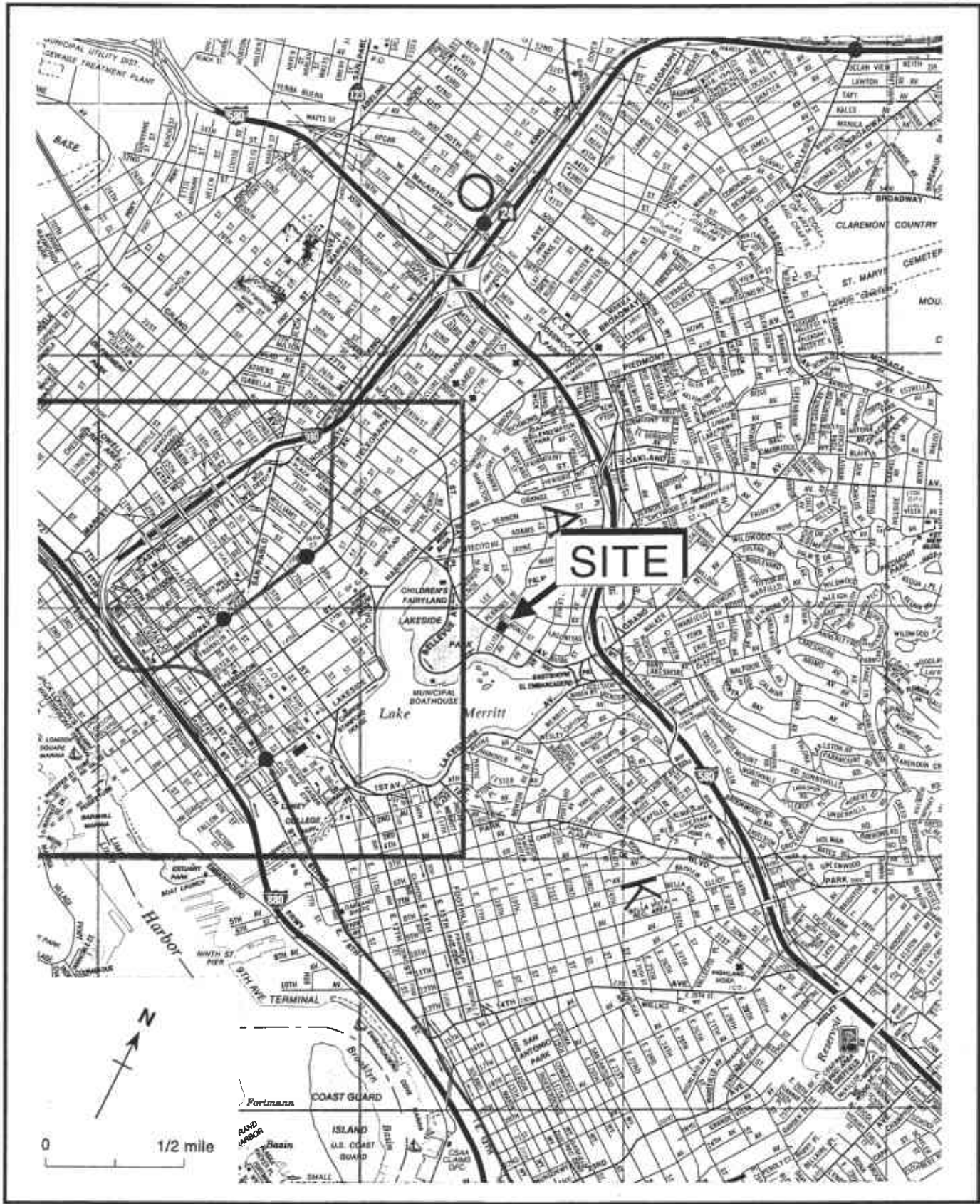
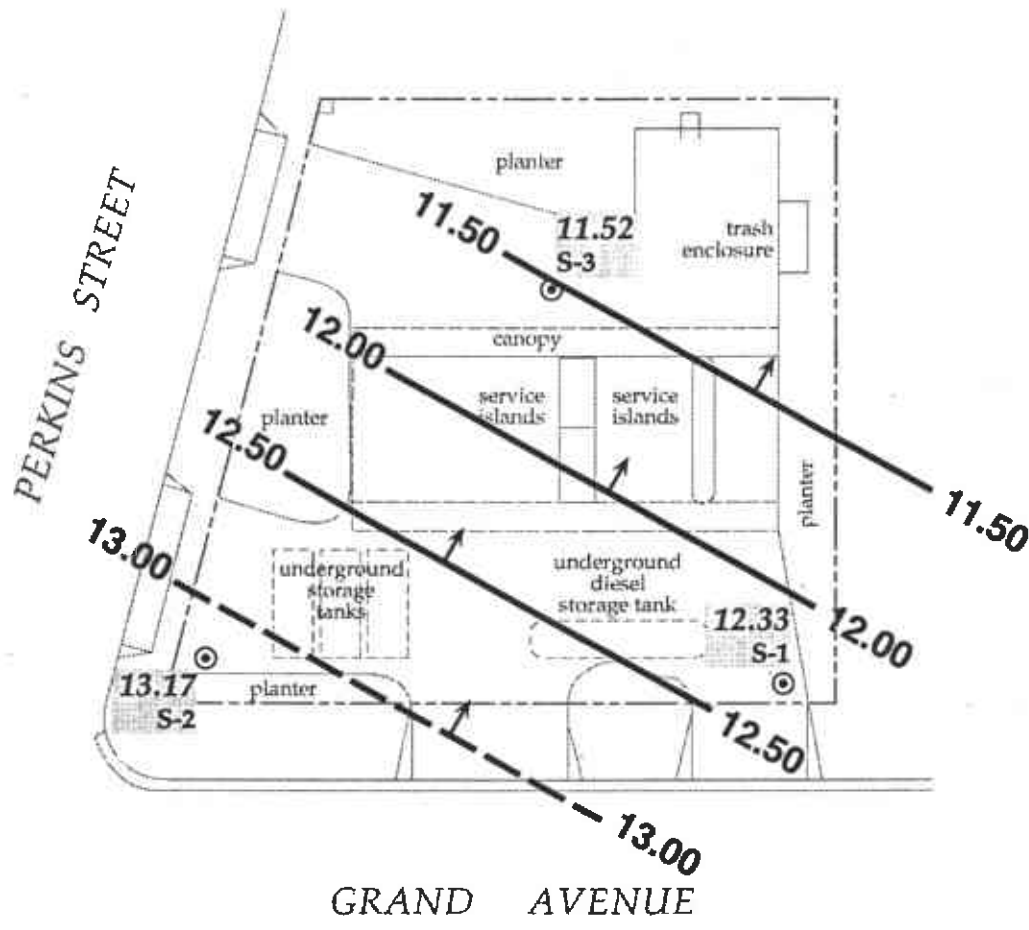
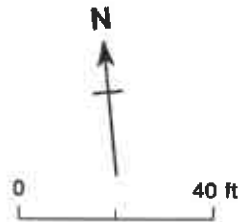


Figure 1. Site Location Map - Shell Service Station WIC #204-5510-0204, 350 Grand Avenue, Oakland, California

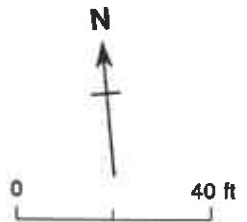
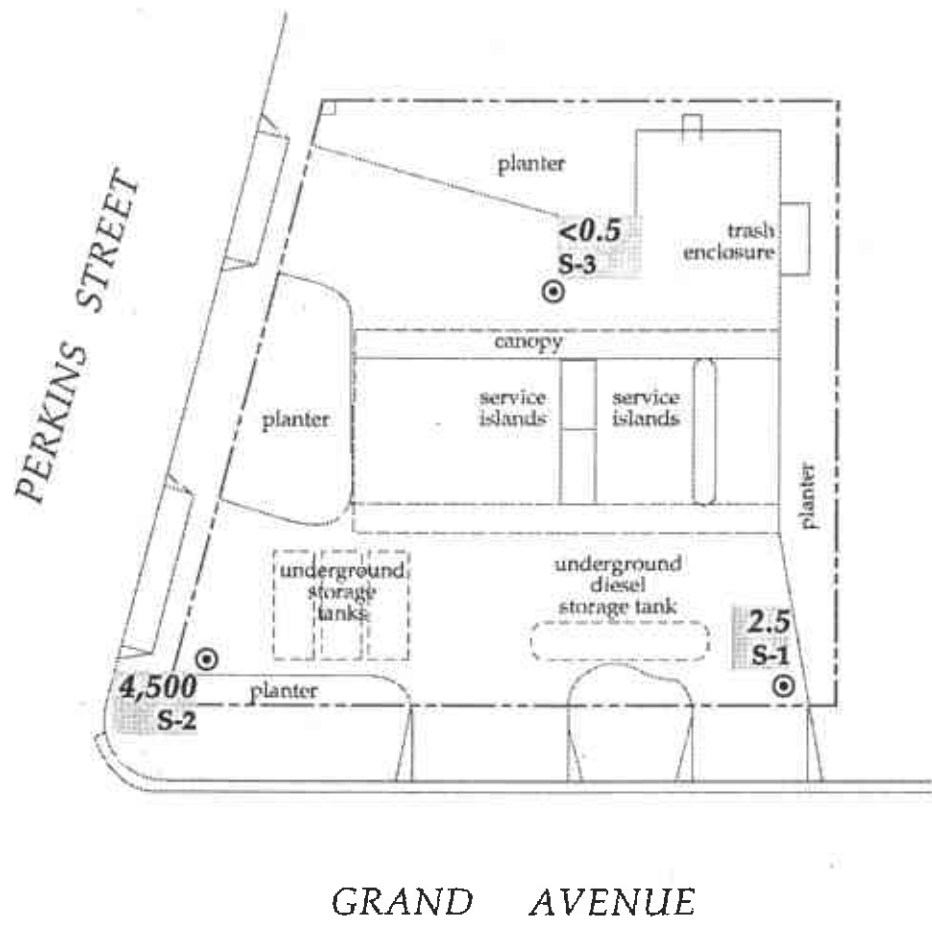


EXPLANATION	
⊙ S-3	Monitoring well
12.33	Ground water elevation, ft above mean sea level (msl)
- 12.00	Ground water elevation contour, ft above msl, approximately located, dashed where inferred
→	Inferred ground water flow direction



Base map from GeoStrategies Inc.

Figure 2. Monitoring Well Location and Ground Water Elevation Contour Map - January 4, 1995 - Shell Service Station WIC #204-5510-0204, 350 Grand Avenue, Oakland, California



EXPLANATION	
⊙ S-3	Monitoring well
12.33	Benzene concentrations in parts per billion (ppb)

Base map from GeoStrategies Inc.

Figure 3. Benzene Concentrations in Ground Water - January 4, 1995 - Shell Service Station WIC #204-5510-0204, 350 Grand Avenue, Oakland, California

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5510-0204, 350 Grand Avenue, Oakland, California

Well ID	Date	Top-of-Casing Elevation	Depth to Water (ft)	Ground Water Elevation (ft above msl)
S-1	01/23/91	20.84	9.73	11.11
	04/25/91		7.37	13.47
	07/19/91		8.92	11.92
	10/09/91		9.62	11.22
	01/23/92		8.94	11.90
	04/27/92		7.06	13.78
	07/10/92		8.31	12.53
	10/06/92		9.55	11.29
	01/06/93		9.86	10.98
	04/26/93		6.30	14.54
	07/20/93		8.78	12.06
	10/18/93		9.20	11.64
	01/07/94		9.53	11.31
	04/11/94		8.50	12.34
	07/14/94		8.45	12.39
	07/19/94		9.07	11.77
	10/06/94		11.68	9.16
01/04/95	8.51	12.33		
S-2	01/23/91	21.24	10.55	10.69
	04/25/91		8.24	13.00
	07/19/91		9.55	11.69
	10/09/91		10.26	10.98
	01/23/92		9.51	11.73
	04/27/92		7.83	13.41
	07/10/92		8.57	12.67
	10/06/92		9.49	11.75
	01/06/93		8.56	12.68
	04/26/93		6.84	14.40
	07/20/93		8.52	12.72
	10/18/93		9.36	11.88
	01/07/94		8.37	12.87
	04/11/94		6.96	14.28
	07/14/94		7.49	13.75
	07/19/94		8.02	13.22
	10/06/94		11.00	10.24
01/04/94	8.07	13.17		
S-3	01/23/91	22.70	14.67	8.03
	04/25/91		12.96	9.74
	07/19/91		12.45	10.25
	10/09/91		12.98	9.72
	01/23/92		13.06	9.64

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5510-0204, 350 Grand Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	04/27/92		7.25	15.45
	07/10/92		8.46	14.24
	10/06/92		11.77	10.93
	01/06/93		12.53	10.17
	04/26/93		4.28	18.42
	07/20/93		5.70	17.00
	10/18/93		10.30	12.40
	01/07/94		12.40	10.30
	04/11/94		10.94	11.76
	07/14/94		7.90	14.80
	07/19/94		8.12	14.58
	10/06/94		12.15	10.55
	01/04/95		11.18	11.52

Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5510-0204, 350 Grand Avenue, Oakland, California

Sample ID	Date	Depth to Water (ft)	TPH-D	←————— parts per billion (µg/L) —————→					X
				TPH-G	B	E	T		
WELLS									
S-1	01/23/91	9.73	<50	<50	<0.5	<0.5	<0.5	<0.5	
	04/25/91	7.37	<50	<50	<0.5	<0.5	<0.5	<0.5	
	07/19/91	8.92	<50	<50	6.8	<0.5	<0.5	<0.5	
	10/09/91	9.62	260 ^a	120	10	<0.5	<0.5	<0.5	
	01/23/92	8.94	<50	<50	<0.5	<0.5	<0.5	<0.5	
	04/27/92	7.06	70 ^b	<50	1.2	<0.5	<0.5	<0.5	
	07/10/92	8.31	930	<50	13	<0.5	<0.5	<0.5	
	10/06/92	9.55	110	62	<0.5	<0.5	<0.5	<0.5	
	01/06/93	9.86	81	85	1.1	<0.5	<0.5	<0.5	
	04/26/93	6.30	53 ^c	<50	<0.5	<0.5	<0.5	<0.5	
	04/26/93 ^{dup}	6.30	53 ^c	<50	<0.5	<0.5	<0.5	<0.5	
	07/20/93	8.78	140	<50	<0.5	<0.5	<0.5	<0.5	
	10/18/93	9.20	210	<50	<0.5	<0.5	<0.5	<0.5	
	01/07/94	9.53	<50	<50	1.4	0.55	1.5	2.8	
	01/07/94 ^{dup}	9.53	53	<50	1.2	<0.5	1.5	2.7	
	04/11/94	8.50	320	<50	2.8	<0.5	<0.5	<0.5	
	04/11/94 ^{dup}	8.50	220	<50	2.6	<0.5	<0.5	<0.5	
	07/19/94	9.07	110	<50	<0.5	<0.5	<0.5	<0.5	
	10/06/94	11.68	370	110	1.4	<0.5	<0.5	<0.5	
	01/04/95	8.51	1,000	120	2.5	1.5	<0.5	1.7	
S-2	01/23/91	10.55	1,200	2,500	550	33	15	42	
	04/25/91	8.24	20,000 ^b	32,000	2,900	1,400	480	2,300	
	07/19/91	9.55	30,000 ^b	21,000	4,700	1,200	430	2,400	
	10/09/91	10.26	32,000 ^b	29,000	6,300	1,700	510	2,400	
	01/23/92	9.51	36,000 ^b	31,000	5,800	2,000	480	2,700	
	04/27/92	7.83	12,000 ^b	21,000 ^d	4,800	1,600	320	1,400	
	07/10/92	8.57	3,700 ^e	31,000	7,500	3,400	940	3,500	
	10/06/92	9.49	4,500 ^e	57,000	9,300	4,000	1,200	4,900	

— Table 2 continues on next page —

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

Sample ID	Date	Depth to Water (ft)	TPH-D	←————— parts per billion (µg/L) —————→					X
				TPH-G	B	E	T		
	01/06/93	8.56	5,600	55,000	5,600	3,000	360	3,000	
	04/26/93	6.84	9,400 ^e	32,000	10,000	4,400	500	3,600	
	07/20/93	8.52	8,400 ^e	25,000	5,800	2,700	300	1,400	
	07/20/93 ^{dup}	8.52	8,900 ^e	25,000	5,900	2,800	310	1,400	
	10/18/93	9.36	18,000 ^e	23,000	3,700	2,100	200	1,600	
	10/18/93 ^{dup}	9.36	14,000 ^e	28,000	3,700	2,100	210	1,600	
	01/07/94	8.37	22,000 ^e	120,000	6,900	3,100	400	2,600	
	04/11/94	6.96	17,000 ^e	34,000	4,800	1,900	170	880	
	07/19/94	8.02	---	23,000	4,300	1,100	210	1,000	
	07/19/94 ^{dup}	8.02	---	29,000	4,700	1,200	270	1,200	
	10/06/94	11.00	---	61,000	4,600	1,900	290	1,900	
	10/06/94 ^{dup}	11.00	---	52,000	5,200	2,100	270	1,900	
	01/04/95	8.07	---	23,000	4,500	1,300	49	500	
	01/04/95^{dup}	8.07	---	18,000	3,800	1,100	33	390	
S-3	01/23/91	14.67	---	<50	<0.5	<0.5	<0.5	<0.5	
	04/25/91	12.96	---	<50	<0.5	<0.5	<0.5	<0.5	
	07/19/91	12.45	---	<50	<0.5	<0.5	<0.5	<0.5	
	10/09/91	12.98	---	<50	<0.5	<0.5	<0.5	<0.5	
	01/23/92	13.06	---	<50	<0.5	<0.5	<0.5	<0.5	
	04/27/92	7.25	100	<50	<0.5	<0.5	<0.5	<0.5	
	07/10/92	8.46	68	<50	<0.5	<0.5	<0.5	<0.5	
	10/06/92	11.77	<10	<50	<0.5	<0.5	<0.5	<0.5	
	01/06/93	12.53	<10	<50	<0.5	<0.5	<0.5	<0.5	
	04/26/93	4.28	69	<50	<0.5	<0.5	<0.5	<0.5	
	07/20/93	5.70	120	<50	<0.5	<0.5	0.6	<0.5	
	10/18/93	10.30	160	<50	<0.5	<0.5	<0.5	<0.5	
	01/07/94 ^f	12.40	58	160	59	4.9	26	22	
	04/11/94	10.94	<50	<50	<0.52	<0.5	<0.5	<0.5	

— Table 2 continues on next page —

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

Sample ID	Date	Depth to Water (ft)	TPH-D	←————— parts per billion (µg/L) —————→					X
				TPH-G	B	E	T		
	07/19/94	8.12	110 ^a	<50	<0.5	<0.5	<0.5	<0.5	
	10/06/94	12.15	<50	<50	<0.5	<0.5	<0.5	<0.5	
	01/04/95	11.18	<50	<50	<0.5	<0.5	<0.5	<0.5	
HP-1	01/27/93		14,000	22,000	2,500	1,400	130	140	
HP-2	01/27/93		---	<50	<0.5	<0.5	4.4	<0.5	
HP-3	01/27/93		---	<50	<0.5	<0.5	<0.5	<0.5	
Trip Blank	01/23/91		---	<50	<0.5	<0.5	<0.5	<0.5	
	04/25/91		---	---	---	---	---	---	
	07/19/91		---	<50	<0.5	<0.5	<0.5	<0.5	
	10/09/91		---	---	---	---	---	---	
	01/23/92		<50	<50	<0.5	<0.5	<0.5	<0.5	
	04/26/93		<50	<50	<0.5	<0.5	<0.5	<0.5	
	07/20/93		---	<50	<0.5	<0.5	<0.5	<0.5	
	10/18/93		<50	<50	<0.5	<0.5	<0.5	<0.5	
	01/07/94		<50	<50	<0.5	<0.5	<0.5	<0.5	
	04/11/94		<50	<50	<0.5	<0.5	<0.5	<0.5	
	07/19/94		<50	<50	<0.5	<0.5	<0.5	<0.5	
	10/06/94		---	<50	<0.5	<0.5	<0.5	<0.5	
	01/04/95		---	<50	<0.5	<0.5	<0.5	<0.5	
	DTSC MCLs				NE	1	680	100 ^b	1,750

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

Abbreviations:

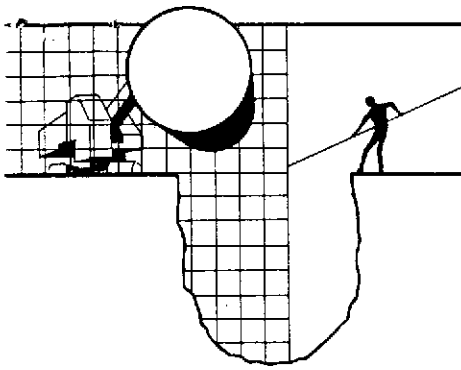
TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
B = Benzene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
T = Toluene by EPA Method 8020
X = Xylenes by EPA Method 8020
--- = Not analyzed
DTSC MCLs = California Department of Toxic Substances Control maximum contaminant levels for drinking water
NE = Not established
<n = Not detected at detection limits of n ppb
dup = Duplicate sample
HP = Hydropunch ground water sample

Notes:

a = compounds detected and calculated as diesel are not characteristic of the standard diesel chromatographic pattern
b = Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline
c = Concentration reported as diesel primarily due to the presence of a heavier petroleum product, possibly motor oil
d = Compounds detected and calculated as gasoline are not characteristic of the standard gasoline chromatographic pattern
e = Concentration reported as diesel is primarily due to the presence of lighter petroleum product, possibly gasoline
f = TPH-G/BETX concentrations anomalous with historical data. Lab verified concentrations.
g = DTSC recommended action level for drinking water; MCL not established

ATTACHMENT A

GROUND WATER MONITORING REPORT AND ANALYTIC REPORT



January 18, 1995

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

Attn: Daniel T. Kirk

SITE:
Shell WIC #204-5510-0204
350 Grand Avenue
Oakland, California

QUARTER:
1st quarter of 1995

QUARTERLY GROUNDWATER SAMPLING REPORT 950104-E-4

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 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 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 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 pre-frozen 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.

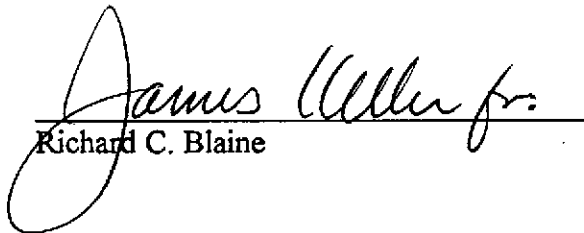
Objective Information Collection

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	1/4/95	TOB	-	NONE	-	-	8.51	17.89
S-2 *	1/4/95	TOB	ODOR	NONE	-	-	8.07	15.31
S-3	1/4/95	TOB	-	NONE	-	-	11.18	15.26

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 950104-E4

Date: 1-4-95

Page 1 of 1

Silo Address: 350 Grand Avenue, Oakland

WICK: 204-5510-0204

Shell Engineer: Dan Kirk
Phone No.: (510) 675-6168
Fax #: 675-6174

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: *Kent Brown*

Printed Name: KENT BROWN

Analysis Required

LAB: ~~XXXXXXXX~~ NET

CHECK ONE (1) BOX ONLY	CT/DI	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6441	48 hours <input type="checkbox"/>
Soil Classfy/Disposal <input type="checkbox"/>	6442	16 days <input checked="" type="checkbox"/> (Normal)
Water Classfy/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	6482	NOTE: Hasty Lab as soon as Possible of 24/48 hrs. TAT.
Water Rem. or Sys. O & M <input type="checkbox"/>	6483	
Other <input type="checkbox"/>		

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BIEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BIEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N
	X				X				
					X				
	X				X				
					X				
					X				
					X				

Sample ID	Date	Sludge	Soil	Water	Air	No. of conls.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BIEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BIEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
S-1	1-4-95			W		5		X				X							
S-2				W		3						X							
S-3				W		5		X				X							
EB				W		3						X							
DOP				W		3						X							
T.B.				W		2						X							

CUSTODY SEALED
[Signature]
J.S.

Relinquished By (signature): <i>[Signature]</i>	Printed Name: <u>KENT BROWN</u>	Date: <u>1/5/95</u>	Received (signature): <i>[Signature]</i>	Printed Name: <u>GT LUMARE</u>	Date: <u>1/5/95</u>
Relinquished By (signature): <i>[Signature]</i>	Printed Name: <u>GT LUMARE</u>	Date: <u>1/5/95</u>	Received (signature): <i>[Signature]</i>	Printed Name: <u>J. SORENSON</u>	Date: <u>1/6/95</u>
Relinquished By (signature):	Printed Name:	Date:	Received (signature):	Printed Name:	Date:

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



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

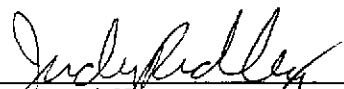
Date: 01/13/1995
NET Client Acct. No: 1821
NET Pacific Job No: 94.06461
Received: 01/06/1995

Client Reference Information

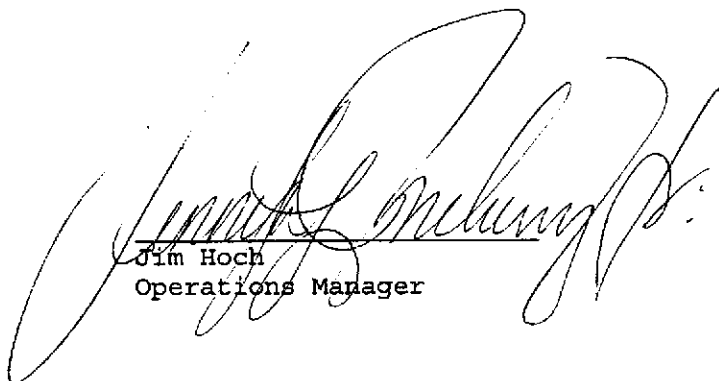
SHELL, 350 Grand Avenue, Oakland, Job No. 950104-E4

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: 94.06461

Date: 01/13/1995
ELAP Cert: 1386
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Ref: SHELL, 350 Grand Avenue, Oakland, Job No. 950104-E4

SAMPLE DESCRIPTION: S-1
Date Taken: 01/04/1995
Time Taken:
NET Sample No: 232944

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE, Liquid)								
METHOD 5030/M8015	--						01/10/1995	2472
DILUTION FACTOR*	1						01/10/1995	2472
as Gasoline	120		50	ug/L	5030		01/10/1995	2472
Carbon Range:	C5-C12						01/10/1995	2472
METHOD 8020 (GC, Liquid)	--						01/10/1995	2472
Benzene	2.5		0.5	ug/L	8020		01/10/1995	2472
Toluene	ND		0.5	ug/L	8020		01/10/1995	2472
Ethylbenzene	1.5		0.5	ug/L	8020		01/10/1995	2472
Xylenes (Total)	1.7		0.5	ug/L	8020		01/10/1995	2472
SURROGATE RESULTS	--						01/10/1995	2472
Bromofluorobenzene (SURR)	97			% Rec.	5030		01/10/1995	2472
METHOD M8015 (EXT., Liquid)						01/10/1995		
DILUTION FACTOR*	1						01/11/1995	890
as Diesel	1,000		50	ug/L	3510		01/11/1995	890
Carbon Range:	C10-C24						01/11/1995	890

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



Client Name: Blaine Tech Services

Date: 01/13/1995

Client Acct: 1821

ELAP Cert: 1386

NET Job No: 94.06461

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Ref: SHELL, 350 Grand Avenue, Oakland, Job No. 950104-E4

SAMPLE DESCRIPTION: S-2

Date Taken: 01/04/1995

Time Taken:

NET Sample No: 232945

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/10/1995	2472
DILUTION FACTOR*	50						01/10/1995	2472
as Gasoline	23,000		2,000	ug/L	5030		01/10/1995	2472
Carbon Range:	CS-C12						01/10/1995	2472
METHOD 8020 (GC,Liquid)	--						01/10/1995	2472
Benzene	4,500	FG	0.5	ug/L	8020		01/11/1995	2477
Toluene	49		20	ug/L	8020		01/10/1995	2472
Ethylbenzene	1,300		20	ug/L	8020		01/10/1995	2472
Xylenes (Total)	500		20	ug/L	8020		01/10/1995	2472
SURROGATE RESULTS	--						01/10/1995	2472
BromoFluorobenzene (SURR)	104			% Rec.	5030		01/10/1995	2472

FG : Compound quantitated at a 200X 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
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Ref: SHELL, 350 Grand Avenue, Oakland, Job No. 950104-E4

SAMPLE DESCRIPTION: S-3

Date Taken: 01/04/1995

Time Taken:

NET Sample No: 232946

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/10/1995	2472
DILUTION FACTOR*	1						01/10/1995	2472
as Gasoline	ND		50	ug/L	5030		01/10/1995	2472
METHOD 8020 (GC,Liquid)	--						01/10/1995	2472
Benzene	ND		0.5	ug/L	8020		01/10/1995	2472
Toluene	ND		0.5	ug/L	8020		01/10/1995	2472
Ethylbenzene	ND		0.5	ug/L	8020		01/10/1995	2472
Xylenes (Total)	ND		0.5	ug/L	8020		01/10/1995	2472
SURROGATE RESULTS	--						01/10/1995	2472
Bromofluorobenzene (SURR)	72			% Rec.	5030		01/10/1995	2472
METHOD M8015 (EXT., Liquid)						01/10/1995		
DILUTION FACTOR*	1						01/11/1995	890
as Diesel	ND		50	ug/L	3510		01/11/1995	890

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: 94.06461

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ELAP Cert: 1386
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Ref: SHELL, 350 Grand Avenue, Oakland, Job No. 950104-E4

SAMPLE DESCRIPTION: EB

Date Taken: 01/04/1995

Time Taken:

NET Sample No: 232947

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/10/1995	2472
DILUTION FACTOR*	1						01/10/1995	2472
as Gasoline	ND		50	ug/L	5030		01/10/1995	2472
Carbon Range:	ND						01/10/1995	2472
METHOD 8020 (GC,Liquid)	--						01/10/1995	2472
Benzene	ND		0.5	ug/L	8020		01/10/1995	2472
Toluene	ND		0.5	ug/L	8020		01/10/1995	2472
Ethylbenzene	ND		0.5	ug/L	8020		01/10/1995	2472
Xylenes (Total)	ND		0.5	ug/L	8020		01/10/1995	2472
SURROGATE RESULTS	--						01/10/1995	2472
Bromofluorobenzene (SURR)	89			‡ Rec.	5030		01/10/1995	2472

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



Client Name: Blaine Tech Services

Date: 01/13/1995

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Ref: SHELL, 350 Grand Avenue, Oakland, Job No. 950104-E4

SAMPLE DESCRIPTION: DUP

Date Taken: 01/04/1995

Time Taken:

NET Sample No: 232948

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/10/1995	2472
DILUTION FACTOR*	50						01/10/1995	2472
as Gasoline	18,000		2,500	ug/L	5030		01/10/1995	2472
Carbon Range:	C5-C12						01/10/1995	2472
METHOD 8020 (GC,Liquid)	--						01/10/1995	2472
Benzene	3,800	FG	50	ug/L	8020		01/11/1995	2477
Toluene	33		50	ug/L	8020		01/10/1995	2472
Ethylbenzene	1,100		50	ug/L	8020		01/10/1995	2472
Xylenes (Total)	390		50	ug/L	8020		01/10/1995	2472
SURROGATE RESULTS	--						01/10/1995	2472
Bromofluorobenzene (SURR)	92			% Rec.	5030		01/10/1995	2472

FG : Compound quantitated at a 200X 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

Date: 01/13/1995

Client Acct: 1821

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Ref: SHELL, 350 Grand Avenue, Oakland, Job No. 950104-E4

SAMPLE DESCRIPTION: TB

Date Taken: 01/04/1995

Time Taken:

NET Sample No: 232949

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						01/11/1995	2477
DILUTION FACTOR*	1						01/11/1995	2477
as Gasoline	ND		50	ug/L	5030		01/11/1995	2477
Carbon Range:	--						01/11/1995	2477
METHOD 8020 (GC,Liquid)	--						01/11/1995	2477
Benzene	ND		0.5	ug/L	8020		01/11/1995	2477
Toluene	ND		0.5	ug/L	8020		01/11/1995	2477
Ethylbenzene	ND		0.5	ug/L	8020		01/11/1995	2477
Xylenes (Total)	ND		0.5	ug/L	8020		01/11/1995	2477
SURROGATE RESULTS	--						01/11/1995	2477
Bromofluorobenzene (SURR)	75			% Rec.	5030		01/11/1995	2477

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
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CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials	Run Batch Number
	Standard % Recovery	Standard Amount Found	Standard Amount Expected				
TPH (Gas/BTXE,Liquid)							
as Gasoline	103.0	1.03	1.00	mg/L	01/10/1995	dfw	2472
Benzene	96.8	4.84	5.00	ug/L	01/10/1995	dfw	2472
Toluene	87.2	4.36	5.00	ug/L	01/10/1995	dfw	2472
Ethylbenzene	92.8	4.64	5.00	ug/L	01/10/1995	dfw	2472
Xylenes (Total)	87.9	13.18	15.0	ug/L	01/10/1995	dfw	2472
Bromofluorobenzene (SURR)	101.0	101	100	% Rec.	01/10/1995	dfw	2472
TPH (Gas/BTXE,Liquid)							
as Gasoline	105.0	1.05	1.00	mg/L	01/11/1995	lss	2477
Benzene	107.4	5.37	5.00	ug/L	01/11/1995	lss	2477
Toluene	97.6	4.88	5.00	ug/L	01/11/1995	lss	2477
Ethylbenzene	98.6	4.93	5.00	ug/L	01/11/1995	lss	2477
Xylenes (Total)	96.0	14.4	15.0	ug/L	01/11/1995	lss	2477
Bromofluorobenzene (SURR)	99.0	99	100	% Rec.	01/11/1995	lss	2477
METHOD M8015 (EXT., Liquid)							
as Diesel	103.6	1036	1000	mg/L	01/11/1995	tdn	890

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
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METHOD BLANK REPORT

Parameter	Method			Date Analyzed	Analyst Initials	Run Batch Number
	Blank Amount Found	Reporting Limit	Units			
TPH (Gas/BTXE, Liquid)						
as Gasoline	ND	0.05	mg/L	01/10/1995	dfw	2472
Benzene	ND	0.5	ug/L	01/10/1995	dfw	2472
Toluene	ND	0.5	ug/L	01/10/1995	dfw	2472
Ethylbenzene	ND	0.5	ug/L	01/10/1995	dfw	2472
Xylenes (Total)	ND	0.5	ug/L	01/10/1995	dfw	2472
Bromofluorobenzene (SURR)	99		% Rec.	01/10/1995	dfw	2472
TPH (Gas/BTXE, Liquid)						
as Gasoline	ND	0.05	mg/L	01/11/1995	lss	2477
Benzene	ND	0.5	ug/L	01/11/1995	lss	2477
Toluene	ND	0.5	ug/L	01/11/1995	lss	2477
Ethylbenzene	ND	0.5	ug/L	01/11/1995	lss	2477
Xylenes (Total)	ND	0.5	ug/L	01/11/1995	lss	2477
Bromofluorobenzene (SURR)	93		% Rec.	01/11/1995	lss	2477
METHOD M8015 (EXT., Liquid)						
as Diesel	ND	0.05	mg/L	01/11/1995	tdn	890

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
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MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix				Sample Conc.	Matrix Spike			Date Analyzed	Run Batch	Sample Spiked
	Matrix Spike % Rec.	Spike Dup % Rec.	RPD	Spike Amount		Matrix Spike Conc.	Spike Dup. Conc.	Units			
TPH (Gas/BTXE,Liquid)											232947
as Gasoline	102.0	100.0	2.0	1.00	ND	1.02	1.00	mg/L	01/10/1995	2472	232947
Benzene	96.5	93.6	3.1	20.2	ND	19.5	18.9	ug/L	01/10/1995	2472	232947
Toluene	99.1	97.6	1.5	84.6	ND	83.8	82.6	ug/L	01/10/1995	2472	232947
TPH (Gas/BTXE,Liquid)											232994
as Gasoline	103.0	108.0	4.7	1.00	ND	1.03	1.08	mg/L	01/11/1995	2477	232994
Benzene	98.1	103.3	5.1	21.0	ND	20.6	21.7	ug/L	01/11/1995	2477	232994
Toluene	98.9	98.1	0.8	87.2	ND	86.2	85.5	ug/L	01/11/1995	2477	232994
METHOD M8015 (EXT., Liquid)											232952
as Diesel	92.7	88.3	4.9	2.06	ND	1.91	1.82	mg/L	01/11/1995	890	232952

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: 94.06461

Date: 01/13/1995
ELAP Cert: 1386
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LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	Duplicate		LCS Amount Found	Duplicate		Units	Date Analyzed	Analyst Run	
		LCS % Recovery	RPD		LCS Amount Found	LCS Amount Expected			Initials	Batch
METHOD M8015 (EXT., Liquid) as Diesel	73.5			0.735		1.00	mg/L	01/11/1995	tdn	890

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: 950104-EA Log No: 4824
Cooler received on: 11/6/94 and checked on 11/6/94 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 0.20c, 0.6c
- 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)