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Environmental and Geologic Services
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April 16, 1993

Ms. Juliet Shin
Alameda County Department of
Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Re: Subsurface Investigation
Shell Service Station
WIC #204-0072-0403
1601 Webster Street
Alameda, California
WA Job #81-434-05

Dear Ms. Shin:

This letter presents the results of Weiss Associates' (WA) subsurface investigation at the Shell service station referenced above (Figure 1). The investigation objectives were to assess whether hydrocarbons are in soil and ground water downgradient of the existing underground fuel tanks and assess the extent of hydrocarbons adjacent to upgradient well MW-2, as outlined in WA's August 17, 1992 workplan[1] and the February 2, 1993 summary letter[2]. Presented below are our scope of work and investigation results.

SCOPE OF WORK

WA's scope of work for this investigation was to:

- Drill eight soil borings near existing monitoring well MW-2 and downgradient of the gasoline storage tanks (Figure 2),

[1] WA, August 17, 1992, Consultant's letter-workplan regarding the proposed drilling of six to ten soil borings at the Shell service station at 1601 Webster Street in Alameda, California, 4 pages.

[2] WA, February 2, 1993, Consultant's letter-summary regarding the subsurface investigation and proposed installation of one ground water monitoring well at the Shell service station at 1601 Webster Street in Alameda, California, 4 pages.

- Install a ground water monitoring well at the downgradient property line to assess whether hydrocarbons are in ground water downgradient of the gasoline tanks and piping,

- Collect and analyze soil and ground water samples, and

- Report the investigation results.

INVESTIGATION RESULTS

Site Setting

Topography: The site is on Alameda island bordered on the north and west by San Francisco Bay, on the south by San Leandro Bay and on the east by the Oakland Inner harbor (Figure 1). Local topography is flat. The site is about 13 ft above mean sea level.

Surroundings: Mixed commercial and residential development.

Adjacent Hydrocarbon Sources: A large tank excavation appears to have recently been conducted on a large abandoned site down and crossgradient to the east of the Shell site. A Unocal 76 service station is about 50 ft directly downgradient to the north of the Shell site. WA was not able to locate any files containing investigation results for these two sites.

Wells in the Site Vicinity: 11 wells are within one-half mile of the site; however none of the wells have been identified as supplying domestic water.[3]

Site Geology: Sediments in the site vicinity are largely sand and silty sand associated with the Merritt Sand, an unconsolidated unit of Pleistocene beach and near-shore deposits.

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[3] WA, July 6, 1990, Subsurface Investigation at Shell Service Station, 1601 Webster Street, Alameda, California, consultant's report prepared for Shell Oil Company, 17 pages and 3 appendices.

Previous Investigations

1987 Waste Oil Tank Removal: In June 1987, a 550-gallon underground waste oil tank that was originally installed in 1962 was removed (Figure 1). Blaine Tech Services (BTS) of San Jose, California reported that the tank contained more than 77 holes and that a hydrocarbon sheen was observed on the water in the excavation.[4] Soil samples from 9.5 ft depth in the excavations contained 133 parts per million (ppm) petroleum oil and grease (POG), 14 ppm total petroleum hydrocarbons (TPH) and 29 ppm 1,1,1-trichloroethane (TCA).[5] A grab water sample collected from the subsurface at about 12.5 ft depth contained 244 ppm POG, 132 ppm TPH, 11 ppm TCA and 59 ppm methylene chloride.

1987 Well S-1 Installation: In September 1987, Pacific Environmental Group (PEG) of Santa Clara, California drilled one soil boring and installed ground water monitoring well S-1 immediately downgradient of the former waste oil tank to assess whether hydrocarbons detected during the excavation were in ground water[6](Figure 2). TOG were detected in soil from the boring from 3.5 and 15.5 ft depth, at a maximum of 130 ppm at about 5 ft depth. TPH-G were detected at 50 ppm in soil at about 4 ft depth. No halogenated volatile organic compounds (HVOCs) were detected in soil or ground water.

1990 Well MW-1 and MW-2 Installations: In April 1990, WA installed wells MW-1 and MW-2[3] (Figure 2). TPH as gasoline (TPH-G) were detected at a maximum of 32 ppm in the boring for well MW-2, with the highest concentrations detected below the water table. Unsaturated soil samples from the two borings contained less than 0.1 ppm benzene, ethylbenzene, toluene and/or xylenes (BETX). No POG or halogenated volatile organic compounds (HVOCs) were detected in soil from either boring.

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4 BTS, June 26, 1989, Consultant's letter-report presenting a summary of previously unpublished notes from the 1987 waste oil tank removal at the Shell service station at 1601 Webster Street in Alameda, California, prepared for Shell Oil Company, 19 pages.

5 BTS, July 16, 1987, Field Sampling at Shell Station, 1601 Webster Street, Alameda, California, consultant's letter-report prepared for Shell, 3 pages plus attachments.

6 PEG, October 23, 1987, Consultant's letter-report regarding a well installation at the Shell service station at 1601 Webster Street in Alameda, California, prepared for Gettler-Ryan, Inc., 3 pages plus attachments.

Quarterly Ground Water Monitoring: Ground water beneath the site has been sampled quarterly since April 1990.[7,8] During this time, ground water has consistently flowed north-northeastward to north-northwestward, and the water table has fluctuated between 4 and 11 ft depth beneath the site. No petroleum hydrocarbons have been detected in ground water samples from wells S-1 and MW-1. However, water samples from well MW-1 have contained up to 0.0079 ppm cis-1,2-dichloroethene. Water samples from well MW-2 have contained up to 33 ppm TPH-G, 2.5 ppm benzene and 0.0011 ppm 1,2-dichloroethane.

Current Soil Boring Investigation

Drilling Dates:	October 12 and 22, 1992 and February 19, 1993.
Drilling Geologist:	Joyce Fremstad.
Drilling Method:	CME-75 drill rig using a cuttingless system, solid flight augers and hollow stem augers. (Drilling and sampling procedures presented in Attachment A).
Number or Borings:	7 (BH-C, BH-D, BH-E, and BH-F by cuttingless system; BH-G, BH-H and BH-I by solid flight augers; and BH-J by hollow stem augers; Figure 2).
Boring Depths:	12.5 to 21.5 ft.
Sediments Encountered:	Silty sand to the maximum depth explored of 21.5 ft. The boring logs and well construction details are presented in Attachment B.
Grab Water Samples:	Grab water samples were collected using a teflon bailer after purging one borehole volume. Water samples were decanted from the bailer into 40 ml VOAS supplied by the analytic laboratory.

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7 WA, December 2, 1991, Consultant's quarterly status report for the Shell service station at 1601 Webster Street in Alameda, California, prepared for the Alameda County Department of Environmental Health (ACDEH), 5 pages plus 4 attachments.

8 WA, July 1, 1992, Consultant's quarterly status report for the Shell service station at 1601 Webster Street in Alameda, California, prepared for the ACDEH, 2 pages and 2 attachments.

Soil and Ground Water Analyses: TPH-G by modified EPA Method 8015, BETX by EPA Method 8020, HVOCs by EPA Method 8010, and TOG by standard method 5520F.

Waste Disposal: Soil cuttings were disposed at the Zanker Road landfill in San Jose, California as Class III waste; steam clean rinsate and purge water were recycled at the Shell Refinery in Martinez, California.

Current Well Construction

Number of Wells: 1 (MW-3, Figure 2)

Well Materials: 4-inch diameter Schedule 40 PVC well casing with 0.010-inch slotted screen; Monterey #2/12 sand.

Screened Interval: About 5 to 20 ft depth for well MW-3.

Well Development Method: Surge block agitation and bailer evacuation.

Flow Rate: 1 to 2 gallons per minute during well development.

Ground Water Depth: 5 to 8 ft below grade.

Ground Water Flow Direction: North-northeastward with a gradient of about 0.014 ft/ft (Figure 3).

Water Samples Analyzed by: TPH-G by modified EPA Method 8015,TPH-D by modified EPA Method 8015, BTEX by EPA Method 8020, HVOCs by EPA Method 8010, and TOG by standard method 5520F.

HYDROCARBON DISTRIBUTION IN SOIL

Borings BH-C through BH-F were drilled to assess the extent of hydrocarbons in soil and ground water near well MW-2. Borings BH-G through BH-J were drilled to assess the extent of hydrocarbons between the underground storage tanks and downgradient of the property boundary. No hydrocarbons were detected in any of the soil samples from the borings downgradient of the underground storage tanks or from boring BH-C, which is at the upgradient property line. However, hydrocarbons were detected in soil samples from borings BH-D, BH-E and BH-F, at a maximum of 170 ppm TPH-G from 10.5 ft depth in boring BH-E (Table 1, Attachment C). No halogenated volatile organic compounds (HVOCs) were detected in any of the soil samples from the borings. Based on the results of this and previous investigations, the highest hydrocarbon concentrations in soil appear restricted to within a few ft of the water table near the upgradient property boundary (Figure 4).

HYDROCARBON DISTRIBUTION IN GROUND WATER

Although, hydrocarbons were detected in grab ground water samples from all borings, the highest concentrations were detected near the former pump islands and product lines (Figure 5 and Table 3). Although petroleum hydrocarbons were detected in the water samples from downgradient well MW-3, the concentrations were near or below DTSC maximum contaminant levels (MCLS). No HVOCs were detected in any of the grab ground water samples from the borings.

WA reviewed Sacramento Department of Water Resources (DWR) records to assess whether other monitoring wells have been installed at any nearby sites since the 1990 well survey. The DWR records documented no new wells near the site. However, during a recent site visit we noted the existence of three undocumented monitoring wells downgradient of the Unocal 76 service station. During a January 26, 1993 conversation with Joyce Fremstad of WA, Juliet Shin of the Alameda County Department of Environmental Health stated that the wells were possibly installed after the recent removal of three tanks. Ms. Shin indicated that soil from either the soil borings or from the tank removal contained up to 1,000 ppm TPH-G and that ground water samples contained up to 360 ppb TPH-G. Since hydrocarbon concentrations in samples from the newly installed Shell well are near or below laboratory detection limits,

and since there are three wells at the nearby Unocal site, no additional monitoring wells appear necessary at the time.

We appreciate this opportunity to provide hydrogeologic consulting services to Shell and trust this submittal meets your needs. Please call if you have any questions or comments.

Sincerely,
Weiss Associates

Joyce Fremstad
Senior Staff Geologist

N. Scott MacLeod, R.G.
Project Geologist

JF/NSM/:fcr

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Attachments: Figures
Tables
A - Sampling Procedures
B - Boring Logs
C - Analytic Results for Ground Water
D - Analytic Results for Soil

cc: Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, California 94520-9998
Lester Feldman, Regional Water Quality Control Board - San Francisco Bay, 2101 Webster Street, Suite 500, Oakland, California 94612

FIGURES

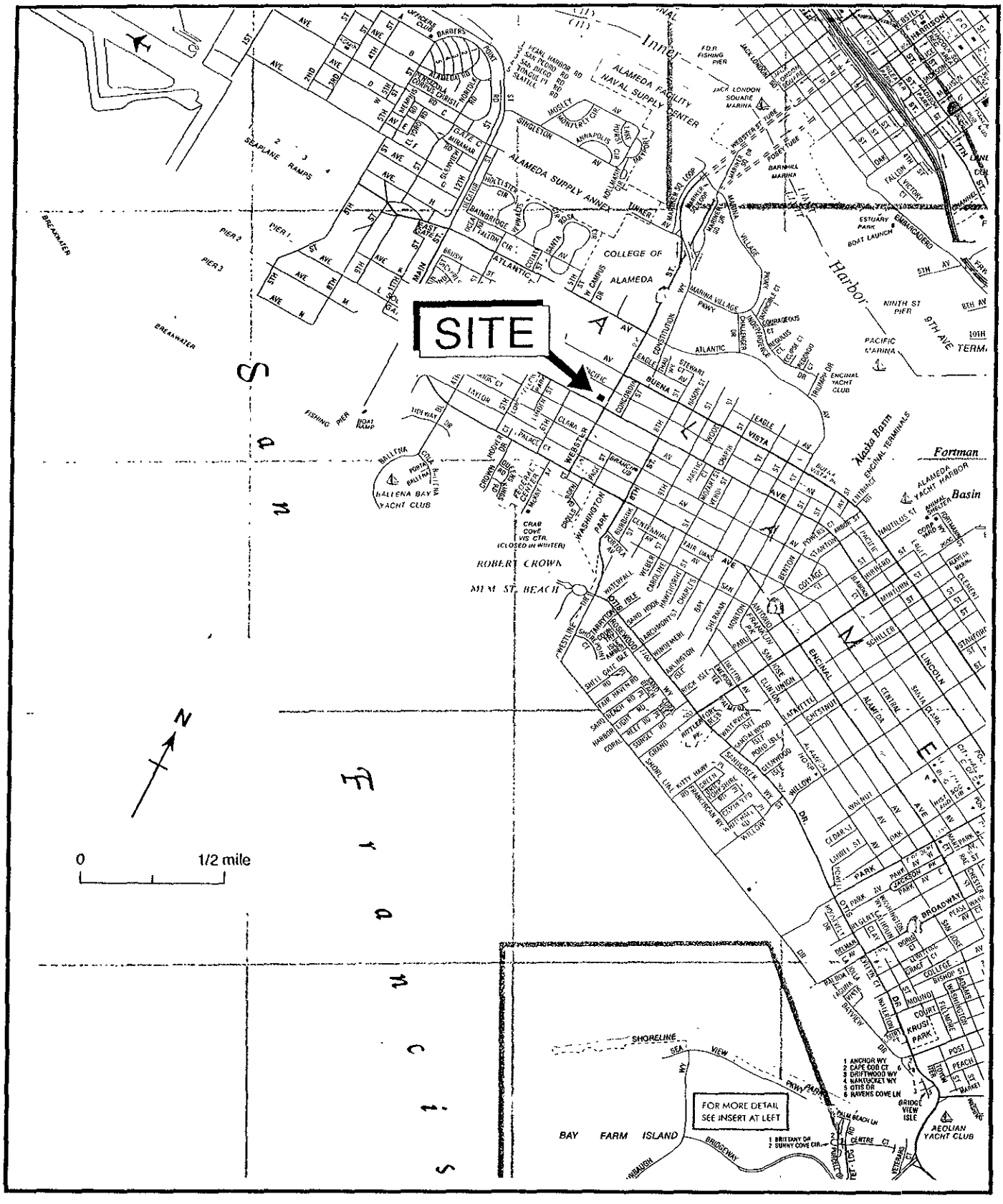


Figure 1. Site Location Map - Shell Service Station, WIC# 204-0072-0403, 1601 Webster Street, Alameda, CA

8/20/90

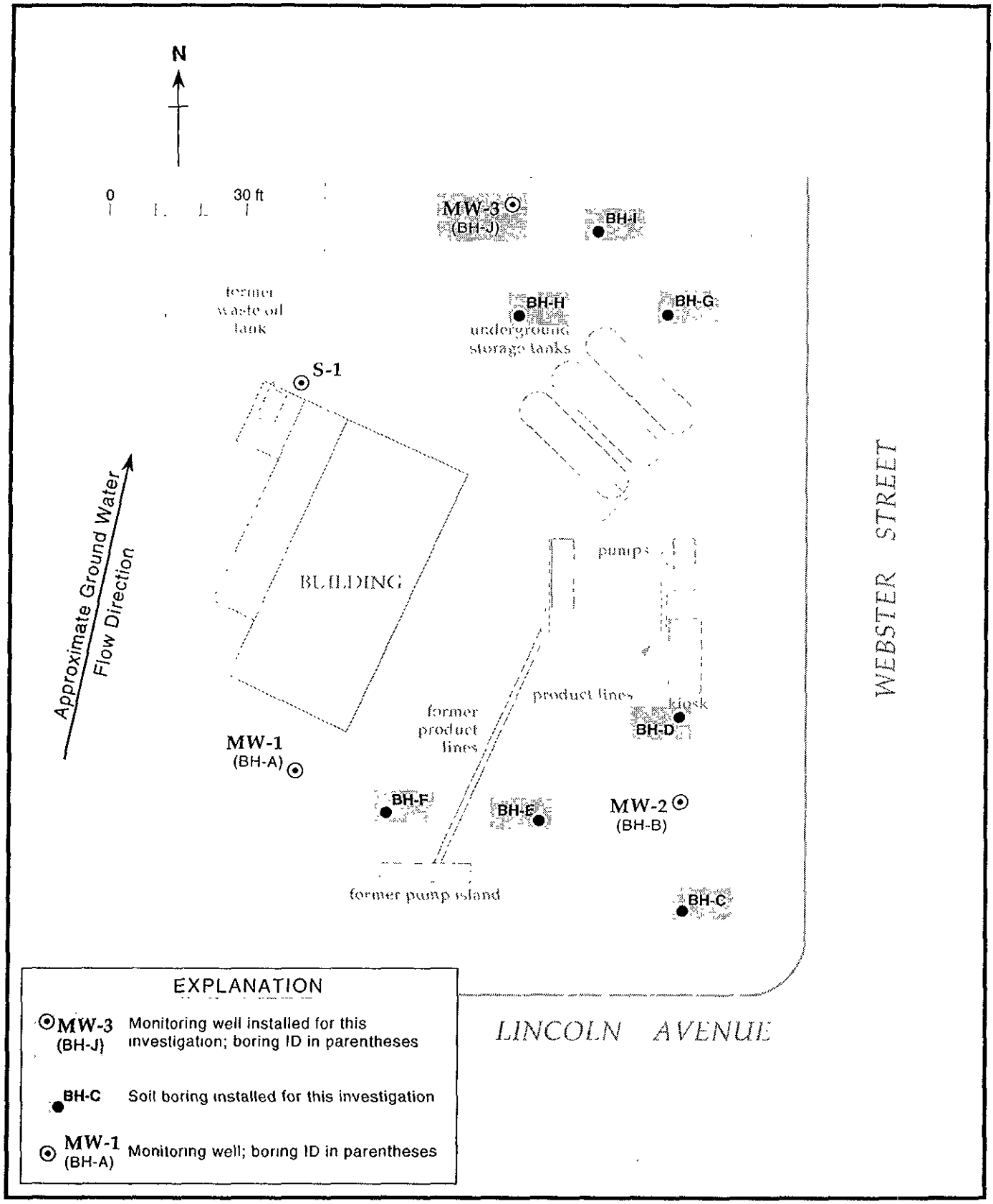


Figure 2. Monitoring Well and Soil Boring Locations - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

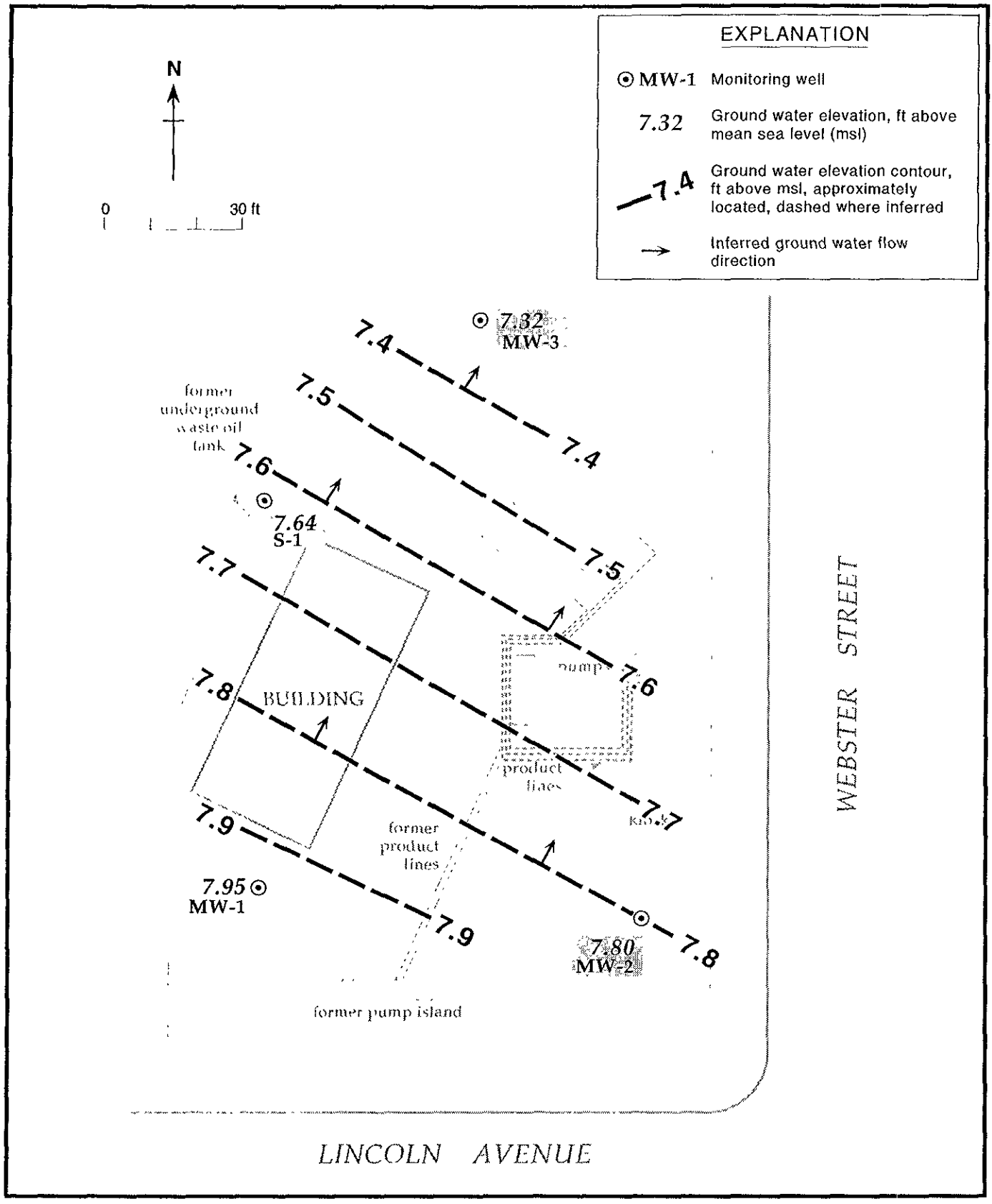


Figure 3. Monitoring Well Locations and Ground Water Elevations - April 8, 1993 - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

4/16/93

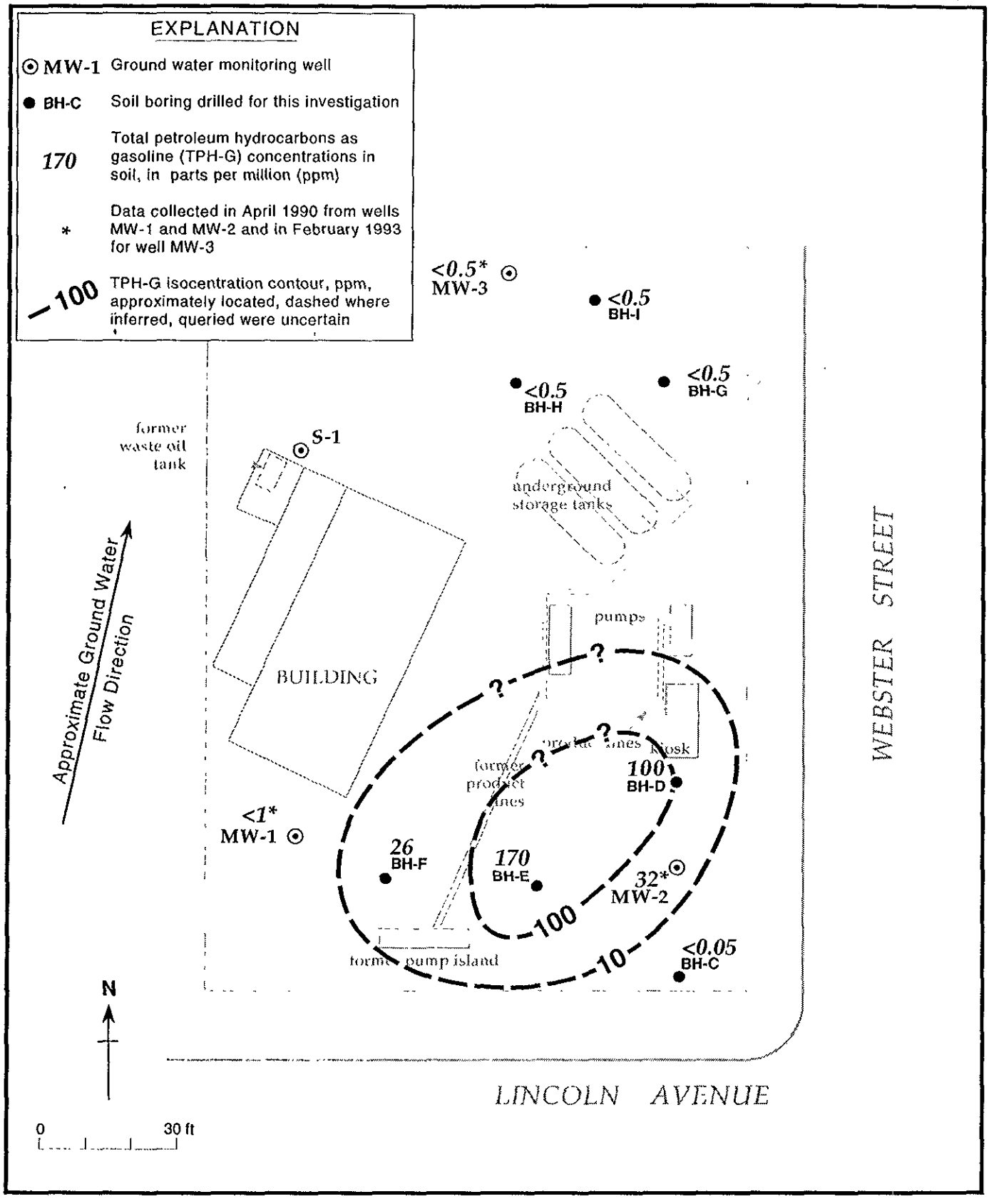


Figure 4. Total Petroleum Hydrocarbons as Gasoline Concentrations in Soil at 5 to 11 Ft Depth - October 1992 - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

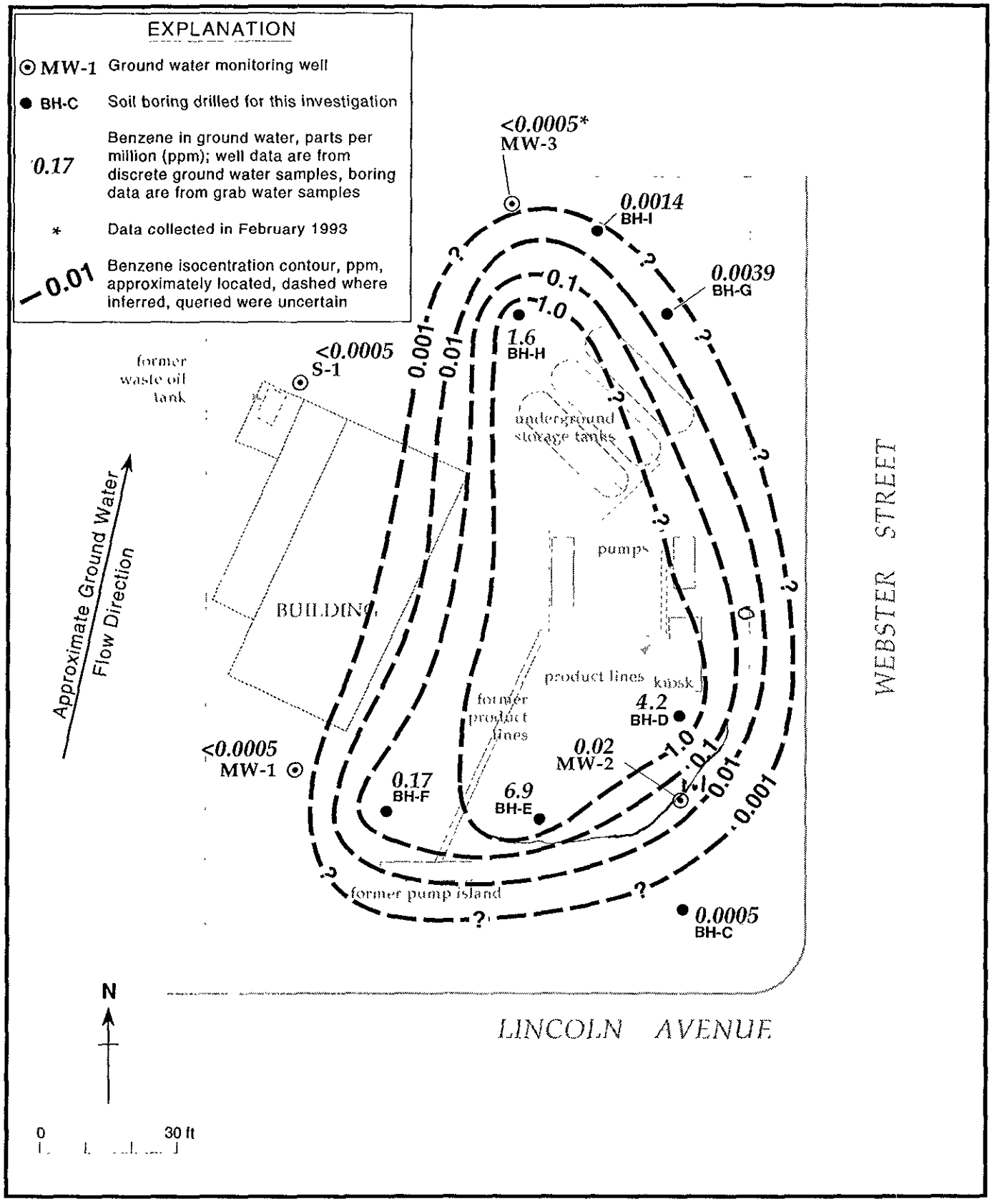


Figure 5. Benzene Concentrations in Ground Water - October 1992 - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

4/13/93

TABLES

Table 1. Analytic Results for Soil - Shell Service Station, WIC #204-0072-0403, 1601 Webster Street, Alameda, California

Soil Boring (Well ID)	Sample Depth (ft)	Date Sampled	Approximate Ground Water Depth (ft)	TPH-G	TPH-D	B	E	T	X	HVOCs	TOG
				<----------parts per million (mg/kg)---------->							
BH-A	4.8	4-3-90	8.5	<1	---	<0.0025	<0.0025	0.0032	0.0030	---	---
(MW-1)	7.8	4-3-90		<1	<1[a]	<0.0025	<0.0025	0.0029	<0.0025	ND	<50
	10.8	4-3-90		<1	---	0.0026	<0.0025	0.010	0.0037	---	---
BH-B	5.2	4-3-90	7.5	<1	---	<0.0025	<0.0025	0.0048	0.013	---	---
(MW-2)	6.8	4-3-90		1.3	<1[a]	0.0034	0.010	0.017	0.079	ND	<50
	10.2	4-3-90		20	---	0.530	0.750	3.800	4.000	---	---
	15.2	4-3-90		32	---	0.15	0.67	1.8	2.6	---	---
	20.2	4-3-90		<1	---	0.0049	0.0047	0.023	0.029	---	---
BH-C	5.5	10-12-92	9.5	<0.5	---	<0.005	<0.005	<0.005	<0.005	ND	<30
	11.0	10-12-92		<0.5	---	<0.005	<0.005	<0.005	<0.005	0.0017[b]	<30
BH-D	5.5	10-12-92	9.5	100	---	<0.005	1.8	<0.005	5.4	ND	<30
	10.5	10-12-92		<0.5	---	<0.005	0.007	<0.005	0.032	ND	<30
BH-E	5.5	10-22-92	10.0	14	---	0.026	0.20	0.40	1.2	0.072[b]	<30
	10.5	10-22-92		170	---	<0.005	3.6	3.0	22	ND	110
	13.5	10-22-92		0.87	---	0.11	0.019	0.097	0.089	ND	<30
BH-F	5.5	10-22-92	10.5	<0.5	---	<0.005	<0.005	<0.005	<0.005	ND	<30
	10.5	10-22-92		26	---	0.065	0.65	0.27	3.6	0.070[b]	47
BH-G	5.5	10-22-92	10.5	<0.5	---	<0.005	<0.005	<0.005	<0.005	ND	<30
	10.0	10-22-92		<0.5	---	<0.005	<0.005	<0.005	<0.005	ND	<30
BH-H	5.5	10-22-92	10.5	<0.5	---	<0.005	<0.005	<0.005	<0.005	ND	<30
	10.0	10-22-92		<0.5	---	<0.005	<0.005	<0.005	<0.005	ND	<30
BH-I	5.5	10-22-92	10.5	<0.5	---	<0.005	<0.005	<0.005	<0.005	ND	<30
	10.5	10-22-92		<0.5	---	<0.005	<0.005	<0.005	<0.005	ND	<30
MW-3	5.5	02-19-93	5.5	<0.5	---	<0.005	<0.005	<0.005	<0.005	ND	<30
(BH-J)	10.5	02-19-93		<0.5	---	<0.005	<0.005	<0.005	<0.005	ND	<30

-- Table 1 continues on next page --

Table 1. Analytic Results for Soil - Shell Service Station, WIC #204-0072-0403, 1601 Webster Street, 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
B = Benzene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
T = Toluene by EPA Method 8020
X = Xylenes by EPA Method 8020
HVOCs = Halogenated volatile organic compounds by EPA Method 8010
TOG = Total oil and grease by APHA Standard Method 503D&E
ppm = parts per million
ND = No VOCs detected.
<n = Not detected at detection limits of n ppm

Notes:

a = Total petroleum hydrocarbons as motor oil (TPH-MO) were not detected at a detection limit of 10 ppm.
b = Methylene Chloride.

Samples from borings BH-A and BH-B were analyzed by National Environmental Testing (NET) Pacific, Inc., Santa Rosa, California. Samples from borings BH-C through BH-I were analyzed by Anametrix, Inc. of San Jose, California.

TABLE 2. Analytic Results for Ground Water - Shell Service Station, WIC #204-0072-0403, 1601 Webster Street, Alameda, California

Sample ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X	1,2-DCE	1,2-DCA	
			<----------parts per million (mg/L)---------->								
MW-1	04-11-90[a]	8.22	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<10
	07-18-90	9.14	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	0.003	<0.0005	<5
	10-18-90	10.37	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	0.0079	<0.0005	<5
	01-25-91	10.41	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	0.0056	<0.0005	---
	04-11-91	7.37	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	0.0009	<0.0005	---
	07-18-91	8.86	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	0.0044	<0.0005	---
	10-17-91	10.47	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	0.0072	<0.0005	---
	01-24-92	9.18	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	0.0014	<0.0005	---
	04-23-92	6.95	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---
	07-02-92	5.79	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---
	10-02-92	3.99	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.002	---
	01-05-93	6.54	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	---
MW-2	04-11-90[a]	7.69	0.58	0.43	0.020	0.0012	0.0049	0.073	<0.0005	0.0011	<10
	07-18-90	8.56	1.4	---	0.11	0.071	0.31	0.31	<0.0005	0.0007	<5
	10-18-90	9.76	1.9	1.3[b]	0.11	0.089	0.47	0.40	<0.0005	0.0009	<5
	01-25-91	9.78	8.1	---	0.43	0.48	1.2	2.6	<0.0005	0.0008	---
	04-11-91	6.87	2.6	---	0.13	0.25	0.15	0.33	<0.0005	<0.0005	---
	07-15-91	8.27	1.3	---	0.10	0.084	0.059	0.12	<0.0005	0.0008	---
	10-17-91	9.89	2.1	---	0.18	0.15	0.26	0.52	<0.0005	0.0006	---
	01-24-92	8.60	7.1	---	0.45	0.45	0.96	1.6	<0.0005	<0.0005	
	04-23-92	6.48	16	---	0.32	0.65	0.74	2.6	---	---	---
	07-02-92	5.83	33.0	---	2.5	2.0	3.7	9.6	<0.05	<0.05	---
	10-02-92	4.0	7.0	---	0.96	0.57	0.65	1.2	<0.05	<0.05	---
	01-05-93	6.4	8.9	---	0.55	0.6	0.5	1.9	<0.002	<0.002	---
MW-3	02-25-93	5.37	0.058	0.14	<0.0005	0.0025	<0.0005	0.0064	<0.0005	0.0015	<5
S-1	09-04-87[c]		---	---	<0.005	<0.005	<0.005	<0.005	<0.0005	<0.0005	---
	09-11-89[d]	9.82	<0.05	<0.1	<0.0005	<0.001	<0.001	<0.003	<0.0005	<0.0005	<1
	04-11-90[a]	8.41	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<10
	07-18-90	9.31	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<5
	10-18-90	10.43	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<5
	01-25-91	10.49	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	04-11-91	7.68	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	07-18-91	8.95	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	10-17-91	10.62	<0.05	---	<0.0005	<0.0005	<0.0005	<0.005	---	---	---
	01-24-92	9.32	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	04-23-92	7.27									
	07-02-92	5.58	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	10-02-92	3.82	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	01-05-93	6.13	<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
Trip Blank	07-18-90		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	10-18-90		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---

-- Table 2 continues on next page --

TABLE 2. Analytic Results for Ground Water - Shell Service Station, WIC #204-0072-0403, 1601 Webster Street, Alameda, California (continued)

Sample ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X	1,2-DCE	1,2-DCA	c-1,2-DCE
			<----------parts per million (mg/L)---------->								
	01-25-91		<0.05	---	<0.0005	<0.0005	<0.0005	0.0008	---	---	---
	04-11-91		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	07-18-91		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	10-17-91		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	01-24-92		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	04-23-92										
	07-02-92		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	10-02-92		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
	01-05-93		<0.05	---	<0.0005	<0.0005	<0.0005	<0.0005	---	---	---
DTSC MCLs			NE	NE	0.001	0.680	0.10[e]	1.750	0.0060	0.0005	NE

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
B = Benzene by EPA Method 602, 624, or 8020
E = Ethylbenzene by EPA Method 602, 624, or 8020
T = Toluene by EPA Method 602, 624, or 8020
X = Xylenes by EPA Method 602, 624, or 8020
c-1,2-DCE = cis-1,2-dichloroethene by EPA Method 601 or 624
1,2-DCA = 1,2-dichloroethane by EPA Method 601 or 624
TOG = Total non-polar oil and grease by American Public Health Association Standard Method 503E
<n = Not detected at detection limit of n ppm
DTSC MCL = California Department of Health Services maximum contaminant level for drinking water
NE = Not established
--- = Not analyzed

Notes:

a = Samples analyzed by National Environmental Testing Pacific, Inc., Santa Rosa, California
b = Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline.
c = Sampled by Pacific Environmental Group, Santa Clara, California; 0.12 ppm acetone detected by EPA Method 624; no other volatile organic compounds detected
d = Metals detected by EPA Method 6010; 0.020 ppm chromium, 0.060 ppm lead and 0.030 ppm zinc; no cadmium detected above detection limit of 0.010 ppm; no PCBs or semi-volatile compounds detected by EPA Method 625.
e = DTSC recommended action level for drinking water; MCL not established

Table 3. Analytic Results for Ground Water Grab Samples - Shell Service Station, WIC #204-0072-0403, 1601 Webster Street, Alameda, California

Sample ID	Date Sampled	Approximate Ground Water Depth (ft)	TPH-G	TPH-D	B	E	T	X	VOCs	TOG
			<----------parts per million (mg/kg)---------->							
BH-C	10-12-92	9.5	0.074	---	0.0005	<0.0005	<0.0005	<0.0005	ND	---
BH-D	10-12-92	9.5	24	---	4.2	4.4	<0.0005	2.8	ND	---
BH-E	10-22-92	10.0	26	---	6.9	2.2	13	12	ND	<7
BH-F	10-22-92	10.5	3.1	---	0.17	0.31	0.11	0.55	ND	<14
BH-G	10-22-92	10.5	0.15	---	0.0039	0.0038	0.0098	0.013	ND	<6
BH-H	10-22-92	10.5	26	---	1.6	1.9	0.28	2.8	ND	<6
BH-I	10-22-92	10.5	0.053	---	0.0014	0.0031	0.0013	0.053	ND	<8
DTSC MCLs			NE	NE	0.001	0.680	0.10[a]	1.750	0.05[b]	NE

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
VOCs = Volatile organic compounds including halogenated volatile organic compounds by EPA Method 624
TOG = Total oil and grease by APHA Standard Method 503D&E
<n = Not detected at laboratory reporting limit of n ppm
DTSC MCL = California Department of Health Services Maximum Contaminant Level
NE = DHS action levels not established
ND = No VOCs detected
--- = Not analyzed of not applicable

Notes:

a = DTSC recommended action level for drinking water
b = MCL for 1,2-dichloroethane

ATTACHMENT A

STANDARD FIELD PROCEDURES

STANDARD FIELD PROCEDURES

Weiss Associates (WA) has developed standard procedures for drilling and sampling soil borings and installing, developing and sampling ground water monitoring wells. These procedures comply with Federal, State and local regulatory guidelines. Specific procedures are summarized below.

SOIL BORING AND SAMPLING

Objectives/Supervision

Soil sampling objectives include characterizing subsurface lithology, assessing whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and collecting samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Registered Geologist (RG) or a Certified Engineering Geologist (CEG).

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers. Split-barrel samplers lined with steam-cleaned brass or stainless steel tubes are driven through the hollow auger stem into undisturbed sediments at the bottom of the borehole using a 140 pound hammer dropped 30 inches. Soil samples can also be collected without using hollow-stem augers by progressively driving split-barrel soil samplers to depths of up to 20 ft.

Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Near the water table and at lithologic changes, the sampling interval may be less than five ft.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Analysis

After noting the lithology at each end of the sampling tubes, the tube chosen for analysis is immediately trimmed of excess soil and capped with teflon tape and plastic end caps. The sample is labelled, stored at or below 4°C, and transported under chain-of-custody to a State-certified analytic laboratory.

Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable photoionization detector (PID) measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. PID measurements are used along with the stratigraphy and ground water depth to select soil samples for analysis.

Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe. If wells are completed in the borings, the well installation, development and sampling procedures summarized below are followed.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

Wells are installed to monitor ground water quality and determine the ground water elevation, flow direction and gradient. Well depths and screen lengths are based on ground water depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and state and local regulatory guidelines. Well screens typically extend 15 ft below and 5 ft above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three to five ft thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two ft above the well screen. A two ft thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of cement with 3-5% bentonite.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security. The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

After 24 hours, the wells are developed using a combination of ground water surging and extraction. Surging agitates the ground water and dislodges fine sediments from the sand pack. After about ten minutes of surging, ground water is extracted from the well using bailing,

pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of ground water are extracted and the sediment volume in the ground water is negligible. All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

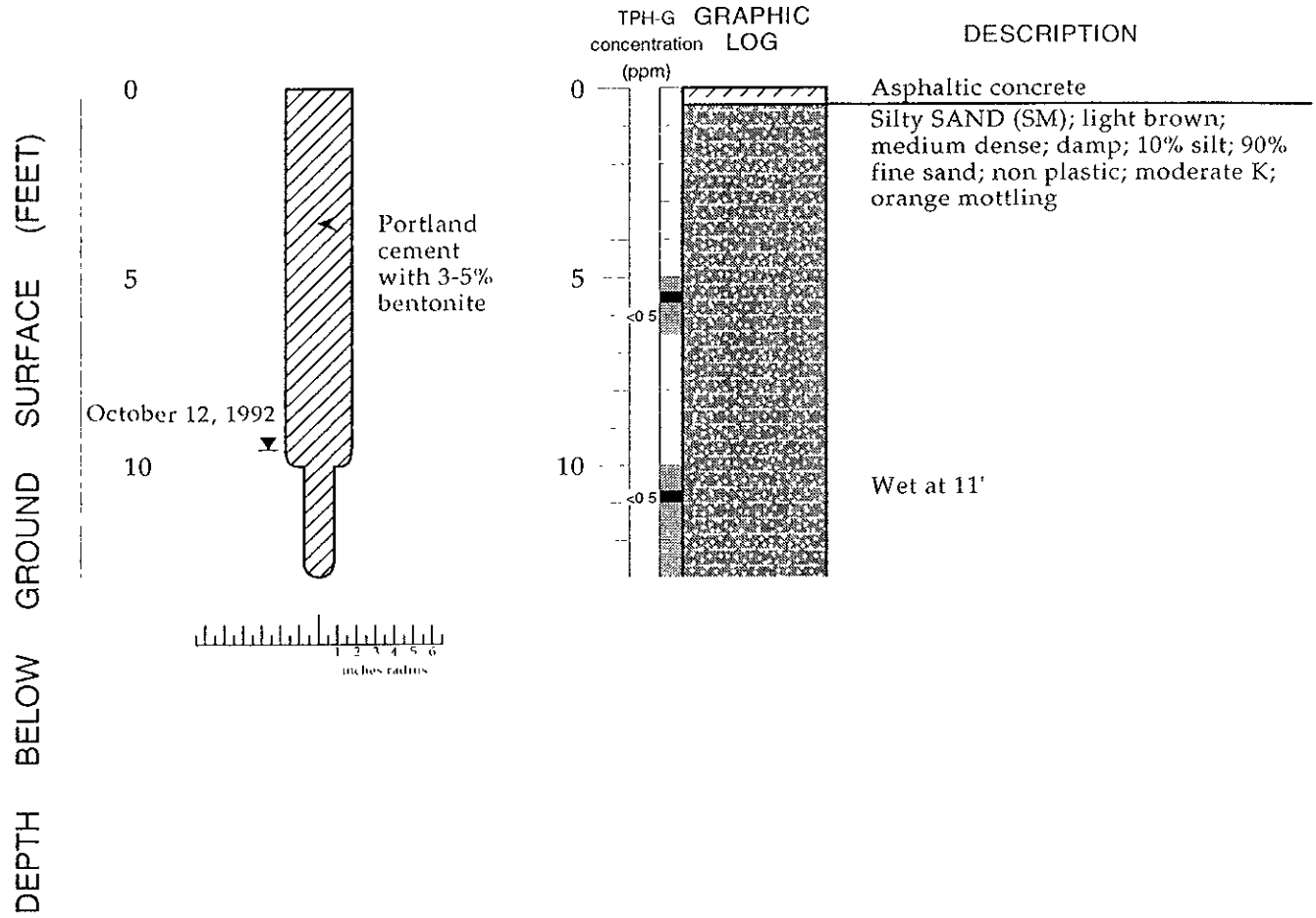
Ground Water Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of ground water are purged prior to sampling. Purging continues until ground water pH, conductivity, and temperature have stabilized. Ground water samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labelled, placed in protective foam sleeves, stored at 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

ATTACHMENT B

BORING LOGS

BORING BH-C



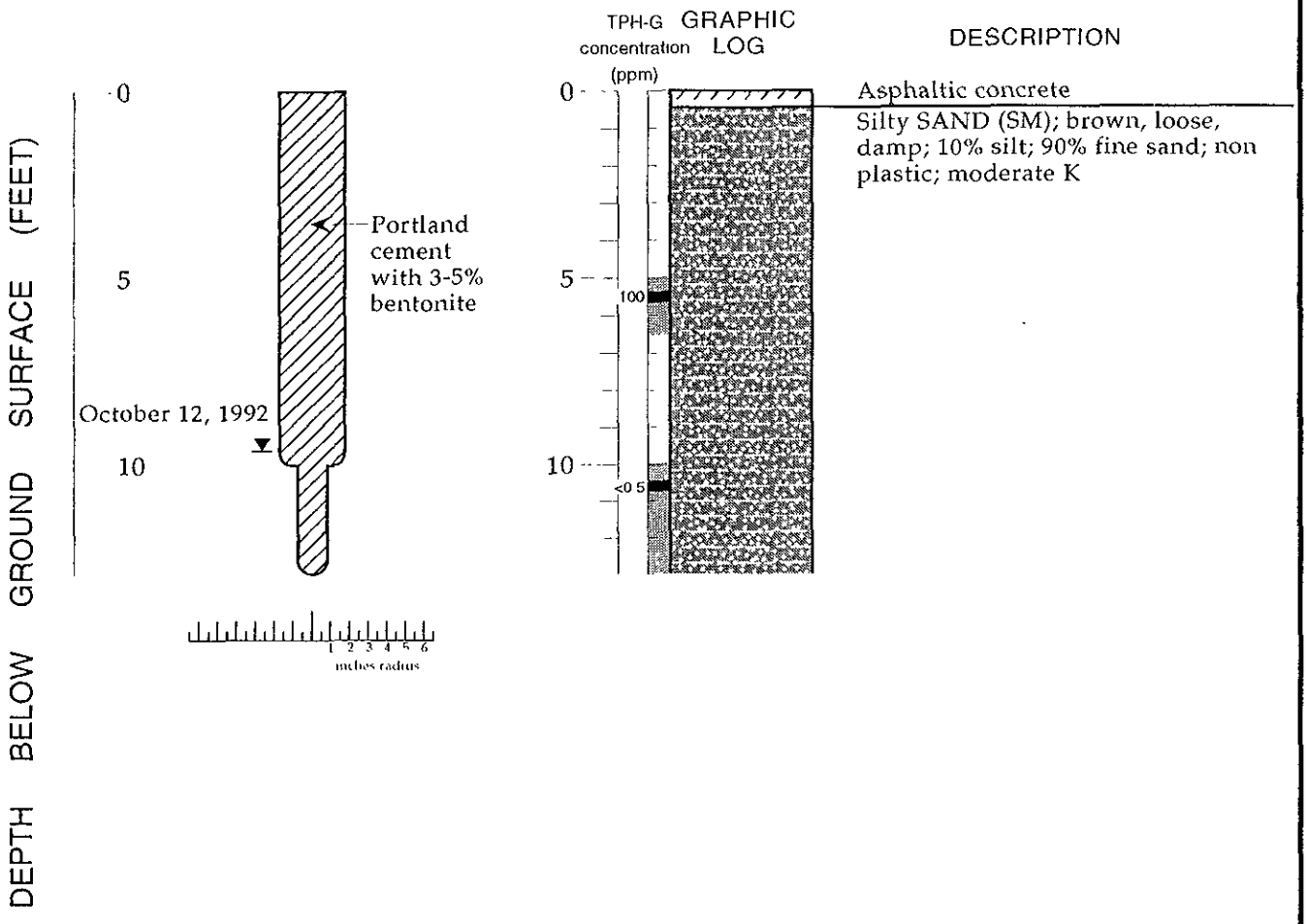
EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approximate)
- Uncertain contact
- Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Joyce E. Fremstad
Supervisor: N. Scott MacLeod
Drilling Company: Soils Exploration Drilling, Vacaville, CA
License Number: C57-582696
Driller: Scott Fitchie & Chad Little
Drilling Method: Cuttingless system
Date Drilled: October 12, 1992
Type of Sampler: Split barrel (2" ID)
TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log and Well Construction Details - Boring BH-C - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

BORING BH-D



EXPLANATION

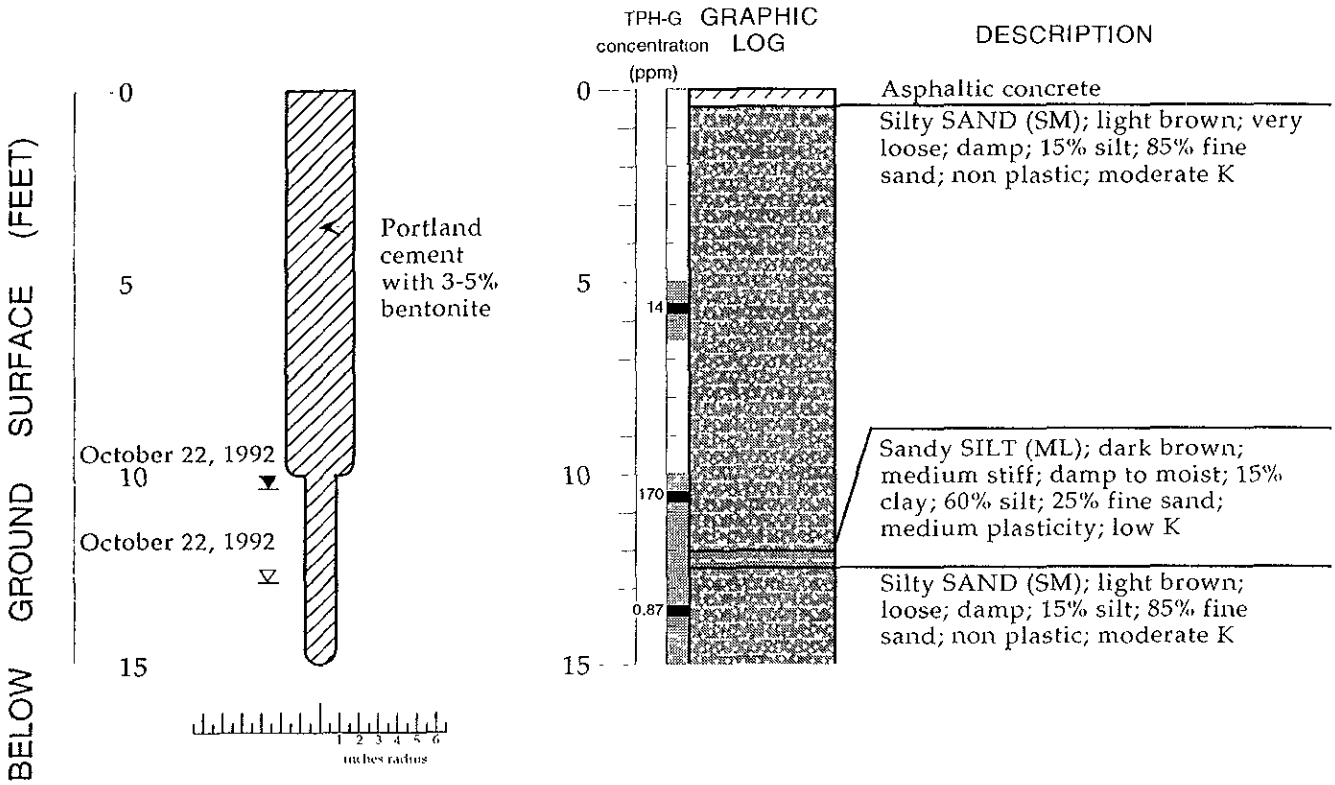
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- ——····—— Contact (dotted where approximate)
- —?—?— Uncertain contact
- //////// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Joyce E. Fremstad
Supervisor: N. Scott MacLeod
Drilling Company: Soils Exploration Drilling, Vacaville, CA
License Number. C57-582696
Driller: Scott Fitchie & Chad Little
Drilling Method: Cuttingless system
Date Drilled: October 12, 1992
Type of Sampler: Split barrel (2" ID)
TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log and Well Construction Details - Boring BH-D - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

12/22/92

BORING BH-E



EXPLANATION

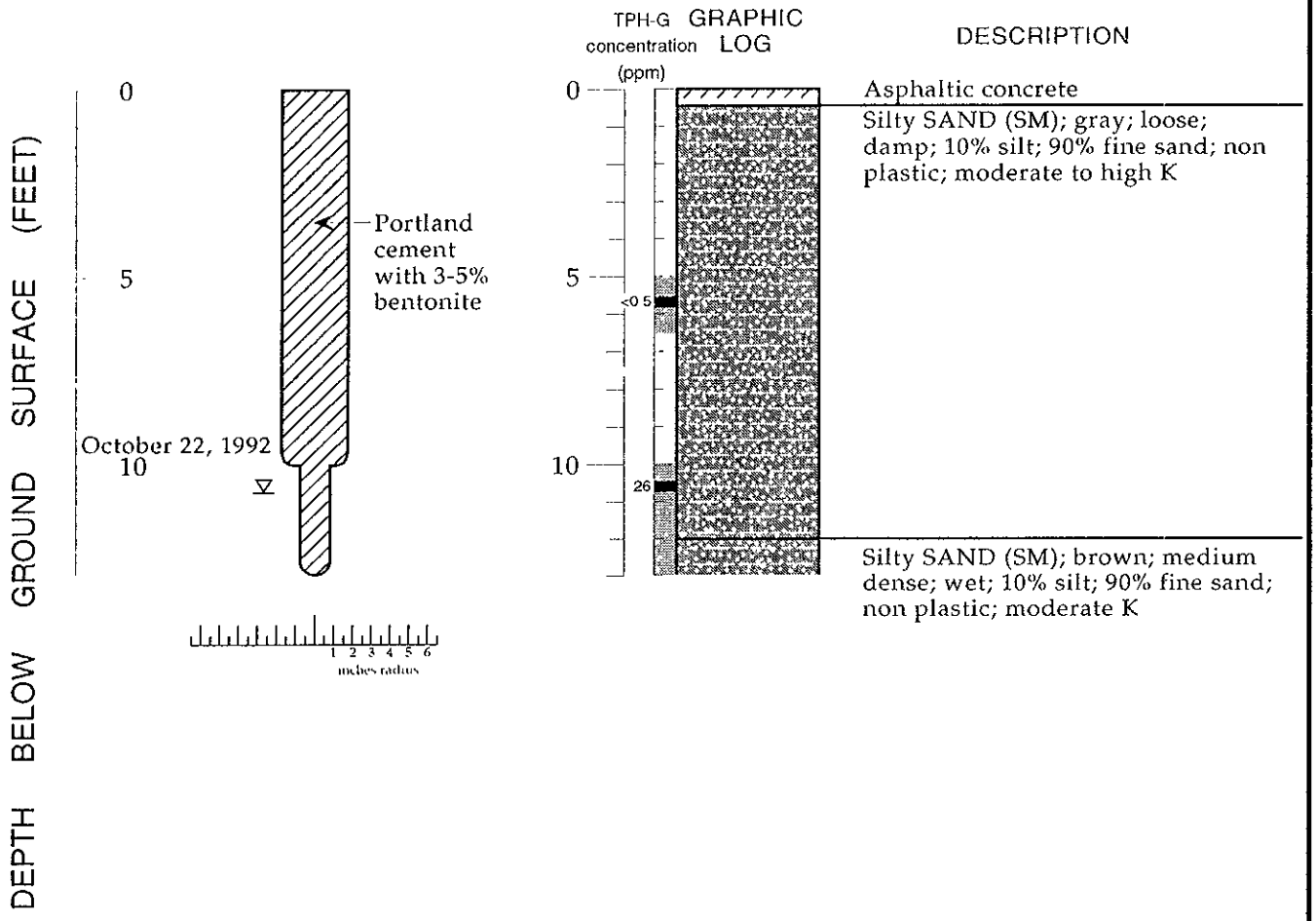
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- ——..... Contact (dotted where approximate)
- —?—?— Uncertain contact
- //////// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Joyce E. Fremstad
Supervisor: N. Scott MacLeod
Drilling Company: Soils Exploration Drilling, Vacaville, CA
License Number: C57-582696
Driller: Mike Duffy & John Sousa
Drilling Method: Cuttingless system
Date Drilled: October 22, 1992
Type of Sampler: Split barrel (2" ID)
TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log and Well Construction Details - Boring BH-E - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

12/22/92

BORING BH-F



EXPLANATION

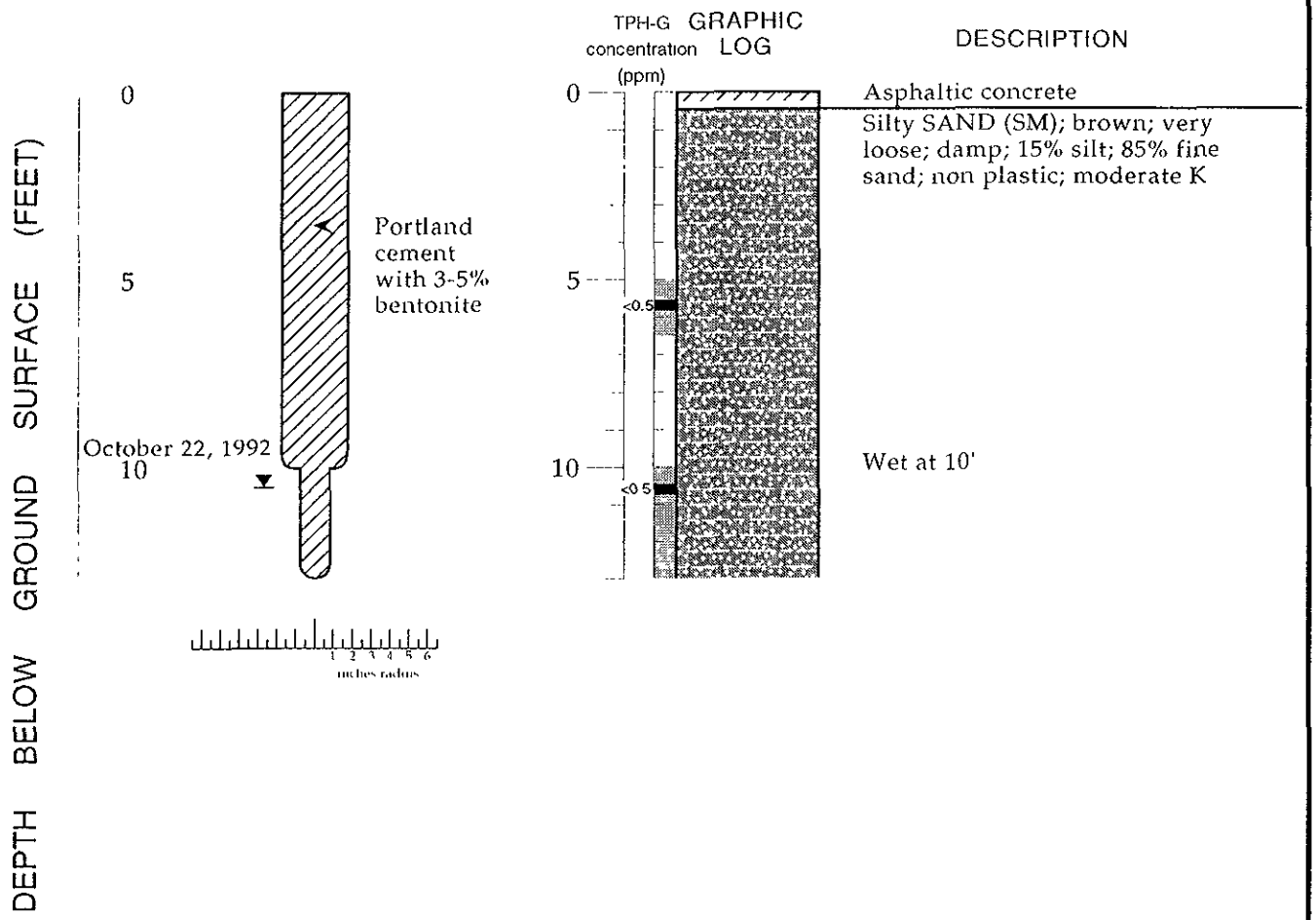
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approximate)
- Uncertain contact
- Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Joyce E. Fremstad
Supervisor: N. Scott MacLeod
Drilling Company: Soils Exploration Drilling, Vacaville, CA
License Number: C57-582696
Driller: Mike Duffy & John Sousa
Drilling Method: Cuttingless system
Date Drilled: October 22, 1992
Type of Sampler: Split barrel (2" ID)
TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log and Well Construction Details - Boring BH-F - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

12/22/92

BORING BH-G



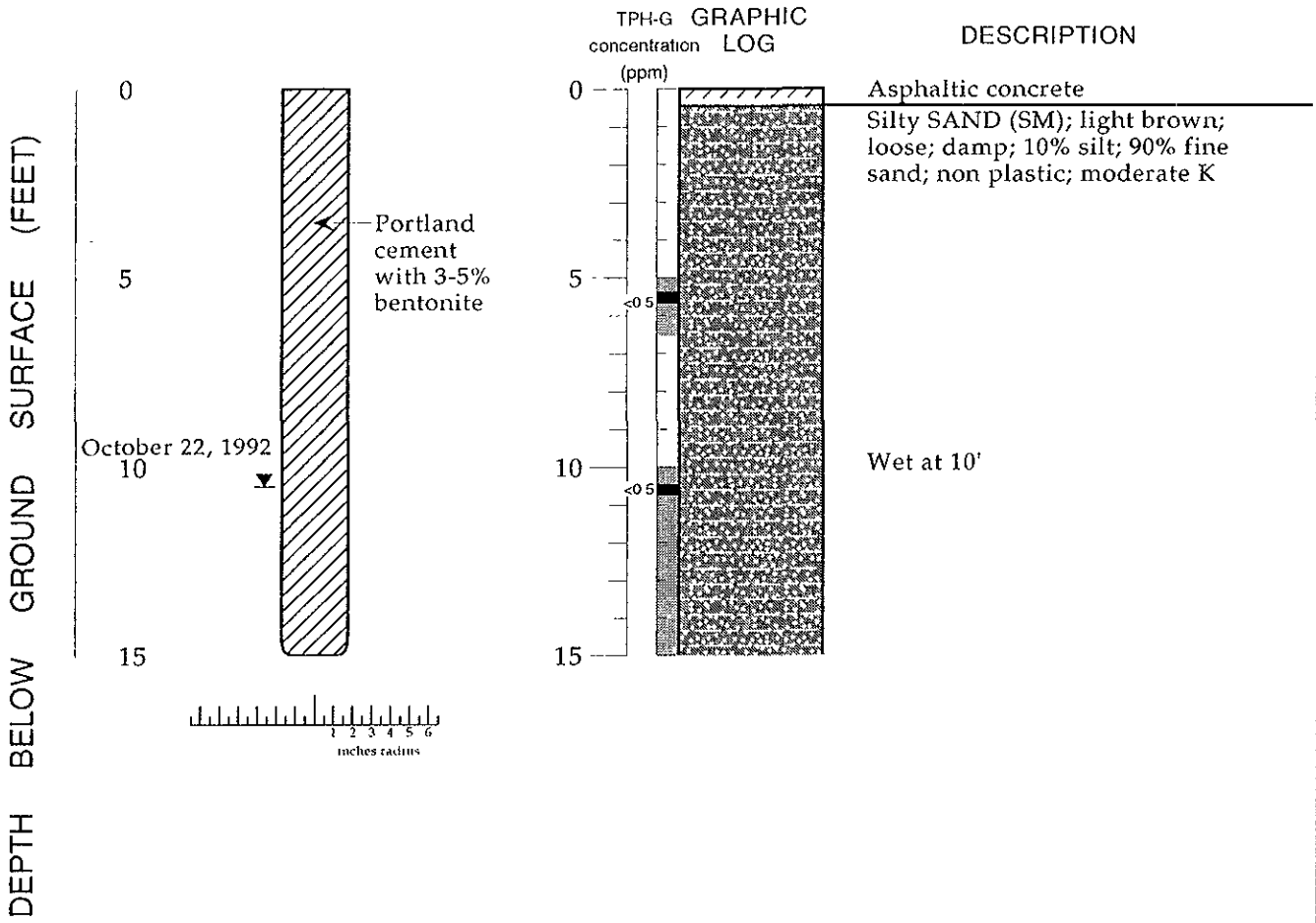
EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approximate)
- Uncertain contact
- Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Joyce E. Fremstad
Supervisor: N. Scott MacLeod
Drilling Company: Soils Exploration Drilling, Vacaville, CA
License Number: C57-582696
Driller: Mike Duffy & John Sousa
Drilling Method: Solid flight auger
Date Drilled: October 22, 1992
Type of Sampler: Split barrel (2" ID)
TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log and Well Construction Details - Boring BH-G - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

BORING BH-H



EXPLANATION

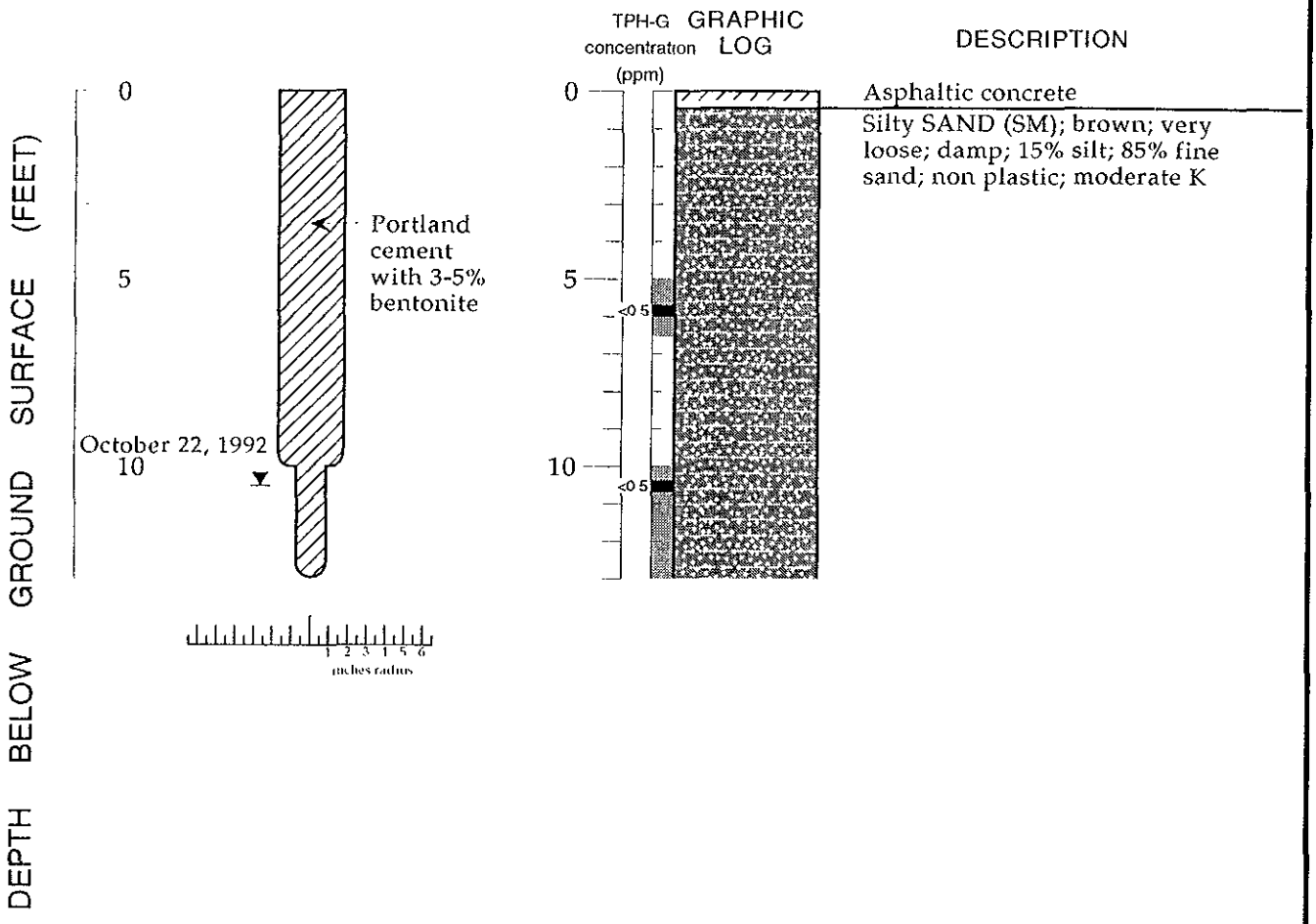
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- ——..... Contact (dotted where approximate)
- —?—?— Uncertain contact
- //////// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Joyce E. Fremstad
Supervisor: N. Scott MacLeod
Drilling Company: Soils Exploration Drilling, Vacaville, CA
License Number: C57-582696
Driller: Mike Duffy & John Sousa
Drilling Method: Solid flight auguer
Date Drilled: October 22, 1992
Type of Sampler: Split barrel (2" ID)
TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log and Well Construction Details - Boring BH-H - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

12/22/92

BORING BH-1



EXPLANATION

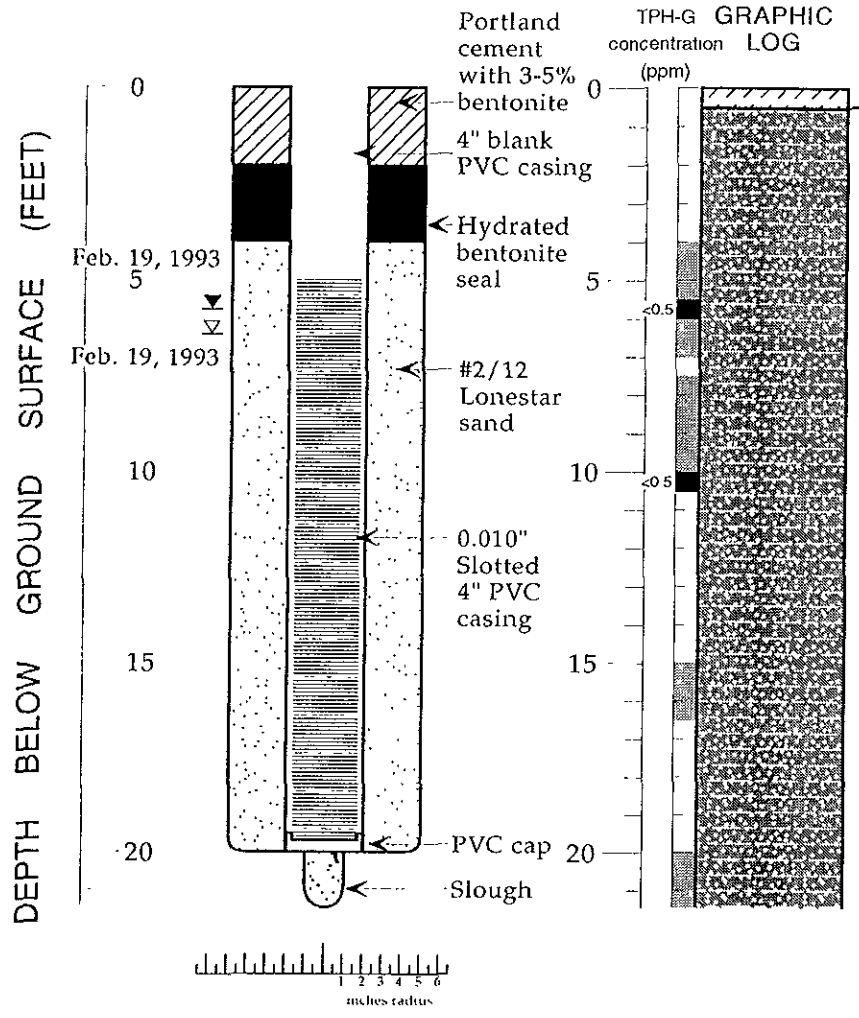
- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approximate)
- Uncertain contact
- Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Joyce E. Fremstad
Supervisor: N. Scott MacLeod
Drilling Company: Soils Exploration Drilling, Vacaville, CA
License Number: C57-582696
Driller: Mike Duffy & John Sousa
Drilling Method: Solid flight auger
Date Drilled: October 22, 1992
Type of Sampler: Split barrel (2" ID)
TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log and Well Construction Details - Boring BH-1 - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

12/22/92

WELL MW-3 (BH-J)



DESCRIPTION

Asphaltic concrete

Silty SAND (SM); dark brown; soft; damp; 5% clay; 25% silt; 70% fine sand with clasts up to 0.5"; moderate K

Light brown; very loose; moist; 10% silt; 90% medium sand; moderate to high K at 4.2'

Wet at 5.5'

Medium dense; 5% silt; 95% medium grain sand; high K at 10.0'

Orange and gray mottling; medium dense at 15.0'

Gray mottling; medium dense at 20.0'

EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- ——····· Contact (dotted where approximate)
- —?—?— Uncertain contact
- //////// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Joyce Fremstad
Supervisor: N. Scott MacLeod; RG 5747
Drilling Company: Soils Exploration Services, Vacaville, CA
License Number: Lic. #C57-582696
Driller: Mike Duffy
Drilling Method: Hollow-stem auger
Date Drilled: February 19, 1993
Well Head Completion: 4" locking well-plug, traffic-rated vault
Type of Sampler: Split barrel (2" ID)
Ground Surface Elevation: feet above mean sea level
TPH-G: Total petroleum hydrocarbon as gasoline in soil by modified EPA Method 8015

Boring Log and Well Construction Details - Well MW-3 (BH-J) - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

ATTACHMENT C

ANALYTIC REPORT FOR SOIL

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

MR. SCOTT MCCLOUD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210186
Date Received : 10/13/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9210186- 1	BH-C-5.5
9210186- 2	BH-C-11.0
9210186- 3	BH-D-5.5
9210186- 4	BH-D-10.5
9210186- 5	BH-C
9210186- 6	BH-D

This report consists of 26 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D.
Laboratory Director

10-27-92
Date

ANAMETRIX REPORT DESCRIPTION
GC

Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anametrix ID number.

Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "*", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

Qualifiers

Anametrix uses several data qualifiers (Q) in it's report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.

B - Indicates that the compound was detected in the associated method blank.

J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.

E - Indicates that the amount reported exceeded the linear range of the instrument calibration.

D - Indicates that the compound was detected in an analysis performed at a secondary dilution.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

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

MR. SCOTT MCCLOUD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210186
Date Received : 10/13/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9210186- 1	BH-C-5.5	SOIL	10/12/92	8010
9210186- 2	BH-C-11.0	SOIL	10/12/92	8010
9210186- 3	BH-D-5.5	SOIL	10/12/92	8010
9210186- 4	BH-D-10.5	SOIL	10/12/92	8010
9210186- 5	BH-C	WATER	10/12/92	8010
9210186- 6	BH-D	WATER	10/12/92	8010

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

MR. SCOTT MCCLOUD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210186
Date Received : 10/13/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- The amount of methylene chloride reported in sample BH-C-11.0 is within normal laboratory background levels.
- Samples BH-D-5.5, BH-D-10.5, and BH-D were analyzed at a dilution due to interfering hydrocarbon peaks.

C Cunningham 10/27/92
Department Supervisor Date

Kamel G. Kamel 10/27/92
Chemist Date

DESCRIPTIONS FOR SPECIFIC COMPOUNDS ANALYZED
EPA METHOD 601/8010

CAS #	COMPOUND NAME	ABBREVIATED NAME
74-87-3	Chloromethane	Chloromethane
74-83-9	Bromomethane	Bromoethane
75-71-8	Dichlorodifluoromethane	Freon 12
75-01-4	Vinyl Chloride	Vinyl Chloride
75-00-3	Chloroethane	Chloroethane
75-09-2	Methylene Chloride	Methylene Chlor
75-69-4	Trichlrofluoromethane	Freon 11
75-35-4	1,1-Dichloroethene	1,1-DCE
75-34-3	1,1-Dichloroethane	1,1-DCA
156-59-2	Cis-1,2-Dichloroethene	Cis-1,2-DCE
156-60-5	Trans-1,2-Dichloroethene	Trans-1,2-DCE
67-66-3	Chloroform	Chloroform
76-13-1	Trichlorotrifluoroethane	Freon 113
107-06-2	1,2-Dichloroethane	1,2-DCA
71-55-6	1,1,1-Trichloroethane	1,1,1-TCA
56-23-5	Carbon Tetrachloride	Carbon Tet
75-27-4	Bromodichloromethane	BromodichloroMe
78-87-5	1,2-Dichloropropane	1,2-DCPA
10061-02-6	Trans-1,3-Dichloropropene	Trans-1,3-DCPE
79-01-6	Trichloroethene	TCE
124-48-1	Dibromochloromethane	DibromochloroMe
79-00-5	1,1,2-Trichloroethane	1,1,2-TCA
10061-01-5	Cis-1,3-Dichloropropene	Cis-1,3-DCPE
110-75-8	2-Chloroethylvinylether	Chloroethylvinl
75-25-2	Bromoform	Bromoform
127-18-4	Tetrachloroethene	PCE
79-34-5	1,1,2,2-Tetrachloroethane	PCA
108-90-7	Chlorobenzene	Chlorobenzene
95-50-1	1,2-Dichlorobenzene	1,2-DCB
541-73-1	1,3-Dichlorobenzene	1,3-DCB
106-46-7	1,4-Dichlorobenzene	1,4-DCB
352-33-0	p-Chlorofluorobenzene	Chlorofluoroben

mh/3426 - 10MH

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403 BH-C-5.5
Matrix : SOIL
Date sampled : 10/12/92
Date analyzed: 10/26/92
Dilution : NONE

Anametrix I.D. : 9210186-01
Analyst : KK
Supervisor : CP
Date released : 10/27/92
Instrument ID : HP10

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	74%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-0072-0403 BH-C-11.0	Anametrix I.D.	: 9210186-02
Matrix	: SOIL	Analyst	: CP KK
Date sampled	: 10/12/92	Supervisor	:
Date analyzed	: 10/26/92	Date released	: 10/27/92
Dilution	: NONE	Instrument ID	: HP10

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	0.0017
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	57%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403 BH-D-5.5
Matrix : SOIL
Date sampled : 10/12/92
Date analyzed: 10/22/92
Dilution : 100

Anametrix I.D. : 9210186-03
Analyst : KK
Supervisor : CP
Date released : 10/27/92
Instrument ID : HP14

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.1	ND
74-83-9	* Bromomethane	0.05	ND
75-71-8	* Dichlorodifluoromethane	0.1	ND
75-01-4	* Vinyl Chloride	0.05	ND
75-00-3	* Chloroethane	0.05	ND
75-09-2	* Methylene Chloride	0.05	ND
75-69-4	* Trichlorofluoromethane	0.05	ND
75-35-4	* 1,1-Dichloroethene	0.05	ND
75-34-3	* 1,1-Dichloroethane	0.05	ND
156-59-2	# Cis-1,2-Dichloroethene	0.05	ND
156-60-5	* Trans-1,2-Dichloroethene	0.05	ND
67-66-3	* Chloroform	0.05	ND
76-13-1	# Trichlorotrifluoroethane	0.05	ND
107-06-2	* 1,2-Dichloroethane	0.05	ND
71-55-6	* 1,1,1-Trichloroethane	0.05	ND
56-23-5	* Carbon Tetrachloride	0.05	ND
75-27-4	* Bromodichloromethane	0.05	ND
78-87-5	* 1,2-Dichloropropane	0.05	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.05	ND
79-01-6	* Trichloroethene	0.05	ND
124-48-1	* Dibromochloromethane	0.05	ND
79-00-5	* 1,1,2-Trichloroethane	0.05	ND
10061-01-5	* cis-1,3-Dichloropropene	0.05	ND
110-75-8	* 2-Chloroethylvinylether	0.1	ND
75-25-2	* Bromoform	0.05	ND
127-18-4	* Tetrachloroethene	0.05	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.05	ND
108-90-7	* Chlorobenzene	0.05	ND
95-50-1	* 1,2-Dichlorobenzene	0.1	ND
541-73-1	* 1,3-Dichlorobenzene	0.1	ND
106-46-7	* 1,4-Dichlorobenzene	0.1	ND
	% Surrogate Recovery	51-136%	95%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-0072-0403 BH-D-10.5	Anametrix I.D.	: 9210186-04
Matrix	: SOIL	Analyst	: KK
Date sampled	: 10/12/92	Supervisor	:
Date analyzed	: 10/26/92	Date released	: 10/27/92
Dilution	: 5	Instrument ID	: HP10

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.005	ND
74-83-9	* Bromomethane	0.0025	ND
75-71-8	* Dichlorodifluoromethane	0.005	ND
75-01-4	* Vinyl Chloride	0.0025	ND
75-00-3	* Chloroethane	0.0025	ND
75-09-2	* Methylene Chloride	0.0025	ND
75-69-4	* Trichlorofluoromethane	0.0025	ND
75-35-4	* 1,1-Dichloroethene	0.0025	ND
75-34-3	* 1,1-Dichloroethane	0.0025	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0025	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0025	ND
67-66-3	* Chloroform	0.0025	ND
76-13-1	# Trichlorotrifluoroethane	0.0025	ND
107-06-2	* 1,2-Dichloroethane	0.0025	ND
71-55-6	* 1,1,1-Trichloroethane	0.0025	ND
56-23-5	* Carbon Tetrachloride	0.0025	ND
75-27-4	* Bromodichloromethane	0.0025	ND
78-87-5	* 1,2-Dichloropropane	0.0025	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0025	ND
79-01-6	* Trichloroethene	0.0025	ND
124-48-1	* Dibromochloromethane	0.0025	ND
79-00-5	* 1,1,2-Trichloroethane	0.0025	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0025	ND
110-75-8	* 2-Chloroethylvinylether	0.005	ND
75-25-2	* Bromoform	0.0025	ND
127-18-4	* Tetrachloroethene	0.0025	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0025	ND
108-90-7	* Chlorobenzene	0.0025	ND
95-50-1	* 1,2-Dichlorobenzene	0.005	ND
541-73-1	* 1,3-Dichlorobenzene	0.005	ND
106-46-7	* 1,4-Dichlorobenzene	0.005	ND
	% Surrogate Recovery	51-136%	64%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: VBLANK	Anametrix I.D.	: 10B1026H01
Matrix	: SOIL	Analyst	: KK
Date sampled	: N/A	Supervisor	: CP
Date analyzed	: 10/26/92	Date released	: 10/27/92
Dilution	: NONE	Instrument ID	: HP10

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	90%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

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

MR. SCOTT MCCLOUD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210186
Date Received : 10/13/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9210186- 1	BH-C-5.5	SOIL	10/12/92	TPHg/BTEX
9210186- 2	BH-C-11.0	SOIL	10/12/92	TPHg/BTEX
9210186- 3	BH-D-5.5	SOIL	10/12/92	TPHg/BTEX
9210186- 4	BH-D-10.5	SOIL	10/12/92	TPHg/BTEX
9210186- 5	BH-C	WATER	10/12/92	TPHg/BTEX
9210186- 6	BH-D	WATER	10/12/92	TPHg/BTEX

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

MR. SCOTT MCCLOUD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210186
Date Received : 10/13/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Balmes 10/27/92
Department Supervisor Date

Peggie Davison 10/27/92
Chemist Date

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

Anametrix W.O.: 9210186
Matrix : SOIL
Date Sampled : 10/12/92

Project Number : 204-0072-0403
Date Released : 10/27/92

	Reporting Limit	Sample I.D.# BH-C -5.5	Sample I.D.# BH-C -11.0	Sample I.D.# BH-D -5.5	Sample I.D.# BH-D -10.5	Sample I.D.# BO1501E1
COMPOUNDS	(mg/Kg)	-01	-02	-03	-04	BLANK
Benzene	0.005	ND	ND	ND	ND	ND
Toluene	0.005	ND	ND	ND	ND	ND
Ethylbenzene	0.005	ND	ND	1.8	0.007	ND
Total Xylenes	0.005	ND	ND	5.4	0.032	ND
TPH as Gasoline	0.5	ND	ND	100	ND	ND
% Surrogate Recovery		94%	121%	97%	92%	116%
Instrument I.D.		HP8	HP8	HP8	HP8	HP8
Date Analyzed		10/15/92	10/15/92	10/15/92	10/20/92	10/15/92
RLMF		1	1	100	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Reggie Davison 10/27/92
Analyst Date

Cheryl Bolmer 10/27/92
Supervisor Date

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

Anametrix W.O.: 9210186
Matrix : SOIL
Date Sampled : N/A

Project Number : 204-0072-0403
Date Released : 10/27/92

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# BO2001E1 BLANK
Benzene	0.005	ND
Toluene	0.005	ND
Ethylbenzene	0.005	ND
Total Xylenes	0.005	ND
TPH as Gasoline	0.5	ND
% Surrogate Recovery		107%
Instrument I.D.		HP8
Date Analyzed		10/20/92
RLMF		1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Reggie Davison 10/27/92
Analyst Date

Cheryl Balmer 10/27/92
Supervisor Date

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

Sample I.D.	: 204-0072-0403 BH-C-11.0	Anametrix I.D.	: 9210186-02
Matrix	: SOIL	Analyst	: RD
Date Sampled	: 10/12/92	Supervisor	: CB
Date Analyzed	: 10/15/92	Date Released	: 10/27/92
		Instrument ID	: HP8

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS
GASOLINE	0.50	0.00	0.70	140%	0.66	132%	-6%	48-145
P-BFB				125%		114%		53-147

* Limits established by Anametrix, Inc.

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

MR. SCOTT MCCLOUD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210186
Date Received : 10/13/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9210186- 1	BH-C-5.5	SOIL	10/12/92	5520EF
9210186- 2	BH-C-11.0	SOIL	10/12/92	5520EF
9210186- 3	BH-D-5.5	SOIL	10/12/92	5520EF
9210186- 4	BH-D-10.5	SOIL	10/12/92	5520EF

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

MR. SCOTT MCCLOUD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210186
Date Received : 10/13/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Department Supervisor — Date: 10.27.92

Chemist — Date: 10-27-92

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
ANAMETRIX, INC. (408) 432-8192

Project # : 204-0072-0403
Matrix : SOIL
Date sampled : 10/12/92
Date ext. TOG : 10/19/92
Date anl. TOG : 10/19/92

Anametrix I.D. : 9210186
Analyst : APP
Supervisor : CeB
Date released : 10/27/92

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9210186-01	BH-C-5.5	30	ND
9210186-02	BH-C-11.0	30	ND
9210186-03	BH-D-5.5	30	ND
9210186-04	BH-D-10.5	30	ND
GSBL101992	METHOD BLANK	30	ND

ND - Not detected at or above the practical quantitation limit for the method.
TOG - Total Oil & Grease is determined by Standard Method 5520EF.

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

TOTAL OIL AND GREASE MATRIX SPIKE REPORT
STANDARD METHOD 5520EF
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-0072-0403 BH-D-10.5	Anametrix I.D.	: 9210186-04
Matrix	: SOIL	Analyst	: APP.
Date sampled	: 10/12/92	Supervisor	: CJB
Date extracted	: 10/19/92	Date Released	: 10/27/92
Date analyzed	: 10/19/92		

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	MS AMT (mg/Kg)	REC MS	MD AMT (mg/Kg)	REC MD	RPD	% REC LIMITS
Motor Oil	300	0	310	103%	300	100%	-3%	48-114%

* Quality control limits established by Anametrix, Inc.

TOTAL OIL AND GREASE LAB CONTROL SAMPLE REPORT
STANDARD METHOD 5520EF
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: LCSS1019
Matrix	: SOIL	Analyst	: APC
Date sampled	: N/A	Supervisor	: CEB
Date extracted	: 10/19/92	Date Released	: 10/27/92
Date analyzed	: 10/19/92		

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	270	90%	68-113%

Quality control established by Anametrix, Inc.

ANAMETRIX INC
Environmental & Analytical Chemistry

Part of INCHCAPE ENVIRONMENTAL

REPORT

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210406
Date Received : 10/23/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9210406- 1	BH-E-5.5
9210406- 2	BH-E-10.5
9210406- 3	BH-E-13.5
9210406- 4	BH-E
9210406- 5	BH-G-5.5
9210406- 6	BH-G-10.0
9210406- 7	BH-F-5.5
9210406- 8	BH-F-10.5
9210406- 9	BH-F
9210406-10	BH-G
9210406-11	BH-H-5.5
9210406-12	BH-H-10.0
9210406-13	BH-H
9210406-14	BH-I-5.5
9210406-15	BH-I-10.5
9210406-16	BH-I

This report consists of 46 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D.
Laboratory Director

11-10-92
Date

ANAMETRIX REPORT DESCRIPTION
GC

Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anametrix ID number.

Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "*", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

Qualifiers

Anametrix uses several data qualifiers (Q) in it's report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.

B - Indicates that the compound was detected in the associated method blank.

J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.

E - Indicates that the amount reported exceeded the linear range of the instrument calibration.

D - Indicates that the compound was detected in an analysis performed at a secondary dilution.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210406
Date Received : 10/23/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9210406- 1	BH-E-5.5	SOIL	10/22/92	8010
9210406- 2	BH-E-10.5	SOIL	10/22/92	8010
9210406- 3	BH-E-13.5	SOIL	10/22/92	8010
9210406- 4	BH-E	WATER	10/22/92	8010
9210406- 5	BH-G-5.5	SOIL	10/22/92	8010
9210406- 6	BH-G-10.0	SOIL	10/22/92	8010
9210406- 7	BH-F-5.5	SOIL	10/22/92	8010
9210406- 8	BH-F-10.5	SOIL	10/22/92	8010
9210406- 9	BH-F	WATER	10/22/92	8010
9210406-10	BH-G	WATER	10/22/92	8010
9210406-11	BH-H-5.5	SOIL	10/22/92	8010
9210406-12	BH-H-10.0	SOIL	10/22/92	8010
9210406-13	BH-H	WATER	10/22/92	8010
9210406-14	BH-I-5.5	SOIL	10/22/92	8010
9210406-15	BH-I-10.5	SOIL	10/22/92	8010
9210406-16	BH-I	WATER	10/22/92	8010

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

MS. JOYCE FREMSTAD
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5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210406
Date Received : 10/23/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- Samples BH-E-5.5, BH-E-10.5, BH-E, BH-F-10.5, BH-5, and BH-H were analyzed at a dilution due to interfering hydrocarbon peaks.
- The amount of methylene chloride reported in samples BH-E-5.5 and BH-F-10.5 is artificially magnified by the dilution factor. However, the amount of methylene chloride in the diluted sample is within normal laboratory background levels.

Corinne Kham 11/6/92
Department Supervisor Date

Kamal C. Kamal 11/5/92
Chemist Date

DESCRIPTIONS FOR SPECIFIC COMPOUNDS ANALYZED
EPA METHOD 601/8010

CAS #	COMPOUND NAME	ABBREVIATED NAME
74-87-3	Chloromethane	Chloromethane
74-83-9	Bromomethane	Bromoethane
75-71-8	Dichlorodifluoromethane	Freon 12
75-01-4	Vinyl Chloride	Vinyl Chloride
75-00-3	Chloroethane	Chloroethane
75-09-2	Methylene Chloride	Methylene Chlor
75-69-4	Trichlrofluoromethane	Freon 11
75-35-4	1,1-Dichloroethene	1,1-DCE
75-34-3	1,1-Dichloroethane	1,1-DCA
156-59-2	Cis-1,2-Dichloroethene	Cis-1,2-DCE
156-60-5	Trans-1,2-Dichloroethene	Trans-1,2-DCE
67-66-3	Chloroform	Chloroform
76-13-1	Trichlorotrifluoroethane	Freon 113
107-06-2	1,2-Dichloroethane	1,2-DCA
71-55-6	1,1,1-Trichloroethane	1,1,1-TCA
56-23-5	Carbon Tetrachloride	Carbon Tet
75-27-4	Bromodichloromethane	BromodichloroMe
78-87-5	1,2-Dichloropropane	1,2-DCPA
10061-02-6	Trans-1,3-Dichloropropene	Trans-1,3-DCPE
79-01-6	Trichloroethene	TCE
124-48-1	Dibromochloromethane	DibromochloroMe
79-00-5	1,1,2-Trichloroethane	1,1,2-TCA
10061-01-5	Cis-1,3-Dichloropropene	Cis-1,3-DCPE
110-75-8	2-Chloroethylvinylether	Chloroethylvinl
75-25-2	Bromoform	Bromoform
127-18-4	Tetrachloroethene	PCE
79-34-5	1,1,2,2-Tetrachloroethane	PCA
108-90-7	Chlorobenzene	Chlorobenzene
95-50-1	1,2-Dichlorobenzene	1,2-DCB
541-73-1	1,3-Dichlorobenzene	1,3-DCB
106-46-7	1,4-Dichlorobenzene	1,4-DCB
352-33-0	p-Chlorofluorobenzene	Chlorofluoroben

mh/3426 - 10MH

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-0072-0403 BH-E-5.5	Anametrix I.D.	: 9210406-01
Matrix	: SOIL	Analyst	: KK
Date sampled	: 10/22/92	Supervisor	:
Date analyzed	: 11/05/92	Date released	: 11/06/92
Dilution	: 50	Instrument ID	: HP15

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.05	ND
74-83-9	* Bromomethane	0.025	ND
75-71-8	* Dichlorodifluoromethane	0.05	ND
75-01-4	* Vinyl Chloride	0.025	ND
75-00-3	* Chloroethane	0.025	ND
75-09-2	* Methylene Chloride	0.025	0.072
75-69-4	* Trichlorofluoromethane	0.025	ND
75-35-4	* 1,1-Dichloroethene	0.025	ND
75-34-3	* 1,1-Dichloroethane	0.025	ND
156-59-2	# Cis-1,2-Dichloroethene	0.025	ND
156-60-5	* Trans-1,2-Dichloroethene	0.025	ND
67-66-3	* Chloroform	0.025	ND
76-13-1	# Trichlorotrifluoroethane	0.025	ND
107-06-2	* 1,2-Dichloroethane	0.025	ND
71-55-6	* 1,1,1-Trichloroethane	0.025	ND
56-23-5	* Carbon Tetrachloride	0.025	ND
75-27-4	* Bromodichloromethane	0.025	ND
78-87-5	* 1,2-Dichloropropane	0.025	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.025	ND
79-01-6	* Trichloroethene	0.025	ND
124-48-1	* Dibromochloromethane	0.025	ND
79-00-5	* 1,1,2-Trichloroethane	0.025	ND
10061-01-5	* cis-1,3-Dichloropropene	0.025	ND
110-75-8	* 2-Chloroethylvinylether	0.05	ND
75-25-2	* Bromoform	0.025	ND
127-18-4	* Tetrachloroethene	0.025	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.025	ND
108-90-7	* Chlorobenzene	0.025	ND
95-50-1	* 1,2-Dichlorobenzene	0.05	ND
541-73-1	* 1,3-Dichlorobenzene	0.05	ND
106-46-7	* 1,4-Dichlorobenzene	0.05	ND
	% Surrogate Recovery	51-136%	96%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403 BH-E-10.5
Matrix : SOIL
Date sampled : 10/22/92
Date analyzed: 11/05/92
Dilution : 200

Anametrix I.D. : 9210406-02
Analyst : KK
Supervisor : CP
Date released : 11/06/92
Instrument ID : HP15

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.2	ND
74-83-9	* Bromomethane	0.1	ND
75-71-8	* Dichlorodifluoromethane	0.2	ND
75-01-4	* Vinyl Chloride	0.1	ND
75-00-3	* Chloroethane	0.1	ND
75-09-2	* Methylene Chloride	0.1	ND
75-69-4	* Trichlorofluoromethane	0.1	ND
75-35-4	* 1,1-Dichloroethene	0.1	ND
75-34-3	* 1,1-Dichloroethane	0.1	ND
156-59-2	# Cis-1,2-Dichloroethene	0.1	ND
156-60-5	* Trans-1,2-Dichloroethene	0.1	ND
67-66-3	* Chloroform	0.1	ND
76-13-1	# Trichlorotrifluoroethane	0.1	ND
107-06-2	* 1,2-Dichloroethane	0.1	ND
71-55-6	* 1,1,1-Trichloroethane	0.1	ND
56-23-5	* Carbon Tetrachloride	0.1	ND
75-27-4	* Bromodichloromethane	0.1	ND
78-87-5	* 1,2-Dichloropropane	0.1	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.1	ND
79-01-6	* Trichloroethene	0.1	ND
124-48-1	* Dibromochloromethane	0.1	ND
79-00-5	* 1,1,2-Trichloroethane	0.1	ND
10061-01-5	* cis-1,3-Dichloropropene	0.1	ND
110-75-8	* 2-Chloroethylvinylether	0.2	ND
75-25-2	* Bromoform	0.1	ND
127-18-4	* Tetrachloroethene	0.1	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.1	ND
108-90-7	* Chlorobenzene	0.1	ND
95-50-1	* 1,2-Dichlorobenzene	0.2	ND
541-73-1	* 1,3-Dichlorobenzene	0.2	ND
106-46-7	* 1,4-Dichlorobenzene	0.2	ND
	% Surrogate Recovery	51-136%	90%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-0072-0403 BH-E-13.5	Anametrix I.D.	: 9210406-03
Matrix	: SOIL	Analyst	: KK
Date sampled	: 10/22/92	Supervisor	: CP
Date analyzed	: 11/04/92	Date released	: 11/06/92
Dilution	: NONE	Instrument ID	: HP10

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	56%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403 BH-G-5.5
Matrix : SOIL
Date sampled : 10/22/92
Date analyzed: 11/04/92
Dilution : NONE

Anametrix I.D. : 9210406-05
Analyst : KK
Supervisor : CP
Date released : 11/06/92
Instrument ID : HP10

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	40%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-0072-0403 BH-G-10.0	Anametrix I.D.	: 9210406-06
Matrix	: SOIL	Analyst	: KK
Date sampled	: 10/22/92	Supervisor	:
Date analyzed	: 11/04/92	Date released	: 11/06/92
Dilution	: NONE	Instrument ID	: HP10

CAS #	Compound Name	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	74%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403 BH-F-5.5
Matrix : SOIL
Date sampled : 10/22/92
Date analyzed: 11/04/92
Dilution : NONE

Anametrix I.D. : 9210406-07
Analyst : KK
Supervisor : CP
Date released : 11/06/92
Instrument ID : HP10

CAS #	Compound Name	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	94%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-0072-0403 BH-F-10.5	Anametrix I.D.	: 9210406-08
Matrix	: SOIL	Analyst	: KK
Date sampled	: 10/22/92	Supervisor	: CP
Date analyzed	: 11/05/92	Date released	: 11/06/92
Dilution	: 50	Instrument ID	: HP15

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.05	ND
74-83-9	* Bromomethane	0.025	ND
75-71-8	* Dichlorodifluoromethane	0.05	ND
75-01-4	* Vinyl Chloride	0.025	ND
75-00-3	* Chloroethane	0.025	ND
75-09-2	* Methylene Chloride	0.025	0.070
75-69-4	* Trichlorofluoromethane	0.025	ND
75-35-4	* 1,1-Dichloroethene	0.025	ND
75-34-3	* 1,1-Dichloroethane	0.025	ND
156-59-2	# Cis-1,2-Dichloroethene	0.025	ND
156-60-5	* Trans-1,2-Dichloroethene	0.025	ND
67-66-3	* Chloroform	0.025	ND
76-13-1	# Trichlorotrifluoroethane	0.025	ND
107-06-2	* 1,2-Dichloroethane	0.025	ND
71-55-6	* 1,1,1-Trichloroethane	0.025	ND
56-23-5	* Carbon Tetrachloride	0.025	ND
75-27-4	* Bromodichloromethane	0.025	ND
78-87-5	* 1,2-Dichloropropane	0.025	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.025	ND
79-01-6	* Trichloroethene	0.025	ND
124-48-1	* Dibromochloromethane	0.025	ND
79-00-5	* 1,1,2-Trichloroethane	0.025	ND
10061-01-5	* cis-1,3-Dichloropropene	0.025	ND
110-75-8	* 2-Chloroethylvinylether	0.05	ND
75-25-2	* Bromoform	0.025	ND
127-18-4	* Tetrachloroethene	0.025	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.025	ND
108-90-7	* Chlorobenzene	0.025	ND
95-50-1	* 1,2-Dichlorobenzene	0.05	ND
541-73-1	* 1,3-Dichlorobenzene	0.05	ND
106-46-7	* 1,4-Dichlorobenzene	0.05	ND
	% Surrogate Recovery	51-136%	93%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403 BH-H-5.5
Matrix : SOIL
Date sampled : 10/22/92
Date analyzed: 11/05/92
Dilution : NONE

Anametrix I.D. : 9210406-11
Analyst :
Supervisor : CP KK
Date released : 11/06/92
Instrument ID : HP10

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	72%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403 BH-H-10.0
Matrix : SOIL
Date sampled : 10/22/92
Date analyzed: 11/05/92
Dilution : NONE

Anametrix I.D. : 9210406-12
Analyst : KK
Supervisor : CP
Date released : 11/06/92
Instrument ID : HP10

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	62%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403 BH-I-5.5
Matrix : SOIL
Date sampled : 10/22/92
Date analyzed: 11/05/92
Dilution : NONE

Anametrix I.D. : 9210406-14
Analyst : KK
Supervisor : CP
Date released : 11/06/92
Instrument ID : HP10

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	62%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-0072-0403 BH-I-10.5	Anametrix I.D.	: 9210406-15
Matrix	: SOIL	Analyst	: KK
Date sampled	: 10/22/92	Supervisor	: SP
Date analyzed	: 11/05/92	Date released	: 11/06/92
Dilution	: NONE	Instrument ID	: HP10

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	65%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : VBLANK
Matrix : SOIL
Date sampled : N/A
Date analyzed: 11/05/92
Dilution : NONE

Anametrix I.D. : 15B1105H01
Analyst : CP KK
Supervisor :
Date released : 11/06/92
Instrument ID : HP15

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	93%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : VBLANK
Matrix : SOIL
Date sampled : N/A
Date analyzed: 11/05/92
Dilution : NONE

Anametrix I.D. : 10B1105H01
Analyst : kk
Supervisor : CJ
Date released : 11/06/92
Instrument ID : HP10

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	90%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : VBLANK
Matrix : SOIL
Date sampled : N/A
Date analyzed: 11/05/92
Dilution : NONE

Anametrix I.D. : 10B1105H01
Analyst :
Supervisor : CP KK
Date released : 11/06/92
Instrument ID : HP10

CAS #	Compound Name	Reporting Limit (mg/KG)	Amount Found (mg/KG)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	84%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210406
Date Received : 10/23/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9210406- 1	BH-E-5.5	SOIL	10/22/92	TPHg/BTEX
9210406- 2	BH-E-10.5	SOIL	10/22/92	TPHg/BTEX
9210406- 3	BH-E-13.5	SOIL	10/22/92	TPHg/BTEX
9210406- 4	BH-E	WATER	10/22/92	TPHg/BTEX
9210406- 5	BH-G-5.5	SOIL	10/22/92	TPHg/BTEX
9210406- 6	BH-G-10.0	SOIL	10/22/92	TPHg/BTEX
9210406- 7	BH-F-5.5	SOIL	10/22/92	TPHg/BTEX
9210406- 8	BH-F-10.5	SOIL	10/22/92	TPHg/BTEX
9210406- 9	BH-F	WATER	10/22/92	TPHg/BTEX
9210406-10	BH-G	WATER	10/22/92	TPHg/BTEX
9210406-11	BH-H-5.5	SOIL	10/22/92	TPHg/BTEX
9210406-12	BH-H-10.0	SOIL	10/22/92	TPHg/BTEX
9210406-13	BH-H	WATER	10/22/92	TPHg/BTEX
9210406-14	BH-I-5.5	SOIL	10/22/92	TPHg/BTEX
9210406-15	BH-I-10.5	SOIL	10/22/92	TPHg/BTEX
9210406-16	BH-I	WATER	10/22/92	TPHg/BTEX

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210406
Date Received : 10/23/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The BTEX and surrogate recoveries for the matrix spike duplicate on sample BH-F-5.5 are outside of quality control limits due to an individual purge and trap vessel leak.

Cheryl Balmer 11/9/92
Department Supervisor Date

Steve [illegible] 11/09/92
Chemist Date

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

Anametrix W.O.: 9210406
Matrix : SOIL
Date Sampled : 10/22/92

Project Number : 204-0072-0403
Date Released : 11/09/92

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# BH-E-5.5 -01	Sample I.D.# BH-E-10.5 -02	Sample I.D.# BH-E-13.5 -03	Sample I.D.# BH-G-5.5 -05	Sample I.D.# BH-G-10.0 -06
Benzene	0.005	0.026	ND	0.11	ND	ND
Toluene	0.005	0.40	3.0	0.097	ND	ND
Ethylbenzene	0.005	0.20	3.6	0.019	ND	ND
Total Xylenes	0.005	1.2	22	0.089	ND	ND
TPH as Gasoline	0.5	14	170	0.87	ND	ND
% Surrogate Recovery		94%	81%	105%	57%	97%
Instrument I.D.		HP8	HP8	HP8	HP8	HP8
Date Analyzed		11/03/92	11/03/92	11/02/92	11/02/92	11/03/92
RLMF		2.5	100	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Analyst 11/9/92 Date

Supervisor 11/9/92 Date

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

Anametrix W.O.: 9210406
Matrix : SOIL
Date Sampled : 10/22/92

Project Number : 204-0072-0403
Date Released : 11/09/92

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# BH-F-5.5 -07	Sample I.D.# BH-F-10.5 -08	Sample I.D.# BH-H-5.5 -11	Sample I.D.# BH-H-10.0 -12	Sample I.D.# BH-I-5.5 -14
Benzene	0.005	ND	0.065	ND	ND	ND
Toluene	0.005	ND	0.27	ND	ND	ND
Ethylbenzene	0.005	ND	0.65	ND	ND	ND
Total Xylenes	0.005	ND	3.6	ND	ND	ND
TPH as Gasoline	0.5	ND	26	ND	ND	ND
% Surrogate Recovery		53%	109%	74%	71%	71%
Instrument I.D.		HP8	HP8	HP8	HP8	HP8
Date Analyzed		11/03/92	11/03/92	11/03/92	11/03/92	11/03/92
RLMF		1	10	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Steve Simon 11/9/92
Analyst Date

Cheryl Balmer 11/9/92
Supervisor Date

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

Anametrix W.O.: 9210406
Matrix : SOIL
Date Sampled : 10/22/92

Project Number : 204-0072-0403
Date Released : 11/09/92

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# BH-I-10.5 -15	Sample I.D.# BN0201E3 BLANK	Sample I.D.# BN0301E3 BLANK
Benzene	0.005	ND	ND	ND
Toluene	0.005	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND
Total Xylenes	0.005	ND	ND	ND
TPH as Gasoline	0.5	ND	ND	ND
% Surrogate Recovery		97%	84%	84%
Instrument I.D.		HP8	HP8	HP8
Date Analyzed		11/03/92	11/02/92	11/03/92
RLMF		1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Analyst 11/04/92 Date

Supervisor 11/5/92 Date

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

Sample I.D. : 204-0072-0403 BH-F-5.5
Matrix : SOIL
Date Sampled : 10/22/92
Date Analyzed : 11/03/92

Anametrix I.D. : 9210406-07
Analyst : JS
Supervisor : CS
Date Released : 11/09/92
Instrument I.D.: HHP8

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% RE MD	RPD	% REC LIMITS
BENZENE	0.020	0.000	0.018	90%	0.000	0%	-200%	49-159
TOLUENE	0.020	0.000	0.019	95%	0.000	0%	-200%	53-156
ETHYLBENZENE	0.020	0.000	0.019	95%	0.000	0%	-200%	54-151
TOTAL XYLENES	0.020	0.000	0.021	105%	0.000	0%	-200%	56-157
p-BFB				69%		0%		53-147

* Quality control limit established by Anametrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date Sampled : N/A
Date Analyzed : 11/03/92

Anametrix I.D. : LCSS110
Analyst : M
Supervisor : CB
Date Released : 11/09/9
Instrument ID : HP8

COMPOUND	SPIKE AMT (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
BENZENE	0.010	0.0075	75%	49-159
TOLUENE	0.010	0.0082	82%	53-156
ETHYLBENZENE	0.010	0.0087	87%	54-151
TOTAL XYLENES	0.010	0.0088	88%	56-153
P-BFB			71%	53-147

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210406
Date Received : 10/23/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9210406- 4	BH-E	WATER	10/22/92	5520BF
9210406- 9	BH-F	WATER	10/22/92	5520BF
9210406-10	BH-G	WATER	10/22/92	5520BF
9210406-13	BH-H	WATER	10/22/92	5520BF
9210406-16	BH-I	WATER	10/22/92	5520BF
9210406- 1	BH-E-5.5	SOIL	10/22/92	5520EF
9210406- 2	BH-E-10.5	SOIL	10/22/92	5520EF
9210406- 3	BH-E-13.5	SOIL	10/22/92	5520EF
9210406- 5	BH-G-5.5	SOIL	10/22/92	5520EF
9210406- 6	BH-G-10.0	SOIL	10/22/92	5520EF
9210406- 7	BH-F-5.5	SOIL	10/22/92	5520EF
9210406- 8	BH-F-10.5	SOIL	10/22/92	5520EF
9210406-11	BH-H-5.5	SOIL	10/22/92	5520EF
9210406-12	BH-H-10.0	SOIL	10/22/92	5520EF
9210406-14	BH-I-5.5	SOIL	10/22/92	5520EF
9210406-15	BH-I-10.5	SOIL	10/22/92	5520EF

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9210406
Date Received : 10/23/92
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Department Supervisor 11/6/92 Date

CRPatel 11-05-92
Chemist Date

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
ANAMETRIX, INC. (408) 432-8192

Project #	: 204-0072-0403	Anametrix I.D.	: 9210406
Matrix	: SOIL	Analyst	:
Date sampled	: 10/22/92	Supervisor	:
Date ext. TOG	: 10/30/92	Date released	: 11/05/92
Date anl. TOG	: 10/30/92		

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9210406-01	BH-E-5.5	30	ND
9210406-02	BH-E-10.5	30	110
9210406-03	BH-E-13.5	30	ND
9210406-05	BH-G-5.5	30	ND
9210406-06	BH-G-10.0	30	ND
9210406-07	BH-F-5.5	30	ND
9210406-08	BH-F-10.5	30	47
9210406-11	BH-H-5.5	30	ND
9210406-12	BH-H-10.0	30	ND
9210406-14	BH-I-5.5	30	ND
9210406-15	BH-I-10.5	30	ND
GSBL103092	METHOD BLANK	30	ND

ND - Not detected at or above the practical quantitation limit for the method.
TOG - Total Oil & Grease is determined by Standard Method 5520EF.

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

TOTAL OIL AND GREASE MATRIX SPIKE REPORT
STANDARD METHOD 5520EF
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403 BH-I-10
Matrix : SOIL
Date sampled : 10/22/92
Date extracted : 10/30/92
Date analyzed : 10/30/92

Anametrix I.D. : 9210406-15
Analyst : APP.
Supervisor : CM
Date Released : 11/05/92

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	MS AMT (mg/Kg)	%REC MS	MD AMT (mg/Kg)	%REC MD	%RPD	% REC LIMITS
Motor Oil	300	0	300	100%	300	100%	0%	48-114%

* Quality control limits established by Anametrix, Inc.

TOTAL OIL AND GREASE LAB CONTROL SAMPLE REPORT
STANDARD METHOD 5520EF
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: LCSS1030
Matrix	: SOIL	Analyst	: APP
Date sampled	: N/A	Supervisor	: CW
Date extracted	: 10/30/92	Date Released	: 11/02/92
Date analyzed	: 10/30/92		

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	270	90%	68-113%

Quality control established by Anametrix, Inc.

ANAMETRIX INC
Environmental & Analytical Chemistry

Part of ENCHCAPE ENVIRONMENTAL

REPORT

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302305
Date Received : 02/23/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9302305- 1	BH-J-5.5
9302305- 2	BHJ-10.0
9302305- 3	BHJ-COMP

This report consists of 24 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D.
Laboratory Director

03-09-93
Date

ANAMETRIX REPORT DESCRIPTION
GC

Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anametrix ID number.

Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "*", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

Qualifiers

Anametrix uses several data qualifiers (Q) in it's report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.

B - Indicates that the compound was detected in the associated method blank.

J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.

E - Indicates that the amount reported exceeded the linear range of the instrument calibration.

D - Indicates that the compound was detected in an analysis performed at a secondary dilution.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302305
Date Received : 02/23/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9302305- 1	BH-J-5.5	SOIL	02/19/93	8010
9302305- 2	BHJ-10.0	SOIL	02/19/93	8010

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302305
Date Received : 02/23/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Corinne Pham 3/4/93
Department Supervisor Date

Kamel G. Kamel 3/4/93
Chemist Date

DESCRIPTIONS FOR SPECIFIC COMPOUNDS ANALYZED

EPA METHOD 601/8010

CAS #	COMPOUND NAME	ABBREVIATED NAME
74-87-3	Chloromethane	Chloromethane
74-83-9	Bromomethane	Bromoethane
75-71-8	Dichlorodifluoromethane	Freon 12
75-01-4	Vinyl Chloride	Vinyl Chloride
75-00-3	Chloroethane	Chloroethane
75-09-2	Methylene Chloride	Methylene Chlor
75-69-4	Trichlrofluoromethane	Freon 11
75-35-4	1,1-Dichloroethene	1,1-DCE
75-34-3	1,1-Dichloroethane	1,1-DCA
156-59-2	Cis-1,2-Dichloroethene	Cis-1,2-DCE
156-60-5	Trans-1,2-Dichloroethene	Trans-1,2-DCE
67-66-3	Chloroform	Chloroform
76-13-1	Trichlorotrifluoroethane	Freon 113
107-06-2	1,2-Dichloroethane	1,2-DCA
71-55-6	1,1,1-Trichloroethane	1,1,1-TCA
56-23-5	Carbon Tetrachloride	Carbon Tet
75-27-4	Bromodichloromethane	BromodichloroMe
78-87-5	1,2-Dichloropropane	1,2-DCPA
10061-02-6	Trans-1,3-Dichloropropene	Trans-1,3-DCPE
79-01-6	Trichloroethene	TCE
124-48-1	Dibromochloromethane	DibromochloroMe
79-00-5	1,1,2-Trichloroethane	1,1,2-TCA
10061-01-5	Cis-1,3-Dichloropropene	Cis-1,3-DCPE
110-75-8	2-Chloroethylvinylether	Chloroethylvinl
75-25-2	Bromoform	Bromoform
127-18-4	Tetrachloroethene	PCE
79-34-5	1,1,2,2-Tetrachloroethane	PCA
108-90-7	Chlorobenzene	Chlorobenzene
95-50-1	1,2-Dichlorobenzene	1,2-DCB
541-73-1	1,3-Dichlorobenzene	1,3-DCB
106-46-7	1,4-Dichlorobenzene	1,4-DCB
352-33-0	p-Chlorofluorobenzene	Chlorofluoroben

mh/3426 - 10MH

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-0072
Sample ID : BH-J-5.5
Matrix : SOIL
Date Sampled : 2/19/93
Date Analyzed : 3/ 2/93
Instrument ID : HP10

Anametrix ID : 9302305-01
Analyst : KK
Supervisor : CP
Dilution Factor : 1.0
Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-0072
Sample ID : BHJ-10.0
Matrix : SOIL
Date Sampled : 2/19/93
Date Analyzed : 3/ 2/93
Instrument ID : HP10

Anametrix ID : 9302305-02
Analyst : KK
Supervisor : CF

Dilution Factor : 1.0
Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-00
Sample ID : BLK302
Matrix : SOIL
Date Sampled : 0/ 0/ 0
Date Analyzed : 3/ 2/93
Instrument ID : HP10

Anametrix ID : 10B0302H01
Analyst : KK
Supervisor : CP

Dilution Factor : 1.0
Conc. Units : ug/Kg

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-0072
Matrix : SOLID

Anametrix ID : 9302305
Analyst : KK
Supervisor : CP

	SAMPLE ID	SU1	SU2	SU3
1	BLK302	84		
2	BH-J-5.5	81		
3	BHJ-10.0	75		
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

	QC LIMITS
SU1 = CHLOROFLUOROBEN	(33-134)

* Values outside of Anametrix QC limits

LABORATORY CONTROL SAMPLE
EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project/Case	: LABORATORY CONTROL SAMPLE	Anametrix I.D.	: WO030293
Matrix	: WATER	Analyst	: CP KK
SDG/Batch	: N/A	Supervisor	:
Date analyzed	: 03/02/93	Instrument I.D.	: HP10

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	9.3	93%	34 - 128
1,1-DICHLOROETHENE	10	9.2	92%	63 - 133
trans-1,2-DICHLOROETHENE	10	10.0	100%	55 - 145
1,1-DICHLOROETHANE	10	10.1	101%	49 - 121
cis-1,2-DICHLOROETHENE	10	10.7	107%	66 - 168
1,1,1-TRICHLOROETHANE	10	10.2	102%	72 - 143
TRICHLOROETHENE	10	10.3	103%	63 - 147
TETRACHLOROETHENE	10	9.5	95%	60 - 133
CHLOROBENZENE	10	8.9	89%	70 - 148
1,3-DICHLOROBENZENE	10	9.4	94%	49 - 139
1,4-DICHLOROBENZENE	10	9.3	93%	70 - 133
1,2-DICHLOROBENZENE	10	9.3	93%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302305
Date Received : 02/23/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9302305- 1	BH-J-5.5	SOIL	02/19/93	TPHg/BTEX
9302305- 2	BHJ-10.0	SOIL	02/19/93	TPHg/BTEX

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302305
Date Received : 02/23/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as gasoline for sample BHJ-10.0 is primarily due to the presence of a heavier petroleum product of hydrocarbon range C10-C14.

Cheryl Balsmeier 3/8/93
Department Supervisor Date

Lucia Sher 3/8/93
Chemist Date

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

Anametrix W.O.: 9302305
Matrix : SOIL
Date Sampled : 02/19/93

Project Number : 204-0072-0403
Date Released : 03/08/93

COMPOUNDS	Reporting Limit (mg/Kg)	Sample I.D.# BH-J-5.5 -01	Sample I.D.# BHJ-10.0 -02	Sample I.D.# BM0101E3 BLANK
Benzene	0.005	ND	ND	ND
Toluene	0.005	ND	ND	ND
Ethylbenzene	0.005	ND	ND	ND
Total Xylenes	0.005	ND	ND	ND
TPH as Gasoline	0.5	ND	ND	ND
% Surrogate Recovery		108%	118%	112%
Instrument I.D.		HP12	HP12	HP12
Date Analyzed		03/01/93	03/01/93	03/01/93
RLMF		1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Analyst 3/9/93 Date

Supervisor 3/9/93 Date

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

Sample I.D. : 204-0072-0403 BHJ-10.0
Matrix : SOIL
Date Sampled : 02/19/93
Date Analyzed : 03/01/93

Anametrix I.D. : 02305-02
Analyst : LS
Supervisor : [illegible]
Date Released : 03/09/93
Instrument I.D.: HP12

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	REC MS (mg/Kg)	% REC MS	REC MD (mg/Kg)	% REC MD	RPD	% REC LIMITS
BENZENE	0.100	0.000	0.112	112%	0.117	117%	4%	45-139
TOLUENE	0.100	0.000	0.113	113%	0.117	117%	3%	51-138
ETHYLBENZENE	0.100	0.000	0.110	110%	0.120	120%	9%	48-146
TOTAL XYLENES	0.100	0.000	0.113	113%	0.113	113%	0%	50-139
p-BFB				105%		102%		53-147

* Quality control limit established by Anametrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date Sampled : N/A
Date Analyzed : 03/01/93

Anametrix I.D. : LCSS0301
Analyst : JS
Supervisor : [illegible]
Date Released : 03/09/93
Instrument ID : HP12

COMPOUND	SPIKE AMT (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
BENZENE	0.020	0.022	110%	52-133
TOLUENE	0.020	0.022	110%	57-136
ETHYLBENZENE	0.020	0.023	115%	56-139
TOTAL-XYLENES	0.020	0.021	105%	56-141
P-BFB			112%	53-147

* Quality control limit established by Anametrix, Inc.

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302305
Date Received : 02/23/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9302305- 1	BH-J-5.5	SOIL	02/19/93	5520EF
9302305- 2	BHJ-10.0	SOIL	02/19/93	5520EF

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302305
Date Received : 02/23/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for samples in workorder.

Department Supervisor 3/8/93 Date

Chemist P.P. Desai 3/8/93 Date

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

Project # : 204-0072-0403
Matrix : SOIL
Date sampled : 02/19/93
Date extracted: 03/01/93
Date analyzed : 03/02/93

Anametrix I.D. : 9302305
Analyst : PD
Supervisor :
Date released : 03/08/93

Workorder #	Sample I.D.	Reporting Limit (mg/Kg)	Amount Found (mg/Kg)
9302305-01	BH-J-5.5	30	ND
9302305-02	BHJ-10.0	30	ND
GSBL030193	METHOD BLANK	30	ND

ND - Not detected at or above the practical quantitation limit for the method.
TRPH - Total Recoverable Petroleum Hydrocarbons are determined by - Standard Method 5520EF.

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

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS MATRIX SPIKE REPORT
STANDARD METHOD 5520EF
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403BH-J-5.5
Matrix : SOIL
Date sampled ; 02/19/93
Date extracted : 03/01/93
Date analyzed : 03/02/93

Anametrix I.D. : 9302305-01
Analyst : PD
Supervisor : CM
Date Released : 03/04/93

COMPOUND	SPIKE AMT (mg/Kg)	SAMPLE CONC (mg/Kg)	MS AMT (mg/Kg)	%REC MS	MD AMT (mg/Kg)	%REC MD	%RPD	% REC LIMITS
Motor Oil	300	0	240	80%	250	83%	4%	48-114%

* Quality control limits established by Anametrix, Inc.

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS LAB CONTROL SAMPLE REPORT
STANDARD METHOD 5520EF
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : SOIL
Date sampled : N/A
Date extracted : 03/01/93
Date analyzed : 03/02/93

Anametrix I.D. : LCSS0301
Analyst : PD
Supervisor : [signature]
Date Released : 03/04/93

COMPOUND	SPIKE AMT. (mg/Kg)	LCS (mg/Kg)	%REC LCS	%REC LIMITS
Motor Oil	300	270	90%	68-113%

Quality control established by Anametrix, Inc.

ANAMETRIX REPORT DESCRIPTION
INORGANICS

Analytical Data Report (ADR)

The ADR contains tabulated results for inorganic analytes. All field samples, QC samples and blanks were prepared and analyzed according to procedures in the following references:

- EPA Method 6010/7000/9000 series - "Test Methods for Evaluating Solid Waste," SW-846, EPA, 3rd Edition, November 1986.
- EPA Method 100, 200, 300 series - "Methods for Chemical Analysis of Water and Wastes," EPA, 3rd Edition, 1983.
- Toxicity Characteristic Leaching Procedure (EPA Method 1311) - 40 CFR, Part 268, Appendix 1, June 1990.
- Waste Extraction Test - Results are reported in mg/L of extract according to procedures of CCR Title 22, Section 66261, Appendix II.
- Organic Lead - CCR Title 22, Section 66261, Appendix XI.
- Standard Method 2340B - "Standard Methods for the Examination of Water and Wastewater," APHA, AWWA, WEF, 18th Edition, 1992.

Matrix Spike Report (MSR)

The MSR summarizes percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. MSRs may not be provided with all analytical reports. Anametrix control limit for MSR is 75-125% with 25% for RPD limits.

Laboratory Control Sample Report (LCSR)

The LCSR summarizes percent recovery information for laboratory control spikes on reagent water or soil. This information is a statement of performance for the method, i.e., the samples are properly prepared and analyzed according to the applicable methods. Anametrix control limit for LCSR is 80-120%.

Method Blank Report (MBR)

The MBR summarizes quality control information for reagents used in preparing samples. The absolute value of each analyte measured in the method blank should be below the method reporting limit for that analyte.

Post Digestion Spike Report (PDSR)

The PDSR summarizes percent recovery information for post digestion spikes. A post digestion spike is performed for a particular analyte if the matrix spike recovery is outside of established control limits. Any percent recovery for a post digestion spike outside of established limits for an analyte indicates probable matrix effects and interferences for that analyte. Anametrix control limit for PDSR is 85-115%.

Qualifiers (Q)

Anametrix uses several data qualifiers in inorganic reports. These qualifiers give additional information on the analytes reported. The following is a list of qualifiers and their meanings:

- I - Sample was analyzed at the stated dilution due to spectral interferences.
- U - Analyte concentration was below the method reporting limit. For matrix and post digestion spike reports, a value of "0.0" is entered for calculation of the percent recovery.
- B - Sample concentration was below the reporting limit but above the instrument detection limit. Result is entered for calculation of the percent recovery only.
- H - Spike percent recovery was outside of Anametrix control limits due to interferences from relatively high concentration level of the analyte in the unspiked sample.

Comment Codes

In addition to qualifiers, the following codes are used in the comment section of all reports to give additional information about sample preparation methods:

- A - Sample was prepared for silver based on the silver digestion method developed by the Southern California Laboratory, Department of Health Services, "Acid Digestion for Sediments, Sludges, Soils and Solid Wastes. A Proposed Alternative to EPA SW846, Method 3050." Environmental Science and Technology, 1989, 23, 898-900.
- T - Spikes were prepared after extraction by the Toxicity Characteristic Leaching Procedure (TCLP).
- C - Spikes were prepared after extraction by the California Waste Extraction Test (CWET) method.
- D - Reported results are dissolved, not total, metals.

Reporting Conventions

Analytical values reported are gross values, i.e., not corrected for method blank contamination.
Solid matrices are reported on a wet weight basis, unless specifically requested otherwise.

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302305
Date Received : 02/23/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : METALS
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9302305- 3	BHJ-COMP	SOIL	02/19/93	CWET-INORG
9302305- 3	BHJ-COMP	SOIL	02/19/93	CWETMETALS

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302305
Date Received : 02/23/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : METALS
Sub-Department: METALS

QA/QC SUMMARY :

- No QA/QC problems encountered for sample.

Department Supervisor 3/5/93 Date

Chemist 3/05/93 Date

INORGANIC ANALYSIS DATA SHEET
ANAMETRIX, INC. (408) 432-8192

Analyte-Method: Lead-CWET-6010
Project I.D. : 204-0072-0403
Matrix : SOIL
Reporting Unit: mg/L

Analyst : MK
Supervisor : MW
Date Sampled : 02/19/93
Date Released : 03/05/93
Instrument I.D. : ICP1

ANAMETRIX SAMPLE I.D.	CLIENT I.D.	DATE PREPARED	DATE ANALYZED	REP. LIMIT	DIL. FACTOR	RESULT	Q
9302305-03	BHJ-COMP	03/01/93	03/04/93	0.040	1	ND	
WMB0301S	METHOD BLANK	03/01/93	03/04/93	0.040	1	ND	

COMMENT:

MATRIX SPIKE REPORT
ANAMETRIX, INC. (408) 432-8192

Spike I.D. : 9302305-03MS,MD
Client I.D. : BHJ-COMP
Project I.D. : 204-0072-0403
Matrix : SOIL
Reporting Unit: mg/L

Date Prepared : 03/01/93
Date Analyzed : 03/04/93
Analyst : MK
Supervisor :
Date Released : 03/05/93
Instrument I.D. : ICP1

ANALYTE-METHOD	SPIKE AMOUNT	SAMPLE CONC.	M.S. CONC.	% REC.	M.S.D. CONC.	% REC.	RPD	Q
Lead-CWET-6010	1.00	0.0	0.84	84.0	0.83	83.0	1.2	

COMMENT:

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 930L305 (16)

Date:
Page 1 of 1

Site Address: 1601 Webster St. Alameda

WIC#: 204-0072-0403

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

Consultant Name & Address: WEISS ASSOCIATES 5500 SHELLMOUND ST EMERYVILLE CA 94608

Consultant Contact: Joyce Fremstad
Phone No.: (510) 547-5420
Fax #: 547-5043
WA JOB # 81-434-02

Comments:

Sampled by: Joyce Fremstad

Printed Name: JOYCE FREMSTAD

LAB: Anametrix

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Total Oil & Grease 5520E/F	Volatile Organics - 8010	Asbestos Soluble Lead (STLC)	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
(1) BH-J-5.5	2/19/93					1						X	X	X	X				Silty Sand	On samples please analyze for 1,2-DCE 1,1,1-TCA 1,2-DCA methylene chloride For the Soluble lead please only do a composite of the two samples.
(2) BH-J-10.0	↓		↓			↓						X	X	X	X				↓	

CHECK ONE (1) BOX ONLY

	CT/DT	TURN AROUND TIME
G.W. Monitoring ☐	4461	24 hours ☐
Site Investigation ☒	4441	48 hours ☐
Soil Classify/Disposal ☐	4442	15 days ☒ (Normal)
Water Classify/Disposal ☐	4443	Other ☐
Soil/Air Rem. or Sys. O & M ☐	4452	
Water Rem. or Sys. O & M ☐	4453	
Other ☐		

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

UST AGENCY:

Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
Joyce Fremstad	JOYCE FREMSTAD	2/19/93	1600	Benny S. Carrizosa	BENNY S. CARRIZOSA	2-23-93	1115
Benny S. Carrizosa	BENNY S. CARRIZOSA	2-23-93	1240	Maria Barajas	Maria Barajas	2/23/93	12:40

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

Rev. 1/12/93

Shell Oil Chn of Custody

Locked in secure storage area from 02/19/93 - 02/23/93

ATTACHMENT D

ANALYTIC REPORT FOR GROUND WATER

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403 BH-C
Matrix : WATER
Date sampled : 10/12/92
Date analyzed: 10/22/92
Dilution : NONE

Anametrix I.D. : 9210186-05
Analyst : KK
Supervisor : CP
Date released : 10/27/92
Instrument ID : HP14

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	92%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403 BH-D
Matrix : WATER
Date sampled : 10/12/92
Date analyzed: 10/22/92
Dilution : 50

Anametrix I.D. : 9210186-06
Analyst : KK
Supervisor : CP
Date released : 10/27/92
Instrument ID : HP14

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.05	ND
74-83-9	* Bromomethane	0.025	ND
75-71-8	* Dichlorodifluoromethane	0.05	ND
75-01-4	* Vinyl Chloride	0.025	ND
75-00-3	* Chloroethane	0.025	ND
75-09-2	* Methylene Chloride	0.025	ND
75-69-4	* Trichlorofluoromethane	0.025	ND
75-35-4	* 1,1-Dichloroethene	0.025	ND
75-34-3	* 1,1-Dichloroethane	0.025	ND
156-59-2	# Cis-1,2-Dichloroethene	0.025	ND
156-60-5	* Trans-1,2-Dichloroethene	0.025	ND
67-66-3	* Chloroform	0.025	ND
76-13-1	# Trichlorotrifluoroethane	0.025	ND
107-06-2	* 1,2-Dichloroethane	0.025	ND
71-55-6	* 1,1,1-Trichloroethane	0.025	ND
56-23-5	* Carbon Tetrachloride	0.025	ND
75-27-4	* Bromodichloromethane	0.025	ND
78-87-5	* 1,2-Dichloropropane	0.025	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.025	ND
79-01-6	* Trichloroethene	0.025	ND
124-48-1	* Dibromochloromethane	0.025	ND
79-00-5	* 1,1,2-Trichloroethane	0.025	ND
10061-01-5	* cis-1,3-Dichloropropene	0.025	ND
110-75-8	* 2-Chloroethylvinylether	0.05	ND
75-25-2	* Bromoform	0.025	ND
127-18-4	* Tetrachloroethene	0.025	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.025	ND
108-90-7	* Chlorobenzene	0.025	ND
95-50-1	* 1,2-Dichlorobenzene	0.05	ND
541-73-1	* 1,3-Dichlorobenzene	0.05	ND
106-46-7	* 1,4-Dichlorobenzene	0.05	ND
	% Surrogate Recovery	51-136%	94%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

LABORATORY CONTROL SAMPLE
EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project/Case : LABORATORY CONTROL SAMPLE
Matrix : WATER
SDG/Batch : N/A
Date analyzed : 10/22/92

Anametrix I.D. : WO102292
Analyst : KK
Supervisor :
Instrument I.D.: HP14

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	8.6	86%	34 - 128
1,1-DICHLOROETHENE	10	10.0	100%	63 - 133
trans-1,2-DICHLOROETHENE	10	9.1	91%	55 - 145
1,1-DICHLOROETHANE	10	10.5	105%	49 - 121
cis-1,2-DICHLOROETHENE	10	15.6	156%	66 - 168
1,1,1-TRICHLOROETHANE	10	10.8	108%	72 - 143
TRICHLOROETHENE	10	12.3	123%	63 - 147
TETRACHLOROETHENE	10	10.5	105%	60 - 133
CHLOROBENZENE	10	10.8	108%	70 - 148
1,3-DICHLOROBENZENE	10	9.0	90%	49 - 139
1,4-DICHLOROBENZENE	10	9.5	95%	70 - 133
1,2-DICHLOROBENZENE	10	9.6	96%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.

LABORATORY CONTROL SAMPLE
EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project/Case : LABORATORY CONTROL SAMPLE
Matrix : WATER
SDG/Batch : N/A
Date analyzed : 10/26/92

Anametrix I.D. : WO102692
Analyst : KK
Supervisor : CP
Instrument I.D.: HP10

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	10.0	100%	34 - 128
1,1-DICHLOROETHENE	10	11.8	118%	63 - 133
trans-1,2-DICHLOROETHENE	10	10.8	108%	55 - 145
1,1-DICHLOROETHANE	10	11.0	110%	49 - 121
cis-1,2-DICHLOROETHENE	10	9.2	92%	66 - 168
1,1,1-TRICHLOROETHANE	10	13.2	132%	72 - 143
TRICHLOROETHENE	10	13.0	130%	63 - 147
TETRACHLOROETHENE	10	12.5	125%	60 - 133
CHLOROBENZENE	10	10.8	108%	70 - 148
1,3-DICHLOROBENZENE	10	13.0	130%	49 - 139
1,4-DICHLOROBENZENE	10	12.7	127%	70 - 133
1,2-DICHLOROBENZENE	10	12.5	124%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : VBLANK
Matrix : WATER
Date sampled : N/A
Date analyzed: 10/22/92
Dilution : NONE

Anametrix I.D. : 14B1022H01
Analyst : KK
Supervisor : CP
Date released : 10/27/92
Instrument ID : HP14

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	97%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

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

Anametrix W.O.: 9210186
Matrix : WATER
Date Sampled : 10/12/92

Project Number : 204-0072-0403
Date Released : 10/27/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# BH-C -05	Sample I.D.# BH-D -06	Sample I.D.# BO1601E1 BLANK
Benzene	0.0005	0.0005	4.2	ND
Toluene	0.0005	ND	ND	ND
Ethylbenzene	0.0005	ND	4.4	ND
Total Xylenes	0.0005	ND	2.8	ND
TPH as Gasoline	0.050	0.074	24	ND
% Surrogate Recovery		92%	94%	104%
Instrument I.D.		HP12	HP12	HP12
Date Analyzed		10/16/92	10/16/92	10/16/92
RLMF		1	250	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Lina Shor 10/27/92
Analyst Date

Cheryl Balmes 10/27/92
Supervisor Date

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

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date Sampled : N/A
Date Analyzed : 10/15/92

Anametrix I.D. : LCSW1015
Analyst : KD
Supervisor : [illegible]
Date Released : 10/27/92
Instrument I.D.: HP8

COMPOUND	SPIKE AMT. (mg/L)	REC LCS (mg/L)	%REC LCS	% REC LIMITS
GASOLINE	0.25	0.26	104%	56-116
SURROGATE		119%		53-147

* Quality control established by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-0072-0403 BH-E	Anametrix I.D.	: 9210406-04
Matrix	: WATER	Analyst	: KK
Date sampled	: 10/22/92	Supervisor	:
Date analyzed	: 11/05/92	Date released	: 11/06/92
Dilution	: 100	Instrument ID	: HP10

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.1	ND
74-83-9	* Bromomethane	0.05	ND
75-71-8	* Dichlorodifluoromethane	0.1	ND
75-01-4	* Vinyl Chloride	0.05	ND
75-00-3	* Chloroethane	0.05	ND
75-09-2	* Methylene Chloride	0.05	ND
75-69-4	* Trichlorofluoromethane	0.05	ND
75-35-4	* 1,1-Dichloroethene	0.05	ND
75-34-3	* 1,1-Dichloroethane	0.05	ND
156-59-2	# Cis-1,2-Dichloroethene	0.05	ND
156-60-5	* Trans-1,2-Dichloroethene	0.05	ND
67-66-3	* Chloroform	0.05	ND
76-13-1	# Trichlorotrifluoroethane	0.05	ND
107-06-2	* 1,2-Dichloroethane	0.05	ND
71-55-6	* 1,1,1-Trichloroethane	0.05	ND
56-23-5	* Carbon Tetrachloride	0.05	ND
75-27-4	* Bromodichloromethane	0.05	ND
78-87-5	* 1,2-Dichloropropane	0.05	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.05	ND
79-01-6	* Trichloroethene	0.05	ND
124-48-1	* Dibromochloromethane	0.05	ND
79-00-5	* 1,1,2-Trichloroethane	0.05	ND
10061-01-5	* cis-1,3-Dichloropropene	0.05	ND
110-75-8	* 2-Chloroethylvinylether	0.1	ND
75-25-2	* Bromoform	0.05	ND
127-18-4	* Tetrachloroethene	0.05	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.05	ND
108-90-7	* Chlorobenzene	0.05	ND
95-50-1	* 1,2-Dichlorobenzene	0.1	ND
541-73-1	* 1,3-Dichlorobenzene	0.1	ND
106-46-7	* 1,4-Dichlorobenzene	0.1	ND
	% Surrogate Recovery	51-136%	83%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-0072-0403 BH-F	Anametrix I.D.	: 9210406-09
Matrix	: WATER	Analyst	:
Date sampled	: 10/22/92	Supervisor	: CP KK
Date analyzed	: 11/05/92	Date released	: 11/06/92
Dilution	: 5	Instrument ID	: HP14

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.005	ND
74-83-9	* Bromomethane	0.0025	ND
75-71-8	* Dichlorodifluoromethane	0.005	ND
75-01-4	* Vinyl Chloride	0.0025	ND
75-00-3	* Chloroethane	0.0025	ND
75-09-2	* Methylene Chloride	0.0025	ND
75-69-4	* Trichlorofluoromethane	0.0025	ND
75-35-4	* 1,1-Dichloroethene	0.0025	ND
75-34-3	* 1,1-Dichloroethane	0.0025	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0025	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0025	ND
67-66-3	* Chloroform	0.0025	ND
76-13-1	# Trichlorotrifluoroethane	0.0025	ND
107-06-2	* 1,2-Dichloroethane	0.0025	ND
71-55-6	* 1,1,1-Trichloroethane	0.0025	ND
56-23-5	* Carbon Tetrachloride	0.0025	ND
75-27-4	* Bromodichloromethane	0.0025	ND
78-87-5	* 1,2-Dichloropropane	0.0025	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0025	ND
79-01-6	* Trichloroethene	0.0025	ND
124-48-1	* Dibromochloromethane	0.0025	ND
79-00-5	* 1,1,2-Trichloroethane	0.0025	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0025	ND
110-75-8	* 2-Chloroethylvinylether	0.005	ND
75-25-2	* Bromoform	0.0025	ND
127-18-4	* Tetrachloroethene	0.0025	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0025	ND
108-90-7	* Chlorobenzene	0.0025	ND
95-50-1	* 1,2-Dichlorobenzene	0.005	ND
541-73-1	* 1,3-Dichlorobenzene	0.005	ND
106-46-7	* 1,4-Dichlorobenzene	0.005	ND
	% Surrogate Recovery	51-136%	87%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 204-0072-0403 BH-G
Matrix : WATER
Date sampled : 10/22/92
Date analyzed: 11/05/92
Dilution : NONE

Anametrix I.D. : 9210406-10
Analyst : KK
Supervisor : CP
Date released : 11/06/92
Instrument ID : HP14

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	88%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-0072-0403 BH-H	Anametrix I.D.	: 9210406-13
Matrix	: WATER	Analyst	: KK
Date sampled	: 10/22/92	Supervisor	: CP
Date analyzed	: 11/05/92	Date released	: 11/06/92
Dilution	: 100	Instrument ID	: HP10

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.1	ND
74-83-9	* Bromomethane	0.05	ND
75-71-8	* Dichlorodifluoromethane	0.1	ND
75-01-4	* Vinyl Chloride	0.05	ND
75-00-3	* Chloroethane	0.05	ND
75-09-2	* Methylene Chloride	0.05	ND
75-69-4	* Trichlorofluoromethane	0.05	ND
75-35-4	* 1,1-Dichloroethene	0.05	ND
75-34-3	* 1,1-Dichloroethane	0.05	ND
156-59-2	# Cis-1,2-Dichloroethene	0.05	ND
156-60-5	* Trans-1,2-Dichloroethene	0.05	ND
67-66-3	* Chloroform	0.05	ND
76-13-1	# Trichlorotrifluoroethane	0.05	ND
107-06-2	* 1,2-Dichloroethane	0.05	ND
71-55-6	* 1,1,1-Trichloroethane	0.05	ND
56-23-5	* Carbon Tetrachloride	0.05	ND
75-27-4	* Bromodichloromethane	0.05	ND
78-87-5	* 1,2-Dichloropropane	0.05	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.05	ND
79-01-6	* Trichloroethene	0.05	ND
124-48-1	* Dibromochloromethane	0.05	ND
79-00-5	* 1,1,2-Trichloroethane	0.05	ND
10061-01-5	* cis-1,3-Dichloropropene	0.05	ND
110-75-8	* 2-Chloroethylvinylether	0.1	ND
75-25-2	* Bromoform	0.05	ND
127-18-4	* Tetrachloroethene	0.05	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.05	ND
108-90-7	* Chlorobenzene	0.05	ND
95-50-1	* 1,2-Dichlorobenzene	0.1	ND
541-73-1	* 1,3-Dichlorobenzene	0.1	ND
106-46-7	* 1,4-Dichlorobenzene	0.1	ND
	% Surrogate Recovery	51-136%	82%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 204-0072-0403 BH-I	Anametrix I.D.	: 9210406-16
Matrix	: WATER	Analyst	: KK
Date sampled	: 10/22/92	Supervisor	: CP
Date analyzed	: 11/05/92	Date released	: 11/06/92
Dilution	: NONE	Instrument ID	: HP14

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	89%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : VBLANK
Matrix : WATER
Date sampled : N/A
Date analyzed: 11/05/92
Dilution : NONE

Anametrix I.D. : 10B1105H01
Analyst :
Supervisor : CP KK
Date released : 11/06/92
Instrument ID : HP10

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	84%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : VBLANK
Matrix : WATER
Date sampled : N/A
Date analyzed: 11/05/92
Dilution : NONE

Anametrix I.D. : 14B1105H01
Analyst :
Supervisor : CP KK
Date released : 11/06/92
Instrument ID : HP14

CAS #	Compound Name	Reporting Limit (mg/L)	Amount Found (mg/L)
74-87-3	* Chloromethane	0.001	ND
74-83-9	* Bromomethane	0.0005	ND
75-71-8	* Dichlorodifluoromethane	0.001	ND
75-01-4	* Vinyl Chloride	0.0005	ND
75-00-3	* Chloroethane	0.0005	ND
75-09-2	* Methylene Chloride	0.0005	ND
75-69-4	* Trichlorofluoromethane	0.0005	ND
75-35-4	* 1,1-Dichloroethene	0.0005	ND
75-34-3	* 1,1-Dichloroethane	0.0005	ND
156-59-2	# Cis-1,2-Dichloroethene	0.0005	ND
156-60-5	* Trans-1,2-Dichloroethene	0.0005	ND
67-66-3	* Chloroform	0.0005	ND
76-13-1	# Trichlorotrifluoroethane	0.0005	ND
107-06-2	* 1,2-Dichloroethane	0.0005	ND
71-55-6	* 1,1,1-Trichloroethane	0.0005	ND
56-23-5	* Carbon Tetrachloride	0.0005	ND
75-27-4	* Bromodichloromethane	0.0005	ND
78-87-5	* 1,2-Dichloropropane	0.0005	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.0005	ND
79-01-6	* Trichloroethene	0.0005	ND
124-48-1	* Dibromochloromethane	0.0005	ND
79-00-5	* 1,1,2-Trichloroethane	0.0005	ND
10061-01-5	* cis-1,3-Dichloropropene	0.0005	ND
110-75-8	* 2-Chloroethylvinylether	0.001	ND
75-25-2	* Bromoform	0.0005	ND
127-18-4	* Tetrachloroethene	0.0005	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.0005	ND
108-90-7	* Chlorobenzene	0.0005	ND
95-50-1	* 1,2-Dichlorobenzene	0.001	ND
541-73-1	* 1,3-Dichlorobenzene	0.001	ND
106-46-7	* 1,4-Dichlorobenzene	0.001	ND
	% Surrogate Recovery	51-136%	95%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

LABORATORY CONTROL SAMPLE
EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project/Case : LABORATORY CONTROL SAMPLE
Matrix : WATER
SDG/Batch : N/A
Date analyzed : 11/04/92

Anametrix I.D. : WO110492
Analyst : CPKK
Supervisor :
Instrument I.D.: HP10

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	7.2	58%	34 - 128
1,1-DICHLOROETHENE	10	9.2	89%	63 - 133
trans-1,2-DICHLOROETHENE	10	6.2	135%	55 - 145
1,1-DICHLOROETHANE	10	9.8	98%	49 - 121
cis-1,2-DICHLOROETHENE	10	9.6	116%	66 - 168
1,1,1-TRICHLOROETHANE	10	11.6	103%	72 - 143
TRICHLOROETHENE	10	10.6	116%	63 - 147
TETRACHLOROETHENE	10	10.7	101%	60 - 133
CHLOROBENZENE	10	11.8	119%	70 - 148
1,3-DICHLOROBENZENE	10	8.7	101%	49 - 139
1,4-DICHLOROBENZENE	10	8.7	117%	70 - 133
1,2-DICHLOROBENZENE	10	8.9	114%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.

LABORATORY CONTROL SAMPLE
EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project/Case : LABORATORY CONTROL SAMPLE
Matrix : WATER
SDG/Batch : N/A
Date analyzed : 11/05/92

Anametrix I.D. : WO110592
Analyst : KE
Supervisor : CF
Instrument I.D.: HP10

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	5.7	57%	34 - 128
1,1-DICHLOROETHENE	10	8.6	86%	63 - 133
trans-1,2-DICHLOROETHENE	10	6.3	63%	55 - 145
1,1-DICHLOROETHANE	10	9.0	90%	49 - 121
cis-1,2-DICHLOROETHENE	10	8.9	89%	66 - 168
1,1,1-TRICHLOROETHANE	10	11.9	119%	72 - 143
TRICHLOROETHENE	10	9.7	97%	63 - 147
TETRACHLOROETHENE	10	9.5	95%	60 - 133
CHLOROBENZENE	10	10.3	103%	70 - 148
1,3-DICHLOROBENZENE	10	8.1	81%	49 - 139
1,4-DICHLOROBENZENE	10	8.3	83%	70 - 133
1,2-DICHLOROBENZENE	10	8.3	83%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.

LABORATORY CONTROL SAMPLE
EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project/Case : LABORATORY CONTROL SAMPLE
Matrix : WATER
SDG/Batch : N/A
Date analyzed : 11/05/92

Anametrix I.D. : WO110592
Analyst : CP KK
Supervisor :
Instrument I.D.: HP14

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	7.3	73%	34 - 128
1,1-DICHLOROETHENE	10	10.0	100%	63 - 133
trans-1,2-DICHLOROETHENE	10	10.4	104%	55 - 145
1,1-DICHLOROETHANE	10	10.5	105%	49 - 121
cis-1,2-DICHLOROETHENE	10	9.4	94%	66 - 168
1,1,1-TRICHLOROETHANE	10	10.4	104%	72 - 143
TRICHLOROETHENE	10	11.7	117%	63 - 147
TETRACHLOROETHENE	10	10.9	109%	60 - 133
CHLOROBENZENE	10	11.7	117%	70 - 148
1,3-DICHLOROBENZENE	10	10.3	103%	49 - 139
1,4-DICHLOROBENZENE	10	10.8	108%	70 - 133
1,2-DICHLOROBENZENE	10	10.8	108%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.

LABORATORY CONTROL SAMPLE
EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project/Case : LABORATORY CONTROL SAMPLE
Matrix : WATER
SDG/Batch : N/A
Date analyzed : 11/05/92

Anametrix I.D. : WO110592
Analyst : CP KE
Supervisor : CP
Instrument I.D.: HP15

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	6.6	66%	34 - 128
1,1-DICHLOROETHENE	10	9.2	92%	63 - 133
trans-1,2-DICHLOROETHENE	10	8.8	88%	55 - 145
1,1-DICHLOROETHANE	10	9.4	94%	49 - 121
cis-1,2-DICHLOROETHENE	10	9.5	95%	66 - 168
1,1,1-TRICHLOROETHANE	10	9.7	97%	72 - 143
TRICHLOROETHENE	10	9.6	96%	63 - 147
TETRACHLOROETHENE	10	10.3	103%	60 - 133
CHLOROBENZENE	10	11.4	114%	70 - 148
1,3-DICHLOROBENZENE	10	9.7	97%	49 - 139
1,4-DICHLOROBENZENE	10	9.8	98%	70 - 133
1,2-DICHLOROBENZENE	10	10.2	102%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.

HALOGENATED VOLATILE RECOVERY REPORT
EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Sample I.D. : 204-0072-0403 BH-F
Matrix : WATER
Date sampled : 10/22/92
Date analyzed : 11/05/92

Anametrix I.D. : 9210406-09
Analyst : KK
Supervisor :
Date released : 11/06/92
Instrument I.D.: HP14

	SPIKE AMT. (ug/L)	MS (ug/L)	REC MS	MSD (ug/L)	REC MSD	RPD	%REC LIMITS
FREON 113	50	26.1	52%	23.2	46%	12%	28 - 127
1,1-DICHLOROETHENE	50	43.7	87%	37.4	75%	16%	47 - 119
trans-1,2-DICHLOROETHENE	50	45.8	92%	40.1	80%	13%	46 - 112
1,1-DICHLOROETHANE	50	50.1	100%	48.0	96%	4%	57 - 124
Cis-1,2-DICHLOROETHENE	50	47.5	95%	47.1	94%	1%	70 - 139
1,1,1-TRICHLOROETHANE	50	43.1	86%	41.0	82%	5%	57 - 125
TRICHLOROETHENE	50	51.0	102%	47.8	96%	6%	61 - 133
TETRACHLOROETHENE	50	46.9	94%	41.3	83%	13%	61 - 132
CHLOROBENZENE	50	57.2	114%	55.2	110%	4%	81 - 120
1,3-DICHLOROBENZENE	50	47.3	95%	49.4	99%	-4%	56 - 113
1,4-DICHLOROBENZENE	50	51.0	102%	52.5	105%	-3%	62 - 119
1,2-DICHLOROBENZENE	50	53.8	108%	52.8	106%	2%	69 - 116

* Limits based on data generated by Anametrix, Inc., September 1992.

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

Anametrix W.O.: 9210406
Matrix : WATER
Date Sampled : 10/22/92

Project Number : 204-0072-0403
Date Released : 11/09/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# BH-E -04	Sample I.D.# BH-F -09	Sample I.D.# BH-G -10	Sample I.D.# BH-H -13	Sample I.D.# BH-I -16
Benzene	0.0005	6.9	0.17	0.0039	1.6	0.0014
Toluene	0.0005	13	0.11	0.0098	0.28	0.0013
Ethylbenzene	0.0005	2.2	0.31	0.0038	1.9	0.0031
Total Xylenes	0.0005	12	0.55	0.013	2.8	0.0034
TPH as Gasoline	0.050	26	3.1	0.15	26	0.053
% Surrogate Recovery		63%	100%	103%	111%	115%
Instrument I.D.		HP4	HP4	HP4	HP4	HP4
Date Analyzed		11/04/92	11/04/92	11/03/92	11/04/92	11/04/92
RLMF		250	50	1	500	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Analyst 11/10/92 Date

Supervisor 11/10/92 Date

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

Anametrix W.O.: 9210406
Matrix : WATER
Date Sampled : N/A

Project Number : 204-0072-0403
Date Released : 11/09/92

COMPOUNDS	Reporting Limit (mg/L)	Sample I.D.# BN0401E3 BLANK	Sample I.D.# BN0301E3 BLANK
Benzene	0.0005	ND	ND
Toluene	0.0005	ND	ND
Ethylbenzene	0.0005	ND	ND
Total Xylenes	0.0005	ND	ND
TPH as Gasoline	0.050	ND	ND
% Surrogate Recovery		122%	99%
Instrument I.D.		HP4	HP4
Date Analyzed		11/04/92	11/03/92
RLMF		1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Analyst 11/10/92 Date

Supervisor 11/10/92 Date

ANALYSIS DATA SHEET - TOTAL OIL AND GREASE
ANAMETRIX, INC. (408) 432-8192

Project I.D. : 204-0072-0403
Matrix : WATER
Date sampled : 10/22/92
Date ext. TOG : 11/02/92
Date anl. TOG : 11/02/92

Anametrix I.D. : 9210406
Analyst : APP
Supervisor : CM
Date released : 11/06/92

Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9210406-04	BH-E	7	ND
9210406-09	BH-F	14	ND
9210406-10	BH-G	6	ND
9210406-13	BH-H	6	ND
9210406-16	BH-I	8	ND
GWBL110292	METHOD BLANK	5	ND

ND - Not detected at or above the practical quantitation limit for the method.
TOG - Total Oil & Grease is determined by Standard Method 5520BF.

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

TOTAL OIL AND GREASE LAB CONTROL SAMPLE REPORT
STANDARD METHOD 5520BF
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: LCSW1102
Matrix	: WATER	Analyst	: APP
Date sampled	: N/A	Supervisor	: CM
Date extracted	: 11/02/92	Date Released	: 11/05/92
Date analyzed	: 11/02/92		

COMPOUND	SPIKE AMT. (mg/L)	LCS (mg/L)	%REC LCS	LCSD (mg/L)	%REC LCSD	%RPD	%REC LIMITS
Motor Oil	50	29	58%	28	56%	4%	54-106%

* Quality control limits established by Anametrix, Inc.

ANAMETRIX INC
Environmental & Analytical Chemistry

Part of INCHCAPE ENVIRONMENTAL

REPORT

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302353
Date Received : 02/26/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813

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

ANAMETRIX ID	CLIENT SAMPLE ID
9302353- 1	MW-3
9302353- 2	TB/LB

This report consists of 19 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Larry Kerr for

Sarah Schoen, Ph.D.
Laboratory Director

3-10-93
Date

ANAMETRIX REPORT DESCRIPTION
GC

Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anametrix ID number.

Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "*", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

Qualifiers

Anametrix uses several data qualifiers (Q) in it's report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank.
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E - Indicates that the amount reported exceeded the linear range of the instrument calibration.
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

REPORTING CONVENTIONS

- Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- Amounts reported are gross values, i.e., not corrected for method blank contamination.

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302353
Date Received : 02/26/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- No QA/QC problems encountered for sample.

Corinne Ham 3/5/93
Department Supervisor Date

Kamel C. Kamel 3/5/93
Chemist Date

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302353
Date Received : 02/26/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9302353- 1	MW-3	WATER	02/25/93	8010

DESCRIPTIONS FOR SPECIFIC COMPOUNDS ANALYZED

EPA METHOD 601/8010

CAS #	COMPOUND NAME	ABBREVIATED NAME
74-87-3	Chloromethane	Chloromethane
74-83-9	Bromomethane	Bromoethane
75-71-8	Dichlorodifluoromethane	Freon 12
75-01-4	Vinyl Chloride	Vinyl Chloride
75-00-3	Chloroethane	Chloroethane
75-09-2	Methylene Chloride	Methylene Chlor
75-69-4	Trichlrofluoromethane	Freon 11
75-35-4	1,1-Dichloroethene	1,1-DCE
75-34-3	1,1-Dichloroethane	1,1-DCA
156-59-2	Cis-1,2-Dichloroethene	Cis-1,2-DCE
156-60-5	Trans-1,2-Dichloroethene	Trans-1,2-DCE
67-66-3	Chloroform	Chloroform
76-13-1	Trichlorotrifluoroethane	Freon 113
107-06-2	1,2-Dichloroethane	1,2-DCA
71-55-6	1,1,1-Trichloroethane	1,1,1-TCA
56-23-5	Carbon Tetrachloride	Carbon Tet
75-27-4	Bromodichloromethane	BromodichloroMe
78-87-5	1,2-Dichloropropane	1,2-DCPA
10061-02-6	Trans-1,3-Dichloropropene	Trans-1,3-DCPE
79-01-6	Trichloroethene	TCE
124-48-1	Dibromochloromethane	DibromochloroMe
79-00-5	1,1,2-Trichloroethane	1,1,2-TCA
10061-01-5	Cis-1,3-Dichloropropene	Cis-1,3-DCPE
110-75-8	2-Chloroethylvinylether	Chloroethylvinl
75-25-2	Bromoform	Bromoform
127-18-4	Tetrachloroethene	PCE
79-34-5	1,1,2,2-Tetrachloroethane	PCA
108-90-7	Chlorobenzene	Chlorobenzene
95-50-1	1,2-Dichlorobenzene	1,2-DCB
541-73-1	1,3-Dichlorobenzene	1,3-DCB
106-46-7	1,4-Dichlorobenzene	1,4-DCB
352-33-0	p-Chlorofluorobenzene	Chlorofluoroben

mh/3426 - 10MH

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID	: 204-0072	Anametrix ID	: 9302353-01
Sample ID	: MW-3	Analyst	: KK
Matrix	: WATER	Supervisor	: CR
Date Sampled	: 2/25/93		
Date Analyzed	: 3/ 3/93	Dilution Factor	: 1.0
Instrument ID	: HP14	Conc. Units	: ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	1.5	
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-00
Sample ID : BLK303
Matrix : WATER
Date Sampled : 0/ 0/ 0
Date Analyzed : 3/ 3/93
Instrument ID : HP14

Anametrix ID : 14B0303H01
Analyst :
Supervisor : KL

Dilution Factor : 1.0
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-0072
Matrix : LIQUID

Anametrix ID : 9302353
Analyst :
Supervisor : KK

	SAMPLE ID	SU1	SU2	SU3
1	BLK303	102		
2	MW-3	100		
3	MW-3 MS	93		
4	MW-3 MSD	102		
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

	QC LIMITS
SU1 = CHLOROFLUOROBEN	(51-136)

* Values outside of Anametrix QC limits

MATRIX SPIKE RECOVERY FORM -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 204-0072
Sample ID : MW-3
Matrix : WATER
Date Sampled : 2/25/93
Date Analyzed : 3/ 3/93
Instrument ID : HP14

Anametrix ID : 9302353-01
Analyst :
Supervisor : CP KK

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	%REC LIMITS
Freon 113	10.0	.0	8.5	85	28-127
1,1-DCE	10.0	.0	8.7	87	47-119
Trans-1,2-DCE	10.0	.0	9.9	99	46-112
1,1-DCA	10.0	.0	9.4	94	57-124
Cis-1,2-DCE	10.0	.0	11.1	111	70-139
1,1,1-TCA	10.0	.0	10.5	105	57-125
Trichloroethene	10.0	.0	10.1	101	61-133
PCE	10.0	.0	9.9	99	61-132
Chlorobenzene	10.0	.0	10.8	108	81-120
1,3-DCB	10.0	.0	10.7	107	56-113
1,4-DCB	10.0	.0	11.0	110	62-119
1,2-DCB	10.0	.0	11.1	111	69-116

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	RPD LIMITS	%REC LIMITS
Freon 113	10.0	8.4	84	1	25	28-127
1,1-DCE	10.0	8.6	86	1	25	47-119
Trans-1,2-DCE	10.0	9.5	95	4	25	46-112
1,1-DCA	10.0	9.2	92	3	25	57-124
Cis-1,2-DCE	10.0	10.5	105	5	25	70-139
1,1,1-TCA	10.0	9.9	99	5	25	57-125
Trichloroethene	10.0	9.8	98	3	25	61-133
PCE	10.0	9.6	96	4	25	61-132
Chlorobenzene	10.0	10.3	103	5	25	81-120
1,3-DCB	10.0	10.5	105	2	25	56-113
1,4-DCB	10.0	10.6	106	3	25	62-119
1,2-DCB	10.0	10.8	108	3	25	69-116

* Value is outside of Anametrix QC limits

RPD: 0 out of 12 outside limits
Spike Recovery: 0 out of 24 outside limits

LABORATORY CONTROL SAMPLE
EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project/Case : LABORATORY CONTROL SAMPLE
Matrix : WATER
SDG/Batch : N/A
Date analyzed : 03/03/93

Anametrix I.D. : WO030393
Analyst :
Supervisor : KL
Instrument I.D.: HP14

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	8.9	89%	34 - 128
1,1-DICHLOROETHENE	10	8.7	87%	63 - 133
trans-1,2-DICHLOROETHENE	10	10.3	103%	55 - 145
1,1-DICHLOROETHANE	10	10.5	105%	49 - 121
cis-1,2-DICHLOROETHENE	10	11.1	111%	66 - 168
1,1,1-TRICHLOROETHANE	10	10.5	105%	72 - 143
TRICHLOROETHENE	10	10.4	104%	63 - 147
TETRACHLOROETHENE	10	10.0	100%	60 - 133
CHLOROBENZENE	10	10.4	104%	70 - 148
1,3-DICHLOROBENZENE	10	10.8	108%	49 - 139
1,4-DICHLOROBENZENE	10	11.3	113%	70 - 133
1,2-DICHLOROBENZENE	10	11.4	114%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302353
Date Received : 02/26/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9302353- 1	MW-3	WATER	02/25/93	TPHd
9302353- 1	MW-3	WATER	02/25/93	TPHg/BTEX
9302353- 2	TB/LB	WATER	02/25/93	TPHg/BTEX

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302353
Date Received : 02/26/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Bowman 3/4/93
Department Supervisor Date

Charlotte Bruch 3.9.93
Chemist Date

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

Anametrix W.O.: 9302353
Matrix : WATER
Date Sampled : 02/25/93

Project Number : 204-0072-0403
Date Released : 03/09/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW-3 -01	Sample I.D.# TB/LB -02	Sample I.D.# BM0201E3 BLANK
Benzene	0.5	ND	ND	ND
Toluene	0.5	ND	ND	ND
Ethylbenzene	0.5	2.5	ND	ND
Total Xylenes	0.5	6.4	ND	ND
TPH as Gasoline	50	58	ND	ND
% Surrogate Recovery		133%	105%	120%
Instrument I.D.		HP4	HP4	HP4
Date Analyzed		03/02/93	03/02/93	03/02/93
RLMF		1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%

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

Charleston Bunch 3.9.93
Analyst Date

Cheryl Balmer 3/9/93
Supervisor Date

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

Anametrix W.O.: 9302353
Matrix : WATER
Date Sampled : 02/25/93
Date Extracted: 02/27/93

Project Number : 204-0072-0403
Date Released : 03/09/93
Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)
9302353-01	MW-3	03/04/93	50	140
DWBL022793	METHOD BLANK	03/04/93	50	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.
ND - Not detected at or above the practical quantitation limit for the method.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3510.

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

Charleston Burch 3.9.93
Analyst Date

Cheryl Balman 3/9/93
Supervisor Date

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

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date Sampled : N/A
Date Analyzed : 03/02/93

Anametrix I.D. : LCSW0302
Analyst : CMB
Supervisor : CS
Date Released : 03/09/93
Instrument I.D.: HP4

COMPOUND	SPIKE AMT. (ug/L)	REC LCS (ug/L)	%REC LCS	% REC LIMITS
GASOLINE	500	544	109%	67-127
SURROGATE			99%	61-139

* Quality control established by Anametrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date Sampled : N/A
Date Extracted: 02/27/93
Date Analyzed : 03/03/93

Anametrix I.D. : LCSW0227
Analyst : IS
Supervisor : [illegible]
Date Released : 03/09/93
Instrument I.D.: HP9

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCSD REC (ug/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1250	710	57%	680	54%	-4%	47-130

*Quality control established by Anametrix, Inc.

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302353
Date Received : 02/26/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : PREP
Sub-Department: PREP

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9302353- 1	MW-3	WATER	02/25/93	5520BF

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

MS. JOYCE FREMSTAD
WEISS ASSOC./SHELL OIL
5500 SHELLMOUND STREET
EMERYVILLE, CA 94608

Workorder # : 9302353
Date Received : 02/26/93
Project ID : 204-0072-0403
Purchase Order: MOH-B813
Department : PREP
Sub-Department: PREP

QA/QC SUMMARY :

- No QA/QC problems encountered for this sample.

Department Supervisor 3/9/93 Date

Chemist 3/9/93 Date

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

Project I.D. : 204-0072-0403
Matrix : WATER
Date sampled : 02/25/93
Date extracted: 03/02/93
Date analyzed : 03/03/93

Anametrix I.D. : 9302353
Analyst :
Supervisor :
Date released : 03/05/93

Workorder #	Sample I.D.	Reporting Limit (mg/L)	Amount Found (mg/L)
9302353-01	MW-3	5	ND
GWBL030293	METHOD BLANK	5	ND

ND - Not detected at or above the practical quantitation limit for the method.
TRPH - Total Recoverable Petroleum Hydrocarbons are determined by Standard Method 5520BF.

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

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS LAB CONTROL SAMPLE REPORT
STANDARD METHOD 5520BF
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date sampled : N/A
Date extracted : 03/02/93
Date analyzed : 03/03/93

Anametrix I.D. : LCSW0302
Analyst :
Supervisor :
Date Released : 03/05/93

COMPOUND	SPIKE AMT. (mg/L)	LCS (mg/L)	%REC LCS	LCSD (mg/L)	%REC LCSD	%RPD	%REC LIMITS
Motor Oil	50	46	92%	42	84%	9%	54-106%

* Quality control limits established by Anametrix, Inc.

9302353 14/18 (18)(16) 13:00 MA

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: ~~ANAMETRIX~~ 69

Date: 2/25/93
Page 1 of 1

Site Address: 1601 WEBSTER ST. ALAMEDA, CA

WIC#: 204-0072-0403

Shell Engineer: DAN KIRK — Phone No.: 510 675-6168 Fax #:

Consultant Name & Address: WEISS ASSOCIATES 5500 SHELLMOUND ST EMERYVILLE CA 94608

Consultant Contact: WA JOB # 81-434-02 — Phone No.: (510) 547-5420 Fax #: 547-5043

Comments:

Sampled by: RON JENSEN Ronald C. Jensen

Printed Name: RON JENSEN

LAB: ANAMETRIX

CHECK ONE (1) BOX ONLY		CT/DT
G.W. Monitoring	X	4461
Site Investigation		4441
Soil Classify/Disposal		4442
Water Classify/Disposal		4443
Soil/Air Rem. or Sys. O & M		4452
Water Rem. or Sys O & M		4453
Other		

TURN AROUND TIME: 24 hours ☐ 48 hours ☐ 15 days ☒ (Normal) Other ☐ ____

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

UST AGENCY: ____

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	TOTAL OIL & GREASE EPA 5520 F	HALOCARBONS * EPA 8010	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW-3	2/25/93			X		3						X				40 ml	HCl	N	* FOR EPA 8010	
(1)						2		X								1 liter	HCl	N	PLEASE ANALYZE FOR 1,1,1-TCA, cis-1,2-DCE	
(1)						1							X			1 liter	H_2SO_4	N	1,2-DCA, AND METHYLENE CHLORIDE	
(1)						3								X		40 ml	HCl	N		
(2) TB/LB	2/25/93					3						X				40 ml	HCl	N		

→ SAMPLES STORED OVERNIGHT IN SECURE AREA

Relinquished By (signature)	Printed Name	Date / Time	Received (signature)	Printed Name	Date / Time
Ronald C. Jensen	RON JENSEN	Date: 2/26/93 Time: 11:20	Benny S. Arrizosa	BENNY S. ARRIZOSA	Date: 2-26-93 Time: 1120
Benny S. Arrizosa	BENNY S. ARRIZOSA	Date: 2-26-93 Time: 1240	Michele D Aguilar	MICHELE D AGUILAR	Date: 2-26-93 Time: 12:40
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):	Printed Name:	Date: Time:

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

Rev. 7/12/90

Shell Oil Chn. of Custody