



Weiss Associates

5500 Shellmound Street, Emeryville, CA 94608-2411

Environmental and Geologic Services

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HAZMAT
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January 3, 1994

Scott Seery
Alameda County Department
of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Re: STID #3719
Shell Service Station
6039 College Avenue
Oakland, California
WIC #204-5508-3301
WA Job #81-618-07

Dear Mr. Seery:

In your October 28, 1992 letter to Dan Kirk of Shell Oil you requested that Shell further investigate the extent of hydrocarbons at the site referenced above. You also requested a Corrective Action Plan including assessment of impacts, feasibility study, applicable cleanup levels and a proposed schedule. Based on data presented in the attached subsurface investigation report we have fully assessed the impact of hydrocarbons to the subsurface. We will present a feasibility study including applicable clean-up levels and a schedule for future work at the site in a subsequent submittal.

We appreciate this opportunity to provide hydrogeologic consulting services on behalf of Shell Oil Company. Please call me at 450-6108 if you have any questions or comments.

Sincerely,
Weiss Associates

David Elias
David Elias
Senior Staff Geologist

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J:HC_ENG\SHELL\OAK-618\618L1DE3.WP

Attachments: December 1993 Investigation Report

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



December 30, 1993

Scott Seery
Alameda County Department
of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

Re: Soil and Water Investigation
STID #3719
Shell Service Station
6039 College Avenue
Oakland, California
WIC #204-5508-3301
WA Job #81-618-07

Dear Mr. Seery:

This letter presents the results of Weiss Associates' (WA) subsurface investigation at the Shell service station referenced above (Figure 1). As outlined in WA's September 14, 1992 workplan and October 12, 1992 work plan addendum,¹ the investigation objective was to assess the crossgradient extent of hydrocarbons in ground water to the west of the site, and to assess hydrocarbon concentrations between source area well MW-4 and clean downgradient well MW-5 on the Olund property southwest of the site. To achieve this objective, WA drilled two soil borings and installed one monitoring well in Claremont Avenue and drilled three soil borings on the Olund property (Figure 2). Our scope of work and a summary of this and previous investigations are presented below.

SCOPE OF WORK

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

- Obtain a well construction permit from the Alameda County Flood Control and Water Conservation District, an encroachment permit and excavation permit from the City of Oakland, and an access agreement from the downgradient property owner;

¹ WA, September 14 and October 12, 1992, Consultant's letter-workplans regarding the proposed soil borings, well installation and water sampling at the Shell service station at 6039 College Avenue in Oakland, California, 6 pages, 2 attachments and 3 pages respectively.

- Drill five offsite soil borings collecting soil samples from the borings for subsurface hydrogeologic description and possible hydrocarbon analyses and "grab" ground water samples for hydrocarbon analyses;
- Complete one boring as a ground water monitoring well;
- Develop the well and collect ground water samples for hydrocarbon analyses;
- Survey the top-of-casing elevation of the well, measure water depths in all site wells and prepare a ground water elevation contour map;
- Arrange for the disposal of the drill cuttings, steam cleaning rinsate and well purge water; and
- Report the results.

INVESTIGATION RESULTS

Site Setting

Location: The site is located at the northern corner of Claremont Avenue and College Avenue in Oakland, California (Figure 1). San Francisco Bay is about 3 miles west of the site.

Surroundings: Mixed commercial and residential development.

Geology: The site is underlain by interbedded silty clay and clayey silt and occasional gravelly silt to sandy silt units to the total depth explored of 50 ft.

Previous Investigations

1957 UST Removal and Installation: In 1957, three 1,000 gallon and one 550 gallon steel leaded gasoline USTs, and one 110 gallon steel waste oil tank were removed. The tanks were replaced by three 5,000 gallon steel leaded gasoline tanks and one 1,000 gallon steel waste oil tank (Figure 2).

1978 UST Removal and Installation: In 1978, one 8,000 and three 5,000 gallon steel gasoline USTs and one 1,000 gallon steel waste oil tank were removed. It is not clear from the available data when the 8,000 gallon tank was installed. The tanks were replaced by three 10,000 gallon fiberglass gasoline USTs (Figure 2).

1990 Soil Borings: In January 1990, Harding Lawson Associates (HLA) drilled and sampled soil borings B-1 through B-6 (Figure 2). Up to 610 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPH-G) and 0.57 ppm benzene were detected (Attachment A).

1990 Soil Boring and Well Installations: In February 1990, HLA drilled and installed ground water monitoring wells MW-1 through MW-4 (Figure 2). Up to 230 ppm TPH-G and 1.1 ppm benzene were detected in soil samples collected from the borings (Attachment A).

1991 Soil Boring and Well Installation: In August 1991, HLA installed monitoring well MW-5 (Figure 2). Although 23 ppm of a petroleum mixture other than gasoline was detected in a soil sample from 16 ft, no benzene was detected in any of the samples (Attachment A).

Quarterly Ground Water Monitoring: Ground water samples have been collected quarterly from all of the site wells since February 1990.

March-April 1993 Installation

Drilling Dates:	September 9 and 10, 1993.
Drilling Geologist:	WA Staff Geologist David Elias working under the supervision of Registered Geologist N. Scott MacLeod.
Drilling Method:	CME-55 drill rig using eight-inch diameter hollow stem augers. (WA's standard field procedures are presented in Attachment B.)
Number of Borings:	Five (BH-A through BH-E; Figure 2).
Boring Depths:	19.5 to 26.5 ft.
Soil Sampling Method:	Samples were collected with clean split-barrel drive samplers lined with steam-cleaned stainless steel tubes.
Ground Water Sampling Method:	Grab ground water samples were collected from borings BH-A through BH-D using steam-cleaned teflon bailers.
Sediments Encountered:	Interbedded clayey silts and silty clays with occasional gravelly silt, sandy silt and silt units (Attachment C).

- Analytical Laboratory:*** National Environmental Testing (NET) Pacific, Inc. in Santa Rosa, California.
- Soil Analytical Methods:*** Selected soil samples were analyzed for TPH-G and total petroleum hydrocarbons as diesel (TPH-D) by Modified EPA Method 8015, petroleum oil and grease (POG) by EPA method 5520F, semi-volatile organic compounds (SVOCs) by EPA method 8270 and benzene, ethylbenzene, toluene, and xylenes (BETX) by EPA Method 8020 (Attachment D).
- Soil Disposal:*** Laidlaw Environmental Services of Martinez, California transported the soil cuttings to the Browning Ferris Inc. landfill in Livermore, California as Class III waste.

Well Installation

- Number of Wells:*** One (MW-6; Figure 2).
- Well Materials:*** Two-inch diameter Schedule 40 PVC well casing with 0.020-inch slotted screen and Monterey #3 sand (Attachment C).
- Screened Interval:*** 10 to 25 ft depth (Attachment C).
- Well Development Method:*** Surge block agitation and bailer evacuation.
- Well Yield:*** Well MW-6 yielded about 0.60 gallons per minute during well development.
- Water Sampling Method:*** Water samples were collected from well MW-6 on September 21, 1993 using a disposable polyethylene bailer after purging three well-casing volumes of ground water.
- Well Elevation Survey:*** Tucker & Associates of Calistoga, California surveyed the well top-of-casing elevation (Table 2, Attachment E).
- Ground Water Depth:*** 14.35 ft below ground surface in well MW-6 on September 15, 1993.

Ground Water Flow Direction:

On September 21, 1993, ground water flowed southwestward to westward beneath the Shell site and westward beneath Claremont Avenue. Historically ground water has appeared to flow southwestward towards well MW-5. However, when September 21, 1993 depth-to-water data from well MW-6 is included, ground water appears to flow westward and places well MW-6 directly downgradient of the USTs (Figure 5 and Table 2)

Ground Water Analytical Methods:

Ground water samples were analyzed for TPH-G and TPH-D by Modified EPA Method 8015, POG by EPA method 5520F, SVOCs by EPA method 8270 and BETX by EPA Method 8020 (Attachment D).

Water Disposal:

Crosby and Overton, Inc. of Oakland, California transported the steam clean rinsate and well purge water to the Shell refinery in Martinez, California for recycling.

HYDROCARBON DISTRIBUTION IN SOIL

~~Up to 580 ppm TPH-G, 0.42 ppm benzene and 930 ppm POG were detected in soil samples collected from downgradient borings BH-A, BH-C and BH-D.~~ No petroleum hydrocarbons were detected in soil samples collected from crossgradient boring BH-B and only 3.5 ppm TPH-D were detected in soil samples collected from boring BH-E (well MW-6), which is located further downgradient of boring BH-A (Figure 2, Table 1, Attachment D).

The maximum benzene and POG concentrations detected in soil from this and previous investigations are presented in Figures 3 and 4. Based on these benzene and POG distributions, gasoline range hydrocarbons are limited primarily to the Shell site and the property immediately downgradient of the Shell site.

Since hydrocarbons have not migrated far offsite despite the fact that this site been operated as a service station for the last 50 years, it is likely that naturally occurring hydrocarbon biodegradation processes have stabilized the hydrocarbon plume.

HYDROCARBON DISTRIBUTION IN GROUND WATER

Although up to 4,900 parts per billion (ppb) TPH-G and 720 ppb benzene were detected in grab ground water samples collected from borings BH-A, BH-C and BH-D, no petroleum hydrocarbons were detected in water samples collected from crossgradient boring BH-B and downgradient well MW-6 (Table 3, Attachment D).

Based on the benzene concentrations detected in ground water from soil borings and wells during the third quarter of 1993, benzene in ground water is limited primarily to the Shell site and the property immediately downgradient of the Shell site (Figure 6). The extent of hydrocarbons in ground water is defined by upgradient well MW-1, crossgradient well MW-2 and downgradient wells MW-5 and MW-6.

Although up to 0.24 ft of floating hydrocarbons have intermittently been detected in well MW-4, these hydrocarbons have been removed by the floating hydrocarbon skimmer that is installed in the well. Since the skimmer was installed, the maximum floating hydrocarbons thickness measured is 0.01 ft. Therefore, the skimming system appears to be sufficient to remediate floating hydrocarbons detected in well MW-4.

SUMMARY

The results of this investigation indicate that:

- Hydrocarbons in soil and ground water extend a limited distance to the southwest beneath the Olund property and to the west beneath Claremont Avenue;
- Hydrocarbons in soil and ground water do not extend to the southwest beyond crossgradient boring BH-B and crossgradient well MW-5, or west beyond downgradient well MW-6; and
- Groundwater beneath the site appears to flow southwestward to westward.

Based on the results of this and previous investigations, the extent of hydrocarbons in soil and ground water has been defined both vertically and horizontally.

Scott Seery
December 30, 1993

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Weiss Associates 

Please call if you have any questions or comments regarding this investigation.



Sincerely,
Weiss Associates

David Elias
Senior Staff Geologist

N. Scott MacLeod, R.G.
Project Geologist

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Attachments: A - Previous Analytic Results for Soil
B - Standard Field Procedures
C - Boring Logs
D - Analytic Report for Soil
E - Monitoring Well Survey Report

cc: Tom Callaghan, California Regional Water Quality Control Board, San Francisco Bay
Region, 2101 Webster Street, Suite 500, Oakland, California, 94612
Dan Kirk, Shell Oil Company, P.O. Box 5278, Concord, California, 95450-9998

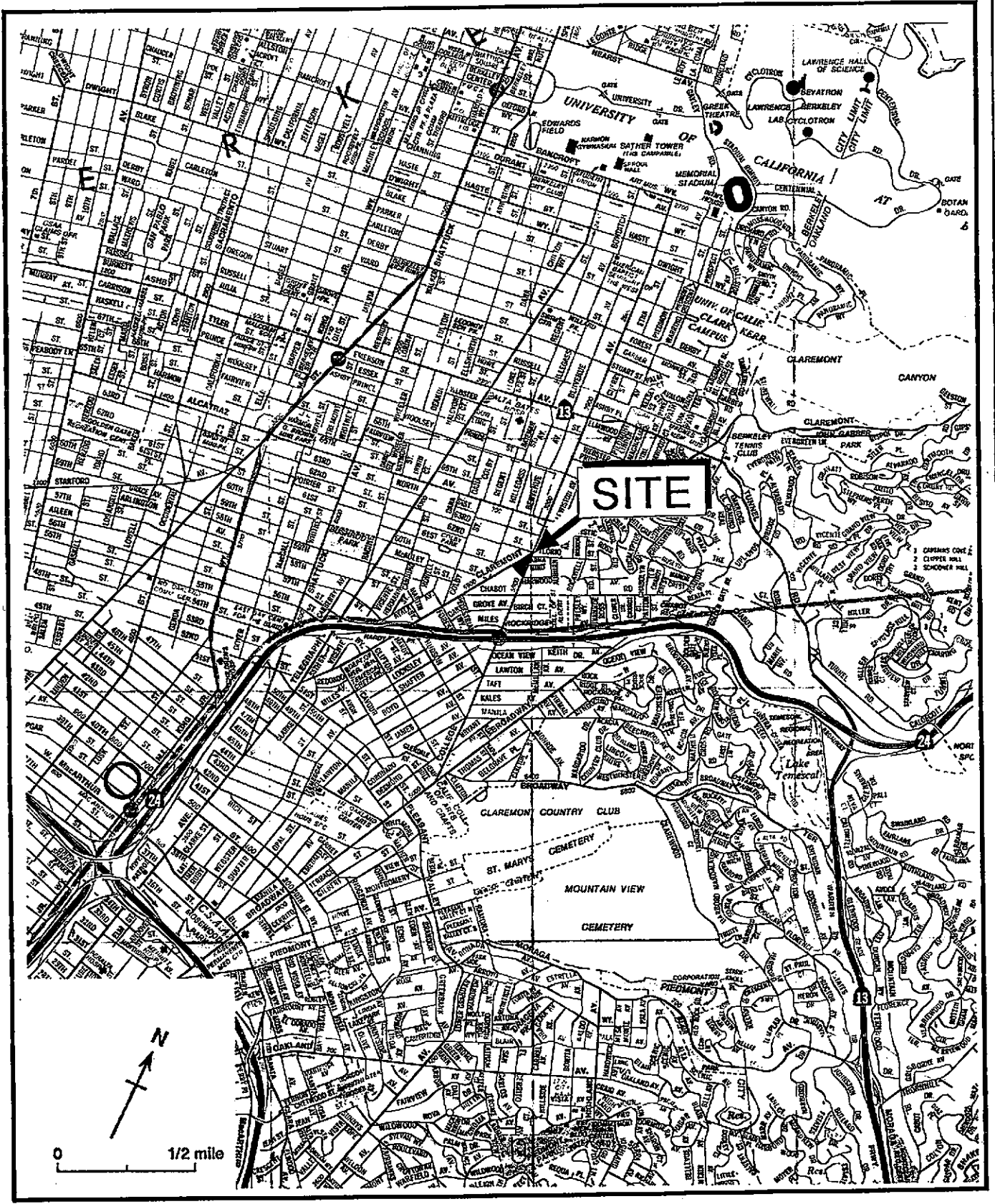


Figure 1. Site Location Map - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

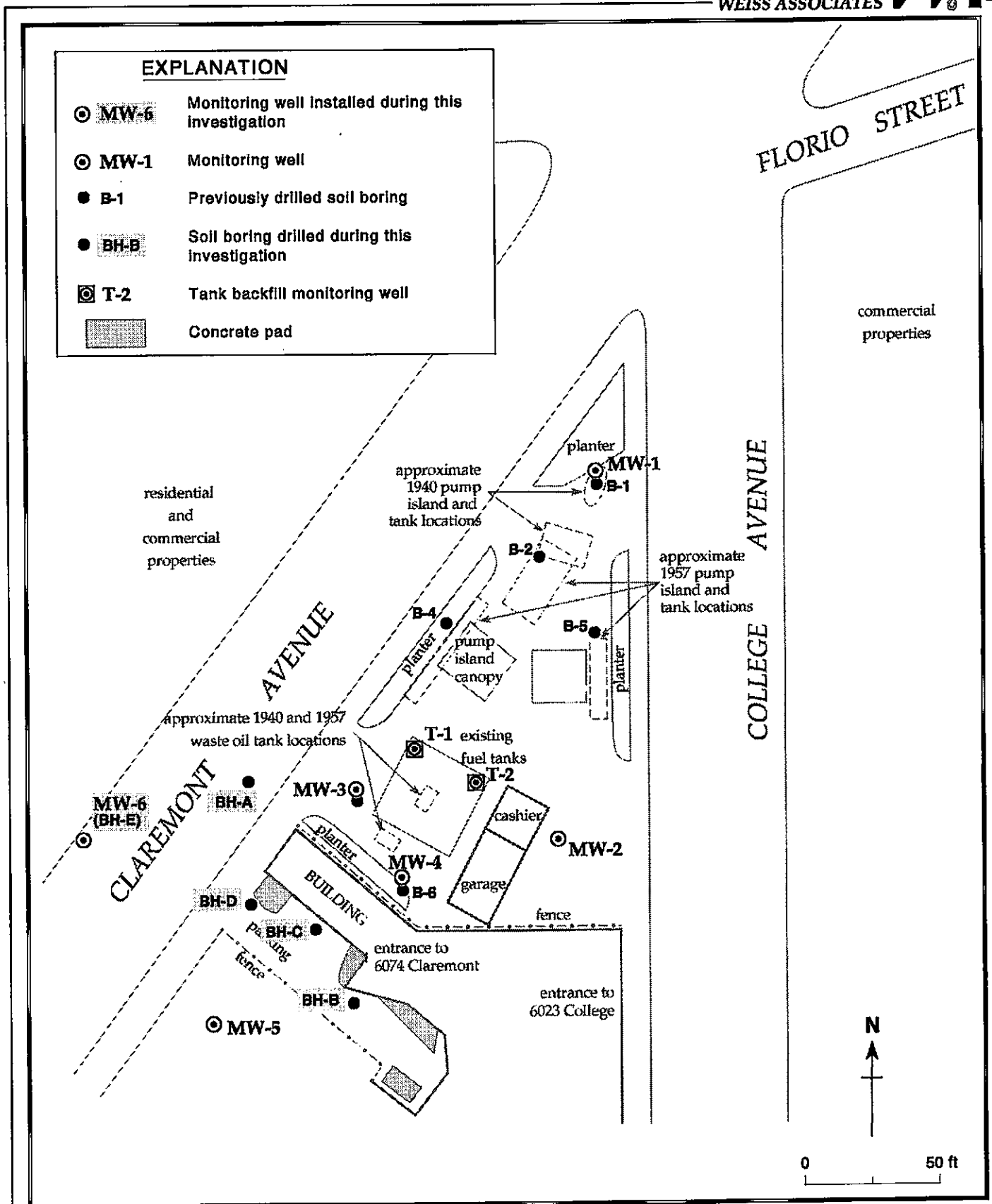


Figure 2. Monitoring Well and Soil Boring Locations - Shell Service Station WIC #204-5510-0303, 6039 College Avenue, Oakland, California

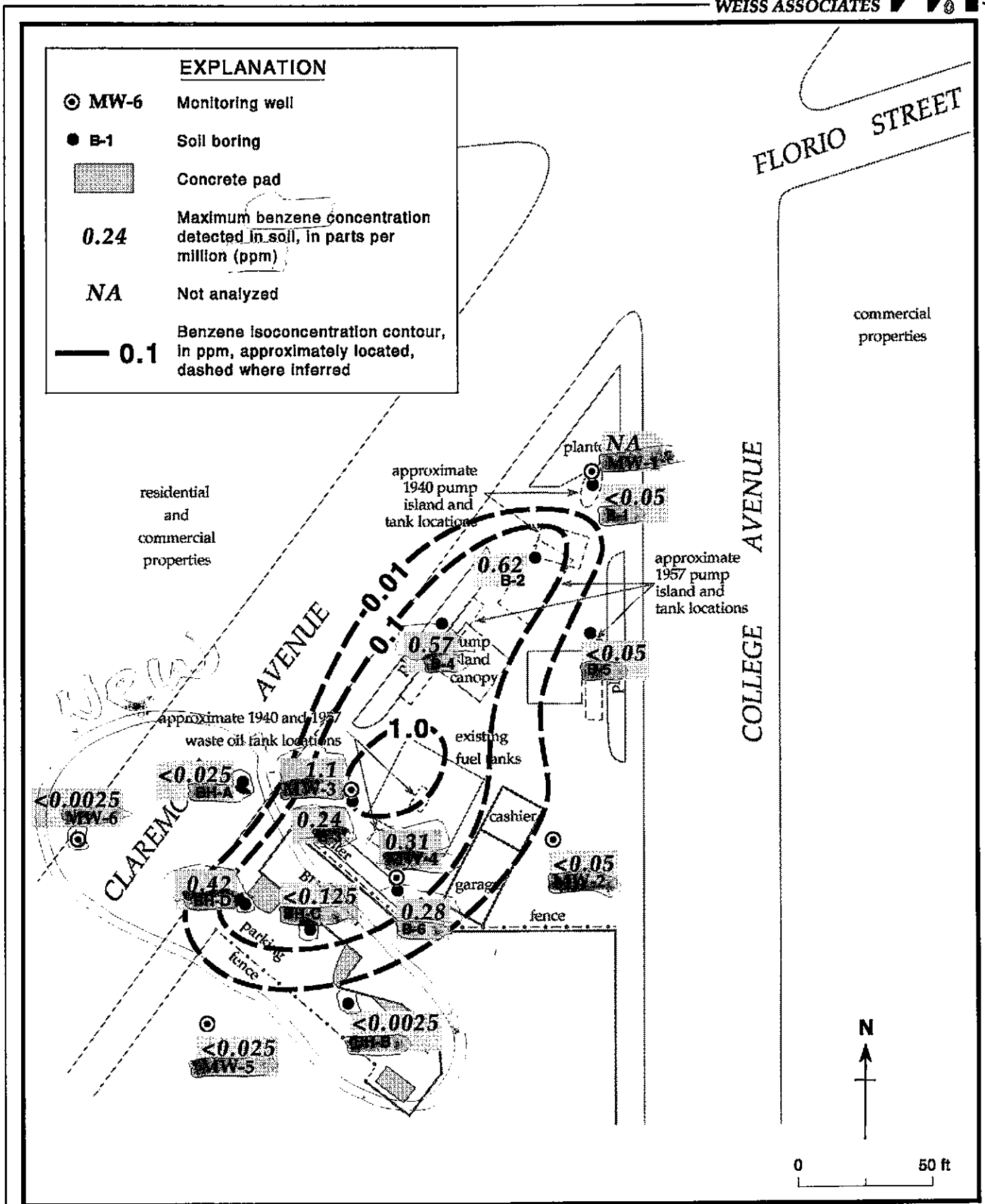


Figure 3. Maximum Benzene Concentrations Detected in Soil - Shell Service Station WIC #204-5510-0303, 6039 College Avenue, Oakland, California

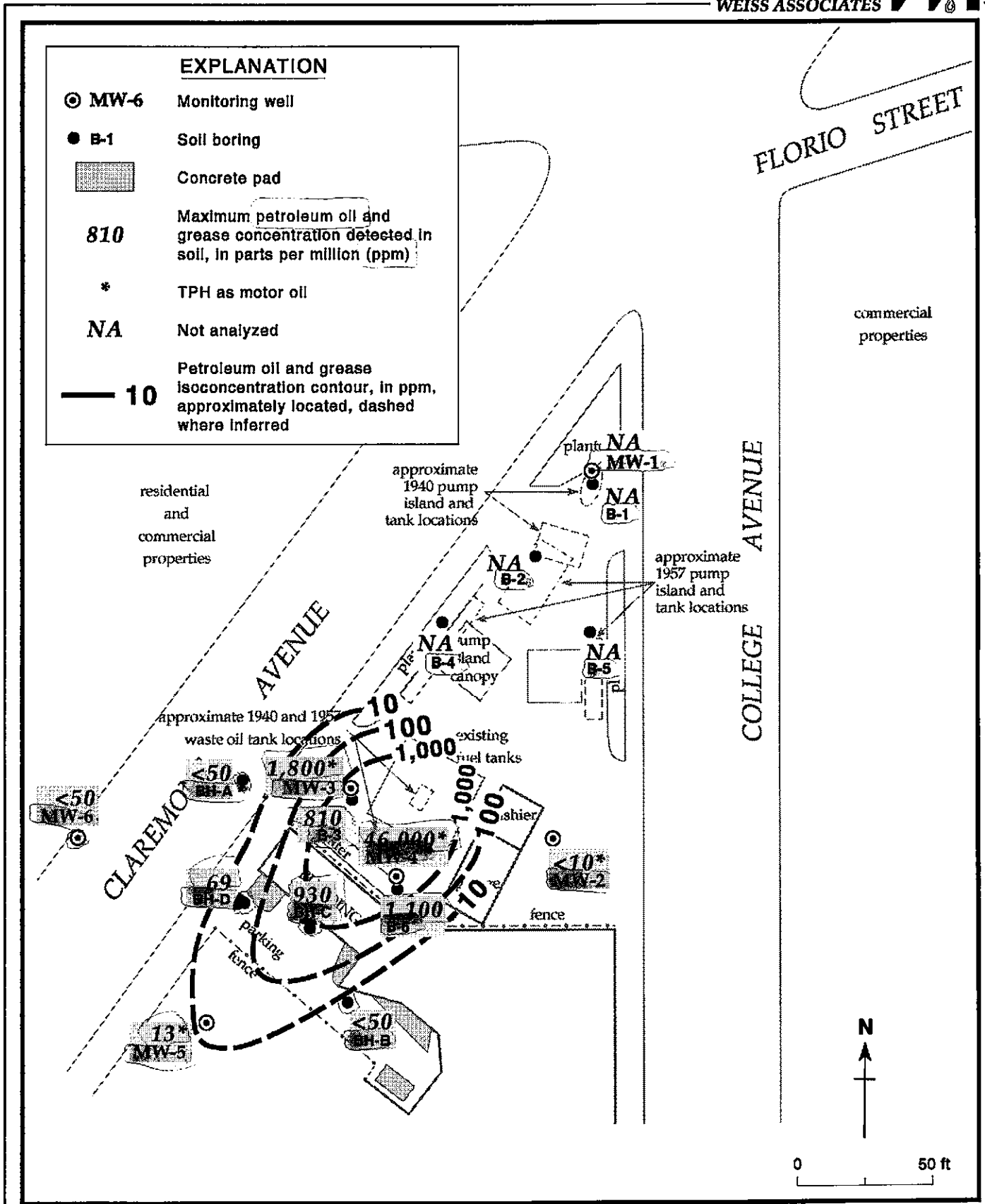


Figure 4. Maximum Petroleum Oil and Grease Concentrations Detected in Soil - Shell Service Station WIC #204-5510-0303, 6039 College Avenue, Oakland, California

EXPLANATION

- ⊙ MW-1 Monitoring well
- 177.54 Ground water elevation, ft above mean sea level
- - 177.0 Ground water elevation contour, ft above mean sea level, approximately located, dashed where inferred
- Inferred ground water flow direction

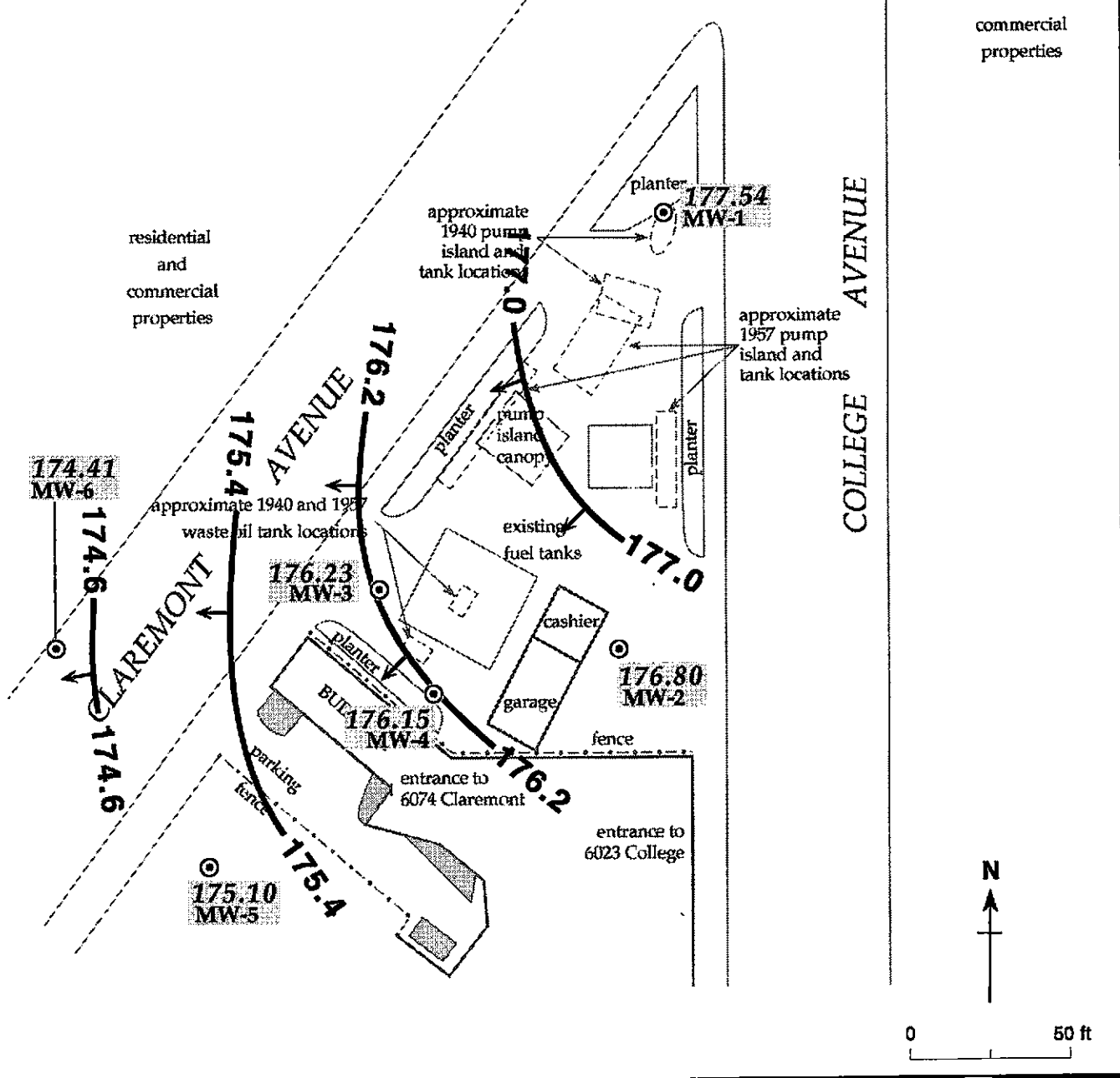





Figure 5. Monitoring Well Locations and Ground Water Elevation Contours - September 21, 1993 - Shell Service Station WIC #204-5510-0303, 6039 College Avenue, Oakland, California

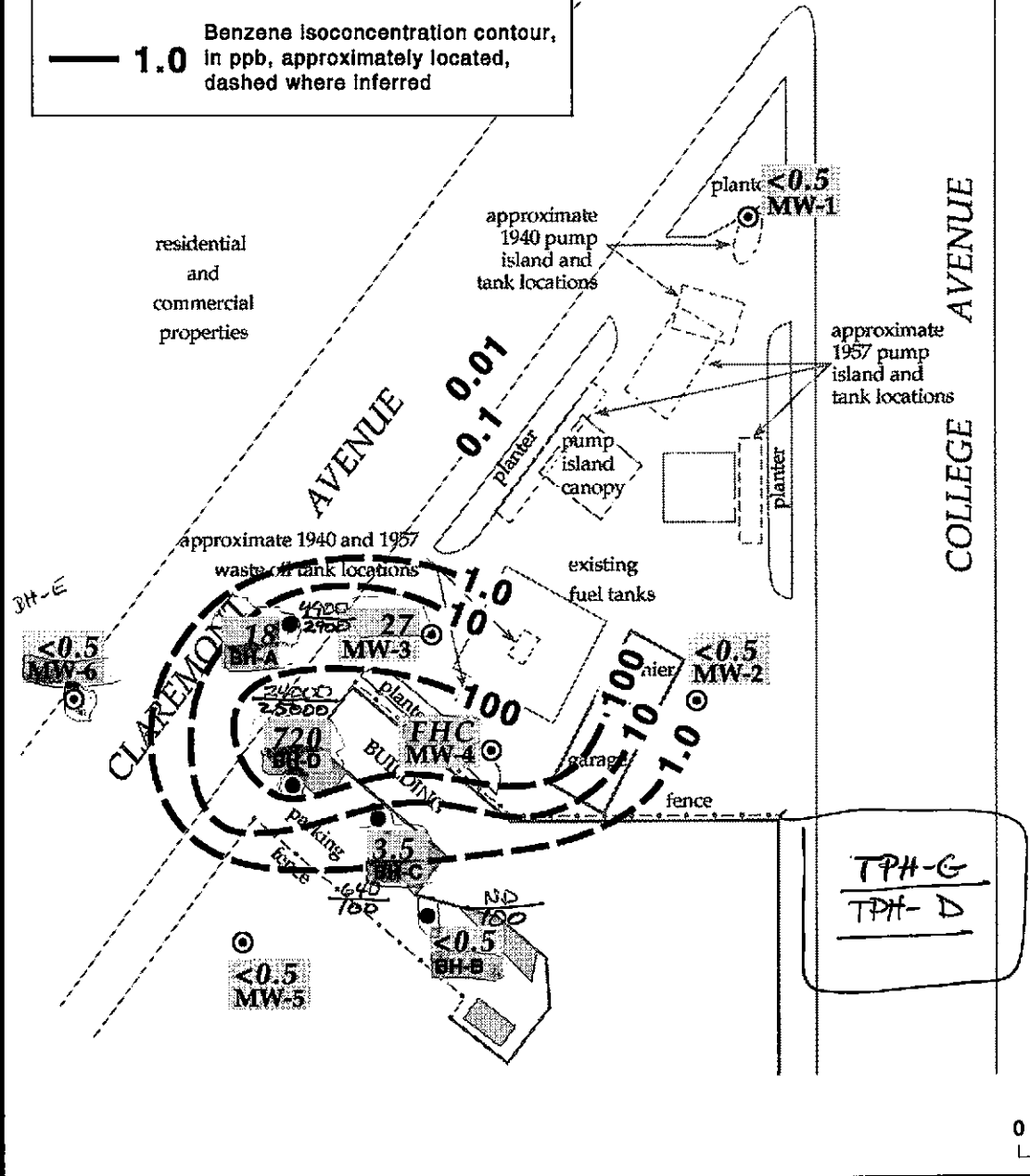
FLORIO STREET

EXPLANATION	
 MW-6	Monitoring well
 B-1	Soil boring
	Concrete pad
27	Benzene concentration in ground water, in parts per billion (ppb)
FHC	Not sampled due to floating hydrocarbon sheen
— 1.0	Benzene isoconcentration contour, in ppb, approximately located, dashed where inferred

commercial properties

COLLEGE AVENUE

residential and commercial properties



0 50 ft

Figure 6. Benzene Concentrations in Ground Water - Third Quarter 1993 - Shell Service Station WIC #204-5510-0303, 6039 College Avenue, Oakland, California

Table 1. Analytic Results for Soil - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

Boring ID	Sample Depth	Approx. Ground Water Depth	Date Sampled	TPH-G	TPH-D	POG	parts per million (mg/L)				HVOCs
							B	E	T	X	
BH-A	6.0	17	09/09/93	<1	---	---	<0.0025	<0.0025	<0.0025	<0.0025	---
	11.0		09/09/93 28 ^a	<1	---	<50	<0.0025	<0.0025	<0.0025	<0.0025	c
	16.0		09/09/93	<1	---	<50	<0.025	<0.025	<0.025	<0.025	ND
[REDACTED]	11.0	15	09/09/93	<1	---	---	<0.0025	<0.0025	<0.0025	<0.0025	---
	15.7		09/09/93	<1	<1	<50	<0.0025	<0.0025	<0.0025	<0.0025	ND
[REDACTED]	10.7	16	09/10/93	<1	---	---	<0.0025	<0.0025	<0.0025	<0.0025	---
	15.7		09/10/93	<1	4,900 ^d	<50	<0.125	<0.125	<0.125	<0.125	ND
	20.7		09/10/93	<1	---	---	<0.0025	<0.0025	<0.0025	<0.0025	---
[REDACTED]	10.7	15	09/10/93	<1	---	<50	<0.0025	<0.0025	<0.0025	<0.0025	ND
	15.7		09/10/93	<1	8.9 ^b	<50	<0.025	<0.025	<0.025	<0.025	ND
	20.7		09/10/93	<1	55 ^b	<50	<0.0025	<0.0025	<0.0025	<0.0025	ND
[REDACTED] (MW-6)	10.7	14	09/10/93	<1	---	---	<0.0025	<0.0025	<0.0025	<0.0025	---
	15.7		09/10/93	<1	3.5 ^b	---	<0.0025	<0.0025	<0.0025	<0.0025	ND

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
 TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
 POG = Petroleum oil and grease by EPA Method 5520F
 HVOCs = Halogenated volatile organic compounds by EPA Method 8270
 B = Benzene by EPA Method 8020
 E = Ethylbenzene by EPA Method 8020
 T = Toluene by EPA Method 8020
 X = Xylenes by EPA Method 8020
 --- = Not analyzed or measured
 <n = Not detected at detection limits of n ppm
 ND = No compounds detected

Notes:

a = Positive result for TPH-G has an atypical pattern for gasoline
 b = Positive result appears to be a lighter hydrocarbon than diesel
 c = 1.6 ppm diethylphthalate and 0.37 ppm dimethyl phthalate detected
 d = Positive result appears to be a heavier hydrocarbon than diesel
 e = Positive result for TPH-D has an atypical pattern for diesel

Table 2. Ground Water Elevations - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Floating Hydrocarbon Thickness (ft) ^a	Ground Water Elevation (ft above msl)
MW-1	06/03/91	195.89	17.82		178.07
	08/30/91		19.87		176.02
	11/22/91		20.58		175.31
	03/18/92		13.55		182.34
	05/28/92		17.08		178.81
	08/19/92		19.07		176.82
	11/17/92		20.11		175.78
	02/12/93		12.10		183.79
	06/10/93		14.87		181.02
	08/18/93		16.90		178.99
	09/21/93		18.35		177.54
MW-2	06/03/91	194.27	17.00		177.27
	08/30/91		18.95		175.32
	11/22/91		19.55		174.72
	03/18/92		12.91		181.36
	05/28/92		16.25		178.02
	08/19/92		18.21		176.06
	11/17/92		19.15		175.12
	02/12/93		11.60		182.67
	06/10/93		14.14		180.13
	08/18/93		16.10		178.17
	09/21/93		17.47		176.80
MW-3	06/03/91	192.52	15.84		176.68
	08/30/91		17.79		174.73
	11/22/91		18.40		174.12
	03/18/92		12.03		180.49
	05/28/92		15.16		177.36
	08/19/92		17.03		175.49
	11/17/92		17.94		174.58
	02/12/93		9.16		183.36
	06/10/93		13.20		179.32
	08/18/93		14.93		177.59
	09/21/93		16.29		176.23
MW-4	06/03/91	193.37	16.77		176.60
	08/30/91		18.71		174.66
	11/22/91		---		---
	03/18/92		13.15	0.24	180.41
	05/28/92		16.22	0.12	177.25
	08/19/92		18.05	0.09	175.39
	11/17/92		18.89	<0.01	174.48
	02/12/93		11.78	<0.01	181.59
	06/10/93		14.20	0.02	179.17

Table 2. Ground Water Elevations - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Floating Hydrocarbon Thickness (ft) ^a	Ground Water Elevation (ft above msl)
	08/18/93		15.95	0.01	177.42
	09/21/93		17.22		176.15
MW-5	08/30/91	190.35	16.74		173.61
	11/22/91		17.27		173.08
	03/18/92		11.28		179.07
	05/28/92 ^b		---		---
	08/19/92		15.99		174.36
	11/17/92		16.84		173.51
	02/12/93		10.30		180.05
	06/10/93		12.36		177.99
	08/18/93		14.02		176.33
	09/21/93		15.25		175.10
MW-6	09/21/93	189.05	14.64		174.41

Notes:

a = When floating hydrocarbons are present ground water elevation corrected by the relation:
 Corrected ground water elevation = (Top-of-Casing Elevation) - (depth to water) + (0.8 x floating hydrocarbon thickness)

b = Well inaccessible

--- = Data not available

Table 3. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

Well/Boring ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	POG	B	E	T	X	HVOCs	parts per billion (ug/L)										

MW-1	06/03/91	17.82	ND	ND	ND	---	ND	ND	ND	ND	ND	---										
	08/30/91	19.87	ND	520	ND	---	ND	ND	ND	ND	ND	---										
	11/22/91	20.58	<50	<50	<500	---	<0.5	<0.5	<0.5	<0.5	<0.5	---										
	03/18/92	13.55	<30	<50	---	---	<0.3	<0.3	<0.3	<0.3	<0.3	---										
	05/28/92	17.08	<50	<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---										
	08/19/92	19.07	<50	<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---										
	11/17/92	20.11	<50	<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---										
	02/12/93	12.10	<50	<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---										
	06/10/93	14.87	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---										
	06/10/93 ^{dup}	14.87	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---										
08/18/93	16.90	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---											
MW-2	06/03/91	17.00	ND	ND	ND	---	ND	ND	ND	ND	ND	---										
	08/30/91	18.95	ND	ND	ND	---	ND	ND	ND	ND	ND	---										
	11/22/91	19.55	<50	<50	<500	---	<0.5	<0.5	<0.5	<0.5	<0.5	---										
	03/18/92	12.91	<30	---	---	---	<0.3	<0.3	<0.3	<0.3	<0.3	---										
	05/28/92	16.25	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---										
	08/19/92	18.21	<50	---	---	---	<0.5	1.2	2	1.9	1.9	---										
	11/17/92	19.15	<50	---	---	---	<0.5	1.2	2	1.9	1.9	---										
	02/12/93 ^{dup}	11.60	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---										
	02/12/93	11.60	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---										
	06/10/93	14.14	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---										
08/18/93	16.10	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---											
08/18/93 ^{dup}	16.10	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	<0.5	---											
MW-3	06/03/91	15.84	1,700	690 ^a	ND	---	260	98	13	24	---											
	08/30/91	17.79	870	370 ^b	500	---	44	10	6.1	2.9	---											
	11/22/91	18.40	310	140	500	---	18	3.3	1.2	2.9	---											
	03/18/92	12.03	67,100	1,900	20,000	---	620	220	28	38	---											
	05/28/92	15.16	2,300	1,100 ^c	4,600	---	200	71	9	17	---											
	08/19/92	17.03	5,700	1,000 ^c	1,800	---	71	52	77	130	---											
	11/17/92	17.94	3,600	160 ^c	1,200	---	16	24	8.6	50	---											
	02/12/93	9.16	4,700	560 ^c	<50	---	820	130	58	77	---											
	06/10/93	13.20	2,200	---	940 ^d	---	310	89	23	23	---											
	08/18/93	14.93	---	---	460 ^d	---	27	---	---	---	---											
MW-4	06/03/91	16.77	670 ^e	1,100 ^f	ND	---	240	1.6	2.3	2.3	---											
	08/30/91	18.71	570	280 ^f	2,000	---	64	0.9	1.8	0.9	---											
	11/22/91 ^{FHC}	---	---	---	---	---	---	---	---	---	---											
	03/18/92 ^{FHC}	13.15	---	---	---	---	---	---	---	---	---											
	05/28/92 ^{FHC}	16.22	---	---	---	---	---	---	---	---	---											
	08/19/92 ^{FHC}	18.05	---	---	---	---	---	---	---	---	---											
	11/17/92 ^{FHC}	18.89	---	---	---	---	---	---	---	---	---											
	02/12/93 ^{FHC}	11.78	---	---	---	---	---	---	---	---	---											

-- Table 3 continues on next page --

Weiss Associates



Table 3. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Well/Boring ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	TPH-MO	parts per billion (ug/L)					HVOCs
						POG	B	E	T	X	
MW-5	06/10/93 ^{FHC}	14.20	---	---	---	---	---	---	---	---	---
	08/18/93 ^{FHC}	15.95	---	---	---	---	---	---	---	---	---
	08/30/91	16.74	ND	80	ND	---	ND	ND	ND	ND	---
	11/22/91	17.27	<50	<50	<500	---	<0.5	<0.5	<0.5	<0.5	---
	03/18/92	11.28	<30	<50	---	---	<0.3	<0.3	<0.3	<0.3	---
	05/28/92 ⁹	---	---	---	---	---	---	---	---	---	---
	08/19/92	15.99	<50	<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/17/92	16.84	<50	<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	02/12/93	10.30	<50	<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	06/10/93	12.36	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---
	08/18/93	14.02	<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---
	09/21/93	14.64	<50	<50	---	<5,000	<0.5	<0.5	<0.5	<0.5	ND
	09/09/93	16.50	4,900	2,900 ^c	---	<5,000	18	54	<5	11	h
	09/09/93	15.85	<50	150	---	<5,000	<0.5	<0.5	<0.5	<0.5	ND
	09/10/93	15.80	640 ^j	100	---	<5,000	3.5	0.6	<0.5	<0.5	ND
09/10/93	14.2	24,000 ^j	25,000 ^c	---	20,000	720	44	86	11	k	
Bailer	08/19/92		<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---
Blank	11/17/92		<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---
Trip	06/03/91		ND	---	---	---	ND	ND	ND	ND	---
Blank	08/30/91		ND	---	---	---	ND	ND	ND	ND	---
	03/18/92		<30	<50	---	---	<0.3	<0.3	<0.3	<0.3	---
	05/28/92		<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---
	08/19/92		<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---
	11/17/92		<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---
	02/12/93		<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---
	06/10/93		<50	---	---	---	<0.5	<0.5	<0.5	<0.5	---
DTSC MCLs			NE	NE	NE	---	1	680	100 ^l	1,750	---

-- Table 3 continues on next page --

Table 3. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California (continued)

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
TPH-MO = Total petroleum hydrocarbons as motor oil by 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
POG = Petroleum Oil & Grease by EPA Method 5520B/F
NE = Not established
DTSC MCLs = California Department of Toxic Substances Control maximum contaminant levels for drinking water
--- = Not analyzed or measured
<n = Not detected at detection limits of n ppb
ND = Not detected
FHC = Floating hydrocarbons in well, not sampled
dup = Duplicate sample

Notes:

a = Positive results for diesel appear to be less volatile constituents of gasoline
b = Positive result for diesel has a typical diesel pattern
c = Concentration reported as diesel is primarily due to the presence of a lighter petroleum product, possibly gasoline
d = Concentration reported as motor oil is due to the presence of a combination of motor oil and a lighter petroleum product of hydrocarbon range C6-C12, possibly gasoline
e = Compounds are within chromatographic range of gasoline but are not characteristic of the standard gasoline pattern
f = Result includes compounds apparently due to gasoline as well as those due to diesel
g = Well inaccessible and not sampled
h = 13 ppb 2-methylnaphthalene and 23 ppb naphthalene detected
i = Due to chain of custody mis-communication analyses run after holding time expiration
j = The positive result for TPH-G has an atypical pattern for gasoline
k = 75 ppb 2-methylnaphthalene and 18 ppb naphthalene detected
l = DTSC recommended action level; MCL not established

ATTACHMENT A
PREVIOUS ANALYTIC RESULTS FOR SOIL

ATTACHMENT B
STANDARD FIELD PROCEDURES

STANDARD FIELD PROCEDURES

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

Deep soil borings or borings for well installation 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 30 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 in crushed ice 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 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.

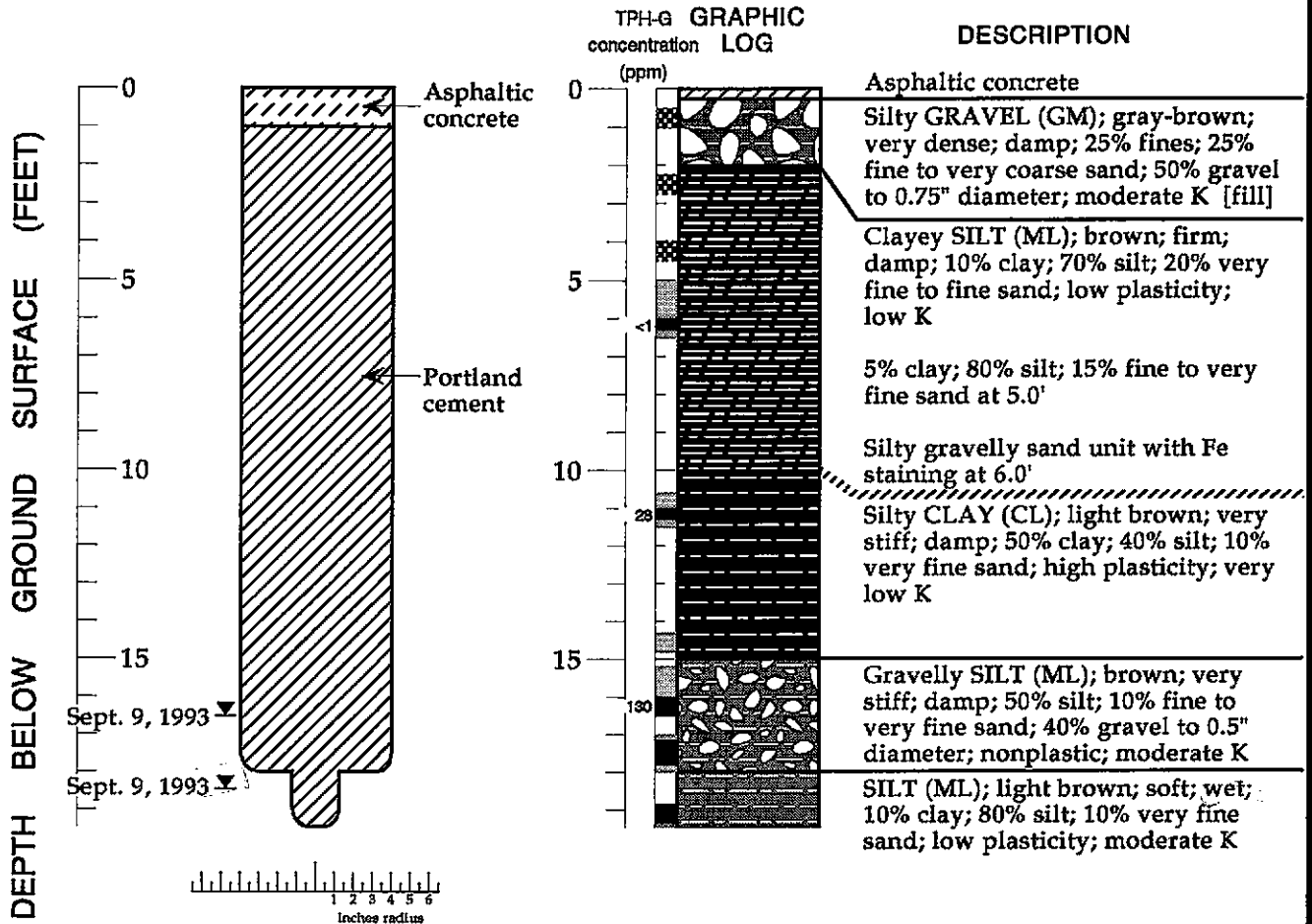
Well Development

After 72 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 72 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.

BORING BH-A



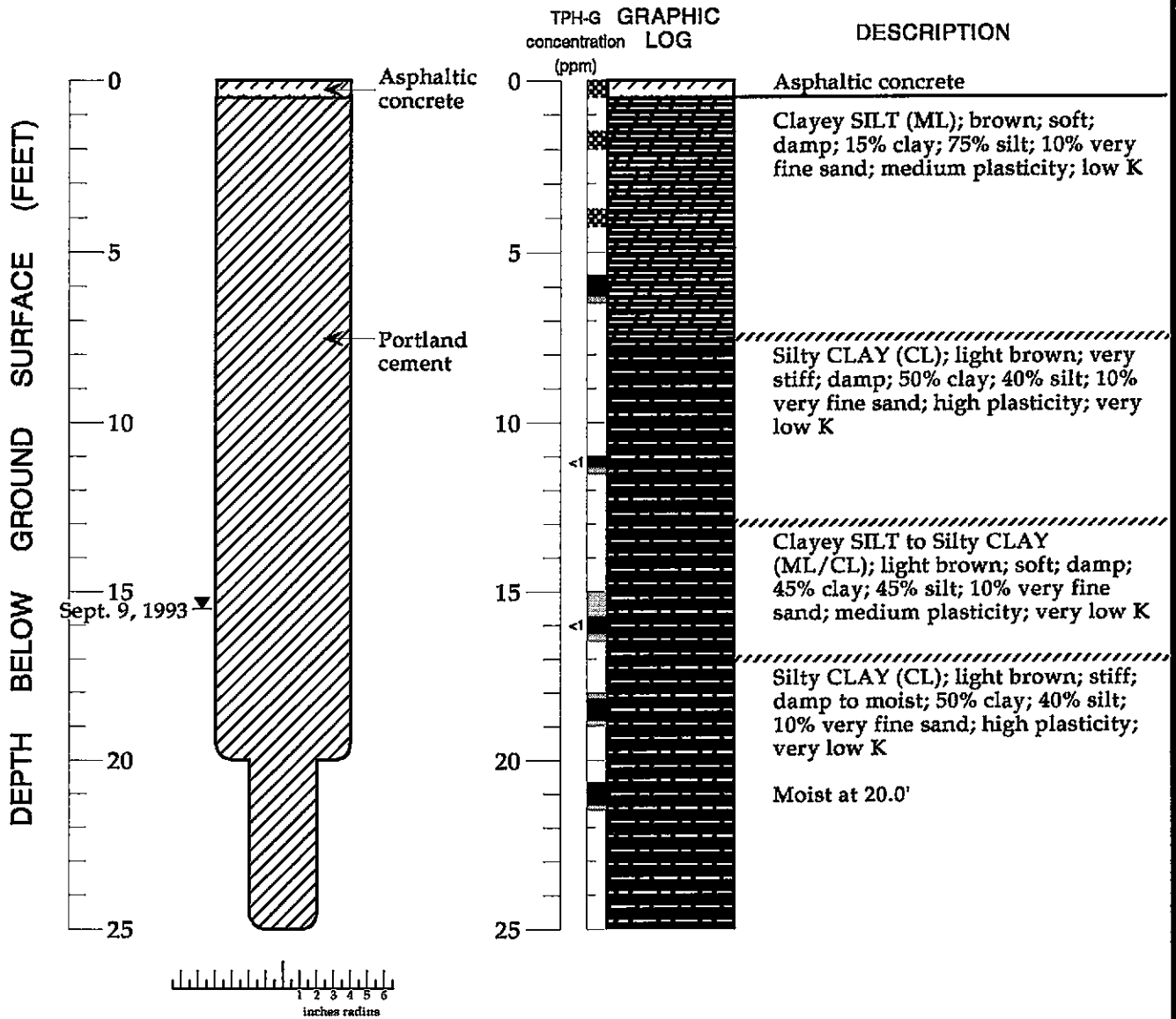
EXPLANATION

- 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: David C. Elias
 Supervisor: N. Scott MacLeod; RG 5747
 Drilling Company: Soils Exploration Services, Vacaville, CA
 License Number: C57-582696
 Driller: Ken Lenk
 Drilling Method: Hollow-stem auger
 Date Drilled: September 9, 1993
 Type of Sampler: Split spoon (1.5", 2", 2.5" ID)
 Ground Surface Elevation: ~193 feet above mean sea level
 TPH-G: Total petroleum hydrocarbons as gasoline in soil by modified EPA Method 8015

Boring Log BH-A - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Berkeley, California

BORING BH-B



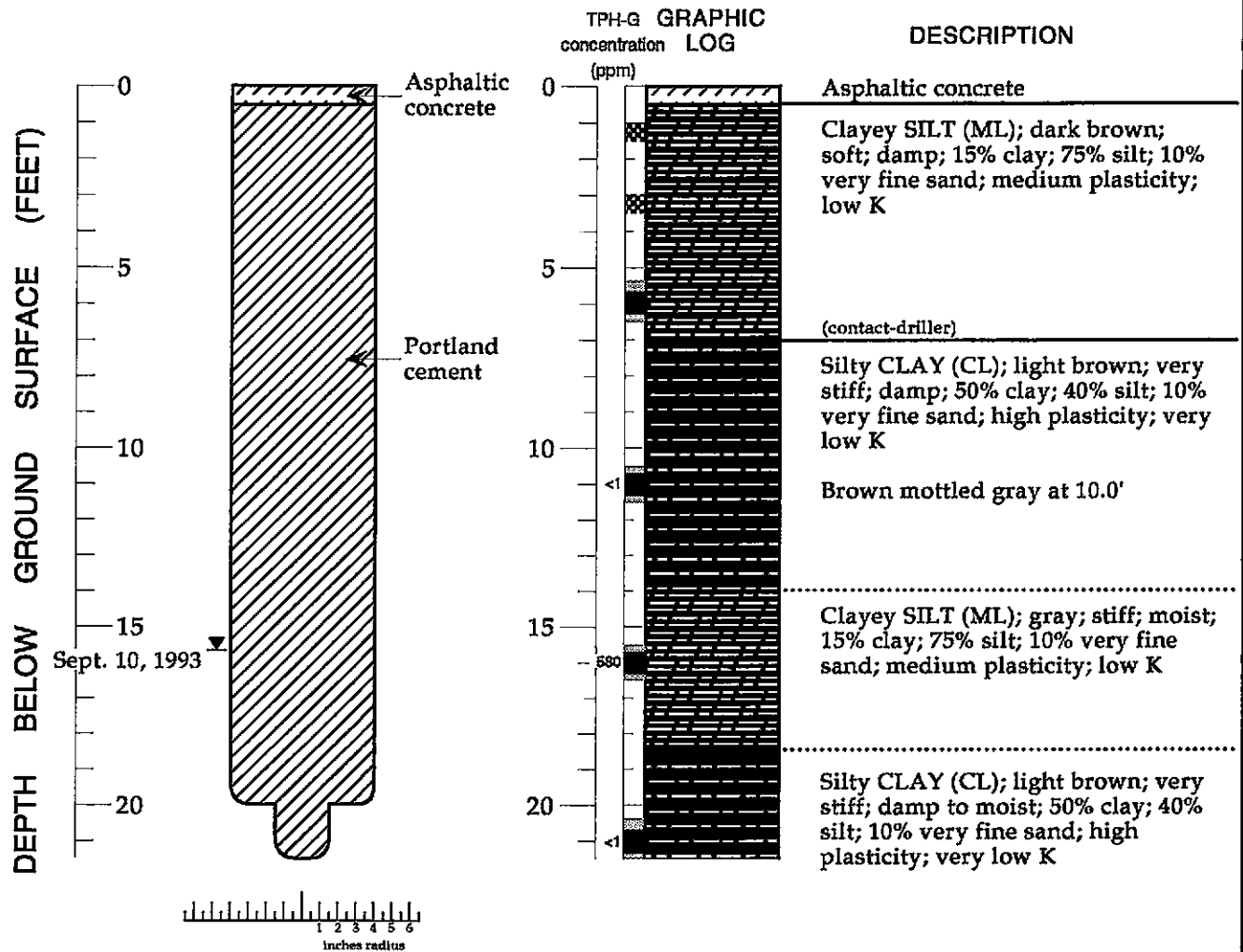
EXPLANATION

- ▼ 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: David C. Elias
 Supervisor: N. Scott MacLeod; RG 5747
 Drilling Company: Soils Exploration Services, Vacaville, CA
 License Number: C57-582696
 Driller: Ken Lenk
 Drilling Method: Hollow-stem auger
 Date Drilled: September 9, 1993
 Type of Sampler: Split spoon (1.5" ID)
 Ground Surface Elevation: ~193 feet above mean sea level
 TPH-G: Total petroleum hydrocarbons as gasoline in soil by modified EPA Method 8015

Boring Log BH-B - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Berkeley, California

BORING BH-C



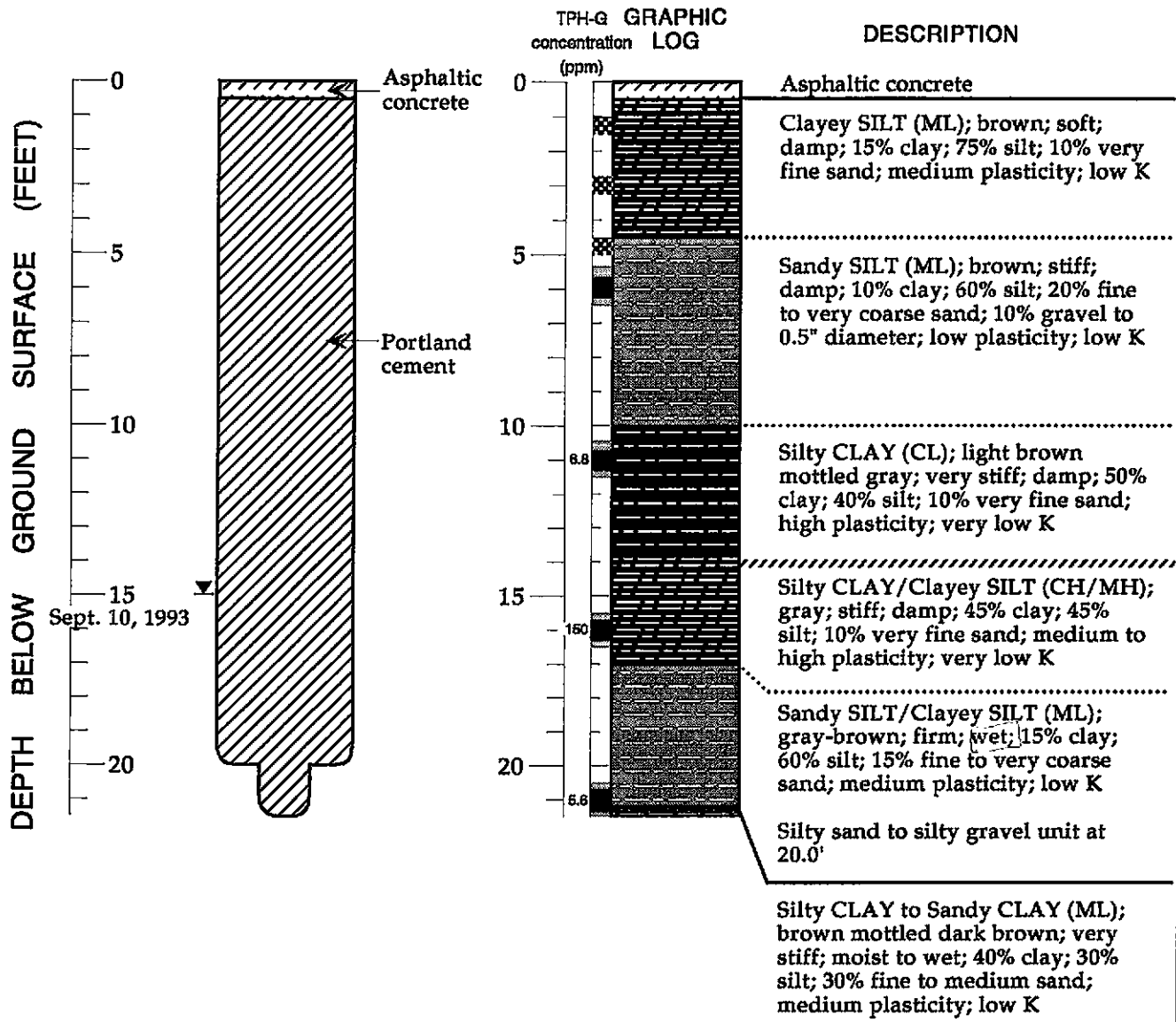
EXPLANATION

- ▼ 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: David C. Elias
 Supervisor: N. Scott MacLeod; RG 5747
 Drilling Company: Soils Exploration Services, Vacaville, CA
 License Number: C57-582696
 Driller: Gene Bernard
 Drilling Method: Hollow-stem auger
 Date Drilled: September 10, 1993
 Type of Sampler: Split spoon (2", ID)
 Ground Surface Elevation: ~193 feet above mean sea level
 TPH-G: Total petroleum hydrocarbons as gasoline in soil by modified EPA Method 8015

Boring Log BH-C - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Berkeley, California

BORING BH-D



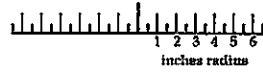
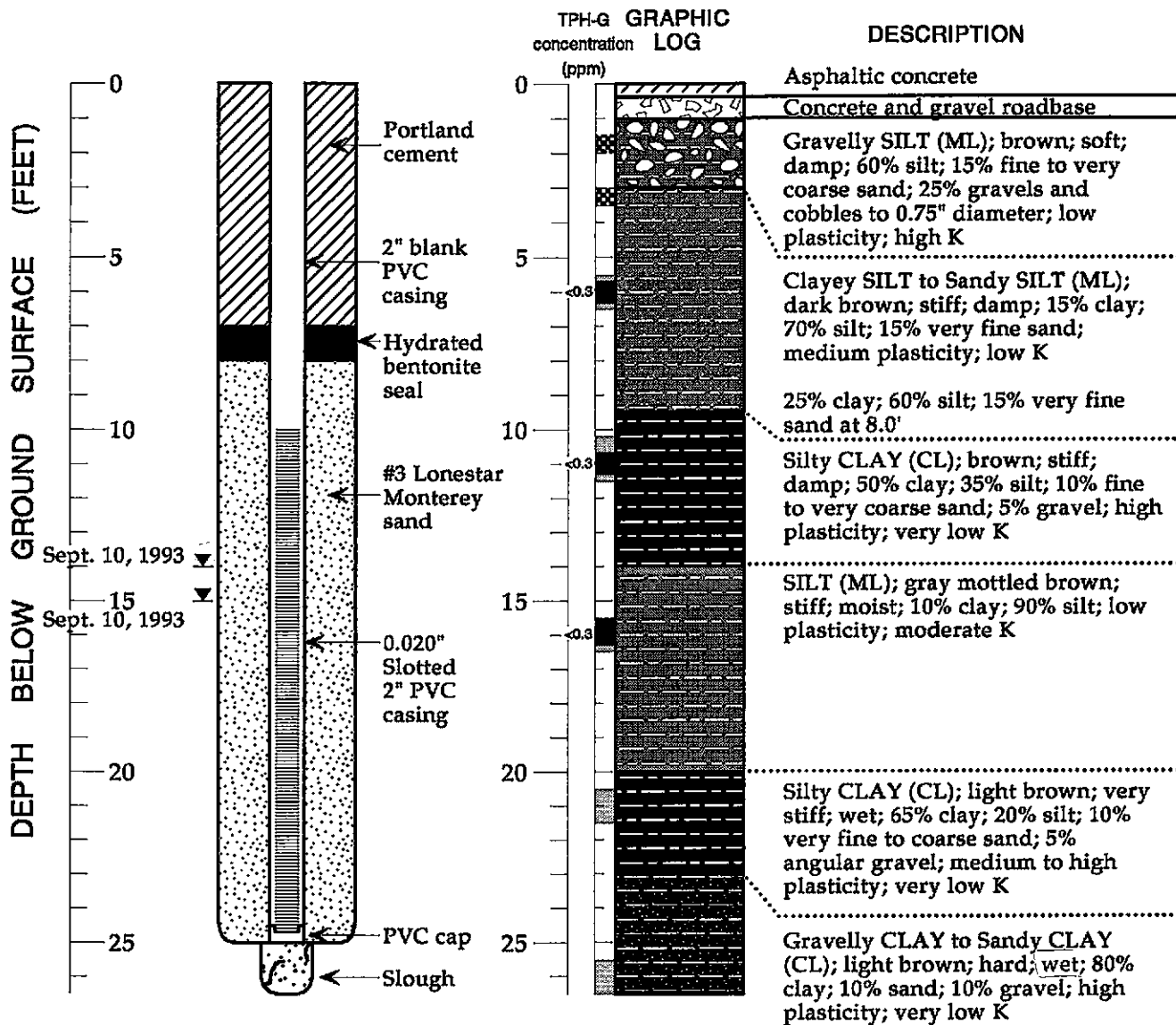
EXPLANATION

- ▼ 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: David C. Elias
 Supervisor: N. Scott MacLeod; RG 5747
 Drilling Company: Soils Exploration Services, Vacaville, CA
 License Number: C57-582696
 Driller: Gene Bernard
 Drilling Method: Hollow-stem auger
 Date Drilled: September 10, 1993
 Type of Sampler: Split spoon (2", ID)
 Ground Surface Elevation: ~193 feet above mean sea level
 TPH-G: Total petroleum hydrocarbons as gasoline in soil by modified EPA Method 8015

Boring Log BH-D - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Berkeley, California

WELL MW-6 (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: David C. Elias
 Supervisor: N. Scott MacLeod; RG 5747
 Drilling Company: Soils Exploration Services, Vacaville, CA
 License Number: C57-582696
 Driller: Gene Bernard
 Drilling Method: Hollow-stem auger
 Date Drilled: September 10, 1993
 Well Head Completion: 2" locking well-plug, traffic-rated vault
 Type of Sampler: Split spoon (2" ID)
 Ground Surface Elevation: ~193 feet above mean sea level
 TPH-G: Total petroleum hydrocarbons as gasoline in soil by modified EPA Method 8015

Boring Log and Well Construction Details - Well MW-6 (BH-E) - Shell Service Station WIC #204-5508-3301, 6039 College Avenue, Oakland, California

ATTACHMENT D
ANALYTIC REPORTS FOR SOIL AND GROUND WATER



NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

David Elias
Weiss Associates
5500 Shellmound St.
Emeryville, CA 94608

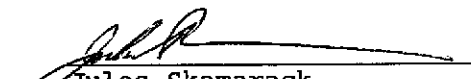
Date: , 09/22/1993
NET Client Acct. No: 1809
NET Pacific Job No: 93.03974
Received: 09/11/1993

Client Reference Information

SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:


Jules Skamarack
Laboratory Manager

Enclosure (s)



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.03974

Date: 09/22/1993
ELAP Certificate: 1386
Page: 2

Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-A-6.0
Date Taken: 09/09/1993
Time Taken:
NET Sample No: 173325

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Solid)							
METHOD 5030/M8015	--						09/15/1993
DILUTION FACTOR*	1						09/15/1993
as Gasoline	ND		1	mg/kg	5030		09/15/1993
METHOD 8020 (GC,Solid)	--						09/15/1993
Benzene	ND		0.0025	mg/kg	8020		09/15/1993
Toluene	ND		0.0025	mg/kg	8020		09/15/1993
Ethylbenzene	ND		0.0025	mg/kg	8020		09/15/1993
Xylenes (Total)	ND		0.0025	mg/kg	8020		09/15/1993
SURROGATE RESULTS	--						09/15/1993
Bromofluorobenzene (SURR)	86			% Rec.	5030		09/15/1993



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.03974

Date: 09/22/1993
 ELAP Certificate: 1386
 Page: 3

Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-A-11.0
 Date Taken: 09/09/1993
 Time Taken:
 NET Sample No: 173326

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Oil & Grease (Total)	ND		50	mg/kg	5520E		09/16/1993
TPH (Gas/BTEX,Solid)							
METHOD 5030/M8015	--						09/17/1993
DILUTION FACTOR*	1						09/16/1993
as Gasoline	28	G-	1	mg/kg	5030		09/17/1993
METHOD 8020 (GC,Solid)							
Benzene	ND		0.0025	mg/kg	8020		09/16/1993
Toluene	ND		0.0025	mg/kg	8020		09/16/1993
Ethylbenzene	ND		0.0025	mg/kg	8020		09/17/1993
Xylenes (Total)	ND		0.0025	mg/kg	8020		09/17/1993
SURROGATE RESULTS							
Bromofluorobenzene (SURR)	109			µ Rec.	5030		09/16/1993
METHOD 3550/M8015							
DILUTION FACTOR*	1					09/16/1993	09/16/1993
as Diesel	11	DL	1	mg/kg	3550		09/16/1993

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
 G- : The positive result has an atypical pattern for Gasoline analysis.



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.03974

Date: 09/22/1993
ELAP Certificate: 1386
Page: 4

Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-A-11.0

Date Taken: 09/09/1993

Time Taken:

NET Sample No: 173326

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
METHOD 8270 (GCMS, Solid)						09/15/1993	
DILUTION FACTOR*	1						09/16/1993
Acenaphthene	ND		0.33	mg/kg	8270		09/16/1993
Acenaphthylene	ND		0.33	mg/kg	8270		09/16/1993
Aldrin	ND		1.6	mg/kg	8270		09/16/1993
Anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzidine	ND		1.6	mg/kg	8270		09/16/1993
Benzo (a) anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzo (b) fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo (k) fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo (a) pyrene	ND		0.33	mg/kg	8270		09/16/1993
Benzo (g, h, i) perylene	ND		0.33	mg/kg	8270		09/16/1993
Benzoic acid	ND		1.6	mg/kg	8270		09/16/1993
Benzyl alcohol	ND		0.33	mg/kg	8270		09/16/1993
Butyl benzyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
delta-BHC	ND		1.6	mg/kg	8270		09/16/1993
gamma-BHC	ND		1.6	mg/kg	8270		09/16/1993
bis (2-Chloroethyl) ether	ND		0.33	mg/kg	8270		09/16/1993
bis (2-Chloroethoxy) methane	ND		0.33	mg/kg	8270		09/16/1993
bis (2-Chloroisopropyl) ether	ND		0.33	mg/kg	8270		09/16/1993
bis (2-Ethylhexyl) phthalate	ND		0.33	mg/kg	8270		09/16/1993
4-Bromophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
4-Chloroaniline	ND		0.33	mg/kg	8270		09/16/1993
2-Chloronaphthalene	ND		0.33	mg/kg	8270		09/16/1993
4-Chlorophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
Chrysene	ND		0.33	mg/kg	8270		09/16/1993
4,4'-DDD	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDE	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDT	ND		1.6	mg/kg	8270		09/16/1993
Dibenzo (a, h) anthracene	ND		0.33	mg/kg	8270		09/16/1993
Dibenzofuran	ND		0.33	mg/kg	8270		09/16/1993
Di-n-butylphthalate	ND		0.33	mg/kg	8270		09/16/1993
1,2-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,3-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,4-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
3,3'-Dichlorobenzidine	ND		0.66	mg/kg	8270		09/16/1993
Dieldrin	ND		1.6	mg/kg	8270		09/16/1993
Diethylphthalate	1.6		0.33	mg/kg	8270		09/16/1993
Dimethyl phthalate	0.37		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
2,6-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
Di-n-octyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
Endrin aldehyde	ND		1.6	mg/kg	8270		09/16/1993
Fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Fluorene	ND		0.33	mg/kg	8270		09/16/1993



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.03974

Date: 09/22/1993
 ELAP Certificate: 1386
 Page: 5

Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-A-11.0
 Date Taken: 09/09/1993
 Time Taken:
 NET Sample No: 173326

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Heptachlor	ND		1.6	mg/kg	8270		09/16/1993
Heptachlor epoxide	ND		1.6	mg/kg	8270		09/16/1993
Hexachlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorobutadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorocyclopentadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachloroethane	ND		0.33	mg/kg	8270		09/16/1993
Indeno(1,2,3-cd)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Isophorone	ND		0.33	mg/kg	8270		09/16/1993
2-Methylnaphthalene	ND		0.33	mg/kg	8270		09/16/1993
Naphthalene	ND		0.33	mg/kg	8270		09/16/1993
2-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
3-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
4-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
Nitrobenzene	ND		0.33	mg/kg	8270		09/16/1993
N-Nitroso-Di-N-propylamine	ND		0.33	mg/kg	8270		09/16/1993
N-Nitrosodiphenylamine	ND		0.33	mg/kg	8270		09/16/1993
Phenanthrene	ND		0.33	mg/kg	8270		09/16/1993
Pyrene	ND		0.33	mg/kg	8270		09/16/1993
1,2,4-Trichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
ACID EXTRACTABLES	--						09/16/1993
4-Chloro-3-methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2-Chlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dimethylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrophenol	ND		1.6	mg/kg	8270		09/16/1993
4,6-Dinitro-2-methylphenol	ND		1.6	mg/kg	8270		09/16/1993
2-Nitrophenol	ND		0.33	mg/kg	8270		09/16/1993
4-Nitrophenol	ND		1.6	mg/kg	8270		09/16/1993
Pentachlorophenol	ND		1.6	mg/kg	8270		09/16/1993
Phenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,6-Trichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
4-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,5-Trichlorophenol	ND		1.6	mg/kg	8270		09/16/1993
SURROGATE RESULTS	--						09/16/1993
Nitrobenzene-d5 (SURR)	63			‰ Rec.	8270		09/16/1993
2-Fluorobiphenyl (SURR)	59			‰ Rec.	8270		09/16/1993
p-Terphenyl-d14 (SURR)	79			‰ Rec.	8270		09/16/1993
Phenol-d5 (SURR)	75			‰ Rec.	8270		09/16/1993
2-Fluorophenol (SURR)	68			‰ Rec.	8270		09/16/1993
2,4,6-Tribromophenol (SURR)	76			‰ Rec.	8270		09/16/1993



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Client Name: Weiss Associates
NET Job No: 93.03974

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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-A-16.0
Date Taken: 09/09/1993
Time Taken:
NET Sample No: 173328

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Oil & Grease (Total)	ND		50	mg/kg	5520E		09/16/1993
TPH (Gas/BTXE,Solid)							
METHOD 5030/M8015	--						09/16/1993
DILUTION FACTOR*	10						09/16/1993
as Gasoline	130		10	mg/kg	5030		09/16/1993
METHOD 8020 (GC,Solid)	--						09/16/1993
Benzene	ND		0.025	mg/kg	8020		09/16/1993
Toluene	ND		0.025	mg/kg	8020		09/16/1993
Ethylbenzene	1.4		0.025	mg/kg	8020		09/16/1993
Xylenes (Total)	0.51		0.025	mg/kg	8020		09/16/1993
SURROGATE RESULTS	--						09/16/1993
Bromofluorobenzene (SURR)	191	MI		% Rec.	5030		09/16/1993
METHOD 3550/M8015						09/16/1993	
DILUTION FACTOR*	1						09/16/1993
as Diesel	27	DL	1	mg/kg	3550		09/16/1993

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
MI : Matrix Interference



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Client Name: Weiss Associates
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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-A-16.0
Date Taken: 09/09/1993
Time Taken:
NET Sample No: 173328

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
METHOD 8270 (GCMS, Solid)						09/15/1993	
DILUTION FACTOR*	1						09/16/1993
Acenaphthene	ND		0.33	mg/kg	8270		09/16/1993
Acenaphthylene	ND		0.33	mg/kg	8270		09/16/1993
Aldrin	ND		1.6	mg/kg	8270		09/16/1993
Anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzidine	ND		1.6	mg/kg	8270		09/16/1993
Benzo (a) anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzo (b) fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo (k) fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo (a) pyrene	ND		0.33	mg/kg	8270		09/16/1993
Benzo (g, h, i) perylene	ND		0.33	mg/kg	8270		09/16/1993
Benzoic acid	ND		1.6	mg/kg	8270		09/16/1993
Benzy l alcohol	ND		0.33	mg/kg	8270		09/16/1993
Butyl benzyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
delta-BHC	ND		1.6	mg/kg	8270		09/16/1993
gamma-BHC	ND		1.6	mg/kg	8270		09/16/1993
bis (2-Chloroethyl) ether	ND		0.33	mg/kg	8270		09/16/1993
bis (2-Chloroethoxy) methane	ND		0.33	mg/kg	8270		09/16/1993
bis (2-Chloroisopropyl) ether	ND		0.33	mg/kg	8270		09/16/1993
bis (2-Ethylhexyl) phthalate	ND		0.33	mg/kg	8270		09/16/1993
4-Bromophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
4-Chloroaniline	ND		0.33	mg/kg	8270		09/16/1993
2-Chloronaphthalene	ND		0.33	mg/kg	8270		09/16/1993
4-Chlorophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
Chrysene	ND		0.33	mg/kg	8270		09/16/1993
4,4' -DDD	ND		1.6	mg/kg	8270		09/16/1993
4,4' -DDE	ND		1.6	mg/kg	8270		09/16/1993
4,4' -DDT	ND		1.6	mg/kg	8270		09/16/1993
Dibenzo (a, h) anthracene	ND		0.33	mg/kg	8270		09/16/1993
Dibenzofuran	ND		0.33	mg/kg	8270		09/16/1993
Di-n-butylphthalate	ND		0.33	mg/kg	8270		09/16/1993
1,2-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,3-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,4-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
3,3' -Dichlorobenzidine	ND		0.66	mg/kg	8270		09/16/1993
Dieldrin	ND		1.6	mg/kg	8270		09/16/1993
Diethylphthalate	ND		0.33	mg/kg	8270		09/16/1993
Dimethyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
2,6-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
Di-n-octyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
Endrin aldehyde	ND		1.6	mg/kg	8270		09/16/1993
Fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Fluorene	ND		0.33	mg/kg	8270		09/16/1993



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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-A-16.0
 Date Taken: 09/09/1993
 Time Taken:
 NET Sample No: 173328

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Heptachlor	ND		1.6	mg/kg	8270		09/16/1993
Heptachlor epoxide	ND		1.6	mg/kg	8270		09/16/1993
Hexachlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorobutadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorocyclopentadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachloroethane	ND		0.33	mg/kg	8270		09/16/1993
Indeno(1,2,3-cd)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Isophorone	ND		0.33	mg/kg	8270		09/16/1993
2-Methylnaphthalene	ND		0.33	mg/kg	8270		09/16/1993
Naphthalene	ND		0.33	mg/kg	8270		09/16/1993
2-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
3-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
4-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
Nitrobenzene	ND		0.33	mg/kg	8270		09/16/1993
N-Nitroso-Di-N-propylamine	ND		0.33	mg/kg	8270		09/16/1993
N-Nitrosodiphenylamine	ND		0.33	mg/kg	8270		09/16/1993
Phenanthrene	ND		0.33	mg/kg	8270		09/16/1993
Pyrene	ND		0.33	mg/kg	8270		09/16/1993
1,2,4-Trichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
ACID EXTRACTABLES	--						09/16/1993
4-Chloro-3-methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2-Chlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dimethylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrophenol	ND		1.6	mg/kg	8270		09/16/1993
4,6-Dinitro-2-methylphenol	ND		1.6	mg/kg	8270		09/16/1993
2-Nitrophenol	ND		0.33	mg/kg	8270		09/16/1993
4-Nitrophenol	ND		1.6	mg/kg	8270		09/16/1993
Pentachlorophenol	ND		1.6	mg/kg	8270		09/16/1993
Phenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,6-Trichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
4-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,5-Trichlorophenol	ND		1.6	mg/kg	8270		09/16/1993
SURROGATE RESULTS	--						09/16/1993
Nitrobenzene-d5 (SURR)	58			% Rec.	8270		09/16/1993
2-Fluorobiphenyl (SURR)	54			% Rec.	8270		09/16/1993
p-Terphenyl-d14 (SURR)	76			% Rec.	8270		09/16/1993
Phenol-d5 (SURR)	73			% Rec.	8270		09/16/1993
2-Fluorophenol (SURR)	62			% Rec.	8270		09/16/1993
2,4,6-Tribromophenol (SURR)	76			% Rec.	8270		09/16/1993



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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-B-11.0
Date Taken: 09/09/1993
Time Taken:
NET Sample No: 173332

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
TPH (Gas/BTXE,Solid)							
METHOD 5030/M8015	--						09/15/1993
DILUTION FACTOR*	1						09/15/1993
as Gasoline	ND		1	mg/kg	5030		09/15/1993
METHOD 8020 (GC,Solid)	--						09/15/1993
Benzene	ND		0.0025	mg/kg	8020		09/15/1993
Toluene	ND		0.0025	mg/kg	8020		09/15/1993
Ethylbenzene	ND		0.0025	mg/kg	8020		09/15/1993
Xylenes (Total)	ND		0.0025	mg/kg	8020		09/15/1993
SURROGATE RESULTS	--						09/15/1993
Bromofluorobenzene (SURR)	101			% Rec.	5030		09/15/1993



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.03974

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ELAP Certificate: 1386
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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-B-15.7
Date Taken: 09/09/1993
Time Taken:
NET Sample No: 173333

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Oil & Grease (Total)	ND		50	mg/kg	5520E		09/16/1993
TPH (Gas/BTXE,Solid)							
METHOD 5030/M8015	--						09/15/1993
DILUTION FACTOR*	1						09/15/1993
as Gasoline	ND		1	mg/kg	5030		09/15/1993
METHOD 8020 (GC,Solid)	--						09/15/1993
Benzene	ND		0.0025	mg/kg	8020		09/15/1993
Toluene	ND		0.0025	mg/kg	8020		09/15/1993
Ethylbenzene	ND		0.0025	mg/kg	8020		09/15/1993
Xylenes (Total)	ND		0.0025	mg/kg	8020		09/15/1993
SURROGATE RESULTS	--						09/15/1993
Bromofluorobenzene (SURR)	92			% Rec.	5030		09/15/1993
METHOD 3550/M8015						09/16/1993	
DILUTION FACTOR*	1						09/16/1993
as Diesel	ND		1	mg/kg	3550		09/16/1993



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Client Name: Weiss Associates
NET Job No: 93.03974

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ELAP Certificate: 1386
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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-B-15.7
Date Taken: 09/09/1993
Time Taken:
NET Sample No: 173333

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
METHOD 8270 (GCMS,Solid)						09/15/1993	
DILUTION FACTOR*	1						09/16/1993
Acenaphthene	ND		0.33	mg/kg	8270		09/16/1993
Acenaphthylene	ND		0.33	mg/kg	8270		09/16/1993
Aldrin	ND		1.6	mg/kg	8270		09/16/1993
Anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzidine	ND		1.6	mg/kg	8270		09/16/1993
Benzo(a)anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(b)fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(k)fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(a)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(g,h,i)perylene	ND		0.33	mg/kg	8270		09/16/1993
Benzoic acid	ND		1.6	mg/kg	8270		09/16/1993
Benzyl alcohol	ND		0.33	mg/kg	8270		09/16/1993
Butyl benzyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
delta-BHC	ND		1.6	mg/kg	8270		09/16/1993
gamma-BHC	ND		1.6	mg/kg	8270		09/16/1993
bis(2-Chloroethyl)ether	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Chloroethoxy)methane	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Chloroisopropyl)ether	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Ethylhexyl)phthalate	ND		0.33	mg/kg	8270		09/16/1993
4-Bromophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
4-Chloroaniline	ND		0.33	mg/kg	8270		09/16/1993
2-Chloronaphthalene	ND		0.33	mg/kg	8270		09/16/1993
4-Chlorophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
Chrysene	ND		0.33	mg/kg	8270		09/16/1993
4,4'-DDD	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDE	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDT	ND		1.6	mg/kg	8270		09/16/1993
Dibenzo(a,h)anthracene	ND		0.33	mg/kg	8270		09/16/1993
Dibenzofuran	ND		0.33	mg/kg	8270		09/16/1993
Di-n-butylphthalate	ND		0.33	mg/kg	8270		09/16/1993
1,2-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,3-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,4-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
3,3'-Dichlorobenzidine	ND		0.66	mg/kg	8270		09/16/1993
Dieldrin	ND		1.6	mg/kg	8270		09/16/1993
Diethylphthalate	ND		0.33	mg/kg	8270		09/16/1993
Dimethyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
2,6-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
Di-n-octyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
Endrin aldehyde	ND		1.6	mg/kg	8270		09/16/1993
Fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Fluorene	ND		0.33	mg/kg	8270		09/16/1993



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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-B-15.7

Date Taken: 09/09/1993

Time Taken:

NET Sample No: 173333

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Heptachlor	ND		1.6	mg/kg	8270		09/16/1993
Heptachlor epoxide	ND		1.6	mg/kg	8270		09/16/1993
Hexachlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorobutadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorocyclopentadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachloroethane	ND		0.33	mg/kg	8270		09/16/1993
Indeno (1,2,3-cd)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Isophorone	ND		0.33	mg/kg	8270		09/16/1993
2-Methylnaphthalene	ND		0.33	mg/kg	8270		09/16/1993
Naphthalene	ND		0.33	mg/kg	8270		09/16/1993
2-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
3-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
4-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
Nitrobenzene	ND		0.33	mg/kg	8270		09/16/1993
N-Nitroso-Di-N-propylamine	ND		0.33	mg/kg	8270		09/16/1993
N-Nitrosodiphenylamine	ND		0.33	mg/kg	8270		09/16/1993
Phenanthrene	ND		0.33	mg/kg	8270		09/16/1993
Pyrene	ND		0.33	mg/kg	8270		09/16/1993
1,2,4-Trichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
ACID EXTRACTABLES	--						09/16/1993
4-Chloro-3-methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2-Chlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dimethylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrophenol	ND		1.6	mg/kg	8270		09/16/1993
4,6-Dinitro-2-methylphenol	ND		1.6	mg/kg	8270		09/16/1993
2-Nitrophenol	ND		0.33	mg/kg	8270		09/16/1993
4-Nitrophenol	ND		1.6	mg/kg	8270		09/16/1993
Pentachlorophenol	ND		1.6	mg/kg	8270		09/16/1993
Phenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,6-Trichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
4-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,5-Trichlorophenol	ND		1.6	mg/kg	8270		09/16/1993
SURROGATE RESULTS	--						09/16/1993
Nitrobenzene-d5 (SURR)	61			‡ Rec.	8270		09/16/1993
2-Fluorobiphenyl (SURR)	59			‡ Rec.	8270		09/16/1993
p-Terphenyl-d14 (SURR)	80			‡ Rec.	8270		09/16/1993
Phenol-d5 (SURR)	76			‡ Rec.	8270		09/16/1993
2-Fluorophenol (SURR)	67			‡ Rec.	8270		09/16/1993
2,4,6-Tribromophenol (SURR)	80			‡ Rec.	8270		09/16/1993



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Date: 09/22/1993
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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-A
Date Taken: 09/09/1993
Time Taken:
NET Sample No: 173336

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Oil & Grease (Total)	ND		5	mg/L	5520B		09/14/1993
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						09/16/1993
DILUTION FACTOR*	10						09/15/1993
as Gasoline	4.9		0.5	mg/L	5030		09/16/1993
METHOD 8020 (GC,Liquid)	--						09/15/1993
Benzene	0.018		0.005	mg/L	8020		09/16/1993
Toluene	ND		0.005	mg/L	8020		09/16/1993
Ethylbenzene	0.054		0.005	mg/L	8020		09/16/1993
Xylenes (Total)	0.011		0.005	mg/L	8020		09/16/1993
SURROGATE RESULTS	--						09/15/1993
Bromofluorobenzene (SURR)	104			% Rec.	5030		09/15/1993
METHOD 3510/M8015						09/14/1993	
DILUTION FACTOR*	10						09/16/1993
as Diesel	2.9	DL	0.05	mg/L	3510		09/16/1993

DL : The positive result appears to be a lighter hydrocarbon than Diesel.



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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-A
Date Taken: 09/09/1993
Time Taken:
NET Sample No: 173336

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
METHOD 8270 (GCMS, Liquid)						09/15/1993	
DILUTION FACTOR*	1						09/20/1993
Acenaphthene	ND		0.010	mg/L	8270		09/20/1993
Acenaphthylene	ND		0.010	mg/L	8270		09/20/1993
Aldrin	ND		0.050	mg/L	8270		09/20/1993
Anthracene	ND		0.010	mg/L	8270		09/20/1993
Benzidine	ND		0.044	mg/L	8270		09/20/1993
Benzo(a)anthracene	ND		0.010	mg/L	8270		09/20/1993
Benzo(b)fluoranthene	ND		0.010	mg/L	8270		09/20/1993
Benzo(k)fluoranthene	ND		0.010	mg/L	8270		09/20/1993
Benzo(a)pyrene	ND		0.010	mg/L	8270		09/20/1993
Benzo(g,h,i)perylene	ND		0.010	mg/L	8270		09/20/1993
Benzoic acid	ND		0.050	mg/L	8270		09/20/1993
Benzyl alcohol	ND		0.010	mg/L	8270		09/20/1993
Butyl benzyl phthalate	ND		0.010	mg/L	8270		09/20/1993
delta-BHC	ND		0.050	mg/L	8270		09/20/1993
gamma-BHC	ND		0.050	mg/L	8270		09/20/1993
bis(2-Chloroethyl) ether	ND		0.010	mg/L	8270		09/20/1993
bis(2-Chloroethoxy)methane	ND		0.010	mg/L	8270		09/20/1993
bis(2-Chloroisopropyl) ether	ND		0.010	mg/L	8270		09/20/1993
bis(2-Ethylhexyl) phthalate	ND		0.010	mg/L	8270		09/20/1993
4-Bromophenyl phenyl ether	ND		0.010	mg/L	8270		09/20/1993
4-Chloroaniline	ND		0.010	mg/L	8270		09/20/1993
2-Chloronaphthalene	ND		0.010	mg/L	8270		09/20/1993
4-Chlorophenyl phenyl ether	ND		0.010	mg/L	8270		09/20/1993
Chrysene	ND		0.010	mg/L	8270		09/20/1993
4,4'-DDD	ND		0.050	mg/L	8270		09/20/1993
4,4'-DDE	ND		0.050	mg/L	8270		09/20/1993
4,4'-DDT	ND		0.050	mg/L	8270		09/20/1993
Dibenzo(a,h)anthracene	ND		0.010	mg/L	8270		09/20/1993
Dibenzofuran	ND		0.010	mg/L	8270		09/20/1993
Di-n-butylphthalate	ND		0.010	mg/L	8270		09/20/1993
1,2-Dichlorobenzene	ND		0.010	mg/L	8270		09/20/1993
1,3-Dichlorobenzene	ND		0.010	mg/L	8270		09/20/1993
1,4-Dichlorobenzene	ND		0.010	mg/L	8270		09/20/1993
3,3'-Dichlorobenzidine	ND		0.020	mg/L	8270		09/20/1993
Dieldrin	ND		0.050	mg/L	8270		09/20/1993
Diethylphthalate	ND		0.010	mg/L	8270		09/20/1993
Dimethyl phthalate	ND		0.010	mg/L	8270		09/20/1993
2,4-Dinitrotoluene	ND		0.010	mg/L	8270		09/20/1993
2,6-Dinitrotoluene	ND		0.010	mg/L	8270		09/20/1993
Di-n-octyl phthalate	ND		0.010	mg/L	8270		09/20/1993
Endrin aldehyde	ND		0.050	mg/L	8270		09/20/1993
Fluoranthene	ND		0.010	mg/L	8270		09/20/1993
Fluorene	ND		0.010	mg/L	8270		09/20/1993



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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-A

Date Taken: 09/09/1993

Time Taken:

NET Sample No: 173336

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Heptachlor	ND		0.050	mg/L	8270		09/20/1993
Heptachlor epoxide	ND		0.050	mg/L	8270		09/20/1993
Hexachlorobenzene	ND		0.010	mg/L	8270		09/20/1993
Hexachlorobutadiene	ND		0.010	mg/L	8270		09/20/1993
Hexachlorocyclopentadiene	ND		0.010	mg/L	8270		09/20/1993
Hexachloroethane	ND		0.010	mg/L	8270		09/20/1993
Indeno (1,2,3-cd)pyrene	ND		0.010	mg/L	8270		09/20/1993
Isophorone	ND		0.010	mg/L	8270		09/20/1993
2-Methylnaphthalene	0.013		0.010	mg/L	8270		09/20/1993
Naphthalene	0.023		0.010	mg/L	8270		09/20/1993
2-Nitroaniline	ND		0.050	mg/L	8270		09/20/1993
3-Nitroaniline	ND		0.050	mg/L	8270		09/20/1993
4-Nitroaniline	ND		0.050	mg/L	8270		09/20/1993
Nitrobenzene	ND		0.010	mg/L	8270		09/20/1993
N-Nitroso-Di-N-propylamine	ND		0.010	mg/L	8270		09/20/1993
N-Nitrosodiphenylamine	ND		0.010	mg/L	8270		09/20/1993
Phenanthrene	ND		0.010	mg/L	8270		09/20/1993
Pyrene	ND		0.010	mg/L	8270		09/20/1993
1,2,4-Trichlorobenzene	ND		0.010	mg/L	8270		09/20/1993
ACID EXTRACTABLES	--						09/20/1993
4-Chloro-3-methylphenol	ND		0.010	mg/L	8270		09/20/1993
2-Chlorophenol	ND		0.010	mg/L	8270		09/20/1993
2,4-Dichlorophenol	ND		0.010	mg/L	8270		09/20/1993
2,4-Dimethylphenol	ND		0.010	mg/L	8270		09/20/1993
2,4-Dinitrophenol	ND		0.050	mg/L	8270		09/20/1993
4,6-Dinitro-2-methylphenol	ND		0.050	mg/L	8270		09/20/1993
2-Nitrophenol	ND		0.010	mg/L	8270		09/20/1993
4-Nitrophenol	ND		0.050	mg/L	8270		09/20/1993
Pentachlorophenol	ND		0.050	mg/L	8270		09/20/1993
Phenol	ND		0.010	mg/L	8270		09/20/1993
2,4,6-Trichlorophenol	ND		0.010	mg/L	8270		09/20/1993
2-Methylphenol	ND		0.010	mg/L	8270		09/20/1993
4-Methylphenol	ND		0.010	mg/L	8270		09/20/1993
2,4,5-Trichlorophenol	ND		0.050	mg/L	8270		09/20/1993
SURROGATE RESULTS	--						09/20/1993
Nitrobenzene-d5 (SURR)	79			‡ Rec.	8270		09/20/1993
2-Fluorobiphenyl (SURR)	72			‡ Rec.	8270		09/20/1993
p-Terphenyl-d14 (SURR)	66			‡ Rec.	8270		09/20/1993
Phenol-d5 (SURR)	50			‡ Rec.	8270		09/20/1993
2-Fluorophenol (SURR)	63			‡ Rec.	8270		09/20/1993
2,4,6-Tribromophenol (SURR)	66			‡ Rec.	8270		09/20/1993



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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-B

Date Taken: 09/09/1993

Time Taken:

NET Sample No: 173337

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Oil & Grease (Total)	ND		5	mg/L	5520B		09/14/1993
TPH (Gas/BTEX,Liquid)							
METHOD 5030/M8015	--						09/15/1993
DILUTION FACTOR*	1						09/15/1993
as Gasoline	ND		0.05	mg/L	5030		09/15/1993
METHOD 8020 (GC,Liquid)	--						09/15/1993
Benzene	ND		0.0005	mg/L	8020		09/15/1993
Toluene	ND		0.0005	mg/L	8020		09/15/1993
Ethylbenzene	ND		0.0005	mg/L	8020		09/15/1993
Xylenes (Total)	ND		0.0005	mg/L	8020		09/15/1993
SURROGATE RESULTS	--						09/15/1993
Bromofluorobenzene (SURR)	87			% Rec.	5030		09/15/1993
METHOD 3510/M8015						09/14/1993	
DILUTION FACTOR*	1						09/16/1993
as Diesel	0.15		0.05	mg/L	3510		09/16/1993



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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-B
Date Taken: 09/09/1993
Time Taken:
NET Sample No: 173337

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
METHOD 8270 (GCMS, Liquid)						09/15/1993	
DILUTION FACTOR*	1						09/16/1993
Acenaphthene	ND		0.010	mg/L	8270		09/16/1993
Acenaphthylene	ND		0.010	mg/L	8270		09/16/1993
Aldrin	ND		0.050	mg/L	8270		09/16/1993
Anthracene	ND		0.010	mg/L	8270		09/16/1993
Benzidine	ND		0.044	mg/L	8270		09/16/1993
Benzo(a)anthracene	ND		0.010	mg/L	8270		09/16/1993
Benzo(b)fluoranthene	ND		0.010	mg/L	8270		09/16/1993
Benzo(k)fluoranthene	ND		0.010	mg/L	8270		09/16/1993
Benzo(a)pyrene	ND		0.010	mg/L	8270		09/16/1993
Benzo(g,h,i)perylene	ND		0.010	mg/L	8270		09/16/1993
Benzoic acid	ND		0.050	mg/L	8270		09/16/1993
Benzyl alcohol	ND		0.010	mg/L	8270		09/16/1993
Butyl benzyl phthalate	ND		0.010	mg/L	8270		09/16/1993
delta-BHC	ND		0.050	mg/L	8270		09/16/1993
gamma-BHC	ND		0.050	mg/L	8270		09/16/1993
bis(2-Chloroethyl)ether	ND		0.010	mg/L	8270		09/16/1993
bis(2-Chloroethoxy)methane	ND		0.010	mg/L	8270		09/16/1993
bis(2-Chloroisopropyl)ether	ND		0.010	mg/L	8270		09/16/1993
bis(2-Ethylhexyl)phthalate	ND		0.010	mg/L	8270		09/16/1993
4-Bromophenyl phenyl ether	ND		0.010	mg/L	8270		09/16/1993
4-Chloroaniline	ND		0.010	mg/L	8270		09/16/1993
2-Chloronaphthalene	ND		0.010	mg/L	8270		09/16/1993
4-Chlorophenyl phenyl ether	ND		0.010	mg/L	8270		09/16/1993
Chrysene	ND		0.010	mg/L	8270		09/16/1993
4,4'-DDD	ND		0.050	mg/L	8270		09/16/1993
4,4'-DDE	ND		0.050	mg/L	8270		09/16/1993
4,4'-DDT	ND		0.050	mg/L	8270		09/16/1993
Dibenzo(a,h)anthracene	ND		0.010	mg/L	8270		09/16/1993
Dibenzofuran	ND		0.010	mg/L	8270		09/16/1993
Di-n-butylphthalate	ND		0.010	mg/L	8270		09/16/1993
1,2-Dichlorobenzene	ND		0.010	mg/L	8270		09/16/1993
1,3-Dichlorobenzene	ND		0.010	mg/L	8270		09/16/1993
1,4-Dichlorobenzene	ND		0.010	mg/L	8270		09/16/1993
3,3'-Dichlorobenzidine	ND		0.020	mg/L	8270		09/16/1993
Dieldrin	ND		0.050	mg/L	8270		09/16/1993
Diethylphthalate	ND		0.010	mg/L	8270		09/16/1993
Dimethyl phthalate	ND		0.010	mg/L	8270		09/16/1993
2,4-Dinitrotoluene	ND		0.010	mg/L	8270		09/16/1993
2,6-Dinitrotoluene	ND		0.010	mg/L	8270		09/16/1993
Di-n-octyl phthalate	ND		0.010	mg/L	8270		09/16/1993
Endrin aldehyde	ND		0.050	mg/L	8270		09/16/1993
Fluoranthene	ND		0.010	mg/L	8270		09/16/1993
Fluorene	ND		0.010	mg/L	8270		09/16/1993



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SAMPLE DESCRIPTION: BH-B

Date Taken: 09/09/1993

Time Taken:

NET Sample No: 173337

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Heptachlor	ND		0.050	mg/L	8270		09/16/1993
Heptachlor epoxide	ND		0.050	mg/L	8270		09/16/1993
Hexachlorobenzene	ND		0.010	mg/L	8270		09/16/1993
Hexachlorobutadiene	ND		0.010	mg/L	8270		09/16/1993
Hexachlorocyclopentadiene	ND		0.010	mg/L	8270		09/16/1993
Hexachloroethane	ND		0.010	mg/L	8270		09/16/1993
Indeno(1,2,3-cd)pyrene	ND		0.010	mg/L	8270		09/16/1993
Isophorone	ND		0.010	mg/L	8270		09/16/1993
2-Methylnaphthalene	ND		0.010	mg/L	8270		09/16/1993
Naphthalene	ND		0.010	mg/L	8270		09/16/1993
2-Nitroaniline	ND		0.050	mg/L	8270		09/16/1993
3-Nitroaniline	ND		0.050	mg/L	8270		09/16/1993
4-Nitroaniline	ND		0.050	mg/L	8270		09/16/1993
Nitrobenzene	ND		0.010	mg/L	8270		09/16/1993
N-Nitroso-Di-N-propylamine	ND		0.010	mg/L	8270		09/16/1993
N-Nitrosodiphenylamine	ND		0.010	mg/L	8270		09/16/1993
Phenanthrene	ND		0.010	mg/L	8270		09/16/1993
Pyrene	ND		0.010	mg/L	8270		09/16/1993
1,2,4-Trichlorobenzene	ND		0.010	mg/L	8270		09/16/1993
ACID EXTRACTABLES	--						09/16/1993
4-Chloro-3-methylphenol	ND		0.010	mg/L	8270		09/16/1993
2-Chlorophenol	ND		0.010	mg/L	8270		09/16/1993
2,4-Dichlorophenol	ND		0.010	mg/L	8270		09/16/1993
2,4-Dimethylphenol	ND		0.010	mg/L	8270		09/16/1993
2,4-Dinitrophenol	ND		0.050	mg/L	8270		09/16/1993
4,6-Dinitro-2-methylphenol	ND		0.050	mg/L	8270		09/16/1993
2-Nitrophenol	ND		0.010	mg/L	8270		09/16/1993
4-Nitrophenol	ND		0.050	mg/L	8270		09/16/1993
Pentachlorophenol	ND		0.050	mg/L	8270		09/16/1993
Phenol	ND		0.010	mg/L	8270		09/16/1993
2,4,6-Trichlorophenol	ND		0.010	mg/L	8270		09/16/1993
2-Methylphenol	ND		0.010	mg/L	8270		09/16/1993
4-Methylphenol	ND		0.010	mg/L	8270		09/16/1993
2,4,5-Trichlorophenol	ND		0.050	mg/L	8270		09/16/1993
SURROGATE RESULTS	--						09/16/1993
Nitrobenzene-d5 (SURR)	79			% Rec.	8270		09/16/1993
2-Fluorobiphenyl (SURR)	79			% Rec.	8270		09/16/1993
p-Terphenyl-d14 (SURR)	68			% Rec.	8270		09/16/1993
Phenol-d5 (SURR)	38			% Rec.	8270		09/16/1993
2-Fluorophenol (SURR)	55			% Rec.	8270		09/16/1993
2,4,6-Tribromophenol (SURR)	74			% Rec.	8270		09/16/1993



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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

SAMPLE DESCRIPTION: BH-21
Date Taken: 09/09/1993
Time Taken:
NET Sample No: 173338

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
TPH (Gas/BTEX, Liquid)							
METHOD 5030/M8015	--						09/15/1993
DILUTION FACTOR*	1						09/15/1993
as Gasoline	ND		0.05	mg/L	5030		09/15/1993
METHOD 8020 (GC, Liquid)	--						09/15/1993
Benzene	ND		0.0005	mg/L	8020		09/15/1993
Toluene	ND		0.0005	mg/L	8020		09/15/1993
Ethylbenzene	ND		0.0005	mg/L	8020		09/15/1993
Xylenes (Total)	ND		0.0005	mg/L	8020		09/15/1993
SURROGATE RESULTS	--						09/15/1993
Bromofluorobenzene (SURR)	91			% Rec.	5030		09/15/1993



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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials
	Standard % Recovery	Standard Amount Found	Standard Amount Expected			
TPH (Gas/BTXE,Liquid)						
as Gasoline	95.6	0.956	1.00	mg/L	09/15/1993	dkb
Benzene	91.6	4.58	5.00	ug/L	09/15/1993	dkb
Toluene	93.2	4.66	5.00	ug/L	09/15/1993	dkb
Ethylbenzene	92.4	4.62	5.00	ug/L	09/15/1993	dkb
Xylenes (Total)	95.1	14.26	15.0	ug/L	09/15/1993	dkb
Bromofluorobenzene (SURR)	92.0	92	100	% Rec.	09/15/1993	dkb
TPH (Gas/BTXE,Liquid)						
as Gasoline	90.2	0.902	1.00	mg/L	09/16/1993	vin
Benzene	104.2	5.21	5.00	ug/L	09/16/1993	vin
Toluene	98.2	4.91	5.00	ug/L	09/16/1993	vin
Ethylbenzene	96.4	4.82	5.00	ug/L	09/16/1993	vin
Xylenes (Total)	97.7	14.65	15.0	ug/L	09/16/1993	vin
Bromofluorobenzene (SURR)	95.0	95	100	% Rec.	09/16/1993	vin
METHOD 3510/M8015						
as Diesel	108.0	1080	1000	mg/L	09/16/1993	tts
TPH (Gas/BTXE,Solid)						
as Gasoline	110.6	5.53	5.00	mg/kg	09/15/1993	vin
Benzene	100.8	25.2	25.0	ug/kg	09/15/1993	vin
Toluene	103.6	25.9	25.0	ug/kg	09/15/1993	vin
Ethylbenzene	107.2	26.8	25.0	ug/kg	09/15/1993	vin
Xylenes (Total)	106.4	79.8	75.0	ug/kg	09/15/1993	vin
Bromofluorobenzene (SURR)	99.0	99	100	% Rec.	09/15/1993	vin
TPH (Gas/BTXE,Solid)						
as Gasoline	115.0	5.75	5.00	mg/kg	09/17/1993	vin
Benzene	102.8	25.7	25.0	ug/kg	09/17/1993	vin
Toluene	106.4	26.6	25.0	ug/kg	09/17/1993	vin
Ethylbenzene	106.4	26.6	25.0	ug/kg	09/17/1993	vin
Xylenes (Total)	106.8	80.1	75.0	ug/kg	09/17/1993	vin
Bromofluorobenzene (SURR)	104.0	104	100	% Rec.	09/17/1993	vin
METHOD 3550/M8015						
as Diesel	114.0	1140	1000	mg/kg	09/16/1993	tts
METHOD 8270 (GCMS,Liquid)						
Acenaphthene	111.0	55.5	50.0	ug/L	09/16/1993	sjg
Benzo(a)pyrene	104.0	52.0	50.0	ug/L	09/16/1993	sjg
1,4-Dichlorobenzene	108.0	54.0	50.0	ug/L	09/16/1993	sjg
Di-n-octyl phthalate	115.0	57.5	50.0	ug/L	09/16/1993	sjg
Fluoranthene	115.0	57.5	50.0	ug/L	09/16/1993	sjg



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Date: 09/22/1993
ELAP Certificate: 1386
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Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials
	Standard % Recovery	Standard Amount Found	Standard Amount Expected			
Hexachlorobutadiene	124.0	62.0	50.0	ug/L	09/16/1993	sjg
N-Nitrosodiphenylamine	106.0	53.0	50.0	ug/L	09/16/1993	sjg
4-Chloro-3-methylphenol	119.0	59.5	50.0	ug/L	09/16/1993	sjg
2,4-Dichlorophenol	118.0	59.0	50.0	ug/L	09/16/1993	sjg
2-Nitrophenol	101.0	50.5	50.0	ug/L	09/16/1993	sjg
Pentachlorophenol	99.0	49.5	50.0	ug/L	09/16/1993	sjg
Phenol	100.0	50.0	50.0	ug/L	09/16/1993	sjg
2,4,6-Trichlorophenol	106.0	53.0	50.0	ug/L	09/16/1993	sjg
Nitrobenzene-d5 (SURR)	105.0	105	100	% Rec.	09/16/1993	sjg
2-Fluorobiphenyl (SURR)	105.0	105	100	% Rec.	09/16/1993	sjg
p-Terphenyl-d14 (SURR)	99.0	99	100	% Rec.	09/16/1993	sjg
Phenol-d5 (SURR)	93.0	93	100	% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)	80.0	80	100	% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)	94.0	94	100	% Rec.	09/16/1993	sjg
METHOD 8270 (GCMS, Liquid)						
Acenaphthene	93.0	46.5	50.0	ug/L	09/20/1993	sjg
Benzo(a)pyrene	106.0	53.0	50.0	ug/L	09/20/1993	sjg
1,4-Dichlorobenzene	100.0	50.0	50.0	ug/L	09/20/1993	sjg
Di-n-octyl phthalate	103.0	51.5	50.0	ug/L	09/20/1993	sjg
Fluoranthene	90.0	45.0	50.0	ug/L	09/20/1993	sjg
Hexachlorobutadiene	113.0	56.5	50.0	ug/L	09/20/1993	sjg
N-Nitrosodiphenylamine	94.0	47.0	50.0	ug/L	09/20/1993	sjg
4-Chloro-3-methylphenol	102.0	51.0	50.0	ug/L	09/20/1993	sjg
2,4-Dichlorophenol	118.0	59.0	50.0	ug/L	09/20/1993	sjg
2-Nitrophenol	115.0	57.5	50.0	ug/L	09/20/1993	sjg
Pentachlorophenol	97.0	48.5	50.0	ug/L	09/20/1993	sjg
Phenol	93.0	46.5	50.0	ug/L	09/20/1993	sjg
2,4,6-Trichlorophenol	112.0	56.0	50.0	ug/L	09/20/1993	sjg
Nitrobenzene-d5 (SURR)	101.0	101	100	% Rec.	09/20/1993	sjg
2-Fluorobiphenyl (SURR)	96.0	96	100	% Rec.	09/20/1993	sjg
p-Terphenyl-d14 (SURR)	101.0	101	100	% Rec.	09/20/1993	sjg
Phenol-d5 (SURR)	93.0	93	100	% Rec.	09/20/1993	sjg
2-Fluorophenol (SURR)	96.0	96	100	% Rec.	09/20/1993	sjg
2,4,6-Tribromophenol (SURR)	82.0	82	100	% Rec.	09/20/1993	sjg



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CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials
	Standard % Recovery	Standard Amount Found	Standard Amount Expected			
METHOD 8270 (GCMS,Solid)						
Acenaphthene	95.0	47.5	50.0	ug/kg	09/16/1993	sjg
Benzo(a)pyrene	101.0	50.5	50.0	ug/kg	09/16/1993	sjg
1,4-Dichlorobenzene	103.0	51.5	50.0	ug/kg	09/16/1993	sjg
Di-n-octyl phthalate	94.0	47.0	50.0	ug/kg	09/16/1993	sjg
Fluoranthene	95.0	47.5	50.0	ug/kg	09/16/1993	sjg
Hexachlorobutadiene	117.0	58.5	50.0	ug/kg	09/16/1993	sjg
N-Nitrosodiphenylamine	98.0	49.0	50.0	ug/kg	09/16/1993	sjg
4-Chloro-3-methylphenol	109.0	54.5	50.0	ug/kg	09/16/1993	sjg
2,4-Dichlorophenol	117.0	58.5	50.0	ug/kg	09/16/1993	sjg
2-Nitrophenol	115.0	57.5	50.0	ug/kg	09/16/1993	sjg
Pentachlorophenol	103.0	51.5	50.0	ug/kg	09/16/1993	sjg
Phenol	97.0	48.5	50.0	ug/kg	09/16/1993	sjg
2,4,6-Trichlorophenol	110.0	55.0	50.0	ug/kg	09/16/1993	sjg
Nitrobenzene-d5 (SURR)	103.0	103	100	% Rec.	09/16/1993	sjg
2-Fluorobiphenyl (SURR)	95.0	95	100	% Rec.	09/16/1993	sjg
p-Terphenyl-d14 (SURR)	93.0	93	100	% Rec.	09/16/1993	sjg
Phenol-d5 (SURR)	97.0	97	100	% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)	99.0	99	100	% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)	95.0	95	100	% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)	99.0	99	100	% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)	95.0	95	100	% Rec.	09/16/1993	sjg



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METHOD BLANK REPORT

Parameter	Method	Reporting	Units	Date	Analyst
	Blank			Analyzed	
	Amount	Limit			
	Found				
Oil & Grease (Total)	ND	5	mg/L	09/14/1993	fwk
Oil & Grease (Total)	ND	50	mg/kg	09/16/1993	vid
Oil & Grease (Total)	ND	50	mg/kg	09/16/1993	vid
TPH (Gas/BTEXE,Liquid)					
as Gasoline	ND	0.05	mg/L	09/15/1993	dkb
Benzene	ND	0.5	ug/L	09/15/1993	dkb
Toluene	ND	0.5	ug/L	09/15/1993	dkb
Ethylbenzene	ND	0.5	ug/L	09/15/1993	dkb
Xylenes (Total)	ND	0.5	ug/L	09/15/1993	dkb
Bromofluorobenzene (SURR)	90		‡ Rec.	09/15/1993	dkb
TPH (Gas/BTEXE,Liquid)					
as Gasoline	ND	0.05	mg/L	09/16/1993	vin
Benzene	ND	0.5	ug/L	09/16/1993	vin
Toluene	ND	0.5	ug/L	09/16/1993	vin
Ethylbenzene	ND	0.5	ug/L	09/16/1993	vin
Xylenes (Total)	ND	0.5	ug/L	09/16/1993	vin
Bromofluorobenzene (SURR)	93		‡ Rec.	09/16/1993	vin
METHOD 3510/M8015					
as Diesel	ND	0.05	mg/L	09/16/1993	tts
TPH (Gas/BTEXE,Solid)					
as Gasoline	ND	1	mg/kg	09/15/1993	vin
Benzene	ND	2.5	ug/kg	09/15/1993	vin
Toluene	ND	2.5	ug/kg	09/15/1993	vin
Ethylbenzene	ND	2.5	ug/kg	09/15/1993	vin
Xylenes (Total)	ND	2.5	ug/kg	09/15/1993	vin
Bromofluorobenzene (SURR)	92		‡ Rec.	09/15/1993	vin
TPH (Gas/BTEXE,Solid)					
as Gasoline	ND	1	mg/kg	09/17/1993	vin
Benzene	ND	2.5	ug/kg	09/17/1993	vin
Toluene	ND	2.5	ug/kg	09/17/1993	vin
Ethylbenzene	ND	2.5	ug/kg	09/17/1993	vin
Xylenes (Total)	ND	2.5	ug/kg	09/17/1993	vin
Bromofluorobenzene (SURR)	100		‡ Rec.	09/17/1993	vin
METHOD 3550/M8015					
as Diesel	ND	1	mg/kg	09/16/1993	tts
METHOD 8270 (GCMS,Liquid)					
Acenaphthene	ND	1.9	ug/L	09/16/1993	sjg
Acenaphthylene	ND	3.5	ug/L	09/16/1993	sjg
Aldrin	ND	1.9	ug/L	09/16/1993	sjg
Anthracene	ND	1.9	ug/L	09/16/1993	sjg
Benzidine	ND	44	ug/L	09/16/1993	sjg
Benzo(a)anthracene	ND	7.8	ug/L	09/16/1993	sjg
Benzo(b)fluoranthene	ND	4.8	ug/L	09/16/1993	sjg
Benzo(k)fluoranthene	ND	2.5	ug/L	09/16/1993	sjg
Benzo(a)pyrene	ND	2.5	ug/L	09/16/1993	sjg
Benzo(g,h,i)perylene	ND	4.1	ug/L	09/16/1993	sjg



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Parameter	Method	Reporting	Units	Date	Analyst
	Blank			Analyzed	
	Amount	Limit			
	Found				
Butyl benzyl phthalate	ND	2.5	ug/L	09/16/1993	sjg
delta-BHC	ND	50	ug/L	09/16/1993	sjg
gamma-BHC	ND	50	ug/L	09/16/1993	sjg
bis(2-Chloroethyl)ether	ND	5.7	ug/L	09/16/1993	sjg
bis(2-Chloroethoxy)methane	ND	5.3	ug/L	09/16/1993	sjg
bis(2-Chloroisopropyl)ether	ND	5.7	ug/L	09/16/1993	sjg
bis(2-Ethylhexyl)phthalate	ND	2.5	ug/L	09/16/1993	sjg
4-Bromophenyl phenyl ether	ND	1.9	ug/L	09/16/1993	sjg
2-Chloronaphthalene	ND	1.9	ug/L	09/16/1993	sjg
4-Chlorophenyl phenyl ether	ND	4.2	ug/L	09/16/1993	sjg
Chrysene	ND	2.5	ug/L	09/16/1993	sjg
4,4'-DDD	ND	2.8	ug/L	09/16/1993	sjg
4,4'-DDE	ND	5.6	ug/L	09/16/1993	sjg
4,4'-DDT	ND	4.7	ug/L	09/16/1993	sjg
Dibenzo(a,h)anthracene	ND	2.5	ug/L	09/16/1993	sjg
Di-n-butylphthalate	ND	2.5	ug/L	09/16/1993	sjg
1,2-Dichlorobenzene	ND	1.9	ug/L	09/16/1993	sjg
1,3-Dichlorobenzene	ND	1.9	ug/L	09/16/1993	sjg
1,4-Dichlorobenzene	ND	4.4	ug/L	09/16/1993	sjg
3,3'-Dichlorobenzidine	ND	17	ug/L	09/16/1993	sjg
Dieldrin	ND	2.5	ug/L	09/16/1993	sjg
Diethylphthalate	ND	1.9	ug/L	09/16/1993	sjg
Dimethyl phthalate	ND	1.6	ug/L	09/16/1993	sjg
2,4-Dinitrotoluene	ND	5.7	ug/L	09/16/1993	sjg
2,6-Dinitrotoluene	ND	1.9	ug/L	09/16/1993	sjg
Di-n-octyl phthalate	ND	2.5	ug/L	09/16/1993	sjg
Endrin aldehyde	ND	50	ug/L	09/16/1993	sjg
Fluoranthene	ND	2.2	ug/L	09/16/1993	sjg
Fluorene	ND	1.9	ug/L	09/16/1993	sjg
Heptachlor	ND	1.9	ug/L	09/16/1993	sjg
Heptachlor epoxide	ND	2.2	ug/L	09/16/1993	sjg
Hexachlorobenzene	ND	1.9	ug/L	09/16/1993	sjg
Hexachlorobutadiene	ND	0.9	ug/L	09/16/1993	sjg
Hexachlorocyclopentadiene	ND	5.0	ug/L	09/16/1993	sjg
Hexachloroethane	ND	1.6	ug/L	09/16/1993	sjg
Indeno(1,2,3-cd)pyrene	ND	3.7	ug/L	09/16/1993	sjg
Isophorone	ND	2.2	ug/L	09/16/1993	sjg
Naphthalene	ND	1.6	ug/L	09/16/1993	sjg
Nitrobenzene	ND	1.9	ug/L	09/16/1993	sjg
N-Nitroso-Di-N-propylamine	ND	10	ug/L	09/16/1993	sjg
N-Nitrosodiphenylamine	ND	10	ug/L	09/16/1993	sjg
Phenanthrene	ND	5.4	ug/L	09/16/1993	sjg
Pyrene	ND	1.9	ug/L	09/16/1993	sjg
1,2,4-Trichlorobenzene	ND	1.9	ug/L	09/16/1993	sjg
4-Chloro-3-methylphenol	ND	3.0	ug/L	09/16/1993	sjg
2-Chlorophenol	ND	3.3	ug/L	09/16/1993	sjg
2,4-Dichlorophenol	ND	2.7	ug/L	09/16/1993	sjg
2,4-Dimethylphenol	ND	2.7	ug/L	09/16/1993	sjg



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METHOD BLANK REPORT

Parameter	Method	Reporting	Units	Date	Analyst
	Blank				
	Amount	Limit		Analyzed	Initials
	Found				
2,4-Dinitrophenol	ND	42	ug/L	09/16/1993	sjg
4,6-Dinitro-2-methylphenol	ND	24	ug/L	09/16/1993	sjg
2-Nitrophenol	ND	3.6	ug/L	09/16/1993	sjg
4-Nitrophenol	ND	2.4	ug/L	09/16/1993	sjg
Pentachlorophenol	ND	3.6	ug/L	09/16/1993	sjg
Phenol	ND	1.5	ug/L	09/16/1993	sjg
2,4,6-Trichlorophenol	ND	2.7	ug/L	09/16/1993	sjg
Nitrobenzene-d5 (SURR)	63		% Rec.	09/16/1993	sjg
2-Fluorobiphenyl (SURR)	60		% Rec.	09/16/1993	sjg
p-Terphenyl-d14 (SURR)	61		% Rec.	09/16/1993	sjg
Phenol-d5 (SURR)	33		% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)	47		% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)	67		% Rec.	09/16/1993	sjg
METHOD 8270 (GCMS, Solid)					
Acenaphthene	ND	330	ug/kg	09/16/1993	sjg
Acenaphthylene	ND	330	ug/kg	09/16/1993	sjg
Aldrin	ND	1600	ug/kg	09/16/1993	sjg
Anthracene	ND	330	ug/kg	09/16/1993	sjg
Benzidine	ND	1600	ug/kg	09/16/1993	sjg
Benzo(a)anthracene	ND	330	ug/kg	09/16/1993	sjg
Benzo(b)fluoranthene	ND	330	ug/kg	09/16/1993	sjg
Benzo(k)fluoranthene	ND	330	ug/kg	09/16/1993	sjg
Benzo(a)pyrene	ND	330	ug/kg	09/16/1993	sjg
Benzo(g,h,i)perylene	ND	330	ug/kg	09/16/1993	sjg
Benzoic acid	ND	1600	ug/kg	09/16/1993	sjg
Benzyl alcohol	ND	330	ug/kg	09/16/1993	sjg
Butyl benzyl phthalate	ND	330	ug/kg	09/16/1993	sjg
delta-BHC	ND	1600	ug/kg	09/16/1993	sjg
gamma-BHC	ND	1600	ug/kg	09/16/1993	sjg
bis(2-Chloroethyl)ether	ND	330	ug/kg	09/16/1993	sjg
bis(2-Chloroethoxy)methane	ND	330	ug/kg	09/16/1993	sjg
bis(2-Chloroisopropyl)ether	ND	330	ug/kg	09/16/1993	sjg
bis(2-Ethylhexyl)phthalate	ND	330	ug/kg	09/16/1993	sjg
4-Bromophenyl phenyl ether	ND	330	ug/kg	09/16/1993	sjg
4-Chloroaniline	ND	330	ug/kg	09/16/1993	sjg
2-Chloronaphthalene	ND	330	ug/kg	09/16/1993	sjg
4-Chlorophenyl phenyl ether	ND	330	ug/kg	09/16/1993	sjg
Chrysene	ND	330	ug/kg	09/16/1993	sjg
4,4'-DDD	ND	1600	ug/kg	09/16/1993	sjg
4,4'-DDE	ND	1600	ug/kg	09/16/1993	sjg
4,4'-DDT	ND	1600	ug/kg	09/16/1993	sjg
Dibenzo(a,h)anthracene	ND	330	ug/kg	09/16/1993	sjg
Dibenzofuran	ND	330	ug/kg	09/16/1993	sjg
Di-n-butylphthalate	ND	330	ug/kg	09/16/1993	sjg
1,2-Dichlorobenzene	ND	330	ug/kg	09/16/1993	sjg
1,3-Dichlorobenzene	ND	330	ug/kg	09/16/1993	sjg
1,4-Dichlorobenzene	ND	330	ug/kg	09/16/1993	sjg
3,3'-Dichlorobenzidine	ND	660	ug/kg	09/16/1993	sjg



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METHOD BLANK REPORT

Parameter	Method	Reporting	Units	Date	Analyst
	Blank				
	Amount	Limit		Analyzed	Initials
	Found				
Dieldrin	ND	1600	ug/kg	09/16/1993	sjg
Diethylphthalate	ND	330	ug/kg	09/16/1993	sjg
Dimethyl phthalate	ND	330	ug/kg	09/16/1993	sjg
2,4-Dinitrotoluene	ND	330	ug/kg	09/16/1993	sjg
2,6-Dinitrotoluene	ND	330	ug/kg	09/16/1993	sjg
Di-n-octyl phthalate	ND	330	ug/kg	09/16/1993	sjg
Endrin aldehyde	ND	1600	ug/kg	09/16/1993	sjg
Fluoranthene	ND	330	ug/kg	09/16/1993	sjg
Fluorene	ND	330	ug/kg	09/16/1993	sjg
Heptachlor	ND	1600	ug/kg	09/16/1993	sjg
Heptachlor epoxide	ND	1600	ug/kg	09/16/1993	sjg
Hexachlorobenzene	ND	330	ug/kg	09/16/1993	sjg
Hexachlorobutadiene	ND	330	ug/kg	09/16/1993	sjg
Hexachlorocyclopentadiene	ND	330	ug/kg	09/16/1993	sjg
Hexachloroethane	ND	330	ug/kg	09/16/1993	sjg
Indeno(1,2,3-cd)pyrene	ND	330	ug/kg	09/16/1993	sjg
Isophorone	ND	330	ug/kg	09/16/1993	sjg
2-Methylnaphthalene	ND	330	ug/kg	09/16/1993	sjg
Naphthalene	ND	330	ug/kg	09/16/1993	sjg
2-Nitroaniline	ND	1600	ug/kg	09/16/1993	sjg
3-Nitroaniline	ND	1600	ug/kg	09/16/1993	sjg
4-Nitroaniline	ND	1600	ug/kg	09/16/1993	sjg
Nitrobenzene	ND	330	ug/kg	09/16/1993	sjg
N-Nitroso-Di-N-propylamine	ND	330	ug/kg	09/16/1993	sjg
N-Nitrosodiphenylamine	ND	330	ug/kg	09/16/1993	sjg
Phenanthrene	ND	330	ug/kg	09/16/1993	sjg
Pyrene	ND	330	ug/kg	09/16/1993	sjg
1,2,4-Trichlorobenzene	ND	330	ug/kg	09/16/1993	sjg
4-Chloro-3-methylphenol	ND	330	ug/kg	09/16/1993	sjg
2-Chlorophenol	ND	330	ug/kg	09/16/1993	sjg
2,4-Dichlorophenol	ND	330	ug/kg	09/16/1993	sjg
2,4-Dimethylphenol	ND	330	ug/kg	09/16/1993	sjg
2,4-Dinitrophenol	ND	1600	ug/kg	09/16/1993	sjg
4,6-Dinitro-2-methylphenol	ND	1600	ug/kg	09/16/1993	sjg
2-Nitrophenol	ND	330	ug/kg	09/16/1993	sjg
4-Nitrophenol	ND	1600	ug/kg	09/16/1993	sjg
Pentachlorophenol	ND	1600	ug/kg	09/16/1993	sjg
Phenol	ND	330	ug/kg	09/16/1993	sjg
2,4,6-Trichlorophenol	ND	330	ug/kg	09/16/1993	sjg
2-Methylphenol	ND	330	ug/kg	09/16/1993	sjg
4-Methylphenol	ND	330	ug/kg	09/16/1993	sjg
2,4,5-Trichlorophenol	ND	1600	ug/kg	09/16/1993	sjg
Nitrobenzene-d5 (SURR)	41		% Rec.	09/16/1993	sjg
2-Fluorobiphenyl (SURR)	47		% Rec.	09/16/1993	sjg
p-Terphenyl-d14 (SURR)	62		% Rec.	09/16/1993	sjg
Phenol-d5 (SURR)	52		% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)	44		% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)	78		% Rec.	09/16/1993	sjg



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MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike			Spike Amount	Sample Conc.	Matrix Spike			Units	Date Analyzed	Analyst Initials
	Matrix Spike % Rec.	Spike Dup % Rec.	RPD			Matrix Spike Conc.	Spike Dup Conc.	Conc.			
Oil & Grease (Total)	98.7	101.4	2.6	82	ND	80.9	102.8	mg/L	09/14/1993	fwk	
Oil & Grease (Total)	101.7	88.6	13.7	2131	ND	2167	1912	mg/kg	09/16/1993	vid	
Oil & Grease (Total)	101.4	100.4	1.0	3746	97	3894	3252	mg/kg	09/16/1993	vid	
TPH (Gas/BTXE,Liquid)											
as Gasoline	90.2	91.0	0.9	1.00	ND	0.902	0.910	mg/L	09/15/1993	dkb	
Benzene	100.3	101.1	0.8	35.2	ND	35.3	35.6	ug/L	09/15/1993	dkb	
Toluene	99.4	99.6	0.2	84.4	ND	83.9	84.1	ug/L	09/15/1993	dkb	
Bromofluorobenzene (SURR)	95	92	3.2	100	93			% Rec.	09/15/1993	dkb	
TPH (Gas/BTXE,Liquid)											
as Gasoline	92.2	83.9	9.4	1.00	ND	0.922	0.839	mg/L	09/16/1993	vin	
Benzene	104.3	100.0	4.2	35.2	ND	36.7	35.2	ug/L	09/16/1993	vin	
Toluene	104.1	99.2	4.7	94.4	ND	98.3	93.6	ug/L	09/16/1993	vin	
Bromofluorobenzene (SURR)		93		100	77			% Rec.	09/16/1993	vin	
TPH (Gas/BTXE,Solid)											
as Gasoline	102.6	97.4	5.1	5.00	ND	5.13	4.87	mg/kg	09/15/1993	vin	
Benzene	100.5	98.5	1.9	195	ND	196	192	ug/kg	09/15/1993	vin	
Toluene	98.6	96.3	2.4	513	ND	506	494	ug/kg	09/15/1993	vin	
Bromofluorobenzene (SURR)	105	92		100	86			% Rec.	09/15/1993	vin	
TPH (Gas/BTXE,Solid)											
as Gasoline	113.8	114.4	0.5	5.00	ND	5.69	5.72	mg/kg	09/16/1993	dkb	
Benzene	97.8	97.1	0.7	136	ND	133	132	ug/kg	09/16/1993	dkb	
Toluene	99.7	99.0	0.7	301	ND	300	298	ug/kg	09/16/1993	dkb	
Bromofluorobenzene (SURR)	120	121		100	103			% Rec.	09/16/1993	dkb	
TPH (Gas/BTXE,Solid)											
as Gasoline	111.2	107.0	3.8	5.00	ND	5.56	5.35	mg/kg	09/17/1993	vin	
Benzene	102.0	97.5	4.4	204	ND	208	199	ug/kg	09/17/1993	vin	
Toluene	100.8	98.1	2.6	533	ND	537	523	ug/kg	09/17/1993	vin	
Bromofluorobenzene (SURR)	123	119		100	89			% Rec.	09/17/1993	vin	
METHOD 3550/M8015											
as Diesel	67	63	6.2	16.7	ND	N/A	N/A	mg/L	09/16/1993	tts	
METHOD 3550/M8015											
as Diesel	N/A	N/A	2.5	16.7	420	N/A	N/A	mg/kg dw	09/20/1993	tts	
METHOD 8270 (GCMS,Liquid)											
Acenaphthene	74.0	76.0	2.7	100	ND	74	76	ug/L	09/16/1993	sjg	
1,4-Dichlorobenzene	54.0	59.0	8.8	100	ND	54	59	ug/L	09/16/1993	sjg	
2,4-Dinitrotoluene	83.0	84.0	1.2	100	ND	83	84	ug/L	09/16/1993	sjg	
N-Nitroso-Di-N-propylamine	63.0	71.0	11.9	100	ND	63	71	ug/L	09/16/1993	sjg	
Pyrene	90.0	88.0	2.2	100	ND	90	88	ug/L	09/16/1993	sjg	
1,2,4-Trichlorobenzene	57.0	61.0	6.8	100	ND	57	61	ug/L	09/16/1993	sjg	
4-Chloro-3-methylphenol	52.0	56.0	7.4	200	ND	104	112	ug/L	09/16/1993	sjg	
2-Chlorophenol	51.0	67.0	27.1	200	ND	102	134	ug/L	09/16/1993	sjg	
4-Nitrophenol	51.5	75.0	37.2	200	ND	103	150	ug/L	09/16/1993	sjg	
Pentachlorophenol	65.0	89.0	31.2	200	ND	130	178	ug/L	09/16/1993	sjg	
Phenol	35.5	44.0	21.4	200	ND	71	88	ug/L	09/16/1993	sjg	
Nitrobenzene-d5 (SURR)				100	76	65	79	% Rec.	09/16/1993	sjg	
2-Fluorobiphenyl (SURR)				100	78	69	73	% Rec.	09/16/1993	sjg	



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.03974

Date: 09/22/1993
 ELAP Certificate: 1386
 Page: 28

Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike			Spike Amount	Sample Conc.	Matrix Spike		Units	Date Analyzed	Analyst Initials
	Matrix Spike % Rec.	Spike Dup % Rec.	RPD			Matrix Spike Conc.	Spike Dup. Conc.			
p-Terphenyl-d14 (SURR)				100	59	67	66	% Rec.	09/16/1993	sjg
Phenol-d5 (SURR)				100	33	37	47	% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)				100	48	42	59	% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)				100	60	52	62	% Rec.	09/16/1993	sjg
METHOD 8270 (GCMS, Solid)										
Acenaphthene	48.0	77.0	46.4	100	ND	48	77	ug/kg dw	09/16/1993	sjg
1,4-Dichlorobenzene	39.0	63.0	47.1	100	ND	39	63	ug/kg dw	09/16/1993	sjg
2,4-Dinitrotoluene	40.0	60.0	40.0	100	ND	40	60	ug/kg dw	09/16/1993	sjg
N-Nitroso-Di-N-propylamine	47.0	76.0	47.2	100	ND	47	76	ug/kg dw	09/16/1993	sjg
Pyrene	47.0	74.0	44.6	100	ND	47	74	ug/kg dw	09/16/1993	sjg
1,2,4-Trichlorobenzene	42.0	67.0	45.9	100	ND	42	67	ug/kg dw	09/16/1993	sjg
4-Chloro-3-methylphenol	46.0	71.0	42.7	200	ND	92	142	ug/kg dw	09/16/1993	sjg
2-Chlorophenol	42.5	68.0	46.2	200	ND	85	136	ug/kg dw	09/16/1993	sjg
4-Nitrophenol	49.0	74.0	40.7	200	ND	98	148	ug/kg dw	09/16/1993	sjg
Pentachlorophenol	52.5	76.0	36.6	200	ND	105	152	ug/kg dw	09/16/1993	sjg
Phenol	43.0	70.0	47.8	200	ND	86	140	ug/kg dw	09/16/1993	sjg
Nitrobenzene-d5 (SURR)				100	64	42	64	% Rec.	09/16/1993	sjg
2-Fluorobiphenyl (SURR)				100	72	46	69	% Rec.	09/16/1993	sjg
p-Terphenyl-d14 (SURR)				100	65	43	62	% Rec.	09/16/1993	sjg
Phenol-d5 (SURR)				100	76	47	74	% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)				100	63	39	62	% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)				100	79	50	78	% Rec.	09/16/1993	sjg



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.03974

Date: 09/22/1993
 ELAP Certificate: 1386
 Page: 29

Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS		LCS	LCS	Units	Date Analyzed	Analyst Initials
	% Recovery	RPD	Amount Found	Amount Expected			
Oil & Grease (Total)	98.8		112.9	114.3	mg/L	09/14/1993	fwk
Oil & Grease (Total)	101.4		96	94.7	mg/L	09/14/1993	fwk
Oil & Grease (Total)	97.2		2276	2342	mg/kg	09/16/1993	vid
Oil & Grease (Total)	100.8		2760	2738	mg/kg	09/16/1993	vid
METHOD 3510/M8015							
as Diesel	88.0		0.88	1.00	mg/L	09/16/1993	tts
METHOD 3550/M8015							
as Diesel	102		17.0	16.7	mg/kg dw	09/20/1993	tts
METHOD 8270 (GCMS, Liquid)							
Acenaphthene	62.0		62	100	ug/L	09/16/1993	sjg
1,4-Dichlorobenzene	48.0		48	100	ug/L	09/16/1993	sjg
2,4-Dinitrotoluene	73.0		73	100	ug/L	09/16/1993	sjg
N-Nitroso-Di-N-propylamine	67.0		67	100	ug/L	09/16/1993	sjg
Pyrene	76.0		76	100	ug/L	09/16/1993	sjg
1,2,4-Trichlorobenzene	49.0		49	100	ug/L	09/16/1993	sjg
4-Chloro-3-methylphenol	67.5		135	200	ug/L	09/16/1993	sjg
2-Chlorophenol	70.0		140	200	ug/L	09/16/1993	sjg
4-Nitrophenol	26.0		52	200	ug/L	09/16/1993	sjg
Pentachlorophenol	73.0		146	200	ug/L	09/16/1993	sjg
Phenol	34.5		69	200	ug/L	09/16/1993	sjg
Nitrobenzene-d5 (SURR)	70.0		70	100	% Rec.	09/16/1993	sjg
2-Fluorobiphenyl (SURR)	59.0		59	100	% Rec.	09/16/1993	sjg
p-Terphenyl-d14 (SURR)	65.0		65	100	% Rec.	09/16/1993	sjg
Phenol-d5 (SURR)	35.0		35	100	% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)	52.0		52	100	% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)	70.0		70	100	% Rec.	09/16/1993	sjg
METHOD 8270 (GCMS, Liquid)							
Acenaphthene	80.0		80	100	ug/L	09/20/1993	sjg
1,4-Dichlorobenzene	61.0		61	100	ug/L	09/20/1993	sjg
2,4-Dinitrotoluene	78.0		78	100	ug/L	09/20/1993	sjg
N-Nitroso-Di-N-propylamine	84.0		84	100	ug/L	09/20/1993	sjg
Pyrene	87.0		87	100	ug/L	09/20/1993	sjg
1,2,4-Trichlorobenzene	60.0		60	100	ug/L	09/20/1993	sjg
4-Chloro-3-methylphenol	78.0		156	200	ug/L	09/20/1993	sjg
2-Chlorophenol	72.0		144	200	ug/L	09/20/1993	sjg
4-Nitrophenol	59.0		118	200	ug/L	09/20/1993	sjg
Pentachlorophenol	86.0		172	200	ug/L	09/20/1993	sjg
Phenol	53.5		107	200	ug/L	09/20/1993	sjg
Nitrobenzene-d5 (SURR)	73.0		73	100	% Rec.	09/20/1993	sjg
2-Fluorobiphenyl (SURR)	73.0		73	100	% Rec.	09/20/1993	sjg
p-Terphenyl-d14 (SURR)	68.0		68	100	% Rec.	09/20/1993	sjg
Phenol-d5 (SURR)	57.0		57	100	% Rec.	09/20/1993	sjg
2-Fluorophenol (SURR)	71.0		71	100	% Rec.	09/20/1993	sjg
2,4,6-Tribromophenol (SURR)	89.0		89	100	% Rec.	09/20/1993	sjg
METHOD 8270 (GCMS, Solid)							
Acenaphthene	81.0		81	100	ug/kg	09/16/1993	sjg
1,4-Dichlorobenzene	70.0		70	100	ug/kg	09/16/1993	sjg
2,4-Dinitrotoluene	79.0		79	100	ug/kg	09/16/1993	sjg



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.03974

Date: 09/22/1993
ELAP Certificate: 1386
Page: 30

Ref: SHELL, 6039 College Ave., Oakland, Job No. 81-618-07

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS		LCS	LCS	Units	Date Analyzed	Analyst Initials
	% Recovery	RPD	Amount Found	Amount Expected			
N-Nitroso-Di-N-propylamine	79.0		79	100	ug/kg	09/16/1993	sjg
Pyrene	79.0		79	100	ug/kg	09/16/1993	sjg
1,2,4-Trichlorobenzene	70.0		70	100	ug/kg	09/16/1993	sjg
4-Chloro-3-methylphenol	78.0		156	200	ug/kg	09/16/1993	sjg
2-Chlorophenol	73.0		146	200	ug/kg	09/16/1993	sjg
4-Nitrophenol	88.0		176	200	ug/kg	09/16/1993	sjg
Pentachlorophenol	93.0		186	200	ug/kg	09/16/1993	sjg
Phenol	74.0		148	200	ug/kg	09/16/1993	sjg
Nitrobenzene-d5 (SURR)	47.0		47	100	% Rec.	09/16/1993	sjg
2-Fluorobiphenyl (SURR)	51.0		51	100	% Rec.	09/16/1993	sjg
p-Terphenyl-d14 (SURR)	67.0		67	100	% Rec.	09/16/1993	sjg
Phenol-d5 (SURR)	57.0		57	100	% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)	49.0		49	100	% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)	85.0		85	100	% Rec.	09/16/1993	sjg



KEY TO ABBREVIATIONS and METHOD REFERENCES

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

Method References

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

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

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

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 5537

Date: 9-9-93

Page 1 of 2

Site Address: 6039 COLLEGE AVE
DAKLAND
WIC#: 204-5508-3301

Analysis Required

LAB: NET

Shell Engineer: DAN KIRK Phone No.: 675-6168
Fax #: 675-6172

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

Consultant Contact: DAVID ELIAS Phone No.: (510) 547-5420
WA JOB # 81-618-07 Fax #: 547-5043

Comments:

Sampled by: David Elias

Printed Name: DAVID ELIAS

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

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

UST AGENCY: ACDEH

Sample ID	Date	Sludge	Soil	Water	Air	No. of conds.	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	<u>OIL & GREASE</u>	<u>SOL'S 8270</u>	<u>Ambocars HOLD</u>	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
BH-A-6.0	9/9		X			1						X				24	N	N	GAS/SOIL	* changes & additions per Dave Elias Fax to S. Long 9/14/93 see attached pink C.O.C.
BH-A-11.0						1		X				X	XX			2.5				
BH-A-14.3						1						X	XX			2.5				
BH-A-16.0						2		X				X	XX			1.5				
BH-A-17.2						2										1.5				
BH-A-18.8						1										2.5				
BH-B-5.7						2										1.5				
BH-B-11.0						1						X				1.5				

seals intact. A/C
(CUSTODY SEALED)
9-10-93
G.P. Lumbre

Relinquished By (signature): <u>David Elias</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9/9/93</u>	Received (signature): <u>M.M. Gray</u>	Printed Name: <u>M. M. Gray</u>	Date: _____
Relinquished By (signature): <u>Robert Agnew</u>	Printed Name: <u>ROBERT AGNEW</u>	Date: <u>9-10-93</u>	Received (signature): <u>G.P. Lumbre</u>	Printed Name: <u>G. P. Lumbre</u>	Date: <u>9-10-93</u>
Relinquished By (signature): <u>G.P. Lumbre</u>	Printed Name: <u>G.P. LUMBRE</u>	Date: <u>9-10-93</u>	Received (signature): <u>Army Lopez</u>	Printed Name: <u>Army Lopez</u>	Date: <u>9/14/93</u>

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

5 STORED IN SECURE PLACE



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 5587

Date: 9-9-93

Page 2 of 3

Site Address: 6039 COLLEGE AVE
OAKLAND
 WIC#: 204-5508-3301

Analysis Required

LAB: NET

Shell Engineer: DAN KIRK Phone No.: 675-6168
 Fax #: 675-6172

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

Consultant Contact: DAVID ELIAS Phone No.: (510) 547-5420
WA JOB # 81-618-07 Fax #: 547-5043

Comments:

Sampled by: David Elias

Printed Name: DAVID ELIAS

CHECK ONE (!) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

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

UST AGENCY: ACDEH

Sample ID	Date	Sludge	Soil	Water	Air	No. of conds.
BH-B-15.7	9/9		X			2
BH-B-18.2	↓		↓			↓
BH-B-20.7	↓		↓			↓

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	Oil & Grease	Synoc's	Asbestos	Container Size	Preparation Used	Composite Y/N
					X	X	X				X

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
GAS/SOIL	* changes & additions per Dave Elias fax to S-long 9/14/93 see attached pink C-04

STORED IN SECURE PLACE

seals intact. A.I.
 CUSTODY SEALED
 9-10-93
 G.P. Lumbree

Relinquished By (signature): <u>David Elias</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9/9/93</u>	Time: <u>20:20</u>	Received (signature): <u>RECEIVED FROM A SECURE PLACE</u>	Printed Name: <u>M.M. Gray</u>	Date: <u>9/10/93</u>	Time: <u>14:00</u>
Relinquished By (signature): <u>Robert L. Agnew</u>	Printed Name: <u>Robert L. Agnew</u>	Date: <u>9-10-93</u>	Time: <u>2:30</u>	Received (signature): <u>G.P. Lumbree</u>	Printed Name: <u>G.P. LUMBREE</u>	Date: <u>9/10/93</u>	Time: <u>16:00</u>
Relinquished By (signature): <u>G.P. Lumbree</u>	Printed Name: <u>G.P. LUMBREE</u>	Date: <u>9-10-93</u>	Time: <u>16:00</u>	Received (signature): <u>via NCS courier</u>	Printed Name: <u>Anny Lopez</u>	Date: <u>9/10/93</u>	Time: <u>13:00</u>

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: _____

Date: 9-9-93

Page 3 of 3

Site Address: 6039 COLLEGE AVE
OAKLAND
WIC#: 204-5508-3301

Analysis Required

LAB: NET

Shell Engineer: DAN KIRK
Phone No.: 675-6168
Fax #: 675-6172

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

Consultant Contact: DAVID ELIAS
WA JOB # 81-618-07
Phone No.: (510) 547-5420
Fax #: 547-5043

Comments:

Sampled by: David Elias

Printed Name: DAVID ELIAS

Sample ID	Date	Sludge	Soil	Water	Air	No. of Conts.
BH-A	9/9			X		8
BH-B	9/9			X		8
BH-21	9/9			X		3

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	OIL & GREASE	SVOC's 8240	Asbestos - HOLD	Container Size	Preparation Used	Composite Y/N
	X				X	X	X			HCL	N
	X				X	X	X			HCL H2SO4	N
					X						

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

UST AGENCY: ACDEH

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
GAS/H2O	PLEASE PRESERVE 2 LITERS w/ H2SO4

(CUSTODY SEALED 9-10-93)
G.P. Lumbke

Relinquished By (signature): <u>David Elias</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9/9/93</u> Time: <u>20:27</u>	Received (signature): <u>M.M. Gray</u>	Printed Name: <u>M.M. Gray</u>	Date: _____ Time: _____
Relinquished By (signature): <u>Robert L. Agnew</u>	Printed Name: <u>Robert L. Agnew</u>	Date: <u>9-10-93</u> Time: <u>2:31</u>	Received (signature): <u>G.P. Lumbke</u>	Printed Name: <u>G.P. Lumbke</u>	Date: <u>9-10-93</u> Time: <u>14:10</u>
Relinquished By (signature): <u>G.P. Lumbke</u>	Printed Name: <u>G.P. Lumbke</u>	Date: <u>9-10-93</u> Time: <u>16:00</u>	Received (signature): _____	Printed Name: _____	Date: _____ Time: _____

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: _____

Date: 9-~~8~~¹-93
Page 1 of 3

Site Address: 6039 COLLEGE AVE
DUBLAND
WICH: 204-5508-3301

Analysis Required

LAB: NET

Shell Engineer: DAN KIRK
Phone No.: 675-6168
Fax #: 675-6172

Consultant Name & Address: WEISS ASSOCIATES
5500 SHELLMOUND ST EMERYVILLE CA 94609

Consultant Contact: DAVID ELIAS
WA JOB # 81-618-07
Phone No.: (510) 547-5420
Fax #: 547-5043

Comments:

Sampled by: David Elias
Printed Name: DAVID ELIAS

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	OIL & GREASE	SVOC'S 8270	Asbestos HOLD	Container Size	Preparation Used	Composite Y/N
-------------------------	----------------------------	---------------------	------------------------------	-------------------	----------------------------------	--------------	-------------	---------------	----------------	------------------	---------------

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4441	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

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

UST AGENCY: ACDEH

Sample ID	Date	Sludge	Soil	Water	Air	No. of conds.	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	OIL & GREASE	SVOC'S 8270	Asbestos HOLD	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
																			GAS/SOIL	
BH-A-6.0	9/9		X			1						X				2.5	N	N	GAS/SOIL	
BH-A-11.0						1		X				X	X	X		2.5				
BH-A-14.3						1										2.5				
BH-A-16.0						1		X				X	X	X		2.5				
BH-A-17.2						2									X	1.5				
BH-A-18.8						1									X	2.5				
BH-B-5.7						2									X	1.5				
BH-B-11.0						1						X				1.5				

Relinquished By (signature): <u>David Elias</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9/9/93</u>	Received (signature): <u>RECEIVED</u>	Printed Name: <u>M. M. Gray</u>	Date: _____
Relinquished By (signature): <u>Robert Agnew</u>	Printed Name: <u>Robert Agnew</u>	Date: <u>9-10-93</u>	Received (signature): <u>M. M. Gray</u>	Printed Name: <u>M. M. Gray</u>	Date: <u>9-10-93</u>
Relinquished By (signature): _____	Printed Name: _____	Date: _____	Received (signature): <u>D. J. [unclear]</u>	Printed Name: <u>G. H. [unclear]</u>	Date: <u>14:30</u>
Relinquished By (signature): _____	Printed Name: _____	Date: _____	Received (signature): _____	Printed Name: _____	Date: _____

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

09/14/1993 10:45 5106475043 WEISS ASSOCIATES PAGE 02



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: _____

Date: 9-9-93

Page 2 of 34

09/14/1993 10:45 5105475043 WEISS ASSOCIATES PAGE 03

Site Address: 6039 COLLEGE AVE
OAKLAND
WICK: 204-5508-3301

Analysis Required

LAB: NET

Shell Engineer: DAN KIRK
Phone No.: 675-6168
Fax #: 675-6172

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

Consultant Contact: DAVID ELIAS
WA JOB # 81-618-07
Phone No.: (510) 547-5430
Fax #: 547-5043

Comments:

Sampled by: David Elias
Printed Name: DAVID ELIAS

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4463	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

NOTE: Holiday Lab as soon as Possible at 24/48 hrs. TAT.

JUST AGENCY: ACDEH

Sample ID	Date	Sludge	Soil	Water	Air	No. of conds.	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	Oil & Grease	Syoc's	Asbestos	Holder	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
BH-B-15.7	9/9		X			2	X					X	X	X					Z	K	Gas/soil	
BH-B-18.2	↓		↓			↓									X				↓	↓		
BH-B-20.7	↓		↓			↓									X				↓	↓		

Relinquished By (signature): <i>David Elias</i>	Printed Name: DAVID ELIAS	Date: 9/9/93	Received (signature): <i>RECEIVED FROM A SECURE PLACE</i>	Printed Name: M.H. Gray	Date: 9/9/93
Relinquished By (signature): <i>Robert L. Agnew</i>	Printed Name: Robert L. Agnew	Date: 9-9-93	Received (signature): <i>D.V. Lumber</i>	Printed Name: G.V. LUMBER	Date: 9/9/93
Relinquished By (signature):	Printed Name:	Date:	Received (signature):	Printed Name:	Date:

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



NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

David Elias
Weiss Associates
5500 Shellmound St.
Emeryville, CA 94608

Date: 09/22/1993
NET Client Acct. No: 1809
NET Pacific Job No: 93.04010
Received: 09/14/1993

Client Reference Information

SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

A handwritten signature in black ink, appearing to read "J. Skamarack", is written over a horizontal line. The signature is stylized and extends to the left and right of the line.

Jules Skamarack
Laboratory Manager

Enclosure(s)



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
Page: 2

Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-E-10.7
Date Taken: 09/10/1993
Time Taken:
NET Sample No: 173537

Parameter	Results	Flags	Reporting			Date	Date
			Limit	Units	Method	Extracted	Analyzed
TPH (Gas/BTXE,Solid)							
METHOD 5030/M8015	--						09/15/1993
DILUTION FACTOR*	1						09/15/1993
as Gasoline	ND		1	mg/kg	5030		09/15/1993
METHOD 8020 (GC,Solid)	--						09/15/1993
Benzene	ND		0.0025	mg/kg	8020		09/15/1993
Toluene	ND		0.0025	mg/kg	8020		09/15/1993
Ethylbenzene	ND		0.0025	mg/kg	8020		09/15/1993
Xylenes (Total)	ND		0.0025	mg/kg	8020		09/15/1993
SURROGATE RESULTS	--						09/15/1993
Bromofluorobenzene (SURR)	93			% Rec.	5030		09/15/1993



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
Page: 3

Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-C-10.7

Date Taken: 09/10/1993

Time Taken:

NET Sample No: 173538

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Solid)							
METHOD 5030/M8015	--						09/15/1993
DILUTION FACTOR*	1						09/15/1993
as Gasoline	ND		1	mg/kg	5030		09/15/1993
METHOD 8020 (GC,Solid)	--						09/15/1993
Benzene	ND		0.0025	mg/kg	8020		09/15/1993
Toluene	ND		0.0025	mg/kg	8020		09/15/1993
Ethylbenzene	ND		0.0025	mg/kg	8020		09/15/1993
Xylenes (Total)	ND		0.0025	mg/kg	8020		09/15/1993
SURROGATE RESULTS	--						09/15/1993
Bromofluorobenzene (SURR)	85			% Rec.	5030		09/15/1993



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
Page: 4

Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-C-20.7
Date Taken: 09/10/1993
Time Taken:
NET Sample No: 173539

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTEX,Solid)							
METHOD 5030/M8015	--						09/15/1993
DILUTION FACTOR*	1						09/15/1993
as Gasoline	ND		1	mg/kg	5030		09/15/1993
METHOD 8020 (GC,Solid)	--						09/15/1993
Benzene	ND		0.0025	mg/kg	8020		09/15/1993
Toluene	ND		0.0025	mg/kg	8020		09/15/1993
Ethylbenzene	ND		0.0025	mg/kg	8020		09/15/1993
Xylenes (Total)	ND		0.0025	mg/kg	8020		09/15/1993
SURROGATE RESULTS	--						09/15/1993
Bromofluorobenzene (SURR)	88			% Rec.	5030		09/15/1993



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.04010

Date: 09/22/1993
 ELAP Certificate: 1386
 Page: 5

Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-E-15.7
 Date Taken: 09/10/1993
 Time Taken:
 NET Sample No: 173540

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Oil & Grease (Total)	ND		50	mg/kg	5520E		09/16/1993
Oil & Grease (Non-Polar)	ND		50	mg/kg	5520E/F		09/16/1993
TPH (Gas/BTEX, Solid)							
METHOD 5030/M8015	--						09/15/1993
DILUTION FACTOR*	1						09/15/1993
as Gasoline	ND		1	mg/kg	5030		09/15/1993
METHOD 8020 (GC, Solid)							
Benzene	ND		0.0025	mg/kg	8020		09/15/1993
Toluene	ND		0.0025	mg/kg	8020		09/15/1993
Ethylbenzene	ND		0.0025	mg/kg	8020		09/15/1993
Xylenes (Total)	ND		0.0025	mg/kg	8020		09/15/1993
SURROGATE RESULTS							
Bromofluorobenzene (SURR)	84			% Rec.	5030		09/15/1993
METHOD 3550/M8015							
DILUTION FACTOR*	1						09/16/1993
as Diesel	3.5	DL	1	mg/kg	3550		09/16/1993

DL : The positive result appears to be a lighter hydrocarbon than Diesel.



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
Page: 6

Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-E-15.7
Date Taken: 09/10/1993
Time Taken:
NET Sample No: 173540

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
METHOD 8270 (GCMS, Solid)						09/15/1993	
DILUTION FACTOR*	1						09/16/1993
Acenaphthene	ND		0.33	mg/kg	8270		09/16/1993
Acenaphthylene	ND		0.33	mg/kg	8270		09/16/1993
Aldrin	ND		1.6	mg/kg	8270		09/16/1993
Anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzidine	ND		1.6	mg/kg	8270		09/16/1993
Benzo(a)anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(b)fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(k)fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(a)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(g,h,i)perylene	ND		0.33	mg/kg	8270		09/16/1993
Benzoic acid	ND		1.6	mg/kg	8270		09/16/1993
Benzyl alcohol	ND		0.33	mg/kg	8270		09/16/1993
Butyl benzyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
delta-BHC	ND		1.6	mg/kg	8270		09/16/1993
gamma-BHC	ND		1.6	mg/kg	8270		09/16/1993
bis(2-Chloroethyl)ether	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Chloroethoxy)methane	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Chloroisopropyl)ether	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Ethylhexyl)phthalate	ND		0.33	mg/kg	8270		09/16/1993
4-Bromophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
4-Chloroaniline	ND		0.33	mg/kg	8270		09/16/1993
2-Chloronaphthalene	ND		0.33	mg/kg	8270		09/16/1993
4-Chlorophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
Chrysene	ND		0.33	mg/kg	8270		09/16/1993
4,4'-DDD	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDE	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDT	ND		1.6	mg/kg	8270		09/16/1993
Dibenzo(a,h)anthracene	ND		0.33	mg/kg	8270		09/16/1993
Dibenzofuran	ND		0.33	mg/kg	8270		09/16/1993
Di-n-butylphthalate	ND		0.33	mg/kg	8270		09/16/1993
1,2-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,3-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,4-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
3,3'-Dichlorobenzidine	ND		0.66	mg/kg	8270		09/16/1993
Dieldrin	ND		1.6	mg/kg	8270		09/16/1993
Diethylphthalate	ND		0.33	mg/kg	8270		09/16/1993
Dimethyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
2,6-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
Di-n-octyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
Endrin aldehyde	ND		1.6	mg/kg	8270		09/16/1993
Fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Fluorene	ND		0.33	mg/kg	8270		09/16/1993



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
Page: 7

Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-E-15.7
Date Taken: 09/10/1993
Time Taken:
NET Sample No: 173540

Parameter	Results	Flags	Reporting			Date	Date
			Limit	Units	Method	Extracted	Analyzed
Heptachlor	ND		1.6	mg/kg	8270		09/16/1993
Heptachlor epoxide	ND		1.6	mg/kg	8270		09/16/1993
Hexachlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorobutadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorocyclopentadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachloroethane	ND		0.33	mg/kg	8270		09/16/1993
Indeno(1,2,3-cd)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Isophorone	ND		0.33	mg/kg	8270		09/16/1993
2-Methylnaphthalene	ND		0.33	mg/kg	8270		09/16/1993
Naphthalene	ND		0.33	mg/kg	8270		09/16/1993
2-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
3-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
4-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
Nitrobenzene	ND		0.33	mg/kg	8270		09/16/1993
N-Nitroso-Di-N-propylamine	ND		0.33	mg/kg	8270		09/16/1993
N-Nitrosodiphenylamine	ND		0.33	mg/kg	8270		09/16/1993
Phenanthrene	ND		0.33	mg/kg	8270		09/16/1993
Pyrene	ND		0.33	mg/kg	8270		09/16/1993
1,2,4-Trichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
ACID EXTRACTABLES	--						09/16/1993
4-Chloro-3-methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2-Chlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dimethylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrophenol	ND		1.6	mg/kg	8270		09/16/1993
4,6-Dinitro-2-methylphenol	ND		1.6	mg/kg	8270		09/16/1993
2-Nitrophenol	ND		0.33	mg/kg	8270		09/16/1993
4-Nitrophenol	ND		1.6	mg/kg	8270		09/16/1993
Pentachlorophenol	ND		1.6	mg/kg	8270		09/16/1993
Phenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,6-Trichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
4-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,5-Trichlorophenol	ND		1.6	mg/kg	8270		09/16/1993
SURROGATE RESULTS	--						09/16/1993
Nitrobenzene-d5 (SURR)	49			% Rec.	8270		09/16/1993
2-Fluorobiphenyl (SURR)	50			% Rec.	8270		09/16/1993
p-Terphenyl-d14 (SURR)	75			% Rec.	8270		09/16/1993
Phenol-d5 (SURR)	63			% Rec.	8270		09/16/1993
2-Fluorophenol (SURR)	44			% Rec.	8270		09/16/1993
2,4,6-Tribromophenol (SURR)	75			% Rec.	8270		09/16/1993



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
Page: 8

Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-C-15.7
Date Taken: 09/10/1993
Time Taken:
NET Sample No: 173541

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Oil & Grease (Total)	1,200		50	mg/kg	5520E		09/16/1993
Oil & Grease (Non-Polar)	930		50	mg/kg	5520E/F		09/16/1993
TPH (Gas/BTXE,Solid)							
METHOD 5030/M8015	--						09/18/1993
DILUTION FACTOR*	50						09/18/1993
as Gasoline	580	G-	50	mg/kg	5030		09/18/1993
METHOD 8020 (GC,Solid)	--						09/18/1993
Benzene	ND		0.125	mg/kg	8020		09/18/1993
Toluene	ND		0.125	mg/kg	8020		09/18/1993
Ethylbenzene	ND		0.125	mg/kg	8020		09/18/1993
Xylenes (Total)	ND		0.125	mg/kg	8020		09/18/1993
SURROGATE RESULTS							
Bromofluorobenzene (SURR)	167	MI		% Rec.	5030		09/18/1993
METHOD 3550/M8015							
DILUTION FACTOR*	100					09/16/1993	09/16/1993
as Diesel	4,900	DH	100	mg/kg	3550		09/16/1993

DH : The positive result appears to be a heavier hydrocarbon than Diesel.
G- : The positive result has an atypical pattern for Gasoline analysis.
MI : Matrix Interference



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
Page: 9

Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-C-15.7
Date Taken: 09/10/1993
Time Taken:
NET Sample No: 173541

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
METHOD 8270 (GCMS,Solid)						09/15/1993	
DILUTION FACTOR*	1						09/16/1993
Acenaphthene	ND		0.33	mg/kg	8270		09/16/1993
Acenaphthylene	ND		0.33	mg/kg	8270		09/16/1993
Aldrin	ND		1.6	mg/kg	8270		09/16/1993
Anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzidine	ND		1.6	mg/kg	8270		09/16/1993
Benzo(a)anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(b)fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(k)fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(a)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(g,h,i)perylene	ND		0.33	mg/kg	8270		09/16/1993
Benzoic acid	ND		1.6	mg/kg	8270		09/16/1993
Benzy alcohol	ND		0.33	mg/kg	8270		09/16/1993
Butyl benzyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
delta-BHC	ND		1.6	mg/kg	8270		09/16/1993
gamma-BHC	ND		1.6	mg/kg	8270		09/16/1993
bis(2-Chloroethyl)ether	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Chloroethoxy)methane	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Chloroisopropyl)ether	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Ethylhexyl)phthalate	ND		0.33	mg/kg	8270		09/16/1993
4-Bromophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
4-Chloroaniline	ND		0.33	mg/kg	8270		09/16/1993
2-Chloronaphthalene	ND		0.33	mg/kg	8270		09/16/1993
4-Chlorophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
Chrysene	ND		0.33	mg/kg	8270		09/16/1993
4,4'-DDD	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDE	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDT	ND		1.6	mg/kg	8270		09/16/1993
Dibenzo(a,h)anthracene	ND		0.33	mg/kg	8270		09/16/1993
Dibenzofuran	ND		0.33	mg/kg	8270		09/16/1993
Di-n-butylphthalate	ND		0.33	mg/kg	8270		09/16/1993
1,2-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,3-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,4-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
3,3'-Dichlorobenzidine	ND		0.66	mg/kg	8270		09/16/1993
Dieldrin	ND		1.6	mg/kg	8270		09/16/1993
Diethylphthalate	ND		0.33	mg/kg	8270		09/16/1993
Dimethyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
2,6-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
Di-n-octyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
Endrin aldehyde	ND		1.6	mg/kg	8270		09/16/1993
Fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Fluorene	ND		0.33	mg/kg	8270		09/16/1993



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
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Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-C-15.7

Date Taken: 09/10/1993

Time Taken:

NET Sample No: 173541

Parameter	Results	Flags	Reporting			Date	Date
			Limit	Units	Method	Extracted	Analyzed
Heptachlor	ND		1.6	mg/kg	8270		09/16/1993
Heptachlor epoxide	ND		1.6	mg/kg	8270		09/16/1993
Hexachlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorobutadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorocyclopentadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachloroethane	ND		0.33	mg/kg	8270		09/16/1993
Indeno(1,2,3-cd)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Isophorone	ND		0.33	mg/kg	8270		09/16/1993
2-Methylnaphthalene	ND		0.33	mg/kg	8270		09/16/1993
Naphthalene	ND		0.33	mg/kg	8270		09/16/1993
2-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
3-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
4-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
Nitrobenzene	ND		0.33	mg/kg	8270		09/16/1993
N-Nitroso-Di-N-propylamine	ND		0.33	mg/kg	8270		09/16/1993
N-Nitrosodiphenylamine	ND		0.33	mg/kg	8270		09/16/1993
Phenanthrene	ND		0.33	mg/kg	8270		09/16/1993
Pyrene	ND		0.33	mg/kg	8270		09/16/1993
1,2,4-Trichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
ACID EXTRACTABLES	--						09/16/1993
4-Chloro-3-methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2-Chlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dimethylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrophenol	ND		1.6	mg/kg	8270		09/16/1993
4,6-Dinitro-2-methylphenol	ND		1.6	mg/kg	8270		09/16/1993
2-Nitrophenol	ND		0.33	mg/kg	8270		09/16/1993
4-Nitrophenol	ND		1.6	mg/kg	8270		09/16/1993
Pentachlorophenol	ND		1.6	mg/kg	8270		09/16/1993
Phenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,6-Trichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
4-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,5-Trichlorophenol	ND		1.6	mg/kg	8270		09/16/1993
SURROGATE RESULTS	--						09/16/1993
Nitrobenzene-d5 (SURR)	61			% Rec.	8270		09/16/1993
2-Fluorobiphenyl (SURR)	64			% Rec.	8270		09/16/1993
p-Terphenyl-d14 (SURR)	79			% Rec.	8270		09/16/1993
Phenol-d5 (SURR)	73			% Rec.	8270		09/16/1993
2-Fluorophenol (SURR)	63			% Rec.	8270		09/16/1993
2,4,6-Tribromophenol (SURR)	77			% Rec.	8270		09/16/1993



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.04010

Date: 09/22/1993
 ELAP Certificate: 1386
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Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-D-10.7
 Date Taken: 09/10/1993
 Time Taken:
 NET Sample No: 173542

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Oil & Grease (Total)	ND		50	mg/kg	5520E		09/16/1993
Oil & Grease (Non-Polar)	ND		50	mg/kg	5520E/F		09/16/1993
TPH (Gas/BTXE,Solid)							
METHOD 5030/M8015	--						09/16/1993
DILUTION FACTOR*	1						09/16/1993
as Gasoline	6.8	G-	1	mg/kg	5030		09/16/1993
METHOD 8020 (GC,Solid)							
Benzene	ND		0.0025	mg/kg	8020		09/16/1993
Toluene	ND		0.0025	mg/kg	8020		09/16/1993
Ethylbenzene	ND		0.0025	mg/kg	8020		09/16/1993
Xylenes (Total)	ND		0.0025	mg/kg	8020		09/16/1993
SURROGATE RESULTS							
Bromofluorobenzene (SURR)	112			µ Rec.	5030		09/16/1993
METHOD 3550/M8015							
DILUTION FACTOR*	1					09/16/1993	09/16/1993
as Diesel	8.9	DL	1	mg/kg	3550		09/16/1993

DL : The positive result appears to be a lighter hydrocarbon than Diesel.
 G- : The positive result has an atypical pattern for Gasoline analysis.



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
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Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-D-10.7
Date Taken: 09/10/1993
Time Taken:
NET Sample No: 173542

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
METHOD 8270 (GCMS, Solid)						09/15/1993	
DILUTION FACTOR*	1						09/16/1993
Acenaphthene	ND		0.33	mg/kg	8270		09/16/1993
Acenaphthylene	ND		0.33	mg/kg	8270		09/16/1993
Aldrin	ND		1.6	mg/kg	8270		09/16/1993
Anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzidine	ND		1.6	mg/kg	8270		09/16/1993
Benzo(a)anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(b)fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(k)fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(a)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(g,h,i)perylene	ND		0.33	mg/kg	8270		09/16/1993
Benzoic acid	ND		1.6	mg/kg	8270		09/16/1993
Benzy alcohol	ND		0.33	mg/kg	8270		09/16/1993
Butyl benzyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
delta-BHC	ND		1.6	mg/kg	8270		09/16/1993
gamma-BHC	ND		1.6	mg/kg	8270		09/16/1993
bis(2-Chloroethyl) ether	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Chloroethoxy)methane	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Chloroisopropyl) ether	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Ethylhexyl) phthalate	ND		0.33	mg/kg	8270		09/16/1993
4-Bromophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
4-Chloroaniline	ND		0.33	mg/kg	8270		09/16/1993
2-Chloronaphthalene	ND		0.33	mg/kg	8270		09/16/1993
4-Chlorophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
Chrysene	ND		0.33	mg/kg	8270		09/16/1993
4,4'-DDD	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDE	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDT	ND		1.6	mg/kg	8270		09/16/1993
Dibenzo(a,h)anthracene	ND		0.33	mg/kg	8270		09/16/1993
Dibenzofuran	ND		0.33	mg/kg	8270		09/16/1993
Di-n-butylphthalate	ND		0.33	mg/kg	8270		09/16/1993
1,2-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,3-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,4-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
3,3'-Dichlorobenzidine	ND		0.66	mg/kg	8270		09/16/1993
Dieldrin	ND		1.6	mg/kg	8270		09/16/1993
Diethylphthalate	ND		0.33	mg/kg	8270		09/16/1993
Dimethyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
2,6-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
Di-n-octyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
Endrin aldehyde	ND		1.6	mg/kg	8270		09/16/1993
Fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Fluorene	ND		0.33	mg/kg	8270		09/16/1993



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
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Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-D-10.7

Date Taken: 09/10/1993

Time Taken:

NET Sample No: 173542

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Heptachlor	ND		1.6	mg/kg	8270		09/16/1993
Heptachlor epoxide	ND		1.6	mg/kg	8270		09/16/1993
Hexachlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorobutadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorocyclopentadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachloroethane	ND		0.33	mg/kg	8270		09/16/1993
Indeno(1,2,3-cd)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Isophorone	ND		0.33	mg/kg	8270		09/16/1993
2-Methylnaphthalene	ND		0.33	mg/kg	8270		09/16/1993
Naphthalene	ND		0.33	mg/kg	8270		09/16/1993
2-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
3-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
4-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
Nitrobenzene	ND		0.33	mg/kg	8270		09/16/1993
N-Nitroso-Di-N-propylamine	ND		0.33	mg/kg	8270		09/16/1993
N-Nitrosodiphenylamine	ND		0.33	mg/kg	8270		09/16/1993
Phenanthrene	ND		0.33	mg/kg	8270		09/16/1993
Pyrene	ND		0.33	mg/kg	8270		09/16/1993
1,2,4-Trichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
ACID EXTRACTABLES	--						09/16/1993
4-Chloro-3-methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2-Chlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dimethylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrophenol	ND		1.6	mg/kg	8270		09/16/1993
4,6-Dinitro-2-methylphenol	ND		1.6	mg/kg	8270		09/16/1993
2-Nitrophenol	ND		0.33	mg/kg	8270		09/16/1993
4-Nitrophenol	ND		1.6	mg/kg	8270		09/16/1993
Pentachlorophenol	ND		1.6	mg/kg	8270		09/16/1993
Phenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,6-Trichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
4-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,5-Trichlorophenol	ND		1.6	mg/kg	8270		09/16/1993
SURROGATE RESULTS	--						09/16/1993
Nitrobenzene-d5 (SURR)	59			% Rec.	8270		09/16/1993
2-Fluorobiphenyl (SURR)	54			% Rec.	8270		09/16/1993
p-Terphenyl-d14 (SURR)	81			% Rec.	8270		09/16/1993
Phenol-d5 (SURR)	73			% Rec.	8270		09/16/1993
2-Fluorophenol (SURR)	64			% Rec.	8270		09/16/1993
2,4,6-Tribromophenol (SURR)	74			% Rec.	8270		09/16/1993



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.04010

Date: 09/22/1993
 ELAP Certificate: 1386
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Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-D-15.7
 Date Taken: 09/10/1993
 Time Taken:
 NET Sample No: 173543

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Oil & Grease (Total)	97		50	mg/kg	5520E		09/16/1993
Oil & Grease (Non-Polar)	69		50	mg/kg	5520E/F		09/16/1993
TPH (Gas/BTXE,Solid)							
METHOD 5030/M8015	--						09/15/1993
DILUTION FACTOR*	10						09/15/1993
as Gasoline	150		1	mg/kg	5030		09/15/1993
METHOD 8020 (GC,Solid)							
Benzene	0.42		0.025	mg/kg	8020		09/16/1993
Toluene	ND		0.025	mg/kg	8020		09/16/1993
Ethylbenzene	ND		0.025	mg/kg	8020		09/16/1993
Xylenes (Total)	ND		0.025	mg/kg	8020		09/15/1993
SURROGATE RESULTS							
Bromofluorobenzene (SURR)	116			% Rec.	5030		09/15/1993
METHOD 3550/M8015							
DILUTION FACTOR*	1					09/16/1993	
as Diesel	55	D-	1	mg/kg	3550		09/16/1993

D- : The positive result has an atypical pattern for Diesel analysis.



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
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Ref: SHELL, 6039 College Ave., Oakland, WA, Job No: 81-618-07

SAMPLE DESCRIPTION: BH-D-15.7
Date Taken: 09/10/1993
Time Taken:
NET Sample No: 173543

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 8270 (GCMS, Solid)						09/15/1993	
DILUTION FACTOR*	1						09/16/1993
Acenaphthene	ND		0.33	mg/kg	8270		09/16/1993
Acenaphthylene	ND		0.33	mg/kg	8270		09/16/1993
Aldrin	ND		1.6	mg/kg	8270		09/16/1993
Anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzidine	ND		1.6	mg/kg	8270		09/16/1993
Benzo (a) anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzo (b) fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo (k) fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo (a) pyrene	ND		0.33	mg/kg	8270		09/16/1993
Benzo (g, h, i) perylene	ND		0.33	mg/kg	8270		09/16/1993
Benzoic acid	ND		1.6	mg/kg	8270		09/16/1993
Benzy l alcohol	ND		0.33	mg/kg	8270		09/16/1993
Butyl benzyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
delta-BHC	ND		1.6	mg/kg	8270		09/16/1993
gamma-BHC	ND		1.6	mg/kg	8270		09/16/1993
bis (2-Chloroethyl) ether	ND		0.33	mg/kg	8270		09/16/1993
bis (2-Chloroethoxy) methane	ND		0.33	mg/kg	8270		09/16/1993
bis (2-Chloroisopropyl) ether	ND		0.33	mg/kg	8270		09/16/1993
bis (2-Ethylhexyl) phthalate	ND		0.33	mg/kg	8270		09/16/1993
4-Bromophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
4-Chloroaniline	ND		0.33	mg/kg	8270		09/16/1993
2-Chloronaphthalene	ND		0.33	mg/kg	8270		09/16/1993
4-Chlorophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
Chrysene	ND		0.33	mg/kg	8270		09/16/1993
4,4'-DDD	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDE	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDT	ND		1.6	mg/kg	8270		09/16/1993
Dibenzo (a, h) anthracene	ND		0.33	mg/kg	8270		09/16/1993
Dibenzofuran	ND		0.33	mg/kg	8270		09/16/1993
Di-n-butylphthalate	ND		0.33	mg/kg	8270		09/16/1993
1,2-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,3-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,4-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
3,3'-Dichlorobenzidine	ND		0.66	mg/kg	8270		09/16/1993
Dieldrin	ND		1.6	mg/kg	8270		09/16/1993
Diethylphthalate	ND		0.33	mg/kg	8270		09/16/1993
Dimethyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
2,6-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
Di-n-octyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
Endrin aldehyde	ND		1.6	mg/kg	8270		09/16/1993
Fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Fluorene	ND		0.33	mg/kg	8270		09/16/1993



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.04010

Date: 09/22/1993
 ELAP Certificate: 1386
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Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-D-15.7
 Date Taken: 09/10/1993
 Time Taken:
 NET Sample No: 173543

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Heptachlor	ND		1.6	mg/kg	8270		09/16/1993
Heptachlor epoxide	ND		1.6	mg/kg	8270		09/16/1993
Hexachlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorobutadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorocyclopentadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachloroethane	ND		0.33	mg/kg	8270		09/16/1993
Indeno(1,2,3-cd)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Isophorone	ND		0.33	mg/kg	8270		09/16/1993
2-Methylnaphthalene	ND		0.33	mg/kg	8270		09/16/1993
Naphthalene	ND		0.33	mg/kg	8270		09/16/1993
2-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
3-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
4-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
Nitrobenzene	ND		0.33	mg/kg	8270		09/16/1993
N-Nitroso-Di-N-propylamine	ND		0.33	mg/kg	8270		09/16/1993
N-Nitrosodiphenylamine	ND		0.33	mg/kg	8270		09/16/1993
Phenanthrene	ND		0.33	mg/kg	8270		09/16/1993
Pyrene	ND		0.33	mg/kg	8270		09/16/1993
1,2,4-Trichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
ACID EXTRACTABLES	--						09/16/1993
4-Chloro-3-methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2-Chlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dimethylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrophenol	ND		1.6	mg/kg	8270		09/16/1993
4,6-Dinitro-2-methylphenol	ND		1.6	mg/kg	8270		09/16/1993
2-Nitrophenol	ND		0.33	mg/kg	8270		09/16/1993
4-Nitrophenol	ND		1.6	mg/kg	8270		09/16/1993
Pentachlorophenol	ND		1.6	mg/kg	8270		09/16/1993
Phenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,6-Trichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
4-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,5-Trichlorophenol	ND		1.6	mg/kg	8270		09/16/1993
SURROGATE RESULTS	--						09/16/1993
Nitrobenzene-d5 (SURR)	55			% Rec.	8270		09/16/1993
2-Fluorobiphenyl (SURR)	48			% Rec.	8270		09/16/1993
p-Terphenyl-d14 (SURR)	79			% Rec.	8270		09/16/1993
Phenol-d5 (SURR)	70			% Rec.	8270		09/16/1993
2-Fluorophenol (SURR)	57			% Rec.	8270		09/16/1993
2,4,6-Tribromophenol (SURR)	73			% Rec.	8270		09/16/1993



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 NET Job No: 93.04010

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Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-D-20.7
 Date Taken: 09/10/1993
 Time Taken:
 NET Sample No: 173544

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
Oil & Grease (Total)	ND		50	mg/kg	5520E		09/16/1993
Oil & Grease (Non-Polar)	ND		50	mg/kg	5520E/F		09/16/1993
TPH (Gas/BTXE,Solid)							
METHOD 5030/M8015	--						09/15/1993
DILUTION FACTOR*	1						09/15/1993
as Gasoline	5.6		1	mg/kg	5030		09/15/1993
METHOD 8020 (GC,Solid)							
Benzene	ND		0.0025	mg/kg	8020		09/15/1993
Toluene	0.0073		0.0025	mg/kg	8020		09/15/1993
Ethylbenzene	0.011		0.0025	mg/kg	8020		09/15/1993
Xylenes (Total)	ND		0.0025	mg/kg	8020		09/15/1993
SURROGATE RESULTS							
Bromofluorobenzene (SURR)	108			% Rec.	5030		09/15/1993
METHOD 3550/M8015							
DILUTION FACTOR*	1					09/16/1993	09/16/1993
as Diesel	2.9	D-	1	mg/kg	3550		09/16/1993

D- : The positive result has an atypical pattern for Diesel analysis.



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Date: 09/22/1993
ELAP Certificate: 1386
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Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-D-20.7
Date Taken: 09/10/1993
Time Taken:
NET Sample No: 173544

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
METHOD 8270 (GCMS, Solid)						09/15/1993	
DILUTION FACTOR*	1						09/16/1993
Acenaphthene	ND		0.33	mg/kg	8270		09/16/1993
Acenaphthylene	ND		0.33	mg/kg	8270		09/16/1993
Aldrin	ND		1.6	mg/kg	8270		09/16/1993
Anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzidine	ND		1.6	mg/kg	8270		09/16/1993
Benzo(a)anthracene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(b)fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(k)fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(a)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Benzo(g,h,i)perylene	ND		0.33	mg/kg	8270		09/16/1993
Benzoic acid	ND		1.6	mg/kg	8270		09/16/1993
Benzyl alcohol	ND		0.33	mg/kg	8270		09/16/1993
Butyl benzyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
delta-BHC	ND		1.6	mg/kg	8270		09/16/1993
gamma-BHC	ND		1.6	mg/kg	8270		09/16/1993
bis(2-Chloroethyl)ether	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Chloroethoxy)methane	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Chloroisopropyl)ether	ND		0.33	mg/kg	8270		09/16/1993
bis(2-Ethylhexyl)phthalate	ND		0.33	mg/kg	8270		09/16/1993
4-Bromophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
4-Chloroaniline	ND		0.33	mg/kg	8270		09/16/1993
2-Chloronaphthalene	ND		0.33	mg/kg	8270		09/16/1993
4-Chlorophenyl phenyl ether	ND		0.33	mg/kg	8270		09/16/1993
Chrysene	ND		0.33	mg/kg	8270		09/16/1993
4,4'-DDD	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDE	ND		1.6	mg/kg	8270		09/16/1993
4,4'-DDT	ND		1.6	mg/kg	8270		09/16/1993
Dibenzo(a,h)anthracene	ND		0.33	mg/kg	8270		09/16/1993
Dibenzofuran	ND		0.33	mg/kg	8270		09/16/1993
Di-n-butylphthalate	ND		0.33	mg/kg	8270		09/16/1993
1,2-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,3-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
1,4-Dichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
3,3'-Dichlorobenzidine	ND		0.66	mg/kg	8270		09/16/1993
Dieldrin	ND		1.6	mg/kg	8270		09/16/1993
Diethylphthalate	ND		0.33	mg/kg	8270		09/16/1993
Dimethyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
2,6-Dinitrotoluene	ND		0.33	mg/kg	8270		09/16/1993
Di-n-octyl phthalate	ND		0.33	mg/kg	8270		09/16/1993
Endrin aldehyde	ND		1.6	mg/kg	8270		09/16/1993
Fluoranthene	ND		0.33	mg/kg	8270		09/16/1993
Fluorene	ND		0.33	mg/kg	8270		09/16/1993



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Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: BH-D-20.7

Date Taken: 09/10/1993

Time Taken:

NET Sample No: 173544

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Heptachlor	ND		1.6	mg/kg	8270		09/16/1993
Heptachlor epoxide	ND		1.6	mg/kg	8270		09/16/1993
Hexachlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorobutadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachlorocyclopentadiene	ND		0.33	mg/kg	8270		09/16/1993
Hexachloroethane	ND		0.33	mg/kg	8270		09/16/1993
Indeno(1,2,3-cd)pyrene	ND		0.33	mg/kg	8270		09/16/1993
Isophorone	ND		0.33	mg/kg	8270		09/16/1993
2-Methylnaphthalene	ND		0.33	mg/kg	8270		09/16/1993
Naphthalene	ND		0.33	mg/kg	8270		09/16/1993
2-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
3-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
4-Nitroaniline	ND		1.6	mg/kg	8270		09/16/1993
Nitrobenzene	ND		0.33	mg/kg	8270		09/16/1993
N-Nitroso-Di-N-propylamine	ND		0.33	mg/kg	8270		09/16/1993
N-Nitrosodiphenylamine	ND		0.33	mg/kg	8270		09/16/1993
Phenanthrene	ND		0.33	mg/kg	8270		09/16/1993
Pyrene	ND		0.33	mg/kg	8270		09/16/1993
1,2,4-Trichlorobenzene	ND		0.33	mg/kg	8270		09/16/1993
ACID EXTRACTABLES	--						09/16/1993
4-Chloro-3-methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2-Chlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dimethylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4-Dinitrophenol	ND		1.6	mg/kg	8270		09/16/1993
4,6-Dinitro-2-methylphenol	ND		1.6	mg/kg	8270		09/16/1993
2-Nitrophenol	ND		0.33	mg/kg	8270		09/16/1993
4-Nitrophenol	ND		1.6	mg/kg	8270		09/16/1993
Pentachlorophenol	ND		1.6	mg/kg	8270		09/16/1993
Phenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,6-Trichlorophenol	ND		0.33	mg/kg	8270		09/16/1993
2-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
4-Methylphenol	ND		0.33	mg/kg	8270		09/16/1993
2,4,5-Trichlorophenol	ND		1.6	mg/kg	8270		09/16/1993
SURROGATE RESULTS	--						09/16/1993
Nitrobenzene-d5 (SURR)	58			‰ Rec.	8270		09/16/1993
2-Fluorobiphenyl (SURR)	53			‰ Rec.	8270		09/16/1993
p-Terphenyl-d14 (SURR)	78			‰ Rec.	8270		09/16/1993
Phenol-d5 (SURR)	72			‰ Rec.	8270		09/16/1993
2-Fluorophenol (SURR)	62			‰ Rec.	8270		09/16/1993
2,4,6-Tribromophenol (SURR)	73			‰ Rec.	8270		09/16/1993



Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials
	Standard % Recovery	Standard Amount Found	Standard Amount Expected			
TPH (Gas/BTXE,Solid)						
as Gasoline	107.8	5.39	5.00	mg/kg	09/15/1993	dkb
Benzene	97.6	24.4	25.0	ug/kg	09/15/1993	dkb
Toluene	87.2	21.8	25.0	ug/kg	09/15/1993	dkb
Ethylbenzene	91.2	22.8	25.0	ug/kg	09/15/1993	dkb
Xylenes (Total)	87.2	65.4	75.0	ug/kg	09/15/1993	dkb
Bromofluorobenzene (SURR)	100.0	100	100	% Rec.	09/15/1993	dkb
TPH (Gas/BTXE,Solid)						
as Gasoline	101.0	5.05	5.00	mg/kg	09/16/1993	dkb
Benzene	98.0	24.5	25.0	ug/kg	09/16/1993	dkb
Toluene	96.0	24.0	25.0	ug/kg	09/16/1993	dkb
Ethylbenzene	97.2	24.3	25.0	ug/kg	09/16/1993	dkb
Xylenes (Total)	92.5	69.4	75.0	ug/kg	09/16/1993	dkb
Bromofluorobenzene (SURR)	99.0	99	100	% Rec.	09/16/1993	dkb
TPH (Gas/BTXE,Solid)						
as Gasoline	115.0	5.75	5.00	mg/kg	09/17/1993	vin
Benzene	102.8	25.7	25.0	ug/kg	09/17/1993	vin
Toluene	106.4	26.6	25.0	ug/kg	09/17/1993	vin
Ethylbenzene	106.4	26.6	25.0	ug/kg	09/17/1993	vin
Xylenes (Total)	106.8	80.1	75.0	ug/kg	09/17/1993	vin
Bromofluorobenzene (SURR)	104.0	104	100	% Rec.	09/17/1993	vin
TPH (Gas/BTXE,Solid)						
as Gasoline	102.8	5.14	5.00	mg/kg	09/18/1993	vin
Benzene	90.0	22.5	25.0	ug/kg	09/18/1993	vin
Toluene	95.2	23.8	25.0	ug/kg	09/18/1993	vin
Ethylbenzene	96.0	24.0	25.0	ug/kg	09/18/1993	vin
Xylenes (Total)	95.3	71.5	75.0	ug/kg	09/18/1993	vin
Bromofluorobenzene (SURR)	104.0	104	100	% Rec.	09/18/1993	vin
METHOD 3550/M8015						
as Diesel	114.0	1140	1000	mg/kg	09/16/1993	tts
METHOD 8270 (GCMS, Solid)						
Acenaphthene	95.0	47.5	50.0	ug/kg	09/16/1993	sjg
Benzo(a)pyrene	101.0	50.5	50.0	ug/kg	09/16/1993	sjg
1,4-Dichlorobenzene	103.0	51.5	50.0	ug/kg	09/16/1993	sjg
Di-n-octyl phthalate	94.0	47.0	50.0	ug/kg	09/16/1993	sjg
Fluoranthene	95.0	47.5	50.0	ug/kg	09/16/1993	sjg
Hexachlorobutadiene	117.0	58.5	50.0	ug/kg	09/16/1993	sjg
N-Nitrosodiphenylamine	98.0	49.0	50.0	ug/kg	09/16/1993	sjg
4-Chloro-3-methylphenol	109.0	54.5	50.0	ug/kg	09/16/1993	sjg
2,4-Dichlorophenol	117.0	58.5	50.0	ug/kg	09/16/1993	sjg
2-Nitrophenol	115.0	57.5	50.0	ug/kg	09/16/1993	sjg
Pentachlorophenol	103.0	51.5	50.0	ug/kg	09/16/1993	sjg



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Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials
	Standard % Recovery	Standard Amount Found	Standard Amount Expected			
Phenol	97.0	48.5	50.0	ug/kg	09/16/1993	sjg
2,4,6-Trichlorophenol	110.0	55.0	50.0	ug/kg	09/16/1993	sjg
Nitrobenzene-d5 (SURR)	103.0	103	100	% Rec.	09/16/1993	sjg
2-Fluorobiphenyl (SURR)	95.0	95	100	% Rec.	09/16/1993	sjg
p-Terphenyl-d14 (SURR)	93.0	93	100	% Rec.	09/16/1993	sjg
Phenol-d5 (SURR)	97.0	97	100	% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)	99.0	99	100	% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)	95.0	95	100	% Rec.	09/16/1993	sjg



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Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
Oil & Grease (Total)	ND	50	mg/kg	09/16/1993	vid
Oil & Grease (Non-Polar)	ND	50	mg/kg	09/16/1993	vid
TPH (Gas/BTXE,Solid)					
as Gasoline	ND	1	mg/kg	09/15/1993	dkb
Benzene	ND	2.5	ug/kg	09/15/1993	dkb
Toluene	ND	2.5	ug/kg	09/15/1993	dkb
Ethylbenzene	ND	2.5	ug/kg	09/15/1993	dkb
Xylenes (Total)	ND	2.5	ug/kg	09/15/1993	dkb
Bromofluorobenzene (SURR)	103		% Rec.	09/15/1993	dkb
TPH (Gas/BTXE,Solid)					
as Gasoline	ND	1	mg/kg	09/16/1993	dkb
Benzene	ND	2.5	ug/kg	09/16/1993	dkb
Toluene	ND	2.5	ug/kg	09/16/1993	dkb
Ethylbenzene	ND	2.5	ug/kg	09/16/1993	dkb
Xylenes (Total)	ND	2.5	ug/kg	09/16/1993	dkb
Bromofluorobenzene (SURR)	100		% Rec.	09/16/1993	dkb
TPH (Gas/BTXE,Solid)					
as Gasoline	ND	1	mg/kg	09/17/1993	vin
Benzene	ND	2.5	ug/kg	09/17/1993	vin
Toluene	ND	2.5	ug/kg	09/17/1993	vin
Ethylbenzene	ND	2.5	ug/kg	09/17/1993	vin
Xylenes (Total)	ND	2.5	ug/kg	09/17/1993	vin
Bromofluorobenzene (SURR)	100		% Rec.	09/17/1993	vin
TPH (Gas/BTXE,Solid)					
as Gasoline	ND	1	mg/kg	09/18/1993	vin
Benzene	ND	2.5	ug/kg	09/18/1993	vin
Toluene	ND	2.5	ug/kg	09/18/1993	vin
Ethylbenzene	ND	2.5	ug/kg	09/18/1993	vin
Xylenes (Total)	ND	2.5	ug/kg	09/18/1993	vin
Bromofluorobenzene (SURR)	87		% Rec.	09/18/1993	vin
METHOD 3550/M8015					
as Diesel	ND	1	mg/kg	09/16/1993	tts
METHOD 8270 (GCMS,Solid)					
Acenaphthene	ND	330	ug/kg	09/16/1993	sjg
Acenaphthylene	ND	330	ug/kg	09/16/1993	sjg
Aldrin	ND	1600	ug/kg	09/16/1993	sjg
Anthracene	ND	330	ug/kg	09/16/1993	sjg
Benzidine	ND	1600	ug/kg	09/16/1993	sjg
Benzo(a)anthracene	ND	330	ug/kg	09/16/1993	sjg
Benzo(b)fluoranthene	ND	330	ug/kg	09/16/1993	sjg
Benzo(k)fluoranthene	ND	330	ug/kg	09/16/1993	sjg
Benzo(a)pyrene	ND	330	ug/kg	09/16/1993	sjg
Benzo(g,h,i)perylene	ND	330	ug/kg	09/16/1993	sjg
Benzoic acid	ND	1600	ug/kg	09/16/1993	sjg
Benzyl alcohol	ND	330	ug/kg	09/16/1993	sjg
Butyl benzyl phthalate	ND	330	ug/kg	09/16/1993	sjg
delta-BHC	ND	1600	ug/kg	09/16/1993	sjg



Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
gamma-BHC	ND	1600	ug/kg	09/16/1993	sjg
bis(2-Chloroethyl) ether	ND	330	ug/kg	09/16/1993	sjg
bis(2-Chloroethoxy) methane	ND	330	ug/kg	09/16/1993	sjg
bis(2-Chloroisopropyl) ether	ND	330	ug/kg	09/16/1993	sjg
bis(2-Ethylhexyl) phthalate	ND	330	ug/kg	09/16/1993	sjg
4-Bromophenyl phenyl ether	ND	330	ug/kg	09/16/1993	sjg
4-Chloroaniline	ND	330	ug/kg	09/16/1993	sjg
2-Chloronaphthalene	ND	330	ug/kg	09/16/1993	sjg
4-Chlorophenyl phenyl ether	ND	330	ug/kg	09/16/1993	sjg
Chrysene	ND	330	ug/kg	09/16/1993	sjg
4,4'-DDD	ND	1600	ug/kg	09/16/1993	sjg
4,4'-DDE	ND	1600	ug/kg	09/16/1993	sjg
4,4'-DDT	ND	1600	ug/kg	09/16/1993	sjg
Dibenzo(a,h) anthracene	ND	330	ug/kg	09/16/1993	sjg
Dibenzofuran	ND	330	ug/kg	09/16/1993	sjg
Di-n-butylphthalate	ND	330	ug/kg	09/16/1993	sjg
1,2-Dichlorobenzene	ND	330	ug/kg	09/16/1993	sjg
1,3-Dichlorobenzene	ND	330	ug/kg	09/16/1993	sjg
1,4-Dichlorobenzene	ND	330	ug/kg	09/16/1993	sjg
3,3'-Dichlorobenzidine	ND	660	ug/kg	09/16/1993	sjg
Dieldrin	ND	1600	ug/kg	09/16/1993	sjg
Diethylphthalate	ND	330	ug/kg	09/16/1993	sjg
Dimethyl phthalate	ND	330	ug/kg	09/16/1993	sjg
2,4-Dinitrotoluene	ND	330	ug/kg	09/16/1993	sjg
2,6-Dinitrotoluene	ND	330	ug/kg	09/16/1993	sjg
Di-n-octyl phthalate	ND	330	ug/kg	09/16/1993	sjg
Endrin aldehyde	ND	1600	ug/kg	09/16/1993	sjg
Fluoranthene	ND	330	ug/kg	09/16/1993	sjg
Fluorene	ND	330	ug/kg	09/16/1993	sjg
Heptachlor	ND	1600	ug/kg	09/16/1993	sjg
Heptachlor epoxide	ND	1600	ug/kg	09/16/1993	sjg
Hexachlorobenzene	ND	330	ug/kg	09/16/1993	sjg
Hexachlorobutadiene	ND	330	ug/kg	09/16/1993	sjg
Hexachlorocyclopentadiene	ND	330	ug/kg	09/16/1993	sjg
Hexachloroethane	ND	330	ug/kg	09/16/1993	sjg
Indeno(1,2,3-cd)pyrene	ND	330	ug/kg	09/16/1993	sjg
Isophorone	ND	330	ug/kg	09/16/1993	sjg
2-Methylnaphthalene	ND	330	ug/kg	09/16/1993	sjg
Naphthalene	ND	330	ug/kg	09/16/1993	sjg
2-Nitroaniline	ND	1600	ug/kg	09/16/1993	sjg
3-Nitroaniline	ND	1600	ug/kg	09/16/1993	sjg
4-Nitroaniline	ND	1600	ug/kg	09/16/1993	sjg
Nitrobenzene	ND	330	ug/kg	09/16/1993	sjg
N-Nitroso-Di-N-propylamine	ND	330	ug/kg	09/16/1993	sjg
N-Nitrosodiphenylamine	ND	330	ug/kg	09/16/1993	sjg
Phenanthrene	ND	330	ug/kg	09/16/1993	sjg
Pyrene	ND	330	ug/kg	09/16/1993	sjg
1,2,4-Trichlorobenzene	ND	330	ug/kg	09/16/1993	sjg



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
Page: 24

Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

METHOD BLANK REPORT

Parameter	Method			Date Analyzed	Analyst Initials
	Blank	Reporting	Units		
	Amount Found	Limit			
4-Chloro-3-methylphenol	ND	330	ug/kg	09/16/1993	sjg
2-Chlorophenol	ND	330	ug/kg	09/16/1993	sjg
2,4-Dichlorophenol	ND	330	ug/kg	09/16/1993	sjg
2,4-Dimethylphenol	ND	330	ug/kg	09/16/1993	sjg
2,4-Dinitrophenol	ND	1600	ug/kg	09/16/1993	sjg
4,6-Dinitro-2-methylphenol	ND	1600	ug/kg	09/16/1993	sjg
2-Nitrophenol	ND	330	ug/kg	09/16/1993	sjg
4-Nitrophenol	ND	1600	ug/kg	09/16/1993	sjg
Pentachlorophenol	ND	1600	ug/kg	09/16/1993	sjg
Phenol	ND	330	ug/kg	09/16/1993	sjg
2,4,6-Trichlorophenol	ND	330	ug/kg	09/16/1993	sjg
2-Methylphenol	ND	330	ug/kg	09/16/1993	sjg
4-Methylphenol	ND	330	ug/kg	09/16/1993	sjg
2,4,5-Trichlorophenol	ND	1600	ug/kg	09/16/1993	sjg
Nitrobenzene-d5 (SURR)	41		% Rec.	09/16/1993	sjg
2-Fluorobiphenyl (SURR)	47		% Rec.	09/16/1993	sjg
p-Terphenyl-d14 (SURR)	62		% Rec.	09/16/1993	sjg
Phenol-d5 (SURR)	52		% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)	44		% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)	78		% Rec.	09/16/1993	sjg



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.04010

Date: 09/22/1993
 ELAP Certificate: 1386
 Page: 25

Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix			Spike Amount	Sample Conc.	Matrix		Units	Date Analyzed	Analyst Initials
	Matrix Spike % Rec.	Spike Dup % Rec.	RPD			Matrix Spike Conc.	Spike Dup. Conc.			
Oil & Grease (Total)	101.4	100.4	1.0	3746	97	3894	3252	mg/kg	09/16/1993	vid
Oil & Grease (Non-Polar)	101.0	100.0	1.0	3746	69			mg/kg	09/16/1993	vid
TPH (Gas/BTXE,Solid)										
as Gasoline	71.4	75.0	4.9	5.00	ND	3.57	3.75	mg/kg	09/15/1993	dkb
Benzene	80.4	89.1	10.3	138	ND	111	123	ug/kg	09/15/1993	dkb
Toluene	89.3	90.6	1.4	307	ND	274	278	ug/kg	09/15/1993	dkb
Bromofluorobenzene (SURR)	77	80		100	71			% Rec.	09/15/1993	dkb
TPH (Gas/BTXE,Solid)										
as Gasoline	113.8	114.4	0.5	5.00	ND	5.69	5.72	mg/kg	09/16/1993	dkb
Benzene	97.8	97.1	0.7	136	ND	133	132	ug/kg	09/16/1993	dkb
Toluene	99.7	99.0	0.7	301	ND	300	298	ug/kg	09/16/1993	dkb
Bromofluorobenzene (SURR)	120	121		100	103			% Rec.	09/16/1993	dkb
TPH (Gas/BTXE,Solid)										
as Gasoline	111.2	107.0	3.8	5.00	ND	5.56	5.35	mg/kg	09/17/1993	vin
Benzene	102.0	97.5	4.4	204	ND	208	199	ug/kg	09/17/1993	vin
Toluene	100.8	98.1	2.6	533	ND	537	523	ug/kg	09/17/1993	vin
Bromofluorobenzene (SURR)	123	119		100	89			% Rec.	09/17/1993	vin
TPH (Gas/BTXE,Solid)										
as Gasoline	82.2	79.2	3.7	5.00	ND	4.11	3.96	mg/kg	09/18/1993	vin
Benzene	90.0	84.2	6.7	190	ND	171	160	ug/kg	09/18/1993	vin
Toluene	91.2	87.7	3.9	513	ND	468	450	ug/kg	09/18/1993	vin
Bromofluorobenzene (SURR)	108	104		100	91			% Rec.	09/18/1993	vin
METHOD 3550/M8015										
as Diesel	N/A	N/A	2.5	16.7	ND	N/A	N/A	mg/kg	09/20/1993	tts
METHOD 8270 (GCMS,Solid)										
Acenaphthene	48.0	77.0	46.4	100	ND	48	77	ug/kg dw	09/16/1993	sjg
1,4-Dichlorobenzene	39.0	63.0	47.1	100	ND	39	63	ug/kg dw	09/16/1993	sjg
2,4-Dinitrotoluene	40.0	60.0	40.0	100	ND	40	60	ug/kg dw	09/16/1993	sjg
N-Nitroso-Di-N-propylamine	47.0	76.0	47.2	100	ND	47	76	ug/kg dw	09/16/1993	sjg
Pyrene	47.0	74.0	44.6	100	ND	47	74	ug/kg dw	09/16/1993	sjg
1,2,4-Trichlorobenzene	42.0	67.0	45.9	100	ND	42	67	ug/kg dw	09/16/1993	sjg
4-Chloro-3-methylphenol	46.0	71.0	42.7	200	ND	92	142	ug/kg dw	09/16/1993	sjg
2-Chlorophenol	42.5	68.0	46.2	200	ND	85	136	ug/kg dw	09/16/1993	sjg
4-Nitrophenol	49.0	74.0	40.7	200	ND	98	148	ug/kg dw	09/16/1993	sjg
Pentachlorophenol	52.5	76.0	36.6	200	ND	105	152	ug/kg dw	09/16/1993	sjg
Phenol	43.0	70.0	47.8	200	ND	86	140	ug/kg dw	09/16/1993	sjg
Nitrobenzene-d5 (SURR)				100	64	42	64	% Rec.	09/16/1993	sjg
2-Fluorobiphenyl (SURR)				100	72	46	69	% Rec.	09/16/1993	sjg
p-Terphenyl-d14 (SURR)				100	65	43	62	% Rec.	09/16/1993	sjg
Phenol-d5 (SURR)				100	76	47	74	% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)				100	63	39	62	% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)				100	79	50	78	% Rec.	09/16/1993	sjg



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04010

Date: 09/22/1993
ELAP Certificate: 1386
Page: 26

Ref: SHELL, 6039 College Ave., Oakland, WA Job No: 81-618-07

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS		LCS	LCS	Units	Date	Analyst
	% Recovery	RPD	Amount Found	Amount Expected		Analyzed	Initials
Oil & Grease (Total)	100.8		2760	2738	mg/kg	09/16/1993	vid
Oil & Grease (Non-Polar)	91.3		2138	2342	mg/kg	09/16/1993	vid
METHOD 8270 (GCMS, Solid)							
Acenaphthene	81.0		81	100	ug/kg	09/16/1993	sjg
1,4-Dichlorobenzene	70.0		70	100	ug/kg	09/16/1993	sjg
2,4-Dinitrotoluene	79.0		79	100	ug/kg	09/16/1993	sjg
N-Nitroso-Di-N-propylamine	79.0		79	100	ug/kg	09/16/1993	sjg
Pyrene	79.0		79	100	ug/kg	09/16/1993	sjg
1,2,4-Trichlorobenzene	70.0		70	100	ug/kg	09/16/1993	sjg
4-Chloro-3-methylphenol	78.0		156	200	ug/kg	09/16/1993	sjg
2-Chlorophenol	73.0		146	200	ug/kg	09/16/1993	sjg
4-Nitrophenol	88.0		176	200	ug/kg	09/16/1993	sjg
Pentachlorophenol	93.0		186	200	ug/kg	09/16/1993	sjg
Phenol	74.0		148	200	ug/kg	09/16/1993	sjg
Nitrobenzene-d5 (SURR)	47.0		47	100	% Rec.	09/16/1993	sjg
2-Fluorobiphenyl (SURR)	51.0		51	100	% Rec.	09/16/1993	sjg
p-Terphenyl-d14 (SURR)	67.0		67	100	% Rec.	09/16/1993	sjg
Phenol-d5 (SURR)	57.0		57	100	% Rec.	09/16/1993	sjg
2-Fluorophenol (SURR)	49.0		49	100	% Rec.	09/16/1993	sjg
2,4,6-Tribromophenol (SURR)	85.0		85	100	% Rec.	09/16/1993	sjg



KEY TO ABBREVIATIONS and METHOD REFERENCES

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

Method References

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

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

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

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 5614

Date: 9-10-93

Page 1 of 2

Site Address: 6039 COLLEGE AVE
AKLAND
WIC#: 204-5508-3301

Analysis Required

LAB: NET

Shell Engineer: DAN KIRK Phone No.: 675-6168
Fax #: 675-6172

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

Consultant Contact: DAVID ELIAS Phone No.: (510) 547-5420
WA JOB # 81-618-07 Fax #: 547-5043

Comments:

Sampled by: David Elias

Printed Name: DAVID ELIAS

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatiles Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	DIL AND GREASE	SVOC'S 8270	Asbestos	Container Size	Preparation Used	Composite Y/N
✓					★						
✓					X						
✓	X				X	X	X				
✓					X						
✓					X			X			
✓	X				X	X	X				
✓	X				X	X	X				
✓	X				X	X	X				

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

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

UST AGENCY: ACDEH

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
BH-C-5.7	9-10		X			2	Soil 1/2 GAS	
BH-C-10.7								
BH-C-15.7								
BH-C-20.7								
BH-D- ^{5.7} 20.7								
BH-D-10.7								
BH-D-15.7								
BH-D-20.7								

CUSTODY SEALED
9/13/93 10:00
E.P. Lumbre
Seal intact

Relinquished By (signature): <u>David Elias</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9-10-93</u>	Received (signature): <u>David Elias</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9-13-93</u>
Relinquished By (signature): <u>David Elias</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9-13-93</u>	Received (signature): <u>E.P. Lumbre</u>	Printed Name: <u>E.P. LUMBRE</u>	Date: <u>9-13-93</u>
Relinquished By (signature): <u>E.P. Lumbre</u>	Printed Name: <u>E.P. LUMBRE</u>	Date: <u>9/13/93</u>	Received (signature): <u>K. Temple</u>	Printed Name: <u>K. Temple</u>	Date: <u>9/14/93</u>

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

STORED IN SECURE PLACE

Received from Owner Place



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 5214

Date: 9-10-93

Page 2 of 2

Site Address: 6039 COLLEGE AVE
DAKLAND

WIC#: 204-5508-3301

Shell Engineer: DAN KIRK

Phone No.: 675-6168
Fax #: 675-6172

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

Consultant Contact: DAVID ELIAS
WA JOB # 81-618-07

Phone No.: (510) 547-5420
Fax #: 547-5043

Comments:

Sampled by: David Elias

Printed Name: DAVID ELIAS

Analysis Required

LAB: NET

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

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

UST AGENCY: ACDEH

Sample ID	Date	Sludge	Soil	Water	Air	No. of conds.	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	OIL AND GREASE	SYDC's 8270	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
BH-E-5.7	9-10-93		X			2						X							Soil & GAS	PLEASE REPEAT DISPOSAL	
BH-E-10.7												X									RESULTS SEPARATE. MAKE SURE
BH-E-15.7							X					X	X	X							RESULTS INCLUDE TPH-G/L LEAD
BH-C				X		8	X					X	X	X			HCL H2O4	N	H2O & GAS	R.C.I.	
BH-D				X		8	X					X	X	X							
BH-E																					
COMP			X			4					X										
BH-21				X		3						X									

CUSTODY SEALED
9/13/93 [Signature] 16:50

Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9-10-93</u>	Time: <u>21:35</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9-10-93</u>	Time: <u>11:18</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9-12-93</u>	Time: <u>11:18</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>G. Lumbre</u>	Date: <u>9-12-93</u>	Time: <u>11:18</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>G. Lumbre</u>	Date: <u>9-13-93</u>	Time: <u>16:00</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>K. Temple</u>	Date: <u>9/14/93</u>	Time: <u>05:00</u>

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

Stored in Above Place

Up to me to form name plates

Changes/additions
to S. Long
9/14/93
pe
Eli



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Date: 9-10-93
 Page 2 of 2

Serial No: _____

Site Address: 6039 COLLEGE AVE
DAKLAND
 WIC#: 204-5508-3301

Analysis Required

LAB: NET

Shell Engineer: DAN KIRK Phone No.: 675-6168
 FAX #: 675-6172

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

Consultant Contact: DAVID ELIAS Phone No.: (510) 547-5420
WA JOB # 81-618-07 Fax #: 547-5043

Comments: _____

Sampled by: David Elias
 Printed Name: DAVID ELIAS

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

NOTE: Notify Lab as soon as possible of 24/48 Hrs. TAT.

UST AGENCY: ACDEH

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/802)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Oil and Grease	SVOC's	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
BH-C-5.7.9.0			X			2														Soil & Gas	
BH-C-10.7.												X									
BH-C-15.7.								X				X	X								
BH-C-20.7.												X									
BH-D- ^{5.7} 20.7															X						
BH-D-10.7.								X				X	X	X							
BH-D-15.7.								X				X	X	X							
BH-D-20.7.								X				X	X	X							

Relinquished By (signature): David Elias
 Relinquished By (signature): David Elias
 Relinquished By (signature): _____

Printed Name: DAVID ELIAS
 Printed Name: DAVID ELIAS
 Printed Name: _____

Date: 9-10-93
 Time: 2:30
 Date: 9-15-93
 Time: 11:15
 Date: _____
 Time: _____

Received (signature): David Elias
 Received (signature): E.P. Lumbee
 Received (signature): _____

Printed Name: DAVID ELIAS
 Printed Name: E.P. LUMBEE
 Printed Name: _____

Date: 9-10-93
 Time: 11:15
 Date: 9-15-93
 Time: 11:15
 Date: _____
 Time: _____

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

Received from David Elias



NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Scott Macleod
Weiss Associates
5500 Shellmound St.
Emeryville, CA 94608

Date: 10/05/1993
NET Client Acct. No: 1809
NET Pacific Job No: 93.04220
Received: 09/24/1993

Client Reference Information

Shell, 6039 College Ave., Oakland, WA Job No: 81-618-07

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:


Jules Skamarack
Laboratory Manager

Enclosure (s)



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.04220

Date: 10/05/1993
 ELAP Certificate: 1386
 Page: 2

Ref: Shell, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: MW-6
 Date Taken: 09/21/1993
 Time Taken:
 NET Sample No: 174591

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Oil & Grease (Total)	ND		5	mg/L	5520B		09/30/1993
Oil & Grease (Non-Polar)	ND		5	mg/L	5520B/F		09/30/1993
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						09/25/1993
DILUTION FACTOR*	1						09/25/1993
as Gasoline	ND		0.05	mg/L	5030		09/25/1993
METHOD 8020 (GC,Liquid)							
Benzene	ND		0.0005	mg/L	8020		09/25/1993
Toluene	ND		0.0005	mg/L	8020		09/25/1993
Ethylbenzene	ND		0.0005	mg/L	8020		09/25/1993
Xylenes (Total)	ND		0.0005	mg/L	8020		09/25/1993
SURROGATE RESULTS							
Bromofluorobenzene (SURR)	91			% Rec.	5030		09/25/1993
METHOD 3510/M8015							
DILUTION FACTOR*	1					09/30/1993	09/30/1993
as Diesel	ND		0.05	mg/L	3510		09/30/1993



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04220

Date: 10/05/1993
ELAP Certificate: 1386
Page: 3

Ref: Shell, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: MW-6
Date Taken: 09/21/1993
Time Taken:
NET Sample No: 174591

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
METHOD 8270 (GCMS, Liquid)						09/27/1993	
DILUTION FACTOR*	1						09/28/1993
Acenaphthene	ND		0.010	mg/L	8270		09/28/1993
Acenaphthylene	ND		0.010	mg/L	8270		09/28/1993
Aldrin	ND		0.050	mg/L	8270		09/28/1993
Anthracene	ND		0.010	mg/L	8270		09/28/1993
Benzidine	ND		0.044	mg/L	8270		09/28/1993
Benzo(a)anthracene	ND		0.010	mg/L	8270		09/28/1993
Benzo(b)fluoranthene	ND		0.010	mg/L	8270		09/28/1993
Benzo(k)fluoranthene	ND		0.010	mg/L	8270		09/28/1993
Benzo(a)pyrene	ND		0.010	mg/L	8270		09/28/1993
Benzo(g,h,i)perylene	ND		0.010	mg/L	8270		09/28/1993
Benzoic acid	ND		0.050	mg/L	8270		09/28/1993
Benzyl alcohol	ND		0.010	mg/L	8270		09/28/1993
Butyl benzyl phthalate	ND		0.010	mg/L	8270		09/28/1993
delta-BHC	ND		0.050	mg/L	8270		09/28/1993
gamma-BHC	ND		0.050	mg/L	8270		09/28/1993
bis(2-Chloroethyl) ether	ND		0.010	mg/L	8270		09/28/1993
bis(2-Chloroethoxy)methane	ND		0.010	mg/L	8270		09/28/1993
bis(2-Chloroisopropyl) ether	ND		0.010	mg/L	8270		09/28/1993
bis(2-Ethylhexyl)phthalate	ND		0.010	mg/L	8270		09/28/1993
4-Bromophenyl phenyl ether	ND		0.010	mg/L	8270		09/28/1993
4-Chloroaniline	ND		0.010	mg/L	8270		09/28/1993
2-Chloronaphthalene	ND		0.010	mg/L	8270		09/28/1993
4-Chlorophenyl phenyl ether	ND		0.010	mg/L	8270		09/28/1993
Chrysene	ND		0.010	mg/L	8270		09/28/1993
4,4'-DDD	ND		0.050	mg/L	8270		09/28/1993
4,4'-DDE	ND		0.050	mg/L	8270		09/28/1993
4,4'-DDT	ND		0.050	mg/L	8270		09/28/1993
Dibenzo(a,h)anthracene	ND		0.010	mg/L	8270		09/28/1993
Dibenzofuran	ND		0.010	mg/L	8270		09/28/1993
Di-n-butylphthalate	ND		0.010	mg/L	8270		09/28/1993
1,2-Dichlorobenzene	ND		0.010	mg/L	8270		09/28/1993
1,3-Dichlorobenzene	ND		0.010	mg/L	8270		09/28/1993
1,4-Dichlorobenzene	ND		0.010	mg/L	8270		09/28/1993
3,3'-Dichlorobenzidine	ND		0.020	mg/L	8270		09/28/1993
Dieldrin	ND		0.050	mg/L	8270		09/28/1993
Diethylphthalate	ND		0.010	mg/L	8270		09/28/1993
Dimethyl phthalate	ND		0.010	mg/L	8270		09/28/1993
2,4-Dinitrotoluene	ND		0.010	mg/L	8270		09/28/1993
2,6-Dinitrotoluene	ND		0.010	mg/L	8270		09/28/1993
Di-n-octyl phthalate	ND		0.010	mg/L	8270		09/28/1993
Endrin aldehyde	ND		0.050	mg/L	8270		09/28/1993
Fluoranthene	ND		0.010	mg/L	8270		09/28/1993
Fluorene	ND		0.010	mg/L	8270		09/28/1993



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Client Name: Weiss Associates
NET Job No: 93.04220

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Ref: Shell, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: MW-6
Date Taken: 09/21/1993
Time Taken:
NET Sample No: 174591

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Heptachlor	ND		0.050	mg/L	8270		09/28/1993
Heptachlor epoxide	ND		0.050	mg/L	8270		09/28/1993
Hexachlorobenzene	ND		0.010	mg/L	8270		09/28/1993
Hexachlorobutadiene	ND		0.010	mg/L	8270		09/28/1993
Hexachlorocyclopentadiene	ND		0.010	mg/L	8270		09/28/1993
Hexachloroethane	ND		0.010	mg/L	8270		09/28/1993
Indeno(1,2,3-cd)pyrene	ND		0.010	mg/L	8270		09/28/1993
Isophorone	ND		0.010	mg/L	8270		09/28/1993
2-Methylnaphthalene	ND		0.010	mg/L	8270		09/28/1993
Naphthalene	ND		0.010	mg/L	8270		09/28/1993
2-Nitroaniline	ND		0.050	mg/L	8270		09/28/1993
3-Nitroaniline	ND		0.050	mg/L	8270		09/28/1993
4-Nitroaniline	ND		0.050	mg/L	8270		09/28/1993
Nitrobenzene	ND		0.010	mg/L	8270		09/28/1993
N-Nitroso-Di-N-propylamine	ND		0.010	mg/L	8270		09/28/1993
N-Nitrosodiphenylamine	ND		0.010	mg/L	8270		09/28/1993
Phenanthrene	ND		0.010	mg/L	8270		09/28/1993
Pyrene	ND		0.010	mg/L	8270		09/28/1993
1,2,4-Trichlorobenzene	ND		0.010	mg/L	8270		09/28/1993
ACID EXTRACTABLES	--						09/28/1993
4-Chloro-3-methylphenol	ND		0.010	mg/L	8270		09/28/1993
2-Chlorophenol	ND		0.010	mg/L	8270		09/28/1993
2,4-Dichlorophenol	ND		0.010	mg/L	8270		09/28/1993
2,4-Dimethylphenol	ND		0.010	mg/L	8270		09/28/1993
2,4-Dinitrophenol	ND		0.050	mg/L	8270		09/28/1993
4,6-Dinitro-2-methylphenol	ND		0.050	mg/L	8270		09/28/1993
2-Nitrophenol	ND		0.010	mg/L	8270		09/28/1993
4-Nitrophenol	ND		0.050	mg/L	8270		09/28/1993
Pentachlorophenol	ND		0.050	mg/L	8270		09/28/1993
Phenol	ND		0.010	mg/L	8270		09/28/1993
2,4,6-Trichlorophenol	ND		0.010	mg/L	8270		09/28/1993
2-Methylphenol	ND		0.010	mg/L	8270		09/28/1993
4-Methylphenol	ND		0.010	mg/L	8270		09/28/1993
2,4,5-Trichlorophenol	ND		0.050	mg/L	8270		09/28/1993
SURROGATE RESULTS	--						09/28/1993
Nitrobenzene-d5 (SURR)	64			% Rec.	8270		09/28/1993
2-Fluorobiphenyl (SURR)	68			% Rec.	8270		09/28/1993
p-Terphenyl-d14 (SURR)	59			% Rec.	8270		09/28/1993
Phenol-d5 (SURR)	3	MI		% Rec.	8270		09/28/1993
2-Fluorophenol (SURR)	4	MI		% Rec.	8270		09/28/1993
2,4,6-Tribromophenol (SURR)	19	MI		% Rec.	8270		09/28/1993

MI - Matrix Interference. The sample was extracted and analyzed two times, both times there was low acid surrogates due to interference from the matrix.



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Ref: Shell, 6039 College Ave., Oakland, WA Job No: 81-618-07

SAMPLE DESCRIPTION: TB-LB

Date Taken: 09/21/1993

Time Taken:

NET Sample No: 174592

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						09/25/1993
DILUTION FACTOR*	1						09/25/1993
as Gasoline	ND		0.05	mg/L	5030		09/25/1993
METHOD 8020 (GC,Liquid)	--						09/25/1993
Benzene	ND		0.0005	mg/L	8020		09/25/1993
Toluene	ND		0.0005	mg/L	8020		09/25/1993
Ethylbenzene	ND		0.0005	mg/L	8020		09/25/1993
Xylenes (Total)	ND		0.0005	mg/L	8020		09/25/1993
SURROGATE RESULTS	--						09/25/1993
Bromofluorobenzene (SURR)	82			† Rec.	5030		09/25/1993



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CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials
	Standard % Recovery	Standard Amount Found	Standard Amount Expected			
TPH (Gas/BTXE, Liquid)						
as Gasoline	103.0	1.03	1.00	mg/L	09/25/1993	dkb
Benzene	87.6	4.38	5.00	ug/L	09/25/1993	dkb
Toluene	92.8	4.64	5.00	ug/L	09/25/1993	dkb
Ethylbenzene	87.6	4.38	5.00	ug/L	09/25/1993	dkb
Xylenes (Total)	61.2	9.18	15.0	ug/L	09/25/1993	dkb
Bromofluorobenzene (SURRE)	90.0	90	100	% Rec.	09/25/1993	dkb
METHOD 8270 (GCMS, Liquid)						
Acenaphthene	110.0	55.0	50.0	ug/L	09/28/1993	sjg
Benzo(a)pyrene	109.0	54.5	50.0	ug/L	09/28/1993	sjg
1,4-Dichlorobenzene	111.0	55.5	50.0	ug/L	09/28/1993	sjg
Di-n-octyl phthalate	113.0	56.5	50.0	ug/L	09/28/1993	sjg
Fluoranthene	108.0	54.0	50.0	ug/L	09/28/1993	sjg
Hexachlorobutadiene	111.0	55.5	50.0	ug/L	09/28/1993	sjg
N-Nitrosodiphenylamine	108.0	54.0	50.0	ug/L	09/28/1993	sjg
4-Chloro-3-methylphenol	113.0	56.5	50.0	ug/L	09/28/1993	sjg
2,4-Dichlorophenol	110.0	55.0	50.0	ug/L	09/28/1993	sjg
2-Nitrophenol	108.0	54.0	50.0	ug/L	09/28/1993	sjg
Pentachlorophenol	121.0	60.5	50.0	ug/L	09/28/1993	sjg
Phenol	117.0	58.5	50.0	ug/L	09/28/1993	sjg
2,4,6-Trichlorophenol	108.0	54.0	50.0	ug/L	09/28/1993	sjg
Nitrobenzene-d5 (SURRE)	107.0	107	100	% Rec.	09/28/1993	sjg
2-Fluorobiphenyl (SURRE)	106.0	106	100	% Rec.	09/28/1993	sjg
p-Terphenyl-d14 (SURRE)	105.0	105	100	% Rec.	09/28/1993	sjg
Phenol-d5 (SURRE)	110.0	110	100	% Rec.	09/28/1993	sjg
2-Fluorophenol (SURRE)	106.0	106	100	% Rec.	09/28/1993	sjg
2,4,6-Tribromophenol (SURRE)	101.0	101	100	% Rec.	09/28/1993	sjg



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Ref: Shell, 6039 College Ave., Oakland, WA Job No: 81-618-07

METHOD BLANK REPORT

Parameter	Method	Reporting	Units	Date	Analyst
	Blank				
	Amount	Limit		Analyzed	Initials
	Found				
Oil & Grease (Total)	ND	5	mg/L	09/30/1993	pbg
Oil & Grease (Non-Polar)	ND	5	mg/L	09/30/1993	pbg
TPH (Gas/BTEX, Liquid)					
as Gasoline	ND	0.05	mg/L	09/25/1993	dkb
Benzene	ND	0.5	ug/L	09/25/1993	dkb
Toluene	ND	0.5	ug/L	09/25/1993	dkb
Ethylbenzene	ND	0.5	ug/L	09/25/1993	dkb
Xylenes (Total)	ND	0.5	ug/L	09/25/1993	dkb
Bromofluorobenzene (SURR)	83		% Rec.	09/25/1993	dkb
METHOD 8270 (GCMS, Liquid)					
Acenaphthene	ND	10	ug/L	09/28/1993	sjg
Acenaphthylene	ND	10	ug/L	09/28/1993	sjg
Aldrin	ND	50	ug/L	09/28/1993	sjg
Anthracene	ND	10	ug/L	09/28/1993	sjg
Benzidine	ND	44	ug/L	09/28/1993	sjg
Benzo (a) anthracene	ND	10	ug/L	09/28/1993	sjg
Benzo (b) fluoranthene	ND	10	ug/L	09/28/1993	sjg
Benzo (k) fluoranthene	ND	10	ug/L	09/28/1993	sjg
Benzo (a) pyrene	ND	10	ug/L	09/28/1993	sjg
Benzo (g, h, i) perylene	ND	10	ug/L	09/28/1993	sjg
Benzoic acid	ND	50	ug/L	09/28/1993	sjg
Benzyl alcohol	ND	10	ug/L	09/28/1993	sjg
Butyl benzyl phthalate	ND	10	ug/L	09/28/1993	sjg
delta-BHC	ND	50	ug/L	09/28/1993	sjg
gamma-BHC	ND	50	ug/L	09/28/1993	sjg
bis (2-Chloroethyl) ether	ND	10	ug/L	09/28/1993	sjg
bis (2-Chloroethoxy) methane	ND	10	ug/L	09/28/1993	sjg
bis (2-Chloroisopropyl) ether	ND	10	ug/L	09/28/1993	sjg
bis (2-Ethylhexyl) phthalate	ND	10	ug/L	09/28/1993	sjg
4-Bromophenyl phenyl ether	ND	10	ug/L	09/28/1993	sjg
4-Chloroaniline	ND	10	ug/L	09/28/1993	sjg
2-Chloronaphthalene	ND	10	ug/L	09/28/1993	sjg
4-Chlorophenyl phenyl ether	ND	10	ug/L	09/28/1993	sjg
Chrysene	ND	10	ug/L	09/28/1993	sjg
4,4'-DDD	ND	50	ug/L	09/28/1993	sjg
4,4'-DDE	ND	50	ug/L	09/28/1993	sjg
4,4'-DDT	ND	50	ug/L	09/28/1993	sjg
Dibenzo (a, h) anthracene	ND	10	ug/L	09/28/1993	sjg
Dibenzofuran	ND	10	ug/L	09/28/1993	sjg
Di-n-butylphthalate	ND	10	ug/L	09/28/1993	sjg
1,2-Dichlorobenzene	ND	10	ug/L	09/28/1993	sjg
1,3-Dichlorobenzene	ND	10	ug/L	09/28/1993	sjg
1,4-Dichlorobenzene	ND	10	ug/L	09/28/1993	sjg
3,3'-Dichlorobenzidine	ND	20	ug/L	09/28/1993	sjg
Dieldrin	ND	50	ug/L	09/28/1993	sjg
Diethylphthalate	ND	10	ug/L	09/28/1993	sjg
Dimethyl phthalate	ND	10	ug/L	09/28/1993	sjg
2,4-Dinitrotoluene	ND	10	ug/L	09/28/1993	sjg



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METHOD BLANK REPORT

Parameter	Method	Reporting	Units	Date	Analyst
	Blank				
	Amount	Limit		Analyzed	Initials
	Found				
2,6-Dinitrotoluene	ND	10	ug/L	09/28/1993	sjg
Di-n-octyl phthalate	ND	10	ug/L	09/28/1993	sjg
Endrin aldehyde	ND	50	ug/L	09/28/1993	sjg
Fluoranthene	ND	10	ug/L	09/28/1993	sjg
Fluorene	ND	10	ug/L	09/28/1993	sjg
Heptachlor	ND	50	ug/L	09/28/1993	sjg
Heptachlor epoxide	ND	50	ug/L	09/28/1993	sjg
Hexachlorobenzene	ND	10	ug/L	09/28/1993	sjg
Hexachlorobutadiene	ND	10	ug/L	09/28/1993	sjg
Hexachlorocyclopentadiene	ND	10	ug/L	09/28/1993	sjg
Hexachloroethane	ND	10	ug/L	09/28/1993	sjg
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	09/28/1993	sjg
Isophorone	ND	10	ug/L	09/28/1993	sjg
2-Methylnaphthalene	ND	10	ug/L	09/28/1993	sjg
Naphthalene	ND	10	ug/L	09/28/1993	sjg
2-Nitroaniline	ND	50	ug/L	09/28/1993	sjg
3-Nitroaniline	ND	50	ug/L	09/28/1993	sjg
4-Nitroaniline	ND	50	ug/L	09/28/1993	sjg
Nitrobenzene	ND	10	ug/L	09/28/1993	sjg
N-Nitroso-Di-N-propylamine	ND	10	ug/L	09/28/1993	sjg
N-Nitrosodiphenylamine	ND	10	ug/L	09/28/1993	sjg
Phenanthrene	ND	10	ug/L	09/28/1993	sjg
Pyrene	ND	10	ug/L	09/28/1993	sjg
1,2,4-Trichlorobenzene	ND	10	ug/L	09/28/1993	sjg
4-Chloro-3-methylphenol	ND	10	ug/L	09/28/1993	sjg
2-Chlorophenol	ND	10	ug/L	09/28/1993	sjg
2,4-Dichlorophenol	ND	10	ug/L	09/28/1993	sjg
2,4-Dimethylphenol	ND	10	ug/L	09/28/1993	sjg
2,4-Dinitrophenol	ND	50	ug/L	09/28/1993	sjg
4,6-Dinitro-2-methylphenol	ND	50	ug/L	09/28/1993	sjg
2-Nitrophenol	ND	10	ug/L	09/28/1993	sjg
4-Nitrophenol	ND	50	ug/L	09/28/1993	sjg
Pentachlorophenol	ND	50	ug/L	09/28/1993	sjg
Phenol	ND	10	ug/L	09/28/1993	sjg
2,4,6-Trichlorophenol	ND	10	ug/L	09/28/1993	sjg
2-Methylphenol	ND	10	ug/L	09/28/1993	sjg
4-Methylphenol	ND	10	ug/L	09/28/1993	sjg
2,4,5-Trichlorophenol	ND	50	ug/L	09/28/1993	sjg
Nitrobenzene-d5 (SURR)	76		% Rec.	09/28/1993	sjg
2-Fluorobiphenyl (SURR)	71		% Rec.	09/28/1993	sjg
p-Terphenyl-d14 (SURR)	57		% Rec.	09/28/1993	sjg
Phenol-d5 (SURR)	33		% Rec.	09/28/1993	sjg
2-Fluorophenol (SURR)	49		% Rec.	09/28/1993	sjg
2,4,6-Tribromophenol (SURR)	88		% Rec.	09/28/1993	sjg



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MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike			Spike Amount	Sample Conc.	Matrix Spike			Units	Date Analyzed	Analyst Initials
	Matrix Spike % Rec.	Spike Dup % Rec.	RPD			Matrix Spike Conc.	Dup. Conc.				
Oil & Grease (Total)	97.7	95.3	2.5	115.5	ND	112.8	122.6	mg/L	09/30/1993	pbg	
Oil & Grease (Non-Polar)	97.7	95.0	2.8	115.5	ND	112.8	122.2	mg/L	09/30/1993	pbg	
TPH (Gas/BTEXE,Liquid)											
as Gasoline	10000.0	10000.0	0.0	1.08	ND	108	102	mg/L	09/25/1993	dkb	
Benzene	254.3	254.5	0.1	40.9	ND	104	100	ug/L	09/25/1993	dkb	
Toluene	118.2	118.1	0.1	86.3	ND	102	100	ug/L	09/25/1993	dkb	
Bromofluorobenzene (SURR)	6.0	1.0	142.9	100	92	98	93	% Rec.	09/25/1993	dkb	
METHOD 8270 (GCMS,Liquid)											
Acenaphthene	70.0	77.0	9.5	100	ND	70	77	ug/L	09/28/1993	sjg	
1,4-Dichlorobenzene	57.0	60.0	5.1	100	ND	57	60	ug/L	09/28/1993	sjg	
2,4-Dinitrotoluene	76.0	77.0	1.3	100	ND	76	77	ug/L	09/28/1993	sjg	
N-Nitroso-Di-N-propylamine	71.0	72.0	1.4	100	ND	71	72	ug/L	09/28/1993	sjg	
Pyrene	63.0	66.0	4.7	100	ND	63	66	ug/L	09/28/1993	sjg	
1,2,4-Trichlorobenzene	62.0	69.0	10.7	100	ND	62	69	ug/L	09/28/1993	sjg	
4-Chloro-3-methylphenol	64.0	66.0	3.1	200	ND	128	132	ug/L	09/28/1993	sjg	
2-Chlorophenol	63.0	67.0	6.2	200	ND	126	134	ug/L	09/28/1993	sjg	
4-Nitrophenol	42.0	49.5	16.4	200	ND	84	99	ug/L	09/28/1993	sjg	
Pentachlorophenol	98.0	100.0	1.9	200	ND	196	200	ug/L	09/28/1993	sjg	
Phenol	35.0	42.0	18.2	200	ND	70	84	ug/L	09/28/1993	sjg	
Nitrobenzene-d5 (SURR)	--	--	--	100	71	71	73	% Rec.	09/28/1993	sjg	
2-Fluorobiphenyl (SURR)	--	--	--	100	71	68	77	% Rec.	09/28/1993	sjg	
p-Terphenyl-d14 (SURR)	--	--	--	100	98	67	70	% Rec.	09/28/1993	sjg	
Phenol-d5 (SURR)	--	--	--	100	26	45	47	% Rec.	09/28/1993	sjg	
2-Fluorophenol (SURR)	--	--	--	100	37	62	59	% Rec.	09/28/1993	sjg	
2,4,6-Tribromophenol (SURR)	--	--	--	100	92	94	102	% Rec.	09/28/1993	sjg	



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04220

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Ref: Shell, 6039 College Ave., Oakland, WA Job No: 81-618-07

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS		LCS		Units	Date Analyzed	Analyst Initials
	% Recovery	RPD	Amount Found	Amount Expected			
Oil & Grease (Total)	98.9		0.1463	0.1480	mg/L	09/30/1993	pbg
Oil & Grease (Non-Polar)	98.9		146.3	148.0	mg/L	09/30/1993	pbg
METHOD 3510/M8015 as Diesel	54.0		0.54	1.00	mg/L	10/03/1993	tts
METHOD 8270 (GCMS, Liquid)							
Acenaphthene	67.0		67	100	ug/L	09/28/1993	sjg
1,4-Dichlorobenzene	52.0		52	100	ug/L	09/28/1993	sjg
2,4-Dinitrotoluene	76.0		76	100	ug/L	09/28/1993	sjg
N-Nitroso-Di-N-propylamine	70.0		70	100	ug/L	09/28/1993	sjg
Pyrene	63.0		63	100	ug/L	09/28/1993	sjg
1,2,4-Trichlorobenzene	59.0		59	100	ug/L	09/28/1993	sjg
4-Chloro-3-methylphenol	63.0		126	200	ug/L	09/28/1993	sjg
2-Chlorophenol	60.0		120	200	ug/L	09/28/1993	sjg
4-Nitrophenol	29.5		59	200	ug/L	09/28/1993	sjg
Pentachlorophenol	93.5		187	200	ug/L	09/28/1993	sjg
Phenol	26.5		53	200	ug/L	09/28/1993	sjg
Nitrobenzene-d5 (SURR)	72.0		72	100	% Rec.	09/28/1993	sjg
2-Fluorobiphenyl (SURR)	68.0		68	100	% Rec.	09/28/1993	sjg
p-Terphenyl-d14 (SURR)	81.0		81	100	% Rec.	09/28/1993	sjg
Phenol-d5 (SURR)	31.0		31	100	% Rec.	09/28/1993	sjg
2-Fluorophenol (SURR)	44.0		44	100	% Rec.	09/28/1993	sjg
2,4,6-Tribromophenol (SURR)	92.0		92	100	% Rec.	09/28/1993	sjg



KEY TO ABBREVIATIONS and METHOD REFERENCES

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

Method References

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

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

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

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 5831

Date: _____
Page 1 of 1

Site Address: 6039 COLLEGE AVE OAKLAND, CA.

WIC#: 204-5510-0303

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

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

Consultant Contact: Scott Macdonald Phone No.: (510) 547-5420
WA JOB # 81-618-07 Fax #: 547-5043

Comments: _____

Sampled by: Rudy R. Marquez

Printed Name: RUDY R. MARQUEZ

Analysis Required

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	<u>EPA 8270 SVOC'S</u>	<u>OIL & GREASE</u>	Asbestos	Container Size	Preparation Used	Composite Y/N

LAB: NEY

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

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

UST AGENCY: AC.D.E.H.

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	<u>EPA 8270 SVOC'S</u>	<u>OIL & GREASE</u>	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
MW-6	9/21			X		8		X				X	X	X				<u>HL</u>		NEW WELL, GROUND WATER	
TB-LB	↓			↓		3						X									<u>DUPLICATE</u> <u>9/24/93</u>

(CUSTODY SEALED)
G.P. Lumare
9/23/93 17:00
Sealed

Relinquished by (signature): <u>Rudy R. Marquez</u>	Printed Name: <u>RUDY R. MARQUEZ</u>	Date: <u>9/22/93</u>	Received (signature): <u>Herb Toor</u>	Printed Name: <u>Herb Toor</u>	Date: <u>9/23/93</u>
Relinquished by (signature): <u>Herb Toor</u>	Printed Name: <u>Herb Toor</u>	Date: <u>9/23/93</u>	Received (signature): <u>G.P. Lumare</u>	Printed Name: <u>G.P. LUMARE</u>	Date: <u>9/23/93</u>
Relinquished by (signature): <u>G.P. Lumare</u>	Printed Name: <u>G.P. LUMARE</u>	Date: <u>9/23/93</u>	Received (signature): <u>K. Temp 6</u>	Printed Name: <u>K. Temp 6</u>	Date: <u>9/24/93</u>

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

* LOCKED IN SECURE AREA



NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

David Elias
Weiss Associates
5500 Shellmound St.
Emeryville, CA 94608

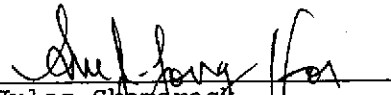
Date: 11/05/1993
NET Client Acct. No: 1809
NET Pacific Job No: 93.04764
Received: 10/27/1993
REVISED: 11/11/1993

Client Reference Information

SHELL 6039 College Ave., Oakland, WA Job:81-618-07

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:



Jules Skamarack
Laboratory Manager

Enclosure(s)



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.04764

Date: 11/05/1993
 ELAP Certificate: 1386
 Page: 2

Ref: SHELL 6039 College Ave., Oakland, WA Job:81-618-07

SAMPLE DESCRIPTION: BH-C
 Date Taken: 09/10/1993
 Time Taken:
 NET Sample No: 177280

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Oil & Grease (Total)	ND		5	mg/L	5520B		10/29/1993
Oil & Grease (Non-Polar)	ND		5	mg/L	5520B/F		10/29/1993
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						10/29/1993
DILUTION FACTOR*	1						10/29/1993
as Gasoline	0.64	G-	0.05	mg/L	5030		10/29/1993
METHOD 8020 (GC,Liquid)							
Benzene	0.0035	C	0.0005	mg/L	8020		10/29/1993
Toluene	ND		0.0005	mg/L	8020		10/29/1993
Ethylbenzene	0.0006	C	0.0005	mg/L	8020		10/29/1993
Xylenes (Total)	ND		0.0005	mg/L	8020		10/29/1993
SURROGATE RESULTS							
Bromofluorobenzene (SURR)	117			% Rec.	5030		10/29/1993
METHOD 3510/M8015							
DILUTION FACTOR*	1					10/28/1993	10/30/1993
as Diesel	0.1		0.05	mg/L	3510		10/30/1993

C : Positive result confirmed by secondary column or GC/MS analysis.
 G- : The positive result has an atypical pattern for Gasoline analysis.



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04764

Date: 11/05/1993
ELAP Certificate: 1386
Page: 3

Ref: SHELL 6039 College Ave., Oakland, WA Job:81-618-07

SAMPLE DESCRIPTION: BH-C
Date Taken: 09/10/1993
Time Taken:
NET Sample No: 177280

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
METHOD 8270 (GCMS, Liquid)						10/30/1993	
DILUTION FACTOR*	1						11/01/1993
Acenaphthene	ND		0.010	mg/L	8270		11/01/1993
Acenaphthylene	ND		0.010	mg/L	8270		11/01/1993
Aldrin	ND		0.050	mg/L	8270		11/01/1993
Anthracene	ND		0.010	mg/L	8270		11/01/1993
Benzidine	ND		0.044	mg/L	8270		11/01/1993
Benzo(a)anthracene	ND		0.010	mg/L	8270		11/01/1993
Benzo(b)fluoranthene	ND		0.010	mg/L	8270		11/01/1993
Benzo(k)fluoranthene	ND		0.010	mg/L	8270		11/01/1993
Benzo(a)pyrene	ND		0.010	mg/L	8270		11/01/1993
Benzo(g,h,i)perylene	ND		0.010	mg/L	8270		11/01/1993
Benzoic acid	ND		0.050	mg/L	8270		11/01/1993
Benzyl alcohol	ND		0.010	mg/L	8270		11/01/1993
Butyl benzyl phthalate	ND		0.010	mg/L	8270		11/01/1993
delta-BHC	ND		0.050	mg/L	8270		11/01/1993
gamma-BHC	ND		0.050	mg/L	8270		11/01/1993
bis(2-Chloroethyl) ether	ND		0.010	mg/L	8270		11/01/1993
bis(2-Chloroethoxy)methane	ND		0.010	mg/L	8270		11/01/1993
bis(2-Chloroisopropyl) ether	ND		0.010	mg/L	8270		11/01/1993
bis(2-Ethylhexyl) phthalate	ND		0.010	mg/L	8270		11/01/1993
4-Bromophenyl phenyl ether	ND		0.010	mg/L	8270		11/01/1993
4-Chloroaniline	ND		0.010	mg/L	8270		11/01/1993
2-Chloronaphthalene	ND		0.010	mg/L	8270		11/01/1993
4-Chlorophenyl phenyl ether	ND		0.010	mg/L	8270		11/01/1993
Chrysene	ND		0.010	mg/L	8270		11/01/1993
4,4'-DDD	ND		0.050	mg/L	8270		11/01/1993
4,4'-DDE	ND		0.050	mg/L	8270		11/01/1993
4,4'-DDT	ND		0.050	mg/L	8270		11/01/1993
Dibenzo(a,h)anthracene	ND		0.010	mg/L	8270		11/01/1993
Dibenzofuran	ND		0.010	mg/L	8270		11/01/1993
Di-n-butylphthalate	ND		0.010	mg/L	8270		11/01/1993
1,2-Dichlorobenzene	ND		0.010	mg/L	8270		11/01/1993
1,3-Dichlorobenzene	ND		0.010	mg/L	8270		11/01/1993
1,4-Dichlorobenzene	ND		0.010	mg/L	8270		11/01/1993
3,3'-Dichlorobenzidine	ND		0.020	mg/L	8270		11/01/1993
Dieldrin	ND		0.050	mg/L	8270		11/01/1993
Diethylphthalate	ND		0.010	mg/L	8270		11/01/1993
Dimethyl phthalate	ND		0.010	mg/L	8270		11/01/1993
2,4-Dinitrotoluene	ND		0.010	mg/L	8270		11/01/1993
2,6-Dinitrotoluene	ND		0.010	mg/L	8270		11/01/1993
Di-n-octyl phthalate	ND		0.010	mg/L	8270		11/01/1993
Endrin aldehyde	ND		0.050	mg/L	8270		11/01/1993
Fluoranthene	ND		0.010	mg/L	8270		11/01/1993
Fluorene	ND		0.010	mg/L	8270		11/01/1993



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04764

Date: 11/05/1993
ELAP Certificate: 1386
Page: 4

Ref: SHELL 6039 College Ave., Oakland, WA Job:81-618-07

SAMPLE DESCRIPTION: BH-C

Date Taken: 09/10/1993

Time Taken:

NET Sample No: 177280

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Heptachlor	ND		0.050	mg/L	8270		11/01/1993
Heptachlor epoxide	ND		0.050	mg/L	8270		11/01/1993
Hexachlorobenzene	ND		0.010	mg/L	8270		11/01/1993
Hexachlorobutadiene	ND		0.010	mg/L	8270		11/01/1993
Hexachlorocyclopentadiene	ND		0.010	mg/L	8270		11/01/1993
Hexachloroethane	ND		0.010	mg/L	8270		11/01/1993
Indeno(1,2,3-cd)pyrene	ND		0.010	mg/L	8270		11/01/1993
Isophorone	ND		0.010	mg/L	8270		11/01/1993
2-Methylnaphthalene	ND		0.010	mg/L	8270		11/01/1993
Naphthalene	ND		0.010	mg/L	8270		11/01/1993
2-Nitroaniline	ND		0.050	mg/L	8270		11/01/1993
3-Nitroaniline	ND		0.050	mg/L	8270		11/01/1993
4-Nitroaniline	ND		0.050	mg/L	8270		11/01/1993
Nitrobenzene	ND		0.010	mg/L	8270		11/01/1993
N-Nitroso-Di-N-propylamine	ND		0.010	mg/L	8270		11/01/1993
N-Nitrosodiphenylamine	ND		0.010	mg/L	8270		11/01/1993
Phenanthrene	ND		0.010	mg/L	8270		11/01/1993
Pyrene	ND		0.010	mg/L	8270		11/01/1993
1,2,4-Trichlorobenzene	ND		0.010	mg/L	8270		11/01/1993
ACID EXTRACTABLES	--						11/01/1993
4-Chloro-3-methylphenol	ND		0.010	mg/L	8270		11/01/1993
2-Chlorophenol	ND		0.010	mg/L	8270		11/01/1993
2,4-Dichlorophenol	ND		0.010	mg/L	8270		11/01/1993
2,4-Dimethylphenol	ND		0.010	mg/L	8270		11/01/1993
2,4-Dinitrophenol	ND		0.050	mg/L	8270		11/01/1993
4,6-Dinitro-2-methylphenol	ND		0.050	mg/L	8270		11/01/1993
2-Nitrophenol	ND		0.010	mg/L	8270		11/01/1993
4-Nitrophenol	ND		0.050	mg/L	8270		11/01/1993
Pentachlorophenol	ND		0.050	mg/L	8270		11/01/1993
Phenol	ND		0.010	mg/L	8270		11/01/1993
2,4,6-Trichlorophenol	ND		0.010	mg/L	8270		11/01/1993
2-Methylphenol	ND		0.010	mg/L	8270		11/01/1993
4-Methylphenol	ND		0.010	mg/L	8270		11/01/1993
2,4,5-Trichlorophenol	ND		0.050	mg/L	8270		11/01/1993
SURROGATE RESULTS	--						11/01/1993
Nitrobenzene-d5 (SURR)	67			‡ Rec.	8270		11/01/1993
2-Fluorobiphenyl (SURR)	63			‡ Rec.	8270		11/01/1993
p-Terphenyl-d14 (SURR)	60			‡ Rec.	8270		11/01/1993
Phenol-d5 (SURR)	12			‡ Rec.	8270		11/01/1993
2-Fluorophenol (SURR)	16			‡ Rec.	8270		11/01/1993
2,4,6-Tribromophenol (SURR)	34			‡ Rec.	8270		11/01/1993



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.04764

Date: 11/05/1993
 ELAP Certificate: 1386
 Page: 5

Ref: SHELL 6039 College Ave., Oakland, WA Job:81-618-07

SAMPLE DESCRIPTION: BH-D
 Date Taken: 09/10/1993
 Time Taken:
 NET Sample No: 177281

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Oil & Grease (Total)	24		5	mg/L	5520B		10/29/1993
Oil & Grease (Non-Polar)	20		5	mg/L	5520B/F		10/29/1993
TPH (Gas/BTEXE,Liquid)							
METHOD 5030/M8015	--						10/30/1993
DILUTION FACTOR*	10						10/30/1993
as Gasoline	24	G-	0.5	mg/L	5030		10/30/1993
METHOD 8020 (GC,Liquid)							
Benzene	0.72	C	0.005	mg/L	8020		10/30/1993
Toluene	0.086	C	0.005	mg/L	8020		10/30/1993
Ethylbenzene	0.044	C	0.005	mg/L	8020		10/30/1993
Xylenes (Total)	0.011	C	0.005	mg/L	8020		10/30/1993
SURROGATE RESULTS							
Bromofluorobenzene (SURRE)	136	MI		% Rec.	5030		10/30/1993
METHOD 3510/M8015							
DILUTION FACTOR*	50					10/28/1993	11/01/1993
as Diesel	25	DL	2	mg/L	3510		11/01/1993

C : Positive result confirmed by secondary column or GC/MS analysis.
 DL : The positive result appears to be a lighter hydrocarbon than Diesel.
 G- : The positive result has an atypical pattern for Gasoline analysis.
 MI: Matrix interference.



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04764

Date: 11/05/1993
ELAP Certificate: 1386
Page: 6

Ref: SHELL 6039 College Ave., Oakland, WA Job:81-618-07

SAMPLE DESCRIPTION: BH-D

Date Taken: 09/10/1993

Time Taken:

NET Sample No: 177281

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
METHOD 8270 (GCMS, Liquid)						10/30/1993	
DILUTION FACTOR*	1						11/03/1993
Acenaphthene	ND		0.010	mg/L	8270		11/03/1993
Acenaphthylene	ND		0.010	mg/L	8270		11/03/1993
Aldrin	ND		0.050	mg/L	8270		11/03/1993
Anthracene	ND		0.010	mg/L	8270		11/03/1993
Benzidine	ND		0.044	mg/L	8270		11/03/1993
Benzo(a)anthracene	ND		0.010	mg/L	8270		11/03/1993
Benzo(b)fluoranthene	ND		0.010	mg/L	8270		11/03/1993
Benzo(k)fluoranthene	ND		0.010	mg/L	8270		11/03/1993
Benzo(a)pyrene	ND		0.010	mg/L	8270		11/03/1993
Benzo(g,h,i)perylene	ND		0.010	mg/L	8270		11/03/1993
Benzoic acid	ND		0.050	mg/L	8270		11/03/1993
Benzyl alcohol	ND		0.010	mg/L	8270		11/03/1993
Butyl benzyl phthalate	ND		0.010	mg/L	8270		11/03/1993
delta-BHC	ND		0.050	mg/L	8270		11/03/1993
gamma-BHC	ND		0.050	mg/L	8270		11/03/1993
bis(2-Chloroethyl)ether	ND		0.010	mg/L	8270		11/03/1993
bis(2-Chloroethoxy)methane	ND		0.010	mg/L	8270		11/03/1993
bis(2-Chloroisopropyl)ether	ND		0.010	mg/L	8270		11/03/1993
bis(2-Ethylhexyl)phthalate	ND		0.010	mg/L	8270		11/03/1993
4-Bromophenyl phenyl ether	ND		0.010	mg/L	8270		11/03/1993
4-Chloroaniline	ND		0.010	mg/L	8270		11/03/1993
2-Chloronaphthalene	ND		0.010	mg/L	8270		11/03/1993
4-Chlorophenyl phenyl ether	ND		0.010	mg/L	8270		11/03/1993
Chrysene	ND		0.010	mg/L	8270		11/03/1993
4,4'-DDD	ND		0.050	mg/L	8270		11/03/1993
4,4'-DDE	ND		0.050	mg/L	8270		11/03/1993
4,4'-DDT	ND		0.050	mg/L	8270		11/03/1993
Dibenzo(a,h)anthracene	ND		0.010	mg/L	8270		11/03/1993
Dibenzofuran	ND		0.010	mg/L	8270		11/03/1993
Di-n-butylphthalate	ND		0.010	mg/L	8270		11/03/1993
1,2-Dichlorobenzene	ND		0.010	mg/L	8270		11/03/1993
1,3-Dichlorobenzene	ND		0.010	mg/L	8270		11/03/1993
1,4-Dichlorobenzene	ND		0.010	mg/L	8270		11/03/1993
3,3'-Dichlorobenzidine	ND		0.020	mg/L	8270		11/03/1993
Dieldrin	ND		0.050	mg/L	8270		11/03/1993
Diethylphthalate	ND		0.010	mg/L	8270		11/03/1993
Dimethyl phthalate	ND		0.010	mg/L	8270		11/03/1993
2,4-Dinitrotoluene	ND		0.010	mg/L	8270		11/03/1993
2,6-Dinitrotoluene	ND		0.010	mg/L	8270		11/03/1993
Di-n-octyl phthalate	ND		0.010	mg/L	8270		11/03/1993
Endrin aldehyde	ND		0.050	mg/L	8270		11/03/1993
Fluoranthene	ND		0.010	mg/L	8270		11/03/1993
Fluorene	ND		0.010	mg/L	8270		11/03/1993



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.04764

Date: 11/05/1993
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Ref: SHELL 6039 College Ave., Oakland, WA Job:81-618-07

SAMPLE DESCRIPTION: BH-D
 Date Taken: 09/10/1993
 Time Taken:
 NET Sample No: 177281

Parameter	Results	Flags	Reporting		Method	Date	Date
			Limit	Units		Extracted	Analyzed
Heptachlor	ND		0.050	mg/L	8270		11/03/1993
Heptachlor epoxide	ND		0.050	mg/L	8270		11/03/1993
Hexachlorobenzene	ND		0.010	mg/L	8270		11/03/1993
Hexachlorobutadiene	ND		0.010	mg/L	8270		11/03/1993
Hexachlorocyclopentadiene	ND		0.010	mg/L	8270		11/03/1993
Hexachloroethane	ND		0.010	mg/L	8270		11/03/1993
Indeno(1,2,3-cd)pyrene	ND		0.010	mg/L	8270		11/03/1993
Isophorone	ND		0.010	mg/L	8270		11/03/1993
2-Methylnaphthalene	0.075		0.010	mg/L	8270		11/03/1993
Naphthalene	0.018		0.010	mg/L	8270		11/03/1993
2-Nitroaniline	ND		0.050	mg/L	8270		11/03/1993
3-Nitroaniline	ND		0.050	mg/L	8270		11/03/1993
4-Nitroaniline	ND		0.050	mg/L	8270		11/03/1993
Nitrobenzene	ND		0.010	mg/L	8270		11/03/1993
N-Nitroso-Di-N-propylamine	ND		0.010	mg/L	8270		11/03/1993
N-Nitrosodiphenylamine	ND		0.010	mg/L	8270		11/03/1993
Phenanthrene	ND		0.010	mg/L	8270		11/03/1993
Pyrene	ND		0.010	mg/L	8270		11/03/1993
1,2,4-Trichlorobenzene	ND		0.010	mg/L	8270		11/03/1993
ACID EXTRACTABLES	--						11/03/1993
4-Chloro-3-methylphenol	ND		0.010	mg/L	8270		11/03/1993
2-Chlorophenol	ND		0.010	mg/L	8270		11/03/1993
2,4-Dichlorophenol	ND		0.010	mg/L	8270		11/03/1993
2,4-Dimethylphenol	ND		0.010	mg/L	8270		11/03/1993
2,4-Dinitrophenol	ND		0.050	mg/L	8270		11/03/1993
4,6-Dinitro-2-methylphenol	ND		0.050	mg/L	8270		11/03/1993
2-Nitrophenol	ND		0.010	mg/L	8270		11/03/1993
4-Nitrophenol	ND		0.050	mg/L	8270		11/03/1993
Pentachlorophenol	ND		0.050	mg/L	8270		11/03/1993
Phenol	ND		0.010	mg/L	8270		11/03/1993
2,4,6-Trichlorophenol	ND		0.010	mg/L	8270		11/03/1993
2-Methylphenol	ND		0.010	mg/L	8270		11/03/1993
4-Methylphenol	ND		0.010	mg/L	8270		11/03/1993
2,4,5-Trichlorophenol	ND		0.050	mg/L	8270		11/03/1993
SURROGATE RESULTS	--						11/03/1993
Nitrobenzene-d5 (SURR)	67			% Rec.	8270		11/03/1993
2-Fluorobiphenyl (SURR)	66			% Rec.	8270		11/03/1993
p-Terphenyl-d14 (SURR)	57			% Rec.	8270		11/03/1993
Phenol-d5 (SURR)	31			% Rec.	8270		11/03/1993
2-Fluorophenol (SURR)	43			% Rec.	8270		11/03/1993
2,4,6-Tribromophenol (SURR)	80			% Rec.	8270		11/03/1993



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CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials
	Standard % Recovery	Standard Amount Found	Standard Amount Expected			
TPH (Gas/BTXE, Liquid)						
as Gasoline	87.2	0.872	1.00	mg/L	10/29/1993	vin
Benzene	93.2	4.66	5.00	ug/L	10/29/1993	vin
Toluene	94.4	4.72	5.00	ug/L	10/29/1993	vin
Ethylbenzene	95.6	4.78	5.00	ug/L	10/29/1993	vin
Xylenes (Total)	97.5	14.63	15.0	ug/L	10/29/1993	vin
Bromofluorobenzene (SURR)	94.0	94	100	% Rec.	10/29/1993	vin
TPH (Gas/BTXE, Liquid)						
as Gasoline	86.7	0.867	1.00	mg/L	10/30/1993	vin
Benzene	93.6	4.68	5.00	ug/L	10/30/1993	vin
Toluene	97.2	4.86	5.00	ug/L	10/30/1993	vin
Ethylbenzene	94.4	4.72	5.00	ug/L	10/30/1993	vin
Xylenes (Total)	97.1	14.56	15.0	ug/L	10/30/1993	vin
Bromofluorobenzene (SURR)	96.0	96	100	% Rec.	10/30/1993	vin
METHOD 3510/M8015						
as Diesel	106.0	1060	1000	mg/L	10/30/1993	dkb
METHOD 8270 (GCMS, Liquid)						
Acenaphthene	102.0	51.0	50.0	ug/L	11/01/1993	sjg
Benzo(a)pyrene	97.0	48.5	50.0	ug/L	11/01/1993	sjg
1,4-Dichlorobenzene	105.0	52.5	50.0	ug/L	11/01/1993	sjg
Di-n-octyl phthalate	104.0	52.0	50.0	ug/L	11/01/1993	sjg
Fluoranthene	103.0	51.5	50.0	ug/L	11/01/1993	sjg
Hexachlorobutadiene	121.0	60.5	50.0	ug/L	11/01/1993	sjg
N-Nitrosodiphenylamine	99.0	49.5	50.0	ug/L	11/01/1993	sjg
4-Chloro-3-methylphenol	100.0	50.0	50.0	ug/L	11/01/1993	sjg
2,4-Dichlorophenol	100.0	50.0	50.0	ug/L	11/01/1993	sjg
2-Nitrophenol	103.0	51.5	50.0	ug/L	11/01/1993	sjg
Pentachlorophenol	130.0	65.0	50.0	ug/L	11/01/1993	sjg
Phenol	93.0	46.5	50.0	ug/L	11/01/1993	sjg
2,4,6-Trichlorophenol	111.0	55.5	50.0	ug/L	11/01/1993	sjg
Nitrobenzene-d5 (SURR)	97.0	97	100	% Rec.	11/01/1993	sjg
2-Fluorobiphenyl (SURR)	104.0	104	100	% Rec.	11/01/1993	sjg
p-Terphenyl-d14 (SURR)	101.0	101	100	% Rec.	11/01/1993	sjg
Phenol-d5 (SURR)	97.0	97	100	% Rec.	11/01/1993	sjg
2-Fluorophenol (SURR)	104.0	104	100	% Rec.	11/01/1993	sjg
2,4,6-Tribromophenol (SURR)	114.0	114	100	% Rec.	11/01/1993	sjg
METHOD 8270 (GCMS, Liquid)						
Acenaphthene		51.0	50.0	ug/L	11/03/1993	sjg
Benzo(a)pyrene	95.0	47.5	50.0	ug/L	11/03/1993	sjg
1,4-Dichlorobenzene	107.0	53.5	50.0	ug/L	11/03/1993	sjg
Di-n-octyl phthalate	116.0	58.0	50.0	ug/L	11/03/1993	sjg
Fluoranthene	105.0	52.5	50.0	ug/L	11/03/1993	sjg
Hexachlorobutadiene	124.0	62.0	50.0	ug/L	11/03/1993	sjg
N-Nitrosodiphenylamine	106.0	53.0	50.0	ug/L	11/03/1993	sjg
4-Chloro-3-methylphenol	97.0	48.5	50.0	ug/L	11/03/1993	sjg
2,4-Dichlorophenol	99.0	49.5	50.0	ug/L	11/03/1993	sjg



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CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials
	Standard % Recovery	Standard Amount Found	Standard Amount Expected			
2-Nitrophenol	99.0	49.5	50.0	ug/L	11/03/1993	sjg
Pentachlorophenol	118.0	59.0	50.0	ug/L	11/03/1993	sjg
Phenol	92.0	46.0	50.0	ug/L	11/03/1993	sjg
2,4,6-Trichlorophenol	107.0	53.5	50.0	ug/L	11/03/1993	sjg
Nitrobenzene-d5 (SURR)	94.0	94	100	% Rec.	11/03/1993	sjg
2-Fluorobiphenyl (SURR)	103.0	103	100	% Rec.	11/03/1993	sjg
p-Terphenyl-d14 (SURR)	97.0	97	100	% Rec.	11/03/1993	sjg
Phenol-d5 (SURR)	96.0	96	100	% Rec.	11/03/1993	sjg
2-Fluorophenol (SURR)	102.0	102	100	% Rec.	11/03/1993	sjg
2,4,6-Tribromophenol (SURR)	105.0	105	100	% Rec.	11/03/1993	sjg



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METHOD BLANK REPORT

Parameter	Method			Date Analyzed	Analyst Initials
	Blank Amount Found	Reporting Limit	Units		
Oil & Grease (Total)	ND	5	mg/L	10/29/1993	pbg
Oil & Grease (Non-Polar)	ND	5	mg/L	10/29/1993	pbg
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	10/29/1993	vin
Benzene	ND	0.5	ug/L	10/29/1993	vin
Toluene	ND	0.5	ug/L	10/29/1993	vin
Ethylbenzene	ND	0.5	ug/L	10/29/1993	vin
Xylenes (Total)	ND	0.5	ug/L	10/29/1993	vin
Bromofluorobenzene (SURR)	87		% Rec.	10/29/1993	vin
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	10/30/1993	vin
Benzene	ND	0.5	ug/L	10/30/1993	vin
Toluene	ND	0.5	ug/L	10/30/1993	vin
Ethylbenzene	ND	0.5	ug/L	10/30/1993	vin
Xylenes (Total)	ND	0.5	ug/L	10/30/1993	vin
Bromofluorobenzene (SURR)	93		% Rec.	10/30/1993	vin
METHOD 3510/M8015					
as Diesel	ND	0.05	mg/L	10/30/1993	dkb
METHOD 6270(GCMS,Liquid)					
Acenaphthene	ND	10	ug/L	11/01/1993	sjg
Acenaphthylene	ND	10	ug/L	11/01/1993	sjg
Aldrin	ND	50	ug/L	11/01/1993	sjg
Anthracene	ND	10	ug/L	11/01/1993	sjg
Benzidine	ND	44	ug/L	11/01/1993	sjg
Benzo (a) anthracene	ND	10	ug/L	11/01/1993	sjg
Benzo (b) fluoranthene	ND	10	ug/L	11/01/1993	sjg
Benzo (k) fluoranthene	ND	10	ug/L	11/01/1993	sjg
Benzo (a) pyrene	ND	10	ug/L	11/01/1993	sjg
Benzo (g,h,i) perylene	ND	10	ug/L	11/01/1993	sjg
Benzoic acid	ND	50	ug/L	11/01/1993	sjg
Benzyl alcohol	ND	10	ug/L	11/01/1993	sjg
Butyl benzyl phthalate	ND	10	ug/L	11/01/1993	sjg
delta-BHC	ND	50	ug/L	11/01/1993	sjg
gamma-BHC	ND	50	ug/L	11/01/1993	sjg
bis(2-Chloroethyl) ether	ND	10	ug/L	11/01/1993	sjg
bis(2-Chloroethoxy) methane	ND	10	ug/L	11/01/1993	sjg
bis(2-Chloroisopropyl) ether	ND	10	ug/L	11/01/1993	sjg
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	11/01/1993	sjg
4-Bromophenyl phenyl ether	ND	10	ug/L	11/01/1993	sjg
4-Chloroaniline	ND	10	ug/L	11/01/1993	sjg
2-Chloronaphthalene	ND	10	ug/L	11/01/1993	sjg
4-Chlorophenyl phenyl ether	ND	10	ug/L	11/01/1993	sjg
Chrysene	ND	10	ug/L	11/01/1993	sjg
4,4'-DDD	ND	50	ug/L	11/01/1993	sjg
4,4'-DDE	ND	50	ug/L	11/01/1993	sjg
4,4'-DDT	ND	50	ug/L	11/01/1993	sjg
Dibenzo (a, h) anthracene	ND	10	ug/L	11/01/1993	sjg
Dibenzofuran	ND	10	ug/L	11/01/1993	sjg



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METHOD BLANK REPORT

Parameter	Method	Reporting	Units	Date	Analyst
	Blank				
	Amount	Limit		Analyzed	Initials
	Found				
Di-n-butylphthalate	ND	10	ug/L	11/01/1993	sjg
1,2-Dichlorobenzene	ND	10	ug/L	11/01/1993	sjg
1,3-Dichlorobenzene	ND	10	ug/L	11/01/1993	sjg
1,4-Dichlorobenzene	ND	10	ug/L	11/01/1993	sjg
3,3'-Dichlorobenzidine	ND	20	ug/L	11/01/1993	sjg
Dieldrin	ND	50	ug/L	11/01/1993	sjg
Diethylphthalate	ND	10	ug/L	11/01/1993	sjg
Dimethyl phthalate	ND	10	ug/L	11/01/1993	sjg
2,4-Dinitrotoluene	ND	10	ug/L	11/01/1993	sjg
2,6-Dinitrotoluene	ND	10	ug/L	11/01/1993	sjg
Di-n-octyl phthalate	ND	10	ug/L	11/01/1993	sjg
Endrin aldehyde	ND	50	ug/L	11/01/1993	sjg
Fluoranthene	ND	10	ug/L	11/01/1993	sjg
Fluorene	ND	10	ug/L	11/01/1993	sjg
Heptachlor	ND	50	ug/L	11/01/1993	sjg
Heptachlor epoxide	ND	50	ug/L	11/01/1993	sjg
Hexachlorobenzene	ND	10	ug/L	11/01/1993	sjg
Hexachlorobutadiene	ND	10	ug/L	11/01/1993	sjg
Hexachlorocyclopentadiene	ND	10	ug/L	11/01/1993	sjg
Hexachloroethane	ND	10	ug/L	11/01/1993	sjg
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	11/01/1993	sjg
Isophorone	ND	10	ug/L	11/01/1993	sjg
2-Methylnaphthalene	ND	10	ug/L	11/01/1993	sjg
Naphthalene	ND	10	ug/L	11/01/1993	sjg
2-Nitroaniline	ND	50	ug/L	11/01/1993	sjg
3-Nitroaniline	ND	50	ug/L	11/01/1993	sjg
4-Nitroaniline	ND	50	ug/L	11/01/1993	sjg
Nitrobenzene	ND	10	ug/L	11/01/1993	sjg
N-Nitroso-Di-N-propylamine	ND	10	ug/L	11/01/1993	sjg
N-Nitrosodiphenylamine	ND	10	ug/L	11/01/1993	sjg
Phenanthrene	ND	10	ug/L	11/01/1993	sjg
Pyrene	ND	10	ug/L	11/01/1993	sjg
1,2,4-Trichlorobenzene	ND	10	ug/L	11/01/1993	sjg
4-Chloro-3-methylphenol	ND	10	ug/L	11/01/1993	sjg
2-Chlorophenol	ND	10	ug/L	11/01/1993	sjg
2,4-Dichlorophenol	ND	10	ug/L	11/01/1993	sjg
2,4-Dimethylphenol	ND	10	ug/L	11/01/1993	sjg
2,4-Dinitrophenol	ND	50	ug/L	11/01/1993	sjg
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11/01/1993	sjg
2-Nitrophenol	ND	10	ug/L	11/01/1993	sjg
4-Nitrophenol	ND	50	ug/L	11/01/1993	sjg
Pentachlorophenol	ND	50	ug/L	11/01/1993	sjg
Phenol	ND	10	ug/L	11/01/1993	sjg
2,4,6-Trichlorophenol	ND	10	ug/L	11/01/1993	sjg
2-Methylphenol	ND	10	ug/L	11/01/1993	sjg
4-Methylphenol	ND	10	ug/L	11/01/1993	sjg
2,4,5-Trichlorophenol	ND	50	ug/L	11/01/1993	sjg
Nitrobenzene-d5 (SURR)	74		% Rec.	11/01/1993	sjg



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METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
2-Fluorobiphenyl (SURR)	65		% Rec.	11/01/1993	sjg
p-Terphenyl-d14 (SURR)	63		% Rec.	11/01/1993	sjg
Phenol-d5 (SURR)	24		% Rec.	11/01/1993	sjg
2-Fluorophenol (SURR)	14		% Rec.	11/01/1993	sjg
2,4,6-Tribromophenol (SURR)	32		% Rec.	11/01/1993	sjg
METHOD 8270 (GCMS, Liquid)					
Acenaphthene	ND	10	ug/L	11/01/1993	sjg
Acenaphthylene	ND	10	ug/L	11/01/1993	sjg
Aldrin	ND	50	ug/L	11/01/1993	sjg
Anthracene	ND	10	ug/L	11/01/1993	sjg
Benzidine	ND	44	ug/L	11/01/1993	sjg
Benzo(a)anthracene	ND	10	ug/L	11/01/1993	sjg
Benzo(b)fluoranthene	ND	10	ug/L	11/01/1993	sjg
Benzo(k)fluoranthene	ND	10	ug/L	11/01/1993	sjg
Benzo(a)pyrene	ND	10	ug/L	11/01/1993	sjg
Benzo(g,h,i)perylene	ND	10	ug/L	11/01/1993	sjg
Benzoic acid	ND	50	ug/L	11/01/1993	sjg
Benzyl alcohol	ND	10	ug/L	11/01/1993	sjg
Butyl benzyl phthalate	ND	10	ug/L	11/01/1993	sjg
delta-BHC	ND	50	ug/L	11/01/1993	sjg
gamma-BHC	ND	50	ug/L	11/01/1993	sjg
bis(2-Chloroethyl)ether	ND	10	ug/L	11/01/1993	sjg
bis(2-Chloroethoxy)methane	ND	10	ug/L	11/01/1993	sjg
bis(2-Chloroisopropyl)ether	ND	10	ug/L	11/01/1993	sjg
bis(2-Ethylhexyl)phthalate	ND	10	ug/L	11/01/1993	sjg
4-Bromophenyl phenyl ether	ND	10	ug/L	11/01/1993	sjg
4-Chloroaniline	ND	10	ug/L	11/01/1993	sjg
2-Chloronaphthalene	ND	10	ug/L	11/01/1993	sjg
4-Chlorophenyl phenyl ether	ND	10	ug/L	11/01/1993	sjg
Chrysene	ND	10	ug/L	11/01/1993	sjg
4,4'-DDD	ND	50	ug/L	11/01/1993	sjg
4,4'-DDE	ND	50	ug/L	11/01/1993	sjg
4,4'-DDT	ND	50	ug/L	11/01/1993	sjg
Dibenzo(a,h)anthracene	ND	10	ug/L	11/01/1993	sjg
Dibenzofuran	ND	10	ug/L	11/01/1993	sjg
Di-n-butylphthalate	ND	10	ug/L	11/01/1993	sjg
1,2-Dichlorobenzene	ND	10	ug/L	11/01/1993	sjg
1,3-Dichlorobenzene	ND	10	ug/L	11/01/1993	sjg
1,4-Dichlorobenzene	ND	10	ug/L	11/01/1993	sjg
3,3'-Dichlorobenzidine	ND	20	ug/L	11/01/1993	sjg
Dieldrin	ND	50	ug/L	11/01/1993	sjg
Diethylphthalate	ND	10	ug/L	11/01/1993	sjg
Dimethyl phthalate	ND	10	ug/L	11/01/1993	sjg
2,4-Dinitrotoluene	ND	10	ug/L	11/01/1993	sjg
2,6-Dinitrotoluene	ND	10	ug/L	11/01/1993	sjg
Di-n-octyl phthalate	ND	10	ug/L	11/01/1993	sjg
Endrin aldehyde	ND	50	ug/L	11/01/1993	sjg
Fluoranthene	ND	10	ug/L	11/01/1993	sjg



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METHOD BLANK REPORT

Parameter	Method	Reporting	Units	Date	Analyst
	Blank			Analyzed	
	Amount	Limit			
	Found				
Fluorene	ND	10	ug/L	11/01/1993	sjg
Heptachlor	ND	50	ug/L	11/01/1993	sjg
Heptachlor epoxide	ND	50	ug/L	11/01/1993	sjg
Hexachlorobenzene	ND	10	ug/L	11/01/1993	sjg
Hexachlorobutadiene	ND	10	ug/L	11/01/1993	sjg
Hexachlorocyclopentadiene	ND	10	ug/L	11/01/1993	sjg
Hexachloroethane	ND	10	ug/L	11/01/1993	sjg
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	11/01/1993	sjg
Isophorone	ND	10	ug/L	11/01/1993	sjg
2-Methylnaphthalene	ND	10	ug/L	11/01/1993	sjg
Naphthalene	ND	10	ug/L	11/01/1993	sjg
2-Nitroaniline	ND	50	ug/L	11/01/1993	sjg
3-Nitroaniline	ND	50	ug/L	11/01/1993	sjg
4-Nitroaniline	ND	50	ug/L	11/01/1993	sjg
Nitrobenzene	ND	10	ug/L	11/01/1993	sjg
N-Nitroso-Di-N-propylamine	ND	10	ug/L	11/01/1993	sjg
N-Nitrosodiphenylamine	ND	10	ug/L	11/01/1993	sjg
Phenanthrene	ND	10	ug/L	11/01/1993	sjg
Pyrene	ND	10	ug/L	11/01/1993	sjg
1,2,4-Trichlorobenzene	ND	10	ug/L	11/01/1993	sjg
4-Chloro-3-methylphenol	ND	10	ug/L	11/01/1993	sjg
2-Chlorophenol	ND	10	ug/L	11/01/1993	sjg
2,4-Dichlorophenol	ND	10	ug/L	11/01/1993	sjg
2,4-Dimethylphenol	ND	10	ug/L	11/01/1993	sjg
2,4-Dinitrophenol	ND	50	ug/L	11/01/1993	sjg
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11/01/1993	sjg
2-Nitrophenol	ND	10	ug/L	11/01/1993	sjg
4-Nitrophenol	ND	50	ug/L	11/01/1993	sjg
Pentachlorophenol	ND	50	ug/L	11/01/1993	sjg
Phenol	ND	10	ug/L	11/01/1993	sjg
2,4,6-Trichlorophenol	ND	10	ug/L	11/01/1993	sjg
2-Methylphenol	ND	10	ug/L	11/01/1993	sjg
4-Methylphenol	ND	10	ug/L	11/01/1993	sjg
2,4,5-Trichlorophenol	ND	50	ug/L	11/01/1993	sjg
Nitrobenzene-d5 (SURR)	74		% Rec.	11/01/1993	sjg
2-Fluorobiphenyl (SURR)	65		% Rec.	11/01/1993	sjg
p-Terphenyl-d14 (SURR)	63		% Rec.	11/01/1993	sjg
Phenol-d5 (SURR)	24		% Rec.	11/01/1993	sjg
2-Fluorophenol (SURR)	14		% Rec.	11/01/1993	sjg
2,4,6-Tribromophenol (SURR)	32		% Rec.	11/01/1993	sjg



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04764

Date: 11/05/1993
ELAP Certificate: 1386
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Ref: SHELL 6039 College Ave., Oakland, WA Job:81-618-07

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike			Spike Amount	Sample Conc.	Matrix Spike		Units	Date Analyzed	Analyst Initials
	Spike % Rec.	Dup % Rec.	RPD			Spike Conc.	Dup. Conc.			
Oil & Grease (Total)	92.3	94.3	2.1	131.5	ND	121.4	115.8	mg/L	10/29/1993	pbg
Oil & Grease (Non-Polar)	92.3	94.3	2.1	131.5	ND	121.4	115.8	mg/L	10/29/1993	pbg
TPH (Gas/BTXE, Liquid)	--	--	--	--	--	--	--	--	--	--
as Gasoline	85.0	85.0	< 1	1.00	ND	0.848	0.851	mg/L	10/30/1993	vin
Benzene	101.0	102.0	< 1	34.8	ND	35.1	35.4	ug/L	10/30/1993	vin
Toluene	100.0	101.0	< 1	93.9	ND	94.3	95.0	ug/L	10/30/1993	vin
Bromofluorobenzene (SURR)	102.0	101.0	--	--	--	102.0	101.0	% Rec.	10/30/1993	vin
TPH (Gas/BTXE, Liquid)	--	--	--	--	--	--	--	--	--	--
as Gasoline	87.3	85.3	2.3	1.00	ND	0.873	0.853	mg/L	10/29/1993	vin
Benzene	100.0	98.9	1.0	35.3	ND	35.3	34.9	ug/L	10/29/1993	vin
Toluene	100.7	99.1	1.5	95.0	ND	95.7	94.1	ug/L	10/29/1993	vin
Bromofluorobenzene (SURR)	105	105		100	87			% Rec.	10/29/1993	vin
METHOD 3510/M8015										
as Diesel	83	88	5.8	1.00	--	0.83	0.88	mg/L	10/30/1993	dkb



Client Acct: 1809
 Client Name: Weiss Associates
 NET Job No: 93.04764

Date: 11/05/1993
 ELAP Certificate: 1386
 Page: 15

Ref: SHELL 6039 College Ave., Oakland, WA Job:81-618-07

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS		LCS		Units	Date Analyzed	Analyst Initials
	% Recovery	RPD	Amount Found	Amount Expected			
Oil & Grease (Total)	95.8		109.3	114.1	mg/L	10/29/1993	pbg
Oil & Grease (Total)	94.8		117.4	123.8	mg/L	10/29/1993	pbg
Oil & Grease (Non-Polar)	84.8		96.8	114.1	mg/L	10/29/1993	pbg
METHOD 3510/M8015							
as Diesel	65.0		0.65	1.00	mg/L	10/30/1993	dkb
METHOD 8270 (GCMS, Liquid)							
Acenaphthene	65.0		65	100	ug/L	11/01/1993	sjg
1,4-Dichlorobenzene	57.0		57	100	ug/L	11/01/1993	sjg
2,4-Dinitrotoluene	76.0		76	100	ug/L	11/01/1993	sjg
N-Nitroso-Di-N-propylamine	78.0		78	100	ug/L	11/01/1993	sjg
Pyrene	84.0		84	100	ug/L	11/01/1993	sjg
1,2,4-Trichlorobenzene	60.0		60	100	ug/L	11/01/1993	sjg
4-Chloro-3-methylphenol	79.0		158	200	ug/L	11/01/1993	sjg
2-Chlorophenol	70.0		140	200	ug/L	11/01/1993	sjg
4-Nitrophenol	370.0		740	200	ug/L	11/01/1993	sjg
Pentachlorophenol	92.0		184	200	ug/L	11/01/1993	sjg
Phenol	38.5		77	200	ug/L	11/01/1993	sjg
Nitrobenzene-d5 (SURR)	76.0		76	100	% Rec.	11/01/1993	sjg
2-Fluorobiphenyl (SURR)	65.0		65	100	% Rec.	11/01/1993	sjg
p-Terphenyl-d14 (SURR)	62.0		62	100	% Rec.	11/01/1993	sjg
Phenol-d5 (SURR)	39.0		39	100	% Rec.	11/01/1993	sjg
2-Fluorophenol (SURR)	51.0		51	100	% Rec.	11/01/1993	sjg
2,4,6-Tribromophenol (SURR)	77.0		77	100	% Rec.	11/01/1993	sjg
METHOD 8270 (GCMS, Liquid)							
Acenaphthene	67.0		67	100	ug/L	11/01/1993	sjg
1,4-Dichlorobenzene	56.0		56	100	ug/L	11/01/1993	sjg
2,4-Dinitrotoluene	73.0		73	100	ug/L	11/01/1993	sjg
N-Nitroso-Di-N-propylamine	76.0		76	100	ug/L	11/01/1993	sjg
Pyrene	83.0		83	100	ug/L	11/01/1993	sjg
1,2,4-Trichlorobenzene	58.0		58	100	ug/L	11/01/1993	sjg
4-Chloro-3-methylphenol	74.0		148	200	ug/L	11/01/1993	sjg
2-Chlorophenol	60.0		120	200	ug/L	11/01/1993	sjg
4-Nitrophenol	9.0		18	200	ug/L	11/01/1993	sjg
Pentachlorophenol	63.0		126	200	ug/L	11/01/1993	sjg
Phenol	34.0		68	200	ug/L	11/01/1993	sjg
Nitrobenzene-d5 (SURR)	74.0		74	100	% Rec.	11/01/1993	sjg
2-Fluorobiphenyl (SURR)	67.0		67	100	% Rec.	11/01/1993	sjg
p-Terphenyl-d14 (SURR)	63.0		63	100	% Rec.	11/01/1993	sjg
Phenol-d5 (SURR)	34.0		34	100	% Rec.	11/01/1993	sjg
2-Fluorophenol (SURR)	34.0		34	100	% Rec.	11/01/1993	sjg
2,4,6-Tribromophenol (SURR)	57.0		57	100	% Rec.	11/01/1993	sjg
METHOD 8270 (GCMS, Liquid)							
Acenaphthene	65.0		65	100	ug/L	11/01/1993	sjg
1,4-Dichlorobenzene	57.0		57	100	ug/L	11/01/1993	sjg
2,4-Dinitrotoluene	76.0		76	100	ug/L	11/01/1993	sjg
N-Nitroso-Di-N-propylamine	78.0		78	100	ug/L	11/01/1993	sjg
Pyrene	84.0		84	100	ug/L	11/01/1993	sjg



Client Acct: 1809
Client Name: Weiss Associates
NET Job No: 93.04764

Date: 11/05/1993
ELAP Certificate: 1386
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Ref: SHELL 6039 College Ave., Oakland, WA Job:81-618-07

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS		LCS	LCS	Units	Date	Analyst
	% Recovery	RPD	Amount Found	Amount Expected		Analyzed	Initials
1,2,4-Trichlorobenzene	60.0		60	100	ug/L	11/01/1993	sjg
4-Chloro-3-methylphenol	79.0		158	200	ug/L	11/01/1993	sjg
2-Chlorophenol	70.0		140	200	ug/L	11/01/1993	sjg
4-Nitrophenol	370.0		740	200	ug/L	11/01/1993	sjg
Pentachlorophenol	92.0		184	200	ug/L	11/01/1993	sjg
Phenol	38.5		77	200	ug/L	11/01/1993	sjg
Nitrobenzene-d5 (SURR)	76.0		76	100	% Rec.	11/01/1993	sjg
2-Fluorobiphenyl (SURR)	65.0		65	100	% Rec.	11/01/1993	sjg
p-Terphenyl-d14 (SURR)	62.0		62	100	% Rec.	11/01/1993	sjg
Phenol-d5 (SURR)	39.0		39	100	% Rec.	11/01/1993	sjg
2-Fluorophenol (SURR)	51.0		51	100	% Rec.	11/01/1993	sjg
2,4,6-Tribromophenol (SURR)	77.0		77	100	% Rec.	11/01/1993	sjg



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 5614

Date: 9-10-93

Page 2 of 2

Site Address: 6039 COLLEGE AVE
DAKLAND
WIC#: 204-5508-3301

Analysis Required

LAB: NET

Shell Engineer: DAN KIRK Phone No.: 675-6168
Fax #: 675-6172

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

Consultant Contact: DAVID ELIAS Phone No.: (510) 547-5420
WA JOB # 81-618-07 Fax #: 547-5043

Comments:

Sampled by: David Elias

Printed Name: DAVID ELIAS

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	16 days <input checked="" type="checkbox"/> Normal
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input checked="" type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

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

Rumper David Elias

UST AGENCY: ACDEH 10/21/93

Sample ID	Date	Sludge	Soil	Water	Air	No. of conds.	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	OIL AND GREASE	SYOC'S 8270	Asbestos 8020	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
																					BH-E-5.7
BH-E-10.7												X									RESULTS SEPARATE. MAKE SURE
BH-E-15.7							X					X	X	X							RESULTS INCLUDE TPH-6 / LEAD
BH-C				X		8	X					X	X	X						H ₂ O & GAS	P.C.I.
BH-D				X		8	X					X	X	X							
COMP			X			4					X									Soil & GAS	Seal next
BH-21			X			3					X									GAS & 420	Changes/additions from Dave to S. Long 9/14/93

Relinquished By (signature): <u>David Elias</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9-10-93</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9-13-93</u>
Relinquished By (signature): <u>David Elias</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9-13-93</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>G.P. Lumbie</u>	Date: <u>9-13-93</u>
Relinquished By (signature): <u>G.P. Lumbie</u>	Printed Name: <u>G.P. Lumbie</u>	Date: <u>9-13-93</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>K. Temple</u>	Date: <u>9/14/93</u>

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
 Serial No: 5614

Date: 9-19-93
 Page 1 of 2

Site Address: 6039 COLLEGE AVE
DAKLAND
 WIC#: 204-5508-3301

Analysis Required

LAB: NET

Shell Engineer: DAN KIRK Phone No.: 675-6168
 Fax #: 675-6172

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

Consultant Contact: DAVID ELIAS Phone No.: (510) 547-5420
WA JOB # 81-618-07 Fax #: 547-5043

Comments:

Sampled by: David Elias
 Printed Name: DAVID ELIAS

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

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

UST AGENCY: ACDEH

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	OIL AND GREASE	SVOC'S 8270	Asbestos	Container Size	Preparation Used	Composite Y/N
BH-C-5.7	✓					✓			✓			N
BH-C-10.7	✓					✓						
BH-C-15.7	✓	✓				✓	✓	✓				
BH-C-20.7	✓					✓						
BH-D-5.7	✓					✓			✓			
BH-D-10.7	✓	✓				✓	✓	✓				
BH-D-15.7	✓	✓				✓	✓	✓				
BH-D-20.7	✓	✓				✓	✓	✓				

(CUSTODY SEALED)
9/13/93
@ G.P. Lumbre
16:00
 Seal intact

Shipped By (signature): <u>David Elias</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9-10-93</u>	Received (signature): <u>David Elias</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9-19-93</u>
Shipped By (signature): <u>David Elias</u>	Printed Name: <u>DAVID ELIAS</u>	Date: <u>9-13-93</u>	Received (signature): <u>G.P. Lumbre</u>	Printed Name: <u>G.P. Lumbre</u>	Date: <u>9-13-93</u>
Shipped By (signature): <u>Lumbre</u>	Printed Name: <u>G.P. Lumbre</u>	Date: <u>9/13/93</u>	Received (signature): <u>K. Temple</u>	Printed Name: <u>K. Temple</u>	Date: <u>9/14/93</u>

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

Received from David Elias

ATTACHMENT E
MONITORING WELL SURVEY REPORT

Table 4. Soil Analytical Results - Well Borings
 Shell 6039 College Avenue, Oakland
 Concentrations in parts per million (ppm)

Sample/Depth	MW-2-11'	MW-2-15.5'	MW-2-20.5'	MW-3-10'	MW-3-15.5'	MW-3-20.5'	MW-4-10.5'	MW-4-15.5'	MW-4-20.5'	MW-5-6'	MW-5-16'	MW-5-21'
Approx. GW Depth	17'	17'	17'	16'	16'	16'	17'	17'	17'	17"	17'	17'
Sample Date	2/08/90	2/08/90	2/08/90	2/07/90	2/07/90	2/07/90	2/07/90	2/07/90	2/07/90	8/24/91	8/24/91	08/24/91
Parameter /Method												
Benzene	ND @ 0.05	ND @ 0.05	ND @ 0.05	ND @ 0.05	1.1	ND @ 0.05	ND @ 0.05	0.31	0.06	ND @ 0.005	ND @ 0.025	ND @ 0.005
Toluene	ND @ 0.1	ND @ 0.1	ND @ 0.1	ND @ 0.1	0.7	ND @ 0.1	ND @ 0.11	0.34	ND @ 0.1	ND @ 0.005	ND @ 0.025	ND @ 0.005
Ethylbenzene	ND @ 0.1	ND @ 0.1	ND @ 0.1	ND @ 0.1	3.1	ND @ 0.1	ND @ 0.1	0.92	0.46	ND @ 0.005	0.028	ND @ 0.005
Xylenes	ND @ 0.1	ND @ 0.1	ND @ 0.1	0.11	1.9	ND @ 0.1	ND @ 0.1	2.6	0.57	ND @ 0.005	0.10	ND @ 0.005
/EPA 8020												
TPH as Gasoline	ND @ 1	ND @ 1	ND @ 1	12	230	28	ND @ 1	140	72	ND @ 1	23*	ND @ 1
TPH as Motor Oil	ND @ 10	ND @ 1	ND @ 10	ND @ 10	1,800	ND @ 10	ND @ 1	6,400	46,000	ND @ 12	13	ND @ 12
TPH as Diesel	ND @ 1	ND @ 1	1.1	4.4	200	9.9	1.2	61	2200	ND @ 1.2	7**	ND @ 1.2
/EPA 8015												
PCBs/EPA 8080	---	---	---	ND @ 0.05	ND @ 0.05	ND @ 0.05	ND @ 0.05	ND @ 0.05	ND @ 0.05	---	---	---
TOG /503E	---	---	---	---	---	---	---	---	---	ND @ 50	ND @ 50	ND @ 50

- = Analysis not performed on sample
 ND = Not present above the stated detection limit
 TPH = Total petroleum hydrocarbons
 PCBs = Polychlorinated biphenyls
 TOG = Total oil and grease
 * = Compounds detected are due to petroleum mixture other than gasoline
 ** = Not characteristic of standard diesel pattern
 *** = Results include compounds apparently due to gasoline as well as those due to diesel.

Tucker & Associates
SURVEYING & MAPPING



Weiss Associates
5500 Shellmound Street
Emeryville CA 94608

November 8, 1993

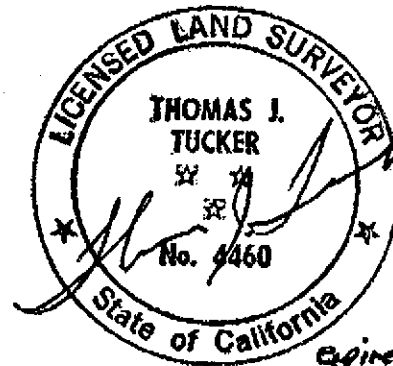
Re: Monitoring well at Shell Station- 6039 College Ave.
Oakland CA.

Well Name	T.O.C.Elev.	Rim Elev.	PVC casing
MW-1	195.89		4"
MW-3	192.52		4"
MW-4	193.37		4"
MW-6	189.05	189.34	2"

Note:

Monitoring wells 1, 3 and 4 were used to establish the elevation of MW-6.

Rim elev. of MW-6 is directly above T.O.C. elevation.



Expires: 9/30/97

Table 3. Soil Analytical Results - Borings
Concentrations in Parts Per Million (ppm)

Sample Depth	B-1-22.5'	B-2-18'	B-2-24'	B-3-19'	B-3-21'	B-4-18.5'	B-4-25'	B-5-22'	B-5-23'	B-6-19.5'	B-6-22.5'
Approx. GW Depth	21'	22'	22'	18'	18'	20'	20'	19'	19'	18'	18'
Sample Date	01/04/90	01/05/90	01/05/90	01/05/90	01/05/90	01/04/90	01/04/90	01/04/90	01/04/90	01/05/90	01/05/90
Parameter /Method											
Benzene	ND @ 0.05	0.62	ND @ 0.05	0.24	0.19	0.57	ND @ 0.05	ND @ 0.05	ND @ 0.05	0.28	ND @ 0.05
Toluene	ND @ 0.1	ND @ 0.1	ND @ 0.1	0.18	ND @ 0.1	0.11	ND @ 0.1	ND @ 0.1	ND @ 0.1	ND @ 0.1	ND @ 0.1
Ethylbenzene	ND @ 0.1	0.48	ND @ 0.1	4.1	0.53	0.65	ND @ 0.1	ND @ 0.1	ND @ 0.1	1.3	ND @ 0.1
Xylenes	ND @ 0.1	1.2	ND @ 0.1	9.8	0.68	1.3	ND @ 0.1	ND @ 0.1	ND @ 0.1	2.1	ND @ 0.1
/EPA 8020											
TPH as Gasoline	8.1	130	1.8	610	71	170	ND @ 1	ND @ 1	4.4	260	ND @ 1
TPH as Motor Oil	---	---	---	110000	14000	---	---	---	---	12000	320
TPH as Diesel	---	---	---	5900	750	---	---	---	---	600	16
/EPA 8015											
Oil and Grease	---	---	---	810	380	---	---	---	---	1100	91
/SM 503 D&E											
Halogenated VOCs	---	---	---	ND @ 0.5	ND @ 0.5	---	---	---	---	ND @ 0.05	ND @ 0.005
/EPA 8010				to 2.5	to 0.25					to 0.25	to 0.025
Cadmium	---	---	---	ND @ 0.5	ND @ 0.5	---	---	---	---	ND @ 0.5	ND @ 0.5
Chromium	---	---	---	48	61	---	---	---	---	86	73
Zinc	---	---	---	51	54	---	---	---	---	52	60
/EPA 6010											
Lead/EPA 7241	---	---	---	13	7.6	---	---	---	---	8.1	9.2

--- = Analysis not performed on sample

ND = Not present above the stated detection limit