ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6777

November 14, 1995

REMEDIAL ACTION COMPLETION CERTIFICATION

November 14, 1995

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

UNDERGROUND STORAGE TANK (UST) CASE
Re: Shell Service Station WIC #204-0072-0502, located at 2160 Otis Drive, Alameda, California 94501

Site No. 590

Dear Mr. Dan Kirk,

This letter confirms the completion of site investigations and/or remedial action for the 550-gallon waste oil underground storage tank formerly located at the above described location. Enclosed is the Case Closure Summary for the referenced site for your records.

Based upon the available information, including the current land use, and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground storage tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, California Code of Regulations, Division 3, Chapter 16, Section 2721(e). (If a change in land use is proposed, the owner must promptly notify this agency).

Please telephone Juliet Shin at (510) 567-6700 if you have any questions regarding this matter.

Sincerely,

Jun Makishima

Jun Makishima, Interim Director

c: Gordon Coleman, Acting Chief, Hazardous Materials Division - files
Juliet Shin, ACDEH
Kevin Graves, RWQCB
Mike Harper, SWRCB

LOP\Completion

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION Date: 10/10/95

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Pkwy.**
City/State/Zip: **Alameda, CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **Juliet Shin** Title: **Senior HMS**

II. CASE INFORMATION

Site facility name: **Shell Service Station**
Site facility address: **2160 Otis Dr., Alameda, CA 94501**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **590**
URF filing date: **9/26/95** SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
1) Shell Oil Company Attn: Dan Kirk	P.O. Box 4023 Concord, CA 94524	(510) 675-6168
2) Harsh Investment Corp	P.O. Box 2708 Portland, Oregon 97208	

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	550	waste oil	removed	June 1987

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Unknown**

Site characterization complete? **YES**

Date approved by oversight agency: **10/10/95**

Monitoring Wells installed? **YES** Number: **Three**

Proper screened interval? **Yes. Wells MW-1 and MW-2 are screened from 4' to 17' bgs, and Well S-1 is screened from 4'to 19'bgs.**

Highest GW depth below ground surface: **3.48** Lowest depth: **5.80**

Flow direction: **north/northeast, with one instance of northwesterly flow in January 1995.**

Leaking Underground Fuel Storage Tank Program

Most sensitive current use: **Unknown**

Are drinking water wells affected? **NO** Aquifer name: **Unknown**

Is surface water affected? **NO** Nearest affected SW name: **None**

Off-site beneficial use impacts (addresses/locations): **None**

Report(s) on file? **YES** Where is report(s) filed? **Alameda County**
1131 Harbor Bay Pkwy.
Alameda, CA 94502

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment of Disposal w/destination)	Date
Tank	550-gallons	Unknown	6/87 ?
Soil	26 cubic yards	Chemical Waste Mgmt. 35251 Old Skyline Rd. Kettleman City, CA 93239	6/15/87
	15 cubic yards	" "	7/15/87

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)
Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm) Before	Soil (ppm) After	Water (ppm) Before	Water (ppm) After
TPH (Gas)	1.5		0.57*	ND
TPH (Diesel)	ND		0.45	ND
Benzene	0.008		0.15	ND
Toluene	ND		0.0014	ND
Xylene	ND		0.0061	ND
Ethylbenzene	0.0042		0.0013	ND
Oil & Grease	1,700#		ND	
alcohol			0.007	
acetone			0.270	
chromium			0.09	
lead			0.09	
zinc			0.10	
carbon disulfate			0.014	
chloroform			0.043	ND
1,2-DCE			0.064	
cis-1,2-DCE			0.084	0.15
trans 1,2-Dichloroethylene			0.018	0.016
trichloroethylene (TCE)			0.0043	0.0028
tetrachloroethene (PCE)			0.0128	ND
vinyl chloride			0.003	ND

* Chromatographic pattern not typical for gasoline, according to the laboratory, the concentration is due mostly to lighter hydrocarbon compounds.
\# From tank excavation

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? **Undetermined**

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? **Undetermined**

Does corrective action protect public health for current land use? **YES**

Site management requirements: **NA**

Should corrective action be reviewed if land use changes? **NO**

Monitoring wells Decommisioned: **NO Will be decommisioned upon receipt of case closure.**

Number Decommisioned: Number Retained:

List enforcement actions taken: **None**

List enforcement actions rescinded:

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Juliet Shin** Title: **Senior HMS**
Signature: Juliet Shin Date: 10/12/95

Reviewed by
Name: **Eva Chu** Title: **Hazardous Materials Specialist**
Signature: Eva Chu Date: 10/13/95

Name: **Dale Klettke** Title: **Hazardous Materials Specialist**
Signature: Dale Klettke Date: 10/16/95

VI. RWQCB NOTIFICATION

Date Submitted to RB: RB Response: Approved
RWQCB Staff Name: **Kevin Graves** Title: **AWRCE** Date: 11/6/95

VII. ADDITIONAL COMMENTS, DATA, ETC.

The site is currently at active service station. A 550-gallon steel waste oil tank was removed from the site in June 1987, and replaced by a 550-gallon fiberglass tank. The removed tank was apparently installed in 1975. According to Weiss Associates report, dated October 13, 1989, the tank and tank wrapping were in good condition, with no visible holes, when the tank was removed. Groundwater was encountered in the tank excavation following the tank removal. Analysis of soil samples collected from the tank

excavation following the tank removal identified 1,700 ppm Total Oil & Grease from the floor of the excavation at 7 feet below ground surface (bgs). No TPHd, VOCs, or BTEX were identified above detection limits in these soil samples. However, TOG at 47 ppm was identified in a soil sample collected from the excavation sidewall at 3 feet depth.

One groundwater monitoring well, S-1, was installed at the site in September 1987. Four soil samples were collected from this boring at 5-, 10-, 15-, and 20-feet bgs. These soil samples were analyzed for TPHd, TPH as oil and jet fuel, BTEX, Total Oil & Grease, and purgeable halocarbons. Analysis of soil samples identified up to 1,600 ppm TOG at about 5-feet bgs and over 300 ppm TPH as oil and jet fuel at 5- and 20-feet bgs. A water sample collected from monitoring well S-1 identified 7 ppb of an unknown alcohol and 270 ppb acetone, but no other detectable VOCs or BTEX.

Based on several manifests, dated June and July 1987, approximately 41 cubic yards of soil resulting from the tank removal was disposed of at Chemical Waste Management, Inc. in Kettleman City, California.

On April 2, 1990, two additional monitoring wells, MW-1 and MW-2, were installed at the site. Three soil samples were collected from each of these well locations. Soil samples collected from above the water table were analyzed for TPHg and BTEX. The soil samples collected from the soil/water interface were analyzed for Total Oil & Grease, halogenated volatile organic compounds, and TPHd, in addition to TPHg and BTEX. Analysis of these samples identified benzene at 0.008 ppm in MW-2 at 10.2-feet bgs. No other contaminants were identified above detection limits.

The three on-site wells (S-1, MW-1, and MW-2) were surveyed to the City of Alameda marker at the intersection of Whitehall and Willow Streets, relative to Mean Sea Level on April 3, 1990.

On December 17, 1992, three borings, (BH-C, BH-D, and BH-E), were drilled at the site in order to determine whether the hydrocarbon concentrations observed in Well MW-2 was originating from the existing on-site pump islands and USTs. The borings were drilled down to 8- to 9-feet bgs (refer to attached figure). One soil sample from the soil/water interface (at approximately 4.5'bgs) was collected from each of these borings and analyzed for TPHg, BTEX, and halogenated volatile organic compounds (HVOCs). Only 0.0042 ppm ethylbenzene (BH-D) and 1.5ppm TPHg (BH-E) were identified. Grab groundwater samples collected from these borings were analyzed for TPHg, BTEX, and HVOCs, and no contaminants were identified in these water samples above detection limits.

One groundwater sample from Well MW-1 and one from Well MW-2 were collected and analyzed for Total Dissolved Solids at the site on August 2, 1994 to determine whether or not the water was potentially potable. A TDS of up to 12,800 ppm was identified. TDS was measured in the wells again in November 1994, and a TDS of up to 20,400 ppm was identified.

On April 10, 1995, two additional borings, BH-F and BH-G were emplaced to try and determine the source of contaminants identified in MW-2 and to determine the radial extent of this contamination (refer to attached figure). Boring BH-F was placed immediately upgradient of Well MW-2 and boring BH-G was placed immediately downgradient of Well MW-2. One soil sample was collected from 2-feet bgs from each of the borings. Additionally, "grab" groundwater samples were collected from both borings. Both soil and groundwater samples were analyzed for HVOCs. Only 0.58ppb chloroform was identified in the "grab" groundwater samples and no contaminants were detected in the soil samples.

Considering the fact that Wells S-1 and MW-1, located in the vicinity of the former waste oil UST, has not identified TPHg, BTEX, or HVOCs in any quarterly sampling events for approximately 4 to 5 years, it appears that the contaminants observed in Well MW-2 may not be resulting from the site. The emplacement and sampling of borings BH-C, BH-D, and BH-E appears to indicate that the contaminants observed in Well MW-2 are also not resulting from the current USTs or pump islands.

A line locator survey and drawings from the City of Alameda indicated that there are two sewer lines in the vicinity of Well MW-2. These sewer lines could potentially be a contributing source to the concentrations observed in Well MW-2.

The low levels of TPHg, BTEX, and HVOCs identified in Well MW-2 appears to be very limited, and does not appear to have migrated significantly through the years, based on the results of borings BH-F and BH-G.

Based on the above information, and the fact that the groundwater in the area is not potable and the groundwater gradient is flowing away from the bay, there appears to be low liklihood for future threat to human health or the environment. Additionally, based on the ND levels observed in Well S-1, it appears that the elevated levels of TOG remaining in place in the former waste oil tank location is not impacting the groundwater.

Lastly, it appears that the HVOCs observed in Well MW-2 are bioattenuating. The most abundant HVOC component appears to be cis-1,2-DCE. Levels of PCE and TCE are significantly lower, indicating that the HVOCs are in the midst of bioremediating. This is very possible due to the fact that bioremediation of the petroleum components, which were also present in this well, would deplete the oxygen supply and create an anaerobic environment which is conducive to biodegradation of HVOCs.

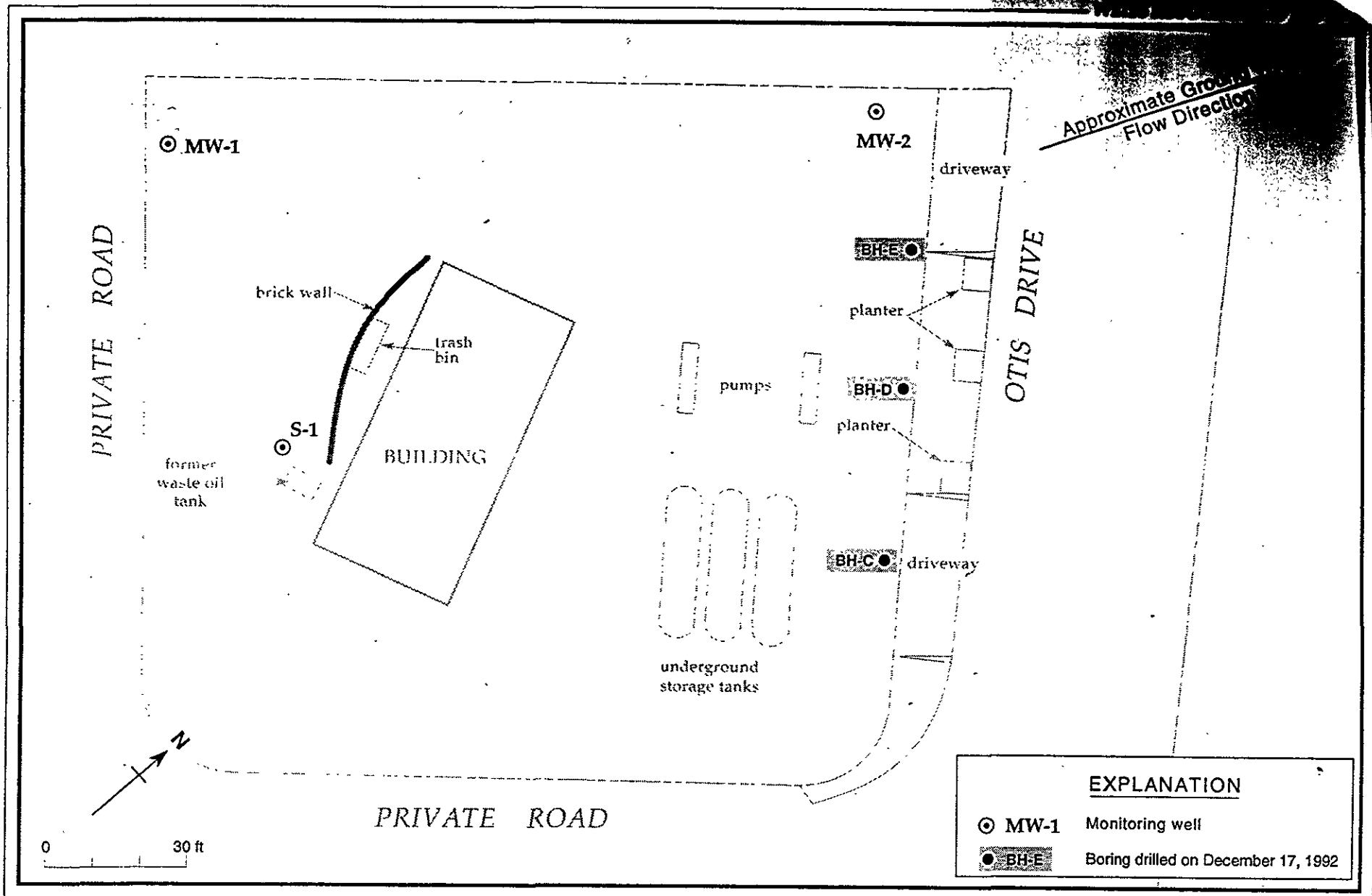

Figure 2. Monitoring Well and Soil Boring Locations - Shell Service Station - WIC #204-0072-0502, 2160 Otis Drive, Alameda, California

2/24/93

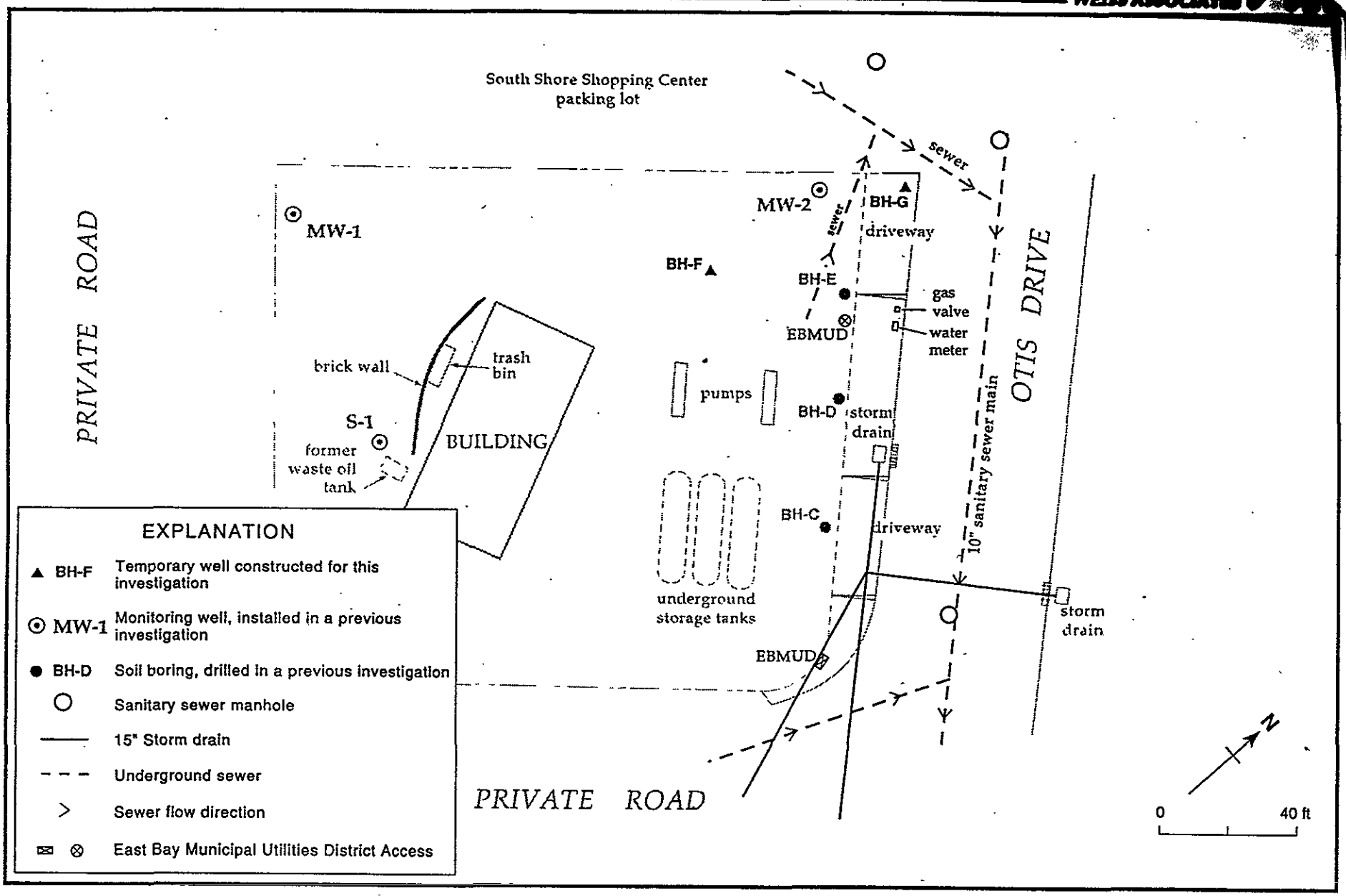

Figure 2. Temporary Well and Underground Utility Locations - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda,

Table 2A. Analytic Results for Ground Water - Petroleum Hydrocarbons - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California

Well ID (Sampling Frequency)	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	POG	B	E	T	X	TDS
			← parts per billion (µg/L) →							
S-1	09/04/87		—	—	—	<5	<5	<5	<5	—
(Annually	09/11/89[a]	4.29	<50	<100	<1,000	<0.5	<1	<1	<3	—
1st Qtr)	04/11/90	4.00	<50	<50	<10,000	<0.5	<0.5	<0.5	<0.5	—
	07/10/90	4.25	<90	—	<10,000	<0.5	<0.5	<0.5	<0.5	—
	10/09/90	4.46	<50	—	<5,000	<0.5	<0.5	<0.5	<0.5	—
	01/17/91	4.53	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	04/09/91	4.20	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	07/10/91	4.42	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	10/09/91	4.87	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	01/24/92	4.90	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	04/23/92	4.66	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	07/01/92	4.85	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	10/02/92	5.80	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	01/05/93	5.38	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	01/07/94	4.19	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	01/07/94	4.19	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	11/01/94	4.84	<50	—	—	<0.5	<0.5	<0.5	<0.5	560,000
MW-1	04/11/90	5.23	<50	<50	<10,000	<0.5	<0.5	<0.5	<0.5	—
(Annually	07/10/90	5.40	100	—	<10,000	<0.5	<0.5	<0.5	<0.5	—
1st Qtr)	10/09/90	5.61	<50	—	<5,000	<0.5	<0.5	<0.5	<0.5	—
	01/17/91	5.66	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	04/09/91	4.96	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	07/10/91	5.52	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	10/09/91	5.70	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	01/24/92	5.51	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	04/23/92	5.14	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	07/01/92	4.48	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	10/02/92	4.80	<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	01/05/93	5.34	<50	—	—	<0.5	<0.5	<0.5	<0.5	—

— Table 2A continues on next page —

Table 2A. Analytic Results for Ground Water - Petroleum Hydrocarbons - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California (continued)

Well ID (Sampling Frequency)	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	POG	B	E	T	X	TDS
			← parts per billion (µg/L) →							
	01/05/93[dup]	5.34	<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	01/07/94	5.26	<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	08/18/94	5.40	<50	---	---	<0.5	<0.5	<0.5	<0.5	6,300,000
	10/11/94	5.60	<50	<50	---	<0.5	<0.5	<0.5	<0.5	6,700,000
MW-2	04/11/90	4.51	200[b]	220	<10,000	2.7	<0.5	0.5	2.4	---
(Quarterly)	07/10/90	4.61	570[b]	450	<10,000	150	<0.5	0.9	3.1	---
	10/09/90	4.74	190[b]	51	<5,000	55	<0.5	<0.5	<0.5	---
	01/17/91	4.73	350[b]	<50	---	51	<0.5	<0.5	<0.5	---
	04/09/91	4.09	---	<50	---	21	<5	<5	<5	---
	07/10/91	4.66	50[b]	<50	---	8.4	<0.5	<0.5	<0.5	---
	10/09/91	4.81	150	---	---	22	<0.5	<0.5	<0.5	---
	01/24/92	4.66	<50	---	---	4.8	<0.5	<0.5	<0.5	---
	04/23/92	4.51	<50	---	---	2.3	1.5	<0.5	<0.5	---
	07/01/92	4.57	130[c]	---	---	19	<0.5	<0.5	<0.5	---
	10/02/92	4.80	120[c]	---	---	7.8	<0.5	<0.5	<0.8	---
	01/05/93	4.39	200[c]	---	---	9.0	<0.5	0.6	1.8	---
	04/08/93	4.15	170[c]	---	---	9.6	<0.5	<0.5	1.6	---
	07/20/93	4.40	80[d]	---	---	16	1.3	1.4	6.1	---
	10/15/93	4.38	400[c]	---	---	37	0.6	1.1	4.7	---
	01/07/94	4.34	86[d]	---	<500	12	<0.5	<0.5	1.1	---
	04/13/94	4.29	<50	---	---	14	<0.5	<0.5	<0.5	---
	07/26/94	4.56	290	---	---	51	<0.5	<0.5	<0.5	12,800,000
	11/11/94	4.68	<50	---	---	3.5	<0.5	<0.5	<0.5	20,400,000
	01/13/95	**3.48**	**<50**	**---**	**---**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**17,700,000**
BH-C[g]	12/17/92	5.0	<50	<0.5	---	<0.5	<0.5	<0.5	<0.5	---
BH-D[g]	12/17/92	5.0	<50	<0.5	---	<0.5	<0.5	<0.5	<0.5	---

— Table 2A continues on next page —

Table 2A. Analytic Results for Ground Water - Petroleum Hydrocarbons - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California (continued)

Well ID (Sampling Frequency)	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	POG	B	E	T	X	TDS
			← parts per billion (µg/L) →							
BH-E[g]	12/17/92	5.5	<50	<0.5	—	<0.5	<0.5	<0.5	<0.5	—
Trip Blank	07/10/90		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	10/09/90		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	01/17/91		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	04/09/91		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	07/10/91		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	10/09/91		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	01/24/92		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	04/23/92		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	07/01/92		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	10/02/92		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	01/05/93		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	04/08/93		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	07/20/93		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	10/15/93		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	01/07/94		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	04/13/94		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	10/11/94		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	11/01/94		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
	01/13/95		<50	—	—	<0.5	<0.5	<0.5	<0.5	—
DTSC MCLs			NE	NE	NE	1	680	100[e]	1,750	500,000[f]

— Table 2A continues on next page —

Table 2A. Analytic Results for Ground Water - Petroleum Hydrocarbons - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, 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
POG = Petroleum oil and grease by American Public Health Association Standard Methods 503 or 5520BF
B = Benzene by EPA Method 8020, or 8240
E = Ethylbenzene by EPA Method 8020, or 8240
T = Toluene by EPA Method 8020, or 8240
X = Xylenes by EPA Method 8020, or 8240
TDS = Total dissolved solids
DTSC MCLs = Department of Toxic Substances Control maximum contaminant levels
<n = Not detected above detection limit of n ppb
NE = DTSC MCL not established

Notes:

a = 90 ppb chromium, 90 ppb lead and 100 ppb Zn detected; no cadmium detected above detection limit of 10 ppb by EPA Method 6010. No semi-volatile organic compounds or PCBs detected by EPA Method 625. DTSC MCLs for Cr = 50 ppb; Pb = 50 ppb; secondary MCL for Zn = 5,000 ppb.
b = Chromatographic pattern not typical for gasoline; the concentration is due mostly to lighter hydrocarbon compounds.
c = The concentration reported as gasoline is partially due to the presence of discrete peaks not indicative of gasoline.
d = The concentration reported as gasoline is primarily due to the presence of discrete peaks not indicative of gasoline.
e = DTSC recommended action level for drinking water; MCL not established
f = Secondary MCL noted; the California State Water Resources Control Board threshold for determining whether ground water has potential beneficial use for domestic supply is 3,000,000 ppb.
g = Ground water sample collected from open borehole.

Table 2B. Analytic Results for Ground Water - Volatile Organic Compounds - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California

Well/ Boring ID	Date Sampled	Depth to Water (ft)	TCE	TCA	PCE	Chloroform	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	Carbon Disulfate	Vinyl Chloride
					← (µg/l) →				parts per billion		
S-1	09/04/87[a]	—	—	—	—	—	—	—	—	—	—
	09/11/89	4.29	ND	ND	ND	ND	ND	ND	ND	ND	ND
	04/11/90	4.00	<0.4	<0.4	<0.4	1.7	<0.4	<0.4	<0.4	—	<0.4
	07/10/90	4.25	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	—	<2
	10/09/90	4.96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	—	<2
	01/07/94	4.19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	—	<0.5
	01/07/94[dup]	4.19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	—	<0.5
	11/01/94	4.84	<0.4	<0.4	<0.4	<0.4	—	<0.4	<0.4	—	<0.4
MW-1	04/11/90	5.23	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	—	<0.4
	07/10/90	5.40	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	—	<2
	10/09/90	5.61	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	—	<2
	01/07/94	5.26	—	—	—	—	—	—	—	—	—
	08/18/94	5.40	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	—	—
	10/11/94	5.60	<0.4	<0.4	<0.4	<0.4	—	<0.4	<0.4	—	<0.4
MW-2	04/11/90	4.51	1.2	<0.4	<0.4	4.5	<0.4	16	<0.4	—	<2
	07/10/90	4.61	0.93	<0.4	<0.4	1.7	<0.4	11	0.44	—	<2
	10/09/90	4.74	1.3	<0.5	1.6	15	46	6.7	<0.5	—	2.5
	01/17/91[b]	4.73	1.2	<0.5	0.6	2.6	74	12	0.5	—	3.0
	04/09/91	4.09	<5	<5	<5	<5	64	<5	<5	<0.5	<10
	07/10/91	4.66	<0.5	<0.5	6.9	43	<0.5	<0.5	<0.5	14	<10
	10/09/91	4.81	1.9	<1	28	7.4	54	16	<1	—	1.7
	01/24/92	4.66	2.5	<0.5	7.0	19	16	4.3	0.6	—	<0.5
	04/23/92	4.51	<3	<3	3.0	<3	84	18	<3	—	<3
	07/01/92	4.57	2.0	<1	2.0	<1	54	14	<1	—	1.0
	10/92/92	4.80	1.0	<1	<1	<1	61	12	<1	—	<1
	01/05/93	4.39	1.7	<0.5	2.2	<0.5	33	8.7	<0.5	—	.67
	04/08/93	4.15	1.3	<1	<1	<1	38	7.8	<1	—	<1
	07/20/93	4.40	2.4	<1	4.7	2.3	43	10	<0.5	—	<0.5
	10/15/93	4.38	<2.5	<2.5	<2.5	<2.5	110	25	<2.5	—	<2.5

— Table 2B continues on next page —

Table 2B. Analytic Results for Ground Water - Volatile Organic Compounds - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California (continued)

Well/ Boring ID	Date Sampled	Depth to Water (ft)	TCE	TCA	PCE	Chloroform	cis-1,2-DCE	trans-1,2-DCE	1,2-DCA	Carbon Disulfate	Vinyl Chloride
			← (µg/l) →						parts per billion		
	01/07/94	4.34	3.8	<0.5	14.0	8.9	29	5.4	<0.5	—	<0.5
	04/13/94	4.29	4.3	<1.3	5.7	2.9	76	14	<1.3	—	—
	07/26/94	4.56	4.3	<0.4	3.5	<0.4	57	5.7	<0.4	—	<0.4
	11/11/94	4.68	2.2	<0.4	6.3	5.6	—	2.2	<0.4	—	<0.4
	01/13/95	3.48	<5.0	<5.0	18	25	<5.0[c]	<5.0	<5.0	9.4	<5.0
	04/10/95	4.30	2.8	<0.50	<0.50	<0.50	150	16	<0.50	—	<1.0
BH-C	12/17/93	5.0[d]	<2	<2	<2	<2	<2	<2	<2	—	<2
BH-D	12/17/93	5.0[d]	<2	<2	<2	<2	<2	<2	<2	—	<2
BH-E	12/17/93	5.5[d]	<2	<2	<2	<2	<2	<2	<2	—	<2
BH-F	04/10/95	3.7[d]	<0.50	<0.50	<0.50	0.58	<0.50	<0.50	<0.50	—	<1.0
BH-G	04/10/95	4.0[d]	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	—	<1.0
DTSC MCLs			5	200	5	NE	6	10	0.5	NE	0.5

Abbreviations:

TCE = Trichloroethene by EPA Method 601/8010 or 8240
TCA = 1,1,1-Trichloroethane by EPA Method 601/8010 or 8240
PCE = Tetrachloroethene by EPA Method 601/8010 or 8240
cis-1,2-DCE = cis-1,2-Dichloroethene by EPA Method 601/8010 or 8240
trans-1,2-DCE = trans-1,2-Dichloroethene by EPA Method 601/8010 or 8240
--- = Not analyzed
<n = Not detected above detection limit of n ppb
1,2-DCA = 1,2 dichloroethane by EPA Method 601/8010 or 8240
DTSC MCLs = Department of Toxic Substance control maximum contaminant levels for drinking water
NE = DTSC MCL not established
ND = Analyte not detected, detection limit not known

Notes:

a = 7.0 ppb unknown alcohol and 270 ppb acetone detected
b = 5.0 ppb chlorobenzene detected
c = Data confirmed by laboratory
d = Depth to water during drilling. Not necessarily representative of the static water table.

Table 3. Analytic Results for Soil - Volatile Organic Compounds - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California

Well/ Boring ID	Sample Depth (ft)	Date Sampled	Depth to Water (ft)	TCE	TCA	PCE	Chloroform	*cis*-1,2-DCE	*trans*-1,2-DCE	1,2-DCA	Vinyl Chloride
				← parts per billion (µg/kg) →							
BH-F	2.0	04/10/95	3.7	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
BH-G	2.0	04/10/95	4.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10

Abbreviations:

TCE = Trichloroethene by EPA Method 8010
TCA = 1,1,1-Trichloroethane by EPA Method 8010
PCE = Tetrachloroethene by EPA Method 8010
cis-1,2-DCE = cis-1,2-Dichloroethene by EPA Method 8010
trans-1,2-DCE = trans-1,2-Dichloroethene by EPA Method 8010
<n = Not detected above detection limit of n ppb
1,2-DCA = 1,2-Dichloroethane by EPA Method 8010