



November 2, 1995

STD  
4017

Brian Oliva  
Hazardous Materials Specialist  
Alameda County Health Agency  
Department of Environmental Health  
Alameda, California 94502

RE: **Dispenser Replacement Sampling**  
Shell Service Station  
WIC #204-5508-5702  
610 Market Street 94607  
Oakland, California  
WA Job #81-1103-09

Dear Mr. Oliva:

On behalf of Shell Oil Products Company (Shell), Weiss Associates (WA) submits this report documenting soil sampling and overexcavation activities for the recent fuel dispenser replacements and product piping removal at the above referenced Shell service station (Figure 1). The former dispensers were used to supply gasoline pumped from the underground storage tanks. The objective of this sampling was to assess whether hydrocarbons are in soil beneath the former dispensers and product piping. The objective of the overexcavation was to remove encountered stained soil as directed by Alameda County Health Agency (ACHA) personnel. WA's scope of work, the site background, and the soil sampling results are presented below.

### SCOPE OF WORK

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

- Collect soil samples from beneath the former dispensers and the removed product piping according to local and state regulatory guidelines;
- Analyze collected soil samples for petroleum hydrocarbons;
- Overexcavate stained soil as directed by ACHA personnel;
- Sample and dispose of the excavated soil; and
- Report the results.

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PROTECTION  
recycled paper

Brian Oliva  
November 2, 1995

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## **SITE BACKGROUND**

- Location:*** The operating Shell service station is located at the southeast corner of Market and 7th Streets in Oakland, California (Figures 1 and 2).
- Surroundings:*** Commercial and residential development.
- Local Topography:*** The site is about 20 ft above mean sea level.
- Nearest Surface Water:*** Oakland Inner Harbor is located about 1/2-mile southwest of the site.
- Ground Water Depth:*** According to Alameda County Department of Public Works, ground water is about 10 ft below ground surface.

## **Soil Sampling Results**

- Parties Present:*** WA Environmental Technician Herb Toor and WA Geologist Faith Daverin collected the soil samples. Alameda County Health Agency (ACHA) Inspector Brian Oliva observed and directed the soil sampling. Paradiso Construction of San Leandro, California excavated the trenches, removed the product lines, assisted the sampling and replaced the dispensers.
- Sampling Dates:*** August 3 and 7, 1995.
- Number of Samples:*** 12 initial samples and 6 confirmation samples: The initial sampling consisted of collecting one sample from beneath each of the eight removed dispensers and four samples total from beneath the removed product lines. Confirmation samples were collected from two areas where stained soil was observed and overexcavated. All soil samples were collected at the request of ACHA Inspector Brian Oliva. Sample locations are presented on Figure 3.
- Soil Sampling Method:*** Soil samples were collected by driving clean brass tubes into undisturbed soil, either from a backhoe bucket or directly from the open trenches or excavation. Product line samples were collected from 2.5 feet below ground surface (bgs).

Confirmation overexcavation samples were collected from up to 5 ft below ground surface. All sample tubes were immediately sealed with Teflon sheeting and plastic caps and placed in an iced cooler for transport to the state-certified analytical laboratory.

***Analytical Laboratory:***

Sequoia Analytical in Redwood City, California.

***Analytical Methods:***

All initial soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) by modified EPA Method 8015 and benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020. The confirmation samples were also analyzed for non-polar petroleum oil and grease by American Public Health Association Standard Method 5520 E&F, volatile organic compounds (VOCs) by EPA Method 8240, semivolatile organic compounds (SVOCs) by EPA Method 8270 and the metals cadmium, chromium, lead, nickel and zinc because a former waste oil tank may have been located between the middle and eastern dispenser islands. The certified analytical reports and chain-of-custody forms are included in Attachment A.

***Soil Sample Observations:***

Stained soil was observed near soil samples D-4, L-2, L-3 and L-4. ACHA Inspector Brian Oliva directed WA to overexcavate additional soil from these areas and collect confirmational soil samples. On August 7<sup>th</sup>, soil was overexcavated from these areas until no stained soil was observed. Soil samples SS-1 through SS-6 were then collected as confirmation samples. Based on overexcavating the stained soil observed near original samples D-4, L-2, L-3 and L-4, the trenches and the overexcavated areas were backfilled and a new concrete center drive was poured.

***Analytic Results:***

TPH-G greater than 1,000 parts per million (ppm) were detected in initial sample D-1 from beneath the former dispenser at the northern end of the middle dispenser island and in samples D-6 and D-7 from the center of the eastern dispenser island. However, no benzene was detected in any of these samples. Of the four samples collected beneath the removed product piping, only 2.2 ppm TPH-G was detected in sample L-2. No benzene was detected in any of the samples collected beneath the product piping. The analytic results are summarized in Table 1.

In the six confirmation soil samples, up to 28 ppm TPH-G but no benzene was detected in the area west of the eastern pump island. Non-polar POG was detected at up to 260 ppm in this same area. However, no VOCs or SVOCs were detected in any of the confirmation samples. All analyzed metals were below their respective total threshold limit concentrations. These analytic results are summarized in Tables 1 and 2.

***Excavated Soil Volume:***

A total of about 48 cubic yards of soil were excavated as shown in Figure 3. About 33 cubic yards of soil were removed in association with the dispenser and piping replacements. Approximately 15 cubic yards of hydrocarbon-bearing soil were overexcavated as shown in Figure 3.

***Maximum Excavation Depth:***

5 ft below ground surface.

***Lithology Encountered:***

Silty sand to about 5 ft depth.

***Ground Water Depth:***

No ground water was encountered.

**Soil Disposal**

***Stockpile Sampling:***

The soil stockpile was sampled by driving clean brass tubes at least 12 inches below the stockpile surface. The tubes were immediately capped and sealed with Teflon tape and refrigerated for transport to the analytical laboratory. The laboratory composited and analyzed the samples for TPH-G, BTEX, and organic lead, POG, pH, polychlorinated byphenyls by EPA Method 8080, reactivity, total characteristic leaching potential (TCLP) for metals by EPA Method 6010, TCLP for SVOCs by EPA Method 8270, TCLP for VOCs by EPA Method 8240, Static Acute Hazardous Waste Bioassay and Toxicity Extraction for Lead. The certified analytic report and chain-of custody form are included in Attachment B.

***Soil Transport and Disposal:***

On October 11, 1995, Manley and Sons Trucking, Inc., in Sacramento, California transported about 48 cubic yards of soil to Laidlaw Environmental in Buttonwillow, California for disposal. The soil disposal confirmation is presented in Attachment B.

## CONCLUSIONS

Based on the sampling results, WA concludes that:

- No TPH-G was detected greater than 76 ppm in initial soil samples D-2, D-3, D-4, D-5, and D-8. However, up to 2,700 ppm TPH-G were detected in samples D-1 from the center dispenser island, and D-6 and D-7 from the western dispenser island. Except for 0.70 ppm benzene in sample D-3, benzene was below laboratory method detection limits in all of these samples.
- The area beneath sample D-4 (southern end of middle fuel island) was overexcavated based on field observations and as directed by ACHA Inspector Brian Oliva. No TPH-G, BTEX, POG, VOCs or SVOCs were detected in confirmation samples collected below this area.
- According to ACHA Inspector Brian Oliva, the area between the middle and eastern dispenser islands may have been impacted by a former waste oil tank. Confirmation samples collected from beneath samples L-2, L-3 and L-4 detected up to 260 ppm POG and up to 28 ppm TPH-G. However, no benzene, VOCs or SVOCs were detected in these samples.
- Due to construction activities, up to 2,700 ppm TPH-G was left in place beneath samples D-1, D-6 and D-7. The new fuel dispenser islands were constructed before the initial analytical results were received, preventing further overexcavation.
- Only the product piping located adjacent to the eastern dispenser island was removed and sampled. All other product piping remained in place and was reattached to the new dispensers.
- The dispensers removed from the eastern dispenser island were not upgraded or replaced, nor was the dispenser island removed. Poor access prevented soil samples from being collected beneath the actual dispenser. As directed by ACHA Inspector Brian Oliva, soil samples L-1 through L-4 collected beneath the former product piping, also satisfy the requirement for sampling below the former dispensers along the eastern dispenser.
- A total of 33 cubic yards of soil were removed during the dispenser upgrade. An additional 15 cubic yards of soil were removed during overexcavation activities.

Brian Oliva  
November 2, 1995

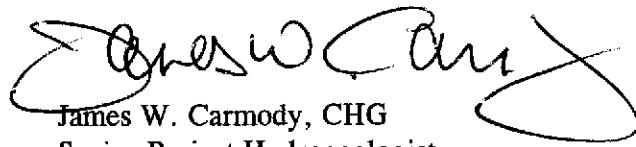
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WA trusts that this submittal meets your needs. Please call if you have any questions.

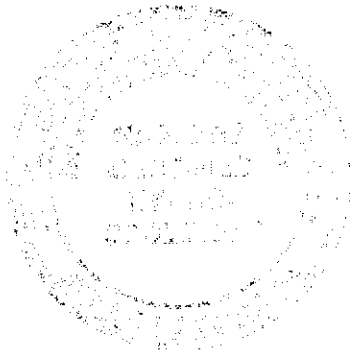
Sincerely,  
Weiss Associates



Faith Morris Daverin  
Staff Geologist



James W. Carmody, CHG  
Senior Project Hydrogeologist



FMD/JWC:fmd

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Attachments:

Figures

Tables

A - Certified Analytical Reports and Chain-of-Custody Forms for Soil

B - Soil Disposal Confirmation and Certified Analytical Report for Stockpile Samples

cc: R. Jeff Granberry, Shell Oil Products Company, PO Box 4023, Concord, CA 94524  
Jeff Byram, Shell Oil Products Company, PO Box 4023, Concord, CA 94524  
Kevin Graves, Regional Water Quality Control Board - San Francisco Bay, 2101 Webster Street, Suite 500, Oakland, CA 94612  
Tom Fojut, Weiss Associates

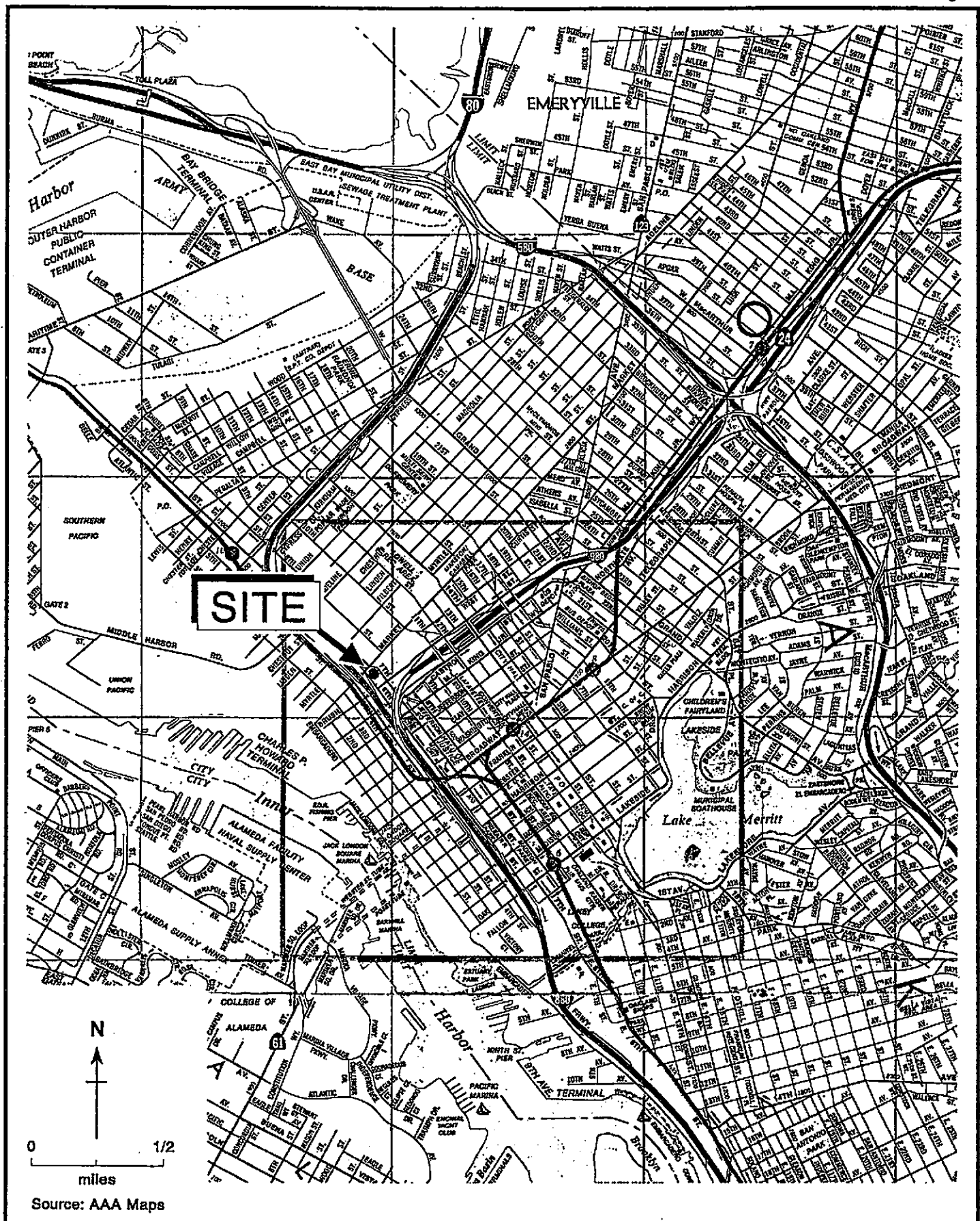


Figure 1. Site Location Map - Shell Service Station WIC# 204-5508-5702 - 610 Market Street, Oakland, California

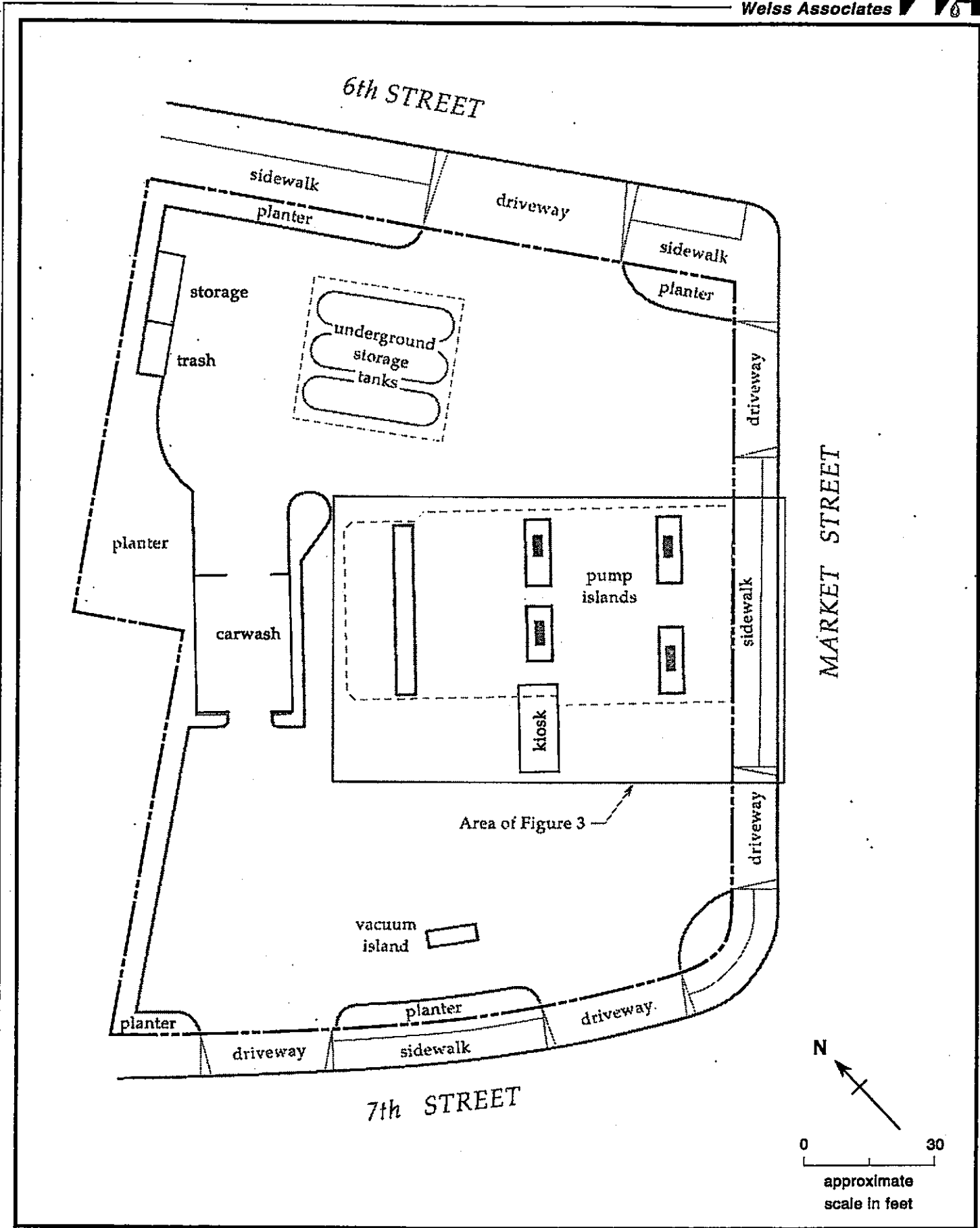


Figure 2. Site Layout - Shell Service Station WIC# 204-5508-5702, 610 Market Street, Oakland, California



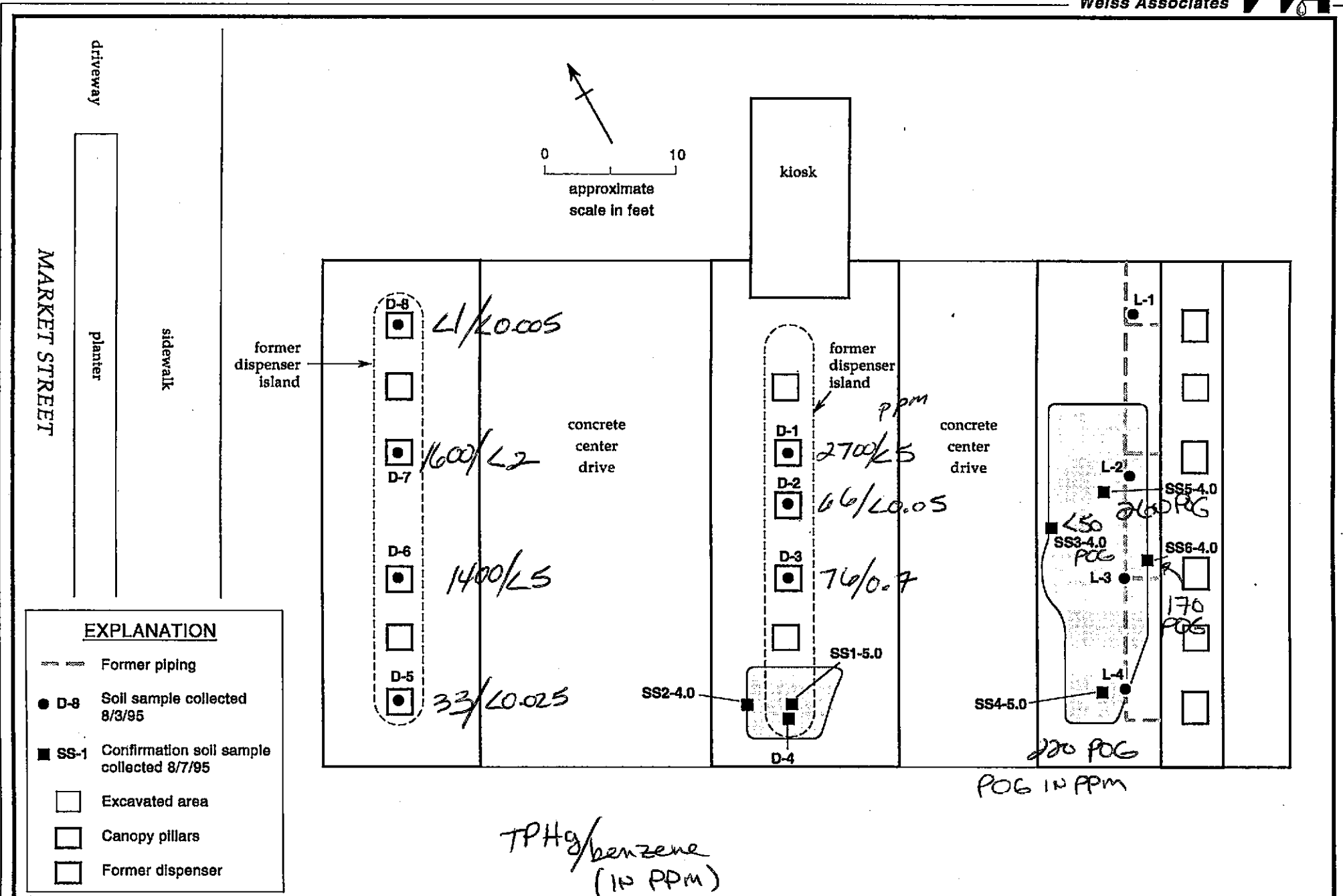


Figure 3. Soil Sample Locations - August 3 and 7, 1995 - Shell Service Station WIC# 204-5508-5702 - 610 Market Street, Oakland, California

Table 1. Analytic Results for Soil - Petroleum Hydrocarbons - Shell Service Station, WIC #204-5508-5702, 610 Market Street, Oakland, California

Sample ID	Date Sampled	Sample Depth (ft)	TPH-G	POG	B	T	E	X
			←————— parts per million (ppm) —————→					
<b>Initial Soil Samples:</b>								
D-1	08/03/95	2.5	2,700	---	<5.0	130	46	320
D-2	08/03/95	2.5	66	---	<0.050	0.11	0.36	1.9
D-3	08/03/95	2.5	76	---	0.70	4.7	0.79	8.7
D-4	08/03/95	2.5	7.7	---	<0.010	0.017	0.043	0.082
D-5	08/03/95	2.5	33	---	<0.025	0.16	0.10	3.0
D-6	08/03/95	2.5	1,400	---	<5.0	<5.0	<5.0	4.2
D-7	08/03/95	2.5	1,600	---	<2.0	<2.0	3.4	25
D-8	08/03/95	2.5	<1.0	---	<0.005	<0.0072	<0.005	<0.025
L-1	08/03/95	2.5	<1.0	---	<0.005	<0.005	<0.005	<0.005
L-2	08/03/95	2.5	2.2	---	<0.005	0.036	0.0068	<0.064
L-3	08/03/95	2.5	<1.0	---	<0.005	<0.005	<0.005	<0.005
L-4	08/03/95	2.5	<1.0	---	<0.005	<0.005	<0.005	<0.005
<b>Confirmation Soil Samples:</b>								
SS-1	08/07/95	5.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005
SS-2	08/07/95	4.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005
SS-3	08/07/95	4.0	<1.0	<50	<0.005	<0.005	<0.005	<0.005
SS-4	08/07/95	5.0	2.0	220	<0.005	0.0057	0.0076	0.019
SS-5	08/07/95	5.0	10	260	<0.005	<0.005	0.034	0.086
SS-6	08/07/95	4.0	28	170	<0.012	<0.012	<0.029	<0.084

**Abbreviations**

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015  
 POG = Non-Polar Petroleum Oil and Grease by EPA Method 5520 E&F  
 B = Benzene by EPA Method 8020  
 T = Toluene by EPA Method 8020  
 E = Ethylbenzene by EPA Method 8020

X = Xylenes by EPA Method 8020  
 --- = Not Analyzed  
 --- = not analyzed

**Analytical Laboratory:**

Sequoia Analytical of Redwood City, California



Table 2. Analytic Results for Soil VOCs, SVOCs, and Various Metals - Shell Service Station, WIC #204-5508-5702, 610 Market Street, Oakland, California

Sample ID	Date Sampled	Sample Depth (ft)	VOCs	SVOCs	Cd	Cr	Pb	Ni	Zn
			parts per million (ppm)						
<b>Confirmation Soil Samples:</b>									
SS-1	08/07/95	5.0	ND	ND	<0.050	52	<5.0	39	26
SS-2	08/07/95	4.0	ND	ND	<0.050	36	<5.0	16	11
SS-3	08/07/95	4.0	ND	ND	<0.050	36	10	24	31
SS-4	08/07/95	5.0	ND	ND	<0.050	34	110	21	110
SS-5	08/07/95	5.0	ND	ND	2.9	38	290	25	320
SS-6	08/07/95	4.0	ND	ND	0.86	35	400	22	260

**Abbreviations**

VOCs = Volatile Organic Compounds by EPA Method 8240  
 SVOCs = Semi-Volatile Organic Compounds by EPA Method 8240  
 Cd = Cadmium by EPA Method 6010  
 Cr = Chromium by EPA Method 6010  
 Pb = Lead by EPA Method 6010  
 Ni = Nickel by EPA Method 6010  
 Zn = Zinc by EPA Method 6010  
 ND = Not detected between detection limit of 0.02 and 0.05 ppm  
 <n = Not detected at laboratory detection limit of n ppm

**Analytical Laboratory:**

Sequoia Analytical of Redwood City, California

**ATTACHMENT A**

**CERTIFIED ANALYTICAL REPORTS AND  
CHAIN OF CUSTODY FORMS FOR SOIL**



# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(415) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Project: Shell 610 Market St, Oakland

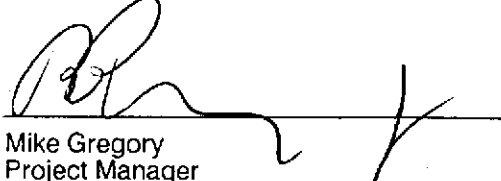
Enclosed are the results from samples received at Sequoia Analytical on August 7, 1995.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9508446 -01	SOLID, D-1	08/03/95	TPHGBS Purgeable TPH/BTEX
9508446 -02	SOLID, D-2	08/03/95	TPHGBS Purgeable TPH/BTEX
9508446 -03	SOLID, D-3	08/03/95	TPHGBS Purgeable TPH/BTEX
9508446 -04	SOLID, D-4	08/03/95	TPHGBS Purgeable TPH/BTEX
9508446 -05	SOLID, D-5	08/03/95	TPHGBS Purgeable TPH/BTEX
9508446 -06	SOLID, D-6	08/03/95	TPHGBS Purgeable TPH/BTEX
9508446 -07	SOLID, D-7	08/03/95	TPHGBS Purgeable TPH/BTEX
9508446 -08	SOLID, D-8	08/03/95	TPHGBS Purgeable TPH/BTEX
9508446 -09	SOLID, L-1	08/03/95	TPHGBS Purgeable TPH/BTEX
9508446 -10	SOLID, L-2	08/03/95	TPHGBS Purgeable TPH/BTEX
9508446 -11	SOLID, L-3	08/03/95	TPHGBS Purgeable TPH/BTEX
9508446 -12	SOLID, L-4	08/03/95	TPHGBS Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

**SEQUOIA ANALYTICAL**



Mike Gregory  
Project Manager



Weiss Associates	Client Proj. ID: Shell 610 Market St, Oakland	Sampled: 08/03/95
5500 Shellmound	Sample Descript: D-1	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/09/95
Attention: Faith Daverin	Analysis Method: 8015Mod/8020	Analyzed: 08/09/95
	Lab Number: 9508446-01	Reported: 08/14/95


QC Batch Number: GC080995BTEXEXB  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1000	2700
Benzene	5.0	N.D.
Toluene	5.0	130
Ethyl Benzene	5.0	46
Xylenes (Total)	5.0	320
Chromatogram Pattern:		Gas
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	107

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory  
Project Manager



Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 610 Market St, Oakland Sample Descript: D-2 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9508446-02	Sampled: 08/03/95 Received: 08/07/95 Extracted: 08/09/95 Analyzed: 08/09/95 Reported: 08/14/95
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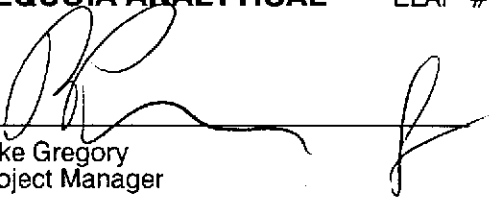
QC Batch Number: GC080995BTEXEXB  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	10	66
Benzene	0.050	N.D.
Toluene	0.050	0.11
Ethyl Benzene	0.050	0.36
Xylenes (Total)	0.050	1.9
Chromatogram Pattern:		
Unidentified HC		>C10
Weathered Gas		C8-C10
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	97

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Mike Gregory  
Project Manager



Weiss Associates Client Proj. ID: Shell 610 Market St, Oakland Sampled: 08/03/95
5500 Shellmound Sample Descript: D-3 Received: 08/07/95
Emeryville, CA 94608 Matrix: SOLID Extracted: 08/09/95
Attention: Faith Daverin Analysis Method: 8015Mod/8020 Analyzed: 08/10/95
Lab Number: 9508446-03 Reported: 08/14/95

QC Batch Number: GC080995BTEXEXB
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Table with 3 columns: Analyte, Detection Limit mg/Kg, Sample Results mg/Kg. Rows include TPHH as Gas, Benzene, Toluene, Ethyl Benzene, Xylenes (Total), Chromatogram Pattern, Surrogates, and Trifluorotoluene.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Signature of Mike Gregory
Mike Gregory
Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 610 Market St, Oakland Sample Descript: D-4 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9508446-04	Sampled: 08/03/95 Received: 08/07/95 Extracted: 08/09/95 Analyzed: 08/10/95 Reported: 08/14/95
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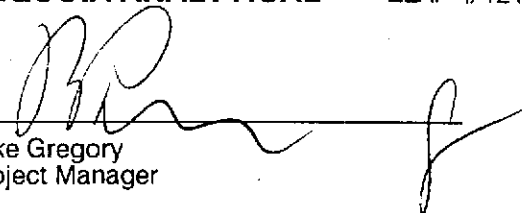
QC Batch Number: GC080995BTEXEXB  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	2.0	7.7
Benzene	0.010	N.D.
Toluene	0.010	0.017
Ethyl Benzene	0.010	0.043
Xylenes (Total)	0.010	0.082
Chromatogram Pattern: Weathered Gas		C7-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	96

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Mike Gregory  
Project Manager



Weiss Associates	Client Proj. ID: Shell 610 Market St, Oakland	Sampled: 08/03/95
5500 Shellmound	Sample Descript: D-5	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/09/95
Attention: Faith Daverin	Analysis Method: 8015Mod/8020	Analyzed: 08/10/95
	Lab Number: 9508446-05	Reported: 08/14/95

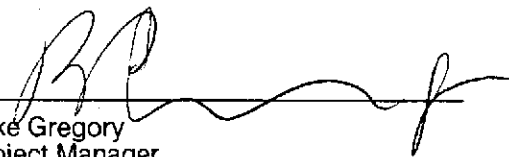
QC Batch Number: GC080995BTEXEXB  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	5.0	33
Benzene	0.025	N.D.
Toluene	0.025	0.16
Ethyl Benzene	0.025	0.10
Xylenes (Total)	0.025	3.0
Chromatogram Pattern: Weathered Gas		C7-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	122

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210



Mike Gregory  
Project Manager



Weiss Associates	Client Proj. ID: Shell 610 Market St, Oakland	Sampled: 08/03/95
5500 Shellmound	Sample Descript: D-6	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/09/95
Attention: Faith Daverin	Analysis Method: 8015Mod/8020	Analyzed: 08/10/95
	Lab Number: 9508446-06	Reported: 08/14/95

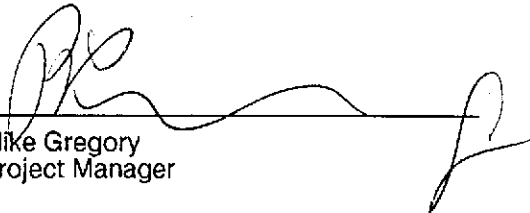
QC Batch Number: GC080995BTEXEXB  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1000	1400
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	42
Chromatogram Pattern: Weathered Gas		C8-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	90

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Mike Gregory  
Project Manager



Weiss Associates Client Proj. ID: Shell 610 Market St, Oakland Sampled: 08/03/95
5500 Shellmound Sample Descript: D-7 Received: 08/07/95
Emeryville, CA 94608 Matrix: SOLID Extracted: 08/09/95
Attention: Faith Daverin Analysis Method: 8015Mod/8020 Analyzed: 08/10/95
Lab Number: 9508446-07 Reported: 08/14/95

QC Batch Number: GC080995BTEXEXB
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Table with 3 columns: Analyte, Detection Limit mg/Kg, Sample Results mg/Kg. Rows include TPHH as Gas (1600), Benzene (N.D.), Toluene (N.D.), Ethyl Benzene (3.4), Xylenes (Total) (25), Unidentified HC (>C10), Weathered Gas (C8-C10), and Surrogates (Control Limits % 70, 130; % Recovery 94).

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Signature of Mike Gregory
Mike Gregory
Project Manager



Weiss Associates	Client Proj. ID: Shell 610 Market St, Oakland	Sampled: 08/03/95
5500 Shellmound	Sample Descript: D-8	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/09/95
Attention: Faith Daverin	Analysis Method: 8015Mod/8020	Analyzed: 08/10/95
	Lab Number: 9508446-08	Reported: 08/14/95

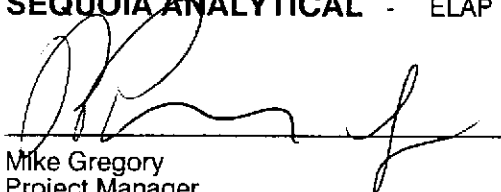
QC Batch Number: GC080995BTEXEXB  
Instrument ID: GCHP22

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	0.0072
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	0.025
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	93

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory  
Project Manager



Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 610 Market St, Oakland Sample Descript: L-1 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9508446-09	Sampled: 08/03/95 Received: 08/07/95 Extracted: 08/09/95 Analyzed: 08/09/95 Reported: 08/14/95
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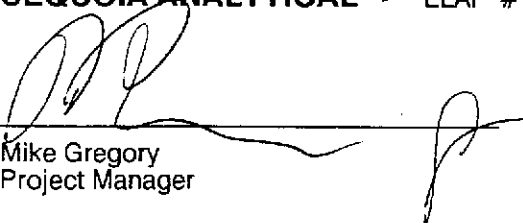
QC Batch Number: GC080995BTEXEXB  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	106

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210



Mike Gregory  
Project Manager



Weiss Associates	Client Proj. ID: Shell 610 Market St, Oakland	Sampled: 08/03/95
5500 Shellmound	Sample Descript: L-2	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/09/95
Attention: Faith Daverin	Analysis Method: 8015Mod/8020	Analyzed: 08/10/95
	Lab Number: 9508446-10	Reported: 08/14/95

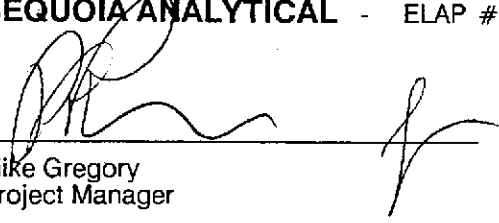
QC Batch Number: GC080995BTEXEXB  
Instrument ID: GCHP22

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	2.2
Benzene	0.0050	N.D.
Toluene	0.0050	0.036
Ethyl Benzene	0.0050	0.0068
Xylenes (Total)	0.0050	0.064
Chromatogram Pattern:		Gas
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	99

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210



Mike Gregory  
Project Manager



Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 610 Market St, Oakland Sample Descript: L-3 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9508446-11	Sampled: 08/03/95 Received: 08/07/95 Extracted: 08/09/95 Analyzed: 08/09/95 Reported: 08/14/95
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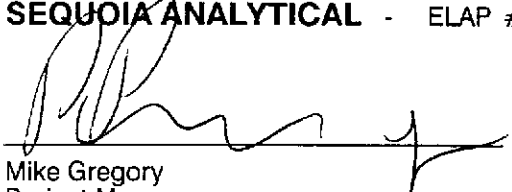
QC Batch Number: GC080995BTEXEXA  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	100

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory  
Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 610 Market St, Oakland Sample Descript: L-4 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9508446-12	Sampled: 08/03/95 Received: 08/07/95 Extracted: 08/09/95 Analyzed: 08/09/95 Reported: 08/14/95
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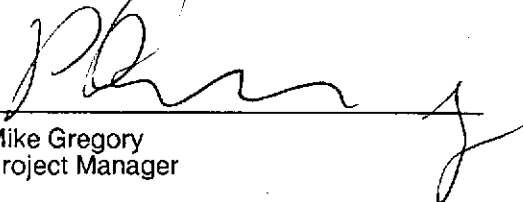
QC Batch Number: GC080995BTEXEXA  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	107

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210



Mike Gregory  
Project Manager



# Sequoia Analytical

680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233  
 404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673  
 819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Weiss & Associates  
 5500 Shellmound  
 Emeryville, CA 94608  
 Attention: Faith Daverin

Client Project ID: Shell 610 Market St., Oakland  
 Matrix: Solid

Work Order #: 9508446 01-10

Reported: Aug 15, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC080995BTEXEXB	GC080995BTEXEXB	GC080995BTEXEXB	GC080995BTEXEXB
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD #:	950804131	950804131	950804131	950804131
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95
Analyzed Date:	8/9/95	8/9/95	8/9/95	8/9/95
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/Kg
Result:	0.14	0.14	0.15	0.44
MS % Recovery:	70	70	75	73
Dup. Result:	0.15	0.15	0.15	0.45
MSD % Recov.:	75	75	75	75
RPD:	6.9	6.9	0.0	2.2
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:

Prepared Date:  
 Analyzed Date:  
 Instrument I.D.#:  
 Conc. Spiked:

LCS Result:  
 LCS % Recov.:

MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140
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**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

  
 Mike Gregory  
 Project Manager

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9508446.WAA <1>



Weiss & Associates Client Project ID: Shell 610 Market St., Oakland  
 5500 Shellmound Matrix: Solid  
 Emeryville, CA 94608  
 Attention: Faith Daverin Work Order #: 9508446 11-12 Reported: Aug 15, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC080995BTEXEXA	GC080995BTEXEXA	GC080995BTEXEXA	GC080995BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	G. Garcia	G. Garcia	G. Garcia	G. Garcia
MS/MSD #:	950804125	950804125	950804125	950804125
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95
Analyzed Date:	8/9/95	8/9/95	8/9/95	8/9/95
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/Kg
Result:	0.14	0.15	0.14	0.43
MS % Recovery:	70	75	70	72
Dup. Result:	0.17	0.18	0.18	0.53
MSD % Recov.:	85	90	90	88
RPD:	19	18	25	21
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:

Prepared Date:  
 Analyzed Date:  
 Instrument I.D.#:  
 Conc. Spiked:

LCS Result:  
 LCS % Recov.:

MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140
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**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

Mike Gregory  
 Project Manager

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9508446.WAA <2>



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: 9502446

Date: 8/1/95

Page 1 of 2

Site Address: 610 Market Street, Oakland, CA

WIC#: 204-5508-5702

Shell Engineer: Jeff Bryam Phone No.:  
Fax #:

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

Consultant Contact: Faith Daverin Phone No.:  
WA JOB #81-1103-9 (510) 547-5420  
Fax #: 547-5043

Comments: Soil sampling - Dispensers

Sampled by: Herb Toor

Printed Name: Herb Toor

**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	Asbestos	Container Size	Preparation Used	Composite Y/N
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LAB: Sequoyia

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 type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input checked="" type="checkbox"/> <u>5-Day</u>
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: \_\_\_\_\_

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
D-1	8/1/95		X			1						X							C1
D-2			X			1						X							C2
D-3			X			1						X							C3
D-4			X			1						X							C4
D-5			X			1						X							C5
D-6			X			1						X							C6
D-7			X			1						X							C7
D-8			X			1						X							C8

Relinquished By (signature): <u>Herb Toor</u>	Printed Name: <u>Herb Toor</u>	Date: <u>8/1/95</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>[Name]</u>	Date: <u>8/1/95</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>[Name]</u>	Date: <u>8/1/95</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>[Name]</u>	Date: <u>[Date]</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>[Name]</u>	Date: <u>8/1/95</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>[Name]</u>	Date: <u>8/7/95</u>

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

\* Samples stored in a locked, secured area over weekend



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: 9508449

Date: 8/14/95

Page 2 of 2

Site Address: 610 Market Street, Oakland, CA

**Analysis Required**

LAB: Seawoig

WIC#: 204-5508-5702

Shell Engineer: Jeff Bryam Phone No.:  
Fax #:

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

Consultant Contact: Faith DAVENIN Phone No.:  
WA JOB # 81-1103-9 (510) 547-5420  
Fax #: 547-5043

Comments: Soil Sampling - Dispensers

Sampled by: Herb Taylor

Printed Name: Herb Taylor

Sample ID	Date	Sludge	Soil	Water	Air	No. of conds.
L-1	8/13/95		X			1
L-2	↓		X			1
L-3	↓		X			1
L-4	↓		X			1

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

CHECK ONE (1) BOX ONLY	CI/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 type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input checked="" type="checkbox"/> <u>5 Day</u>
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: \_\_\_\_\_

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
	09
	02 10
	03 11
	07 12

Relinquished By (signature): <u>Herb Taylor</u>	Printed Name: <u>Herb Taylor</u>	Date: <u>8/14/95</u> Time: <u>1:34</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>N. Jones</u>	Date: <u>8/17/95</u> Time: <u>7:55</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>N. Jones</u>	Date: <u>8/14/95</u> Time: <u>5:40</u>	Received (signature): <u>[Signature]</u>	Printed Name: _____	Date: _____ Time: _____
Relinquished By (signature): <u>[Signature]</u>	Printed Name: _____	Date: _____ Time: _____	Received (signature): <u>[Signature]</u>	Printed Name: <u>M. Yonig</u>	Date: <u>8/17/95</u> Time: <u>1:45</u>

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



# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(415) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Project: Shell, 610 Market St., Oakland

Enclosed are the results from samples received at Sequoia Analytical on August 7, 1995. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
950844801	SOLID, SS1-5.0	8/7/95	TPHGB Purgeable TPH/BTEX
950844802	SOLID, SS2-4.0	8/7/95	TPHGB Purgeable TPH/BTEX
950844803	SOLID, SS3-4.0	8/7/95	TPHGB Purgeable TPH/BTEX
950844804	SOLID, SS4-5.0	8/7/95	TPHGB Purgeable TPH/BTEX
950844805	SOLID, SS5-5.0	8/7/95	TPHGB Purgeable TPH/BTEX
950844806	SOLID, SS6-4.0	8/7/95	TPHGB Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

  
Mike Gregory  
Project Manager



Weiss Associates	Client Proj. ID: Shell 204-5508-5702/Oakland	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SS1-5.0	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/09/95
Attention: Faith Daverin	Analysis Method: 8015Mod/8020	Analyzed: 08/10/95
	Lab Number: 9508448-01	Reported: 08/11/95

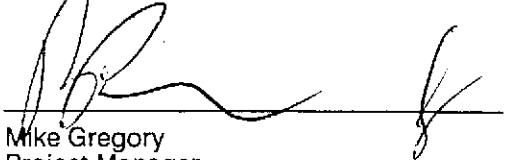
QC Batch Number: GC080995BTEXEXC  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	85

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210



Mike Gregory  
Project Manager



Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 204-5508-5702/Oakland Sample Descript: SS2-4.0 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9508448-02	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/09/95 Analyzed: 08/10/95 Reported: 08/11/95
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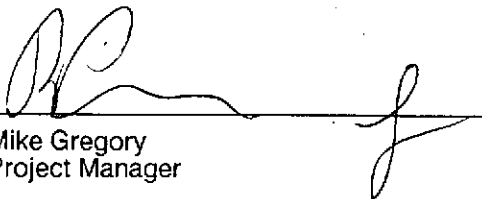
QC Batch Number: GC080995BTEXEXC  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	95

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
 Mike Gregory  
 Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 204-5508-5702/Oakland Sample Descript: SS3-4.0 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9508448-03	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/09/95 Analyzed: 08/10/95 Reported: 08/11/95
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QC Batch Number: GC080995BTEXEXC  
Instrument ID: GCHP18

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	109

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory  
Project Manager



Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 204-5508-5702/Oakland Sample Descript: SS4-5.0 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9508448-04	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/09/95 Analyzed: 08/10/95 Reported: 08/11/95
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QC Batch Number: GC080995BTEXEXC  
Instrument ID: GCHP22

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	2.0
Benzene	0.0050	N.D.
Toluene	0.0050	0.0057
Ethyl Benzene	0.0050	0.0076
Xylenes (Total)	0.0050	0.019
Chromatogram Pattern:		Gas
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	110

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager



Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 204-5508-5702/Oakland Sample Descript: SS5-5.0 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9508448-05	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/09/95 Analyzed: 08/10/95 Reported: 08/11/95
Attention: Faith Daverin		


QC Batch Number: GC080995BTEXEXC  
Instrument ID: GCHP22

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	10
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	0.034
Xylenes (Total)	0.0050	0.086
Chromatogram Pattern:		Gas
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	131 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory  
Project Manager



Weiss Associates	Client Proj. ID: Shell 204-5508-5702/Oakland	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SS6-4.0	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/09/95
Attention: Faith Daverin	Analysis Method: 8015Mod/8020	Analyzed: 08/10/95
	Lab Number: 9508448-06	Reported: 08/11/95

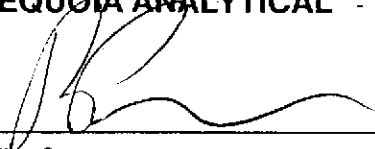
QC Batch Number: GC080995BTEXEXC  
Instrument ID: GCHP22

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	2.5	28
Benzene	0.012	N.D.
Toluene	0.012	N.D.
Ethyl Benzene	0.012	0.029
Xylenes (Total)	0.012	0.084
Chromatogram Pattern: Gas & Unidentified HC		Gas >C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	123

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Mike Gregory  
Project Manager



Sequoia  
Analytical

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Weiss Associates	Client Proj. ID: Shell 204-5508-5702/Oakland	Received: 08/07/95
5500 Shellmound	Lab Proj. ID: 9508448	Reported: 08/11/95
Emeryville, CA 94608		
Attention: Faith Daverin		

### LABORATORY NARRATIVE

Q = High surrogate recovery due to coelution.

SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell, 610 Market St., Oakland  
Matrix: Solid

Work Order #: 9508448 01-06

Reported: Aug 14, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC080995BTEXEXC	GC080995BTEXEXC	GC080995BTEXEXC	GC080995BTEXEXC
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD #:	950804106	950804106	950804106	950804106
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95
Analyzed Date:	8/9/95	8/9/95	8/9/95	8/9/95
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.15	0.15	0.15	0.46
MS % Recovery:	75	75	75	77
Dup. Result:	0.15	0.15	0.15	0.44
MSD % Recov.:	75	75	75	73
RPD:	0.0	0.0	0.0	4.4
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:

Prepared Date:  
Analyzed Date:  
Instrument I.D.#:  
Conc. Spiked:

LCS Result:  
LCS % Recov.:

MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140
---------------------------------	--------	--------	--------	--------

**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

*Mike Gregory*  
Mike Gregory  
Project Manager

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9508448.WAA <1>



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: 9508448

Date: 8/7/95

Page 1 of 1

Site Address: 610 Market Street, Oakland, CA

WIC#: 204-5508-5702

Shell Engineer: Dan Kirk Phone No.:  
Fax #:

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

Consultant Contact: Faith Davern Phone No.:  
WA JOB # 81-1103-9 (510) 547-5420  
Fax #: 547-5043

Comments: Confirmation soil samples

Sampled by: Faith Davern

Printed Name: Faith Davern

**Analysis Required**

LAB: Sequoia

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 type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input checked="" type="checkbox"/> <u>5-Day</u>
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:**

Sample ID	Date	Sludge	Soil	Water	Air	No. of conls.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
SS1-5.0	8/7/95		X			1						X						01
SS2-4.0			X			1						X						02
SS3-4.0			X			1						X						03
SS4-5.0			X			1						X						04
SS5-5.0			X			1						X						05
SS6-4.0			X			1						X						06

Relinquished By (signature): <u>Faith Davern</u>	Printed Name: <u>Faith Davern</u>	Date: <u>8/7/95</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>W. Jones</u>	Date: <u>8/7/95</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>W. Jones</u>	Date: <u>8/7/95</u>	Received (signature): <u>[Signature]</u>	Printed Name:	Date:
Relinquished By (signature): <u>[Signature]</u>	Printed Name:	Date:	Received (signature): <u>[Signature]</u>	Printed Name: <u>M. YONG</u>	Date: <u>8/7/95</u>

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



# Sequoia Analytical

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FAX (916) 921-0100

Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Project: Shell 610 Market, Oakland

Enclosed are the results from samples received at Sequoia Analytical on August 7, 1995.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9508815 -01	SOLID, SS1-5.0	08/07/95	TRPH (SM 5520 E&F Mod.)
9508815 -01	SOLID, SS1-5.0	08/07/95	8240_S Volatile Organic Co
9508815 -01	SOLID, SS1-5.0	08/07/95	8270_S SemiVolatile Organi
9508815 -01	SOLID, SS1-5.0	08/07/95	Cadmium
9508815 -01	SOLID, SS1-5.0	08/07/95	Chromium
9508815 -01	SOLID, SS1-5.0	08/07/95	Nickel
9508815 -01	SOLID, SS1-5.0	08/07/95	Lead
9508815 -01	SOLID, SS1-5.0	08/07/95	Zinc
9508815 -02	SOLID, SS2-4.0	08/07/95	TRPH (SM 5520 E&F Mod.)
9508815 -02	SOLID, SS2-4.0	08/07/95	8240_S Volatile Organic Co
9508815 -02	SOLID, SS2-4.0	08/07/95	8270_S SemiVolatile Organi
9508815 -02	SOLID, SS2-4.0	08/07/95	Cadmium
9508815 -02	SOLID, SS2-4.0	08/07/95	Chromium
9508815 -02	SOLID, SS2-4.0	08/07/95	Nickel
9508815 -02	SOLID, SS2-4.0	08/07/95	Lead
9508815 -02	SOLID, SS2-4.0	08/07/95	Zinc
9508815 -03	SOLID, SS3-4.0	08/07/95	TRPH (SM 5520 E&F Mod.)
9508815 -03	SOLID, SS3-4.0	08/07/95	8240_S Volatile Organic Co
9508815 -03	SOLID, SS3-4.0	08/07/95	8270_S SemiVolatile Organi
9508815 -03	SOLID, SS3-4.0	08/07/95	Cadmium
9508815 -03	SOLID, SS3-4.0	08/07/95	Chromium

SEQUOIA ANALYTICAL







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<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9508815 -03	SOLID, SS3-4.0	08/07/95	Nickel
9508815 -03	SOLID, SS3-4.0	08/07/95	Lead
9508815 -03	SOLID, SS3-4.0	08/07/95	Zinc
9508815 -04	SOLID, SS4-5.0	08/07/95	TRPH (SM 5520 E&F Mod.)
9508815 -04	SOLID, SS4-5.0	08/07/95	8240_S Volatile Organic Co
9508815 -04	SOLID, SS4-5.0	08/07/95	8270_S SemiVolatile Organi
9508815 -04	SOLID, SS4-5.0	08/07/95	Cadmium
9508815 -04	SOLID, SS4-5.0	08/07/95	Chromium
9508815 -04	SOLID, SS4-5.0	08/07/95	Nickel
9508815 -04	SOLID, SS4-5.0	08/07/95	Lead
9508815 -04	SOLID, SS4-5.0	08/07/95	Zinc
9508815 -05	SOLID, SS5-5.0	08/07/95	TRPH (SM 5520 E&F Mod.)
9508815 -05	SOLID, SS5-5.0	08/07/95	8240_S Volatile Organic Co
9508815 -05	SOLID, SS5-5.0	08/07/95	8270_S SemiVolatile Organi
9508815 -05	SOLID, SS5-5.0	08/07/95	Cadmium
9508815 -05	SOLID, SS5-5.0	08/07/95	Chromium
9508815 -05	SOLID, SS5-5.0	08/07/95	Nickel
9508815 -05	SOLID, SS5-5.0	08/07/95	Lead
9508815 -05	SOLID, SS5-5.0	08/07/95	Zinc
9508815 -06	SOLID, SS6-4.0	08/07/95	TRPH (SM 5520 E&F Mod.)
9508815 -06	SOLID, SS6-4.0	08/07/95	8240_S Volatile Organic Co
9508815 -06	SOLID, SS6-4.0	08/07/95	8270_S SemiVolatile Organi
9508815 -06	SOLID, SS6-4.0	08/07/95	Cadmium
9508815 -06	SOLID, SS6-4.0	08/07/95	Chromium
9508815 -06	SOLID, SS6-4.0	08/07/95	Nickel



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<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9508815 -06	SOLID, SS6-4.0	08/07/95	Lead
9508815 -06	SOLID, SS6-4.0	08/07/95	Zinc

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

**SEQUOIA ANALYTICAL**

Mike Gregory  
Project Manager



Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market, Oakland	Sampled: 08/07/95 Received: 08/07/95 Analyzed: see below
Attention: Faith Daverin	Lab Proj. ID: 9508815	Reported: 08/22/95

**LABORATORY ANALYSIS**

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9508815-01 Sample Desc: <b>SOLID,SS1-5.0</b>				
Cadmium	mg/Kg	08/16/95	0.50	N.D.
<b>Chromium</b>	<b>mg/Kg</b>	<b>08/16/95</b>	<b>0.50</b>	<b>52</b>
Lead	mg/Kg	08/16/95	5.0	N.D.
<b>Nickel</b>	<b>mg/Kg</b>	<b>08/16/95</b>	<b>2.5</b>	<b>39</b>
TRPH (SM 5520 E&F Mod.)	mg/Kg	08/18/95	50	N.D.
<b>Zinc</b>	<b>mg/Kg</b>	<b>08/16/95</b>	<b>0.50</b>	<b>26</b>
Lab No: 9508815-02 Sample Desc: <b>SOLID,SS2-4.0</b>				
Cadmium	mg/Kg	08/18/95	0.50	N.D.
<b>Chromium</b>	<b>mg/Kg</b>	<b>08/18/95</b>	<b>0.50</b>	<b>36</b>
Lead	mg/Kg	08/18/95	5.0	N.D.
<b>Nickel</b>	<b>mg/Kg</b>	<b>08/18/95</b>	<b>2.5</b>	<b>16</b>
TRPH (SM 5520 E&F Mod.)	mg/Kg	08/18/95	50	N.D.
<b>Zinc</b>	<b>mg/Kg</b>	<b>08/18/95</b>	<b>0.50</b>	<b>11</b>
Lab No: 9508815-03 Sample Desc: <b>SOLID,SS3-4.0</b>				
Cadmium	mg/Kg	08/18/95	0.50	N.D.
<b>Chromium</b>	<b>mg/Kg</b>	<b>08/18/95</b>	<b>0.50</b>	<b>36</b>
Lead	mg/Kg	08/18/95	5.0	10
<b>Nickel</b>	<b>mg/Kg</b>	<b>08/18/95</b>	<b>2.5</b>	<b>24</b>
TRPH (SM 5520 E&F Mod.)	mg/Kg	08/18/95	50	N.D.
<b>Zinc</b>	<b>mg/Kg</b>	<b>08/18/95</b>	<b>0.50</b>	<b>31</b>
Lab No: 9508815-04 Sample Desc: <b>SOLID,SS4-5.0</b>				
Cadmium	mg/Kg	08/18/95	0.50	N.D.
<b>Chromium</b>	<b>mg/Kg</b>	<b>08/18/95</b>	<b>0.50</b>	<b>34</b>

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

Mike Gregory  
Project Manager



Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market, Oakland	Sampled: 08/07/95 Received: 08/07/95 Analyzed: see below
Attention: Faith Daverin	Lab Proj. ID: 9508815	Reported: 08/22/95

**LABORATORY ANALYSIS**

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lead	mg/Kg	08/18/95	5.0	110
Nickel	mg/Kg	08/18/95	2.5	21
TRPH (SM 5520 E&F Mod.)	mg/Kg	08/18/95	50	220
Zinc	mg/Kg	08/18/95	0.50	110

Lab No: 9508815-05  
Sample Desc : SOLID,SS5-5.0

Cadmium	mg/Kg	08/18/95	0.50	2.9
Chromium	mg/Kg	08/18/95	0.50	38
Lead	mg/Kg	08/18/95	5.0	290
Nickel	mg/Kg	08/18/95	2.5	25
TRPH (SM 5520 E&F Mod.)	mg/Kg	08/18/95	50	260
Zinc	mg/Kg	08/18/95	0.50	320

Lab No: 9508815-06  
Sample Desc : SOLID,SS6-4.0

Cadmium	mg/Kg	08/18/95	0.50	0.86
Chromium	mg/Kg	08/18/95	0.50	35
Lead	mg/Kg	08/18/95	5.0	400
Nickel	mg/Kg	08/18/95	2.5	22
TRPH (SM 5520 E&F Mod.)	mg/Kg	08/18/95	50	170
Zinc	mg/Kg	08/18/95	0.50	260

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Mike Gregory  
Project Manager



Weiss Associates	Client Proj. ID: Shell 610 Market, Oakland	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SS1-5.0	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/15/95
Attention: Faith Daverin	Analysis Method: EPA 8240	Analyzed: 08/15/95
	Lab Number: 9508815-01	Reported: 08/22/95

QC Batch Number: MS0815958240EXA  
 Instrument ID: F3

**Volatile Organics (EPA 8240)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.





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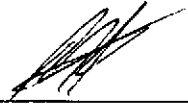
Weiss Associates	Client Proj. ID: Shell 610 Market, Oakland	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SS1-5.0	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/15/95
Attention: Faith Daverin	Analysis Method: EPA 8240	Analyzed: 08/15/95
	Lab Number: 9508815-01	Reported: 08/22/95

QC Batch Number: MS0815958240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Total Xylenes	100	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
 \_\_\_\_\_  
 Mike Gregory  
 Project Manager



Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS1-5.0 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9508815-01	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/16/95 Analyzed: 08/17/95 Reported: 08/22/95
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QC Batch Number: MS0814958270EXA  
Instrument ID: H5

**Semivolatile Organics (EPA 8270)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.



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Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS1-5.0 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9508815-01	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/16/95 Analyzed: 08/17/95 Reported: 08/22/95
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QC Batch Number: MS0814958270EXA  
Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
2,6-Dinitrotoluene	250	N.D.
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
2-Methylphenol	250	N.D.
4-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	250	N.D.
Phenol	250	N.D.
Pyrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	250	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	25	121	60
Phenol-d5	24	113	64
Nitrobenzene-d5	23	120	57
2-Fluorobiphenyl	30	115	61
2,4,6-Tribromophenol	19	122	57
p-Terphenyl-d14	18	137	56

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Mike Gregory  
Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS2-4.0 Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9508815-02	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/15/95 Analyzed: 08/15/95 Reported: 08/22/95
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QC Batch Number: SM0815958240EXA  
Instrument ID: F3

**Volatile Organics (EPA 8240)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.





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819 Striker Avenue, Suite 8	Sacramento, CA 95834	(916) 921-9600	FAX (916) 921-0100

Weiss Associates	Client Proj. ID: Shell 610 Market, Oakland	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SS2-4.0	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/15/95
Attention: Faith Daverin	Analysis Method: EPA 8240	Analyzed: 08/15/95
	Lab Number: 9508815-02	Reported: 08/22/95

QC Batch Number: SM0815958240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Total Xylenes	100	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1,2-Dichloroethane-d4	70	92
Toluene-d8	81	100
4-Bromofluorobenzene	74	93

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Mike Gregory  
Project Manager





Weiss Associates	Client Proj. ID: Shell 610 Market, Oakland	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SS2-4.0	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/16/95
Attention: Faith Daverin	Analysis Method: EPA 8270	Analyzed: 08/17/95
	Lab Number: 9508815-02	Reported: 08/22/95

QC Batch Number: MS0814958270EXA  
Instrument ID: H5

**Semivolatile Organics (EPA 8270)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.





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Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS2-4.0 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9508815-02	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/16/95 Analyzed: 08/17/95 Reported: 08/22/95
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QC Batch Number: MS0814958270EXA  
Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
2,6-Dinitrotoluene	250	N.D.
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
2-Methylphenol	250	N.D.
4-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	250	N.D.
Phenol	250	N.D.
Pyrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	250	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	25	121	62
Phenol-d5	24	113	67
Nitrobenzene-d5	23	120	61
2-Fluorobiphenyl	30	115	65
2,4,6-Tribromophenol	19	122	60
p-Terphenyl-d14	18	137	50

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS3-4.0 Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9508815-03	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/15/95 Analyzed: 08/15/95 Reported: 08/22/95
Attention: Faith Daverin		

QC Batch Number: MS0815958240EXA  
Instrument ID: F3

**Volatile Organics (EPA 8240)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.





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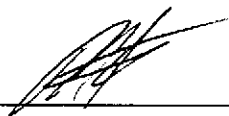
Weiss Associates	Client Proj. ID: Shell 610 Market, Oakland	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SS3-4.0	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/15/95
Attention: Faith Daverin	Analysis Method: EPA 8240	Analyzed: 08/15/95
	Lab Number: 9508815-03	Reported: 08/22/95

QC Batch Number: MS0815958240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Total Xylenes	100	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
\_\_\_\_\_  
Mike Gregory  
Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS3-4.0 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9508815-03	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/16/95 Analyzed: 08/17/95 Reported: 08/22/95
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QC Batch Number: MS0814958270EXA  
Instrument ID: H5

**Semivolatile Organics (EPA 8270)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.





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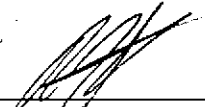
Weiss Associates	Client Proj. ID: Shell 610 Market, Oakland	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SS3-4.0	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/16/95
Attention: Faith Daverin	Analysis Method: EPA 8270	Analyzed: 08/17/95
	Lab Number: 9508815-03	Reported: 08/22/95

QC Batch Number: MS0814958270EXA  
Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg	
2,6-Dinitrotoluene	250	N.D.	
Di-n-octyl phthalate	250	N.D.	
Fluoranthene	250	N.D.	
Fluorene	250	N.D.	
Hexachlorobenzene	250	N.D.	
Hexachlorobutadiene	250	N.D.	
Hexachlorocyclopentadiene	500	N.D.	
Hexachloroethane	250	N.D.	
Indeno(1,2,3-cd)pyrene	250	N.D.	
Isophorone	250	N.D.	
2-Methylnaphthalene	250	N.D.	
2-Methylphenol	250	N.D.	
4-Methylphenol	250	N.D.	
Naphthalene	250	N.D.	
2-Nitroaniline	500	N.D.	
3-Nitroaniline	500	N.D.	
4-Nitroaniline	500	N.D.	
Nitrobenzene	250	N.D.	
2-Nitrophenol	250	N.D.	
4-Nitrophenol	500	N.D.	
N-Nitrosodiphenylamine	250	N.D.	
N-Nitroso-di-n-propylamine	250	N.D.	
Pentachlorophenol	500	N.D.	
Phenanthrene	250	N.D.	
Phenol	250	N.D.	
Pyrene	250	N.D.	
1,2,4-Trichlorobenzene	250	N.D.	
2,4,5-Trichlorophenol	500	N.D.	
2,4,6-Trichlorophenol	250	N.D.	
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>	
2-Fluorophenol	25	121	68
Phenol-d5	24	113	72
Nitrobenzene-d5	23	120	66
2-Fluorobiphenyl	30	115	71
2,4,6-Tribromophenol	19	122	67
p-Terphenyl-d14	18	137	72

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Mike Gregory  
Project Manager







Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS4-5.0 Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9508815-04	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/15/95 Analyzed: 08/15/95 Reported: 08/22/95
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QC Batch Number: MS0815958240EXA  
Instrument ID: F3

**Volatile Organics (EPA 8240)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.





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Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS4-5.0 Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9508815-04	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/15/95 Analyzed: 08/15/95 Reported: 08/22/95
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QC Batch Number: MS0815958240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Total Xylenes	100	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS4-5.0 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9508815-04	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/16/95 Analyzed: 08/17/95 Reported: 08/22/95
Attention: Faith Daverin		

QC Batch Number: MS0814958270EXA  
Instrument ID: H5

**Semivolatile Organics (EPA 8270)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.





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Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS4-5.0 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9508815-04	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/16/95 Analyzed: 08/17/95 Reported: 08/22/95
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QC Batch Number: MS0814958270EXA  
Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
2,6-Dinitrotoluene	250	N.D.
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
2-Methylphenol	250	N.D.
4-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	250	N.D.
Phenol	250	N.D.
Pyrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	250	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	25	121	61
Phenol-d5	24	113	63
Nitrobenzene-d5	23	120	58
2-Fluorobiphenyl	30	115	63
2,4,6-Tribromophenol	19	122	56
p-Terphenyl-d14	18	137	52

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS5-5.0 Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9508815-05	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/15/95 Analyzed: 08/15/95 Reported: 08/22/95
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QC Batch Number: MS0815958240EXa  
Instrument ID: F3

**Volatile Organics (EPA 8240)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.





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Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS5-5.0 Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9508815-05	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/15/95 Analyzed: 08/15/95 Reported: 08/22/95
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QC Batch Number: MS0815958240EXa  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Total Xylenes	100	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1,2-Dichloroethane-d4	70	121
Toluene-d8	81	117
4-Bromofluorobenzene	74	121

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
\_\_\_\_\_  
Mike Gregory  
Project Manager





Weiss Associates	Client Proj. ID: Shell 610 Market, Oakland	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SS5-5.0	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/16/95
Attention: Faith Daverin	Analysis Method: EPA 8270	Analyzed: 08/17/95
	Lab Number: 9508815-05	Reported: 08/22/95

QC Batch Number: MS0814958270EXA  
Instrument ID: H5

**Semivolatile Organics (EPA 8270)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	1250	N.D.
Acenaphthylene	1250	N.D.
Anthracene	1250	N.D.
Benzoic Acid	2500	N.D.
Benzo(a)anthracene	1250	N.D.
Benzo(b)fluoranthene	1250	N.D.
Benzo(k)fluoranthene	1250	N.D.
Benzo(g,h,i)perylene	1250	N.D.
Benzo(a)pyrene	1250	N.D.
Benzyl alcohol	1250	N.D.
Bis(2-chloroethoxy)methane	1250	N.D.
Bis(2-chloroethyl)ether	1250	N.D.
Bis(2-chloroisopropyl)ether	1250	N.D.
Bis(2-ethylhexyl)phthalate	2500	N.D.
4-Bromophenyl phenyl ether	1250	N.D.
Butyl benzyl phthalate	1250	N.D.
4-Chloroaniline	2500	N.D.
2-Chloronaphthalene	1250	N.D.
4-Chloro-3-methylphenol	1250	N.D.
2-Chlorophenol	1250	N.D.
4-Chlorophenyl phenyl ether	1250	N.D.
Chrysene	1250	N.D.
Dibenzo(a,h)anthracene	1250	N.D.
Dibenzofuran	1250	N.D.
Di-n-butyl phthalate	2500	N.D.
1,2-Dichlorobenzene	1250	N.D.
1,3-Dichlorobenzene	1250	N.D.
1,4-Dichlorobenzene	1250	N.D.
3,3-Dichlorobenzidine	2500	N.D.
2,4-Dichlorophenol	1250	N.D.
Diethyl phthalate	1250	N.D.
2,4-Dimethylphenol	1250	N.D.
Dimethyl phthalate	1250	N.D.
4,6-Dinitro-2-methylphenol	2500	N.D.
2,4-Dinitrophenol	2500	N.D.
2,4-Dinitrotoluene	1250	N.D.





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Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Faith Daverin	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS5-5.0 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9508815-05	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/16/95 Analyzed: 08/17/95 Reported: 08/22/95
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QC Batch Number: MS0814958270EXA  
Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg	
2,6-Dinitrotoluene	1250	N.D.	
Di-n-octyl phthalate	1250	N.D.	
Fluoranthene	1250	N.D.	
Fluorene	1250	N.D.	
Hexachlorobenzene	1250	N.D.	
Hexachlorobutadiene	1250	N.D.	
Hexachlorocyclopentadiene	2500	N.D.	
Hexachloroethane	1250	N.D.	
Indeno(1,2,3-cd)pyrene	1250	N.D.	
Isophorone	1250	N.D.	
2-Methylnaphthalene	1250	N.D.	
2-Methylphenol	1250	N.D.	
4-Methylphenol	1250	N.D.	
Naphthalene	1250	N.D.	
2-Nitroaniline	2500	N.D.	
3-Nitroaniline	2500	N.D.	
4-Nitroaniline	2500	N.D.	
Nitrobenzene	1250	N.D.	
2-Nitrophenol	1250	N.D.	
4-Nitrophenol	2500	N.D.	
N-Nitrosodiphenylamine	1250	N.D.	
N-Nitroso-di-n-propylamine	1250	N.D.	
Pentachlorophenol	2500	N.D.	
Phenanthrene	1250	N.D.	
Phenol	1250	N.D.	
Pyrene	1250	N.D.	
1,2,4-Trichlorobenzene	1250	N.D.	
2,4,5-Trichlorophenol	2500	N.D.	
2,4,6-Trichlorophenol	1250	N.D.	
<b>Surrogates</b>			
	<b>Control Limits %</b>	<b>% Recovery</b>	
2-Fluorophenol	25	121	80
Phenol-d5	24	113	82
Nitrobenzene-d5	23	120	75
2-Fluorobiphenyl	30	115	79
2,4,6-Tribromophenol	19	122	63
p-Terphenyl-d14	18	137	43

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS6-4.0 Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9508815-06	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/15/95 Analyzed: 08/15/95 Reported: 08/22/95
Attention: Faith Daverin		

QC Batch Number: MS0815958240EXA  
Instrument ID: F3

**Volatile Organics (EPA 8240)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.



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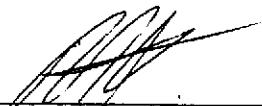
Weiss Associates	Client Proj. ID: Shell 610 Market, Oakland	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SS6-4.0	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/15/95
Attention: Faith Daverin	Analysis Method: EPA 8240	Analyzed: 08/15/95
	Lab Number: 9508815-06	Reported: 08/22/95

QC Batch Number: MS0815958240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Total Xylenes	100	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
1,2-Dichloroethane-d4	70	94
Toluene-d8	81	103
4-Bromofluorobenzene	74	99

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
 \_\_\_\_\_  
 Mike Gregory  
 Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS6-4.0 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9508815-06	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/16/95 Analyzed: 08/17/95 Reported: 08/22/95
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QC Batch Number: MS0814958270EXA  
Instrument ID: H5

**Semivolatile Organics (EPA 8270)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	1250	N.D.
Acenaphthylene	1250	N.D.
Anthracene	1250	N.D.
Benzoic Acid	2500	N.D.
Benzo(a)anthracene	1250	N.D.
Benzo(b)fluoranthene	1250	N.D.
Benzo(k)fluoranthene	1250	N.D.
Benzo(g,h,i)perylene	1250	N.D.
Benzo(a)pyrene	1250	N.D.
Benzyl alcohol	1250	N.D.
Bis(2-chloroethoxy)methane	1250	N.D.
Bis(2-chloroethyl)ether	1250	N.D.
Bis(2-chloroisopropyl)ether	1250	N.D.
Bis(2-ethylhexyl)phthalate	2500	N.D.
4-Bromophenyl phenyl ether	1250	N.D.
Butyl benzyl phthalate	1250	N.D.
4-Chloroaniline	2500	N.D.
2-Chloronaphthalene	1250	N.D.
4-Chloro-3-methylphenol	1250	N.D.
2-Chlorophenol	1250	N.D.
4-Chlorophenyl phenyl ether	1250	N.D.
Chrysene	1250	N.D.
Dibenzo(a,h)anthracene	1250	N.D.
Dibenzofuran	1250	N.D.
Di-n-butyl phthalate	2500	N.D.
1,2-Dichlorobenzene	1250	N.D.
1,3-Dichlorobenzene	1250	N.D.
1,4-Dichlorobenzene	1250	N.D.
3,3-Dichlorobenzidine	2500	N.D.
2,4-Dichlorophenol	1250	N.D.
Diethyl phthalate	1250	N.D.
2,4-Dimethylphenol	1250	N.D.
Dimethyl phthalate	1250	N.D.
4,6-Dinitro-2-methylphenol	2500	N.D.
2,4-Dinitrophenol	2500	N.D.
2,4-Dinitrotoluene	1250	N.D.



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Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 610 Market, Oakland Sample Descript: SS6-4.0 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9508815-06	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/16/95 Analyzed: 08/17/95 Reported: 08/22/95
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QC Batch Number: MS0814958270EXA  
Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg	
2,6-Dinitrotoluene	1250	N.D.	
Di-n-octyl phthalate	1250	N.D.	
Fluoranthene	1250	N.D.	
Fluorene	1250	N.D.	
Hexachlorobenzene	1250	N.D.	
Hexachlorobutadiene	1250	N.D.	
Hexachlorocyclopentadiene	2500	N.D.	
Hexachloroethane	1250	N.D.	
Indeno(1,2,3-cd)pyrene	1250	N.D.	
Isophorone	1250	N.D.	
2-Methylnaphthalene	1250	N.D.	
2-Methylphenol	1250	N.D.	
4-Methylphenol	1250	N.D.	
Naphthalene	1250	N.D.	
2-Nitroaniline	2500	N.D.	
3-Nitroaniline	2500	N.D.	
4-Nitroaniline	2500	N.D.	
Nitrobenzene	1250	N.D.	
2-Nitrophenol	1250	N.D.	
4-Nitrophenol	2500	N.D.	
N-Nitrosodiphenylamine	1250	N.D.	
N-Nitroso-di-n-propylamine	1250	N.D.	
Pentachlorophenol	2500	N.D.	
Phenanthrene	1250	N.D.	
Phenol	1250	N.D.	
Pyrene	1250	N.D.	
1,2,4-Trichlorobenzene	1250	N.D.	
2,4,5-Trichlorophenol	2500	N.D.	
2,4,6-Trichlorophenol	1250	N.D.	
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>	
2-Fluorophenol	25	121	82
Phenol-d5	24	113	81
Nitrobenzene-d5	23	120	82
2-Fluorobiphenyl	30	115	75
2,4,6-Tribromophenol	19	122	62
p-Terphenyl-d14	18	137	42

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager





Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 610 Market, Oakland  
Matrix: Solid

Work Order #: 9508815 -01-06

Reported: Aug 22, 1995

**QUALITY CONTROL DATA REPORT**

<b>Analyte:</b>	Phenol	2-Chlorophenol	1,4-Dichloro benzene	N-Nitroso-Di-N-propylamine
<b>QC Batch#:</b>	MS0814958270EXA	MS0814958270EXA	MS0814958270EXA	MS0814958270EXA
<b>Analy. Method:</b>	EPA 8270	EPA 8270	EPA 8270	EPA 8270
<b>Prep. Method:</b>	EPA 3550	EPA 3550	EPA 3550	EPA 3550

<b>Analyst:</b>	E. Manuel	E. Manuel	E. Manuel	E. Manuel
<b>MS/MSD #:</b>	950857209	950857209	950857209	950857209
<b>Sample Conc.:</b>	N.D.	N.D.	N.D.	N.D.
<b>Prepared Date:</b>	8/14/95	8/14/95	8/14/95	8/14/95
<b>Analyzed Date:</b>	8/17/95	8/17/95	8/17/95	8/17/95
<b>Instrument I.D.#:</b>	F4	F4	F4	F4
<b>Conc. Spiked:</b>	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
<b>Result:</b>	2600	2500	2200	2700
<b>MS % Recovery:</b>	79	76	67	82
<b>Dup. Result:</b>	2800	2700	2400	2900
<b>MSD % Recov.:</b>	85	82	73	88
<b>RPD:</b>	7.4	7.7	8.7	7.1
<b>RPD Limit:</b>	0-50	0-50	0-50	0-50

<b>LCS #:</b>	BLK081495	BLK081495	BLK081495	BLK081495
<b>Prepared Date:</b>	8/14/95	8/14/95	8/14/95	8/14/95
<b>Analyzed Date:</b>	8/17/95	8/17/95	8/17/95	8/17/95
<b>Instrument I.D.#:</b>	F4	F4	F4	F4
<b>Conc. Spiked:</b>	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
<b>LCS Result:</b>	2400	2300	2200	2500
<b>LCS % Recov.:</b>	73	70	67	76

<b>MS/MSD</b>				
<b>LCS</b>	5-112	23-134	20-124	DL-230
<b>Control Limits</b>				

SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager

**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

\*\* MS= Matrix Spike, MSD= MS Duplicate, RPD= Relative % Difference



Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Project ID: Shell 610 Market, Oakland Matrix: Solid  Work Order #: 9508815-01-06	Reported: Aug 22, 1995
---	--	------------------------

**QUALITY CONTROL DATA REPORT**

Analyte:	1,2,4-Trichloro benzene	4-Chloro-3 Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS0814958270EXA	MS0814958270EXA	MS0814958270EXA	MS0814958270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

<b>Analyst:</b>	E. Manuel	E. Manuel	E. Manuel	E. Manuel
<b>MS/MSD #:</b>	950857209	950857209	950857209	950857209
<b>Sample Conc.:</b>	N.D.	N.D.	N.D.	N.D.
<b>Prepared Date:</b>	8/14/95	8/14/95	8/14/95	8/14/95
<b>Analyzed Date:</b>	8/17/95	8/17/95	8/17/95	8/17/95
<b>Instrument I.D.#:</b>	F4	F4	F4	F4
<b>Conc. Spiked:</b>	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
<b>Result:</b>	2500	2500	2400	2400
<b>MS % Recovery:</b>	76	76	73	73
<b>Dup. Result:</b>	2600	2700	2500	2500
<b>MSD % Recov.:</b>	79	82	76	76
<b>RPD:</b>	3.9	7.7	4.1	4.1
<b>RPD Limit:</b>	0-50	0-50	0-50	0-50

<b>LCS #:</b>	BLK081495	BLK081495	BLK081495	BLK081495
<b>Prepared Date:</b>	8/14/95	8/14/95	8/14/95	8/14/95
<b>Analyzed Date:</b>	8/17/95	8/17/95	8/17/95	8/17/95
<b>Instrument I.D.#:</b>	F4	F4	F4	F4
<b>Conc. Spiked:</b>	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
<b>LCS Result:</b>	2400	2300	2300	1900
<b>LCS % Recov.:</b>	73	70	70	58

MS/MSD	LCS	LCS	LCS	LCS
Control Limits	44-142	22-147	47-145	DL-132

**SEQUOIA ANALYTICAL**

*[Signature]*  
Mike Gregory  
Project Manager

Please Note:  
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\*\* MS= Matrix Spike, MSD= MS Duplicate, RPD= Relative % Difference



Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 610 Market, Oakland  
Matrix: Solid

Work Order #: 9508815-01-06

Reported: Aug 22, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
QC Batch#:	MS0814958270EXA	MS0814958270EXA	MS0814958270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550

Analyst:	E. Manuel	E. Manuel	E. Manuel
MS/MSD #:	950857209	950857209	950857209
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	8/14/95	8/14/95	8/14/95
Analyzed Date:	8/17/95	8/17/95	8/17/95
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	2300	1000	2100
MS % Recovery:	70	30	64
Dup. Result:	2400	1100	2200
MSD % Recov.:	73	33	67
RPD:	4.3	10	4.7
RPD Limit:	0-50	0-50	0-50

LCS #:	BLK081495	BLK081495	BLK081495
Prepared Date:	8/14/95	8/14/95	8/14/95
Analyzed Date:	8/17/95	8/17/95	8/17/95
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2200	2100	1700
LCS % Recov.:	67	64	52

MS/MSD			
LCS	39-139	14-176	52-115
Control Limits			

SEQUOIA ANALYTICAL

  
Mike Gregory  
Project Manager

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\*\* MS= Matrix Spike, MSD= MS Duplicate, RPD= Relative % Difference



Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 610 Market, Oakland  
Matrix: Solid

Work Order #: 9508815-01-06

Reported: Aug 22, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro- benzene
QC Batch#:	MS0815958240EXA	MS0815958240EXA	MS0815958240EXA	MS0815958240EXA	MS0815958240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.
Analyst:	M. Williams	M. Williams	M. Williams	M. Williams	M. Williams
MS/MSD #:	950881501	950881501	950881501	950881501	950881501
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	N.A.	N.A.	N.A.	N.A.	N.A.
Analyzed Date:	8/15/95	8/15/95	8/15/95	8/15/95	8/15/95
Instrument I.D.#:	MSF3	MSF3	MSF3	MSF3	MSF3
Conc. Spiked:	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg
Result:	2200	2300	2400	2400	2400
MS % Recovery:	88	92	96	96	96
Dup. Result:	2400	2500	2600	2700	2600
MSD % Recov.:	96	100	104	108	104
RPD:	8.7	8.3	8.0	12	8.0
RPD Limit:	0-50	0-50	0-50	0-50	0-50

LCS #:

Prepared Date:  
Analyzed Date:  
Instrument I.D.#:  
Conc. Spiked:

LCS Result:  
LCS % Recov.:

MS/MSD LCS	DL-234	71-157	37-151	47-150	37-160
Control Limits					

**SEQUOIA ANALYTICAL**

Mike Gregory  
Project Manager

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Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 610 Market, Oakland  
Matrix: Solid

Work Order #: 9508815-01-06

Reported: Aug 22, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0815956010MDA	ME0815956010MDA	ME0815956010MDA	ME0815956010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	S. O'Donnell	S. O'Donnell	S. O'Donnell	S. O'Donnell
MS/MSD #:	950881501	950881501	950881501	950881501
Sample Conc.:	0.53	N.D.	52	39
Prepared Date:	8/15/95	8/15/95	8/15/95	8/15/95
Analyzed Date:	8/15/95	8/15/95	8/15/95	8/15/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
Result:	110	100	150	140
MS % Recovery:	109	100	98	101
Dup. Result:	110	100	140	140
MSD % Recov.:	109	100	88	101
RPD:	0.0	0.0	6.9	0.0
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	BLK081595	BLK081595	BLK081595	BLK081595
Prepared Date:	8/15/95	8/15/95	8/15/95	8/15/95
Analyzed Date:	8/15/95	8/15/95	8/15/95	8/15/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
LCS Result:	110	110	110	110
LCS % Recov.:	110	110	110	110

MS/MSD LCS Control Limits	75-125	75-125	75-125	75-125
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**SEQUOIA ANALYTICAL**

  
Mike Gregory  
Project Manager

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9508815.WAA <5>





Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 610 Market, Oakland  
Matrix: Solid

Work Order #: 9508815-01-06

Reported: Aug 22, 1995

QUALITY CONTROL DATA REPORT

Analyte: Total Recoverable  
Petroleum Hydrocabons

QC Batch#: OP0817955520EXA  
Analy. Method: SM 5520EF MOD  
Prep. Method: EPA 3550

Analyst: C. Garde  
MS/MSD #: 950881504  
Sample Conc.: 220  
Prepared Date: 8/17/95  
Analyzed Date: 8/18/95  
Instrument I.D.#: MANUAL  
Conc. Spiked: 500 mg/Kg

Result: 560  
MS % Recovery: 68

Dup. Result: 630  
MSD % Recov.: 82

RPD: 12  
RPD Limit: 0-50

LCS #: BLK081795

Prepared Date: 8/17/95  
Analyzed Date: 8/18/95  
Instrument I.D.#: MANUAL  
Conc. Spiked: 500 mg/Kg

LCS Result: 430  
LCS % Recov.: 86

MS/MSD  
LCS 60-140  
Control Limits 70-110

Please Note:

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SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9508815.WAA <6>





**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**  
Serial No: \_\_\_\_\_

Date: 8/7/95  
Page 1 of 1

Site Address: 610 Market Street, Oakland, CA

WIC#: 204-5508-5702

Shell Engineer: Dan Kirk Phone No.: \_\_\_\_\_  
Fax #: \_\_\_\_\_

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

Consultant Contact: Faith Davern Phone No.: \_\_\_\_\_  
WA JOB # 81-1103-9 (510) 547-5420  
Fax #: 547-5043

Comments: Confirmation Soil samples

Sampled by: Faith Davern

Printed Name: Faith Davern

**Analysis Required**

LAB: Sequora

CHECK ONE (1) BOX ONLY	CT/DI	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
SRA Investigation <input checked="" type="checkbox"/>	4461	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4462	15 days <input type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4463	Other: <u>5-Day</u>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4463	NOTE: Notify Lab as soon as possible of 24/48 hr. TAT
Other <input type="checkbox"/>		

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

UST AGENCY: \_\_\_\_\_

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
SS1-5.0	8/7/95		X			1		
SS2-4.0			X			1		
SS3-4.0			X			1		
SS4-5.0			X			1		
SS5-5.0			X			1		
SS6-4.0			X			1		

Relinquished By (signature): <u>Faith Davern</u>	Printed Name: <u>Faith Davern</u>	Date: <u>8/7/95</u>	Time: <u>1:34</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>W. Jones</u>	Date: <u>8/7/95</u>	Time: <u>1:55</u>
Relinquished By (signature): _____	Printed Name: _____	Date: _____	Time: _____	Received (signature): _____	Printed Name: _____	Date: _____	Time: _____
Relinquished By (signature): _____	Printed Name: _____	Date: _____	Time: _____	Received (signature): _____	Printed Name: _____	Date: _____	Time: _____

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

PAGE 02  
WEISS ASSOC EMYVL  
08/11/1995 13:11  
018-047-0043

**ATTACHMENT B**

**SOIL DISPOSAL CONFIRMATION AND CERTIFIED ANALYTICAL  
REPORT FOR STOCKPILE SAMPLES**

## DISPOSAL CONFIRMATION

Consultant:	WEISS ASSOCIATES
Contact:	FAITH DAVERIN
Phone/Fax:	(510) 547-5420 FAX (510) 547-5043
Client:	SHELL OIL CO. - JEFF BYRAM
Station #/Wic #:	204-5508-5702+4442
Site Address:	610 NMARKET STREET
City/State:	OAKLAND, CA
Estimated YD/Ton:	2-3 LOADS
Actual YD/Ton:	34.32 TONS
Disposal Facility:	LIDLAW ENVIRONMENTAL
Disposal Date:	OCTOBER 11, 1995
Contact:	CHARLES
Phone #:	(805) 762-7372
Hauler:	MANLEY & SONS TRUCKING, INC.
Contact:	TIM A. MANLEY
Phone #:	(916) 381-6864
Fax #:	(916) 381-1573

Date &amp; Time Faxed

3657



# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(415) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Project: Shell 81-1103-9

Enclosed are the results from samples received at Sequoia Analytical on August 7, 1995. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
950842901	SOLID, SP-1	8/3/95	TPHGB Purgeable TPH/BTEX
950842902	SOLID, SP-2	8/3/95	TPHGB Purgeable TPH/BTEX
950842903	SOLID, SP-3	8/3/95	TPHGB Purgeable TPH/BTEX
950842904	SOLID, SP-4	8/3/95	Organic Lead TTLC Metals TPHGB Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager





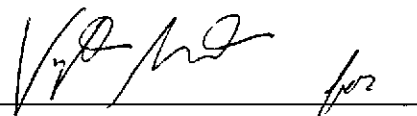
Weiss Associates	Client Proj. ID: Shell 81-1103-9	Sampled: 08/03/95
5500 Shellmound	Lab Proj. ID: 9508429	Received: 08/07/95
Emeryville, CA 94608		Analyzed: see below
Attention: Faith Daverin		Reported: 08/15/95

**LABORATORY ANALYSIS**

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9508429-04				
Sample Desc: SOLID,SP-4				
Organic Lead	mg/Kg	08/15/95	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
 Mike Gregory  
 Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 81-1103-9 Sample Descript: SP-1 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9508429-01	Sampled: 08/03/95 Received: 08/07/95 Extracted: 08/08/95 Analyzed: 08/08/95 Reported: 08/15/95
Attention: Faith Daverin		

QC Batch Number: GC080895BTEXEXC  
Instrument ID: GCHP01

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	20	51
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	0.10	N.D.
Xylenes (Total)	0.10	4.7
Chromatogram Pattern:		C8-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	114

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager







Weiss Associates	Client Proj. ID: Shell 81-1103-9	Sampled: 08/03/95
5500 Shellmound	Sample Descript: SP-2	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/08/95
Attention: Faith Daverin	Analysis Method: 8015Mod/8020	Analyzed: 08/08/95
	Lab Number: 9508429-02	Reported: 08/15/95

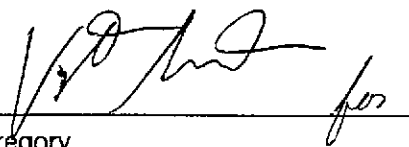
QC Batch Number: GC080895BTEXEXC  
Instrument ID: GCHP01

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	1.3
Benzene	0.0050	N.D.
Toluene	0.0050	0.011
Ethyl Benzene	0.0050	0.0070
Xylenes (Total)	0.0050	0.17
Chromatogram Pattern:		C8-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	112

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

  
 Mike Gregory  
 Project Manager



Weiss Associates	Client Proj. ID: Shell 81-1103-9	Sampled: 08/03/95
5500 Shellmound	Sample Descript: SP-3	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/08/95
Attention: Faith Daverin	Analysis Method: 8015Mod/8020	Analyzed: 08/08/95
	Lab Number: 9508429-03	Reported: 08/15/95

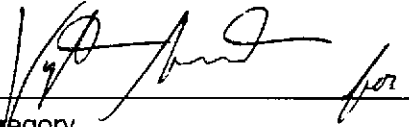
QC Batch Number: GC080895BTEXEXC  
Instrument ID: GCHP01

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	10	44
Benzene	0.050	N.D.
Toluene	0.050	0.10
Ethyl Benzene	0.050	0.16
Xylenes (Total)	0.050	3.9
Chromatogram Pattern:		C7-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	107

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
 Mike Gregory  
 Project Manager



Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608

Client Proj. ID: Shell 81-1103-9  
Sample Descript: SP-4  
Matrix: SOLID  
Analysis Method: Title 22  
Lab Number: 9508429-04

Sampled: 08/03/95  
Received: 08/07/95  
Analyzed:  
Reported: 08/15/95

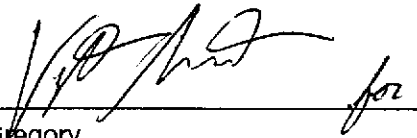
Attention: Faith Daverin

**Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC**

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	N.D.
Arsenic, As	500	5.0	N.D.
<b>Barium, Ba</b>	<b>10000</b>	<b>5.0</b>	<b>50</b>
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	N.D.
<b>Chromium, Cr</b>	<b>2500</b>	<b>0.50</b>	<b>29</b>
<b>Cobalt, Co</b>	<b>8000</b>	<b>2.5</b>	<b>6.7</b>
<b>Copper, Cu</b>	<b>2500</b>	<b>0.50</b>	<b>20</b>
<b>Lead, Pb</b>	<b>1000</b>	<b>5.0</b>	<b>16</b>
<b>Mercury, Hg</b>	<b>20</b>	<b>0.020</b>	<b>0.050</b>
Molybdenum, Mo	3500	2.5	N.D.
<b>Nickel, Ni</b>	<b>2000</b>	<b>2.5</b>	<b>48</b>
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
<b>Vanadium, V</b>	<b>2400</b>	<b>2.5</b>	<b>17</b>
<b>Zinc, Zn</b>	<b>5000</b>	<b>0.50</b>	<b>45</b>

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Mike Gregory  
Project Manager





Weiss Associates	Client Proj. ID: Shell 81-1103-9	Sampled: 08/03/95
5500 Shellmound	Sample Descript: SP-4	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/08/95
Attention: Faith Daverin	Analysis Method: 8015Mod/8020	Analyzed: 08/08/95
	Lab Number: 9508429-04	Reported: 08/15/95

QC Batch Number: GC080895BTEXEXC  
Instrument ID: GCHP01

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	2.0	19
Benzene	0.010	N.D.
Toluene	0.010	0.11
Ethyl Benzene	0.010	0.074
Xylenes (Total)	0.010	2.3
Chromatogram Pattern:		C7-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	115

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory  
Project Manager





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 81-1103-9  
Matrix: SOLID  
Work Order #: 9508429 04

Reported: Aug 16, 1995

QUALITY CONTROL DATA REPORT

Analyte: Organic Lead

QC Batch#: ME0811957000MDA

Analy. Method: LUFT

Prep. Method: LUFT

Analyst: R. Butler

MS/MSD #: 950875701

Sample Conc.: N.D.

Prepared Date: 8/11/95

Analyzed Date: 8/15/95

Instrument I.D.#: MV2

Conc. Spiked: 0.50 mg/Kg

Result: 0.49

MS % Recovery: 98

Dup. Result: 0.51

MSD % Recov.: 102

RPD: 6.0

RPD Limit: 0-30

LCS #: BLK081195

Prepared Date: 8/11/95

Analyzed Date: 8/15/95

Instrument I.D.#: MV2

Conc. Spiked: 0.50 mg/Kg

LCS Result: 0.50

LCS % Recov.: 100

MS/MSD

LCS 75-125

Control Limits

Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9508429.WAA <1>





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 81-1103-9  
Matrix: Solid  
Work Order #: 9508429 04

Reported: Aug 16, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0809956010MDE	ME0809956010MDE	ME0809956010MDE	ME0809956010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyt:	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser
MS/MSD #:	950847901	950847901	950847901	950847901
Sample Conc.:	N.D.	N.D.	24	29
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95
Analyzed Date:	8/10/95	8/10/95	8/10/95	8/10/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
Result:	100	96	120	130
MS % Recovery:	100	96	120	130
Dup. Result:	100	93	120	120
MSD % Recov.:	100	93	120	120
RPD:	0.0	3.2	0.0	8.0
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	BLK080995	BLK080995	BLK080995	BLK080995
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95
Analyzed Date:	8/10/95	8/10/95	8/10/95	8/10/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
LCS Result:	100	96	99	99
LCS % Recov.:	100	96	99	99

MS/MSD	LCS	LCS	LCS	LCS
Control Limits	75-125	75-125	75-125	75-125

**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

*[Signature]*  
Mike Gregory  
Project Manager

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9508429.WAA <2>





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 81-1103-9  
Matrix: Liquid  
Work Order #: 9508429 04

Reported: Aug 16, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0809956010MDB	ME0809956010MDB	ME0809956010MDB	ME0809956010MDB
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyt:	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser
MS/MSD #:	950805301	950805301	950805301	950805301
Sample Conc.:	N.D.	N.D.	0.030	0.081
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95
Analyzed Date:	8/9/95	8/9/95	8/9/95	8/9/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.0	0.95	0.99	1.0
MS % Recovery:	100	95	96	92
Dup. Result:	1.1	0.99	1.0	1.1
MSD % Recov.:	110	99	97	102
RPD:	9.5	4.1	1.0	9.5
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	BLK080995	BLK080995	BLK080995	BLK080995
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95
Analyzed Date:	8/9/95	8/9/95	8/9/95	8/9/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.1	0.97	0.99	1.0
LCS % Recov.:	110	97	99	100

MS/MSD LCS Control Limits	75-125	75-125	75-125	75-125
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**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

*[Signature]*  
Mike Gregory  
Project Manager

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9508429.WAA <3>





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 81-1103-9  
Matrix: Solid  
Work Order #: 9508429 04

Reported: Aug 16, 1995

**QUALITY CONTROL DATA REPORT**

**Analyte:** Mercury  
**QC Batch#:** ME0808957471M4B  
**Analy. Method:** EPA 7471  
**Prep. Method:** EPA 7471

**Analyst:** T. Hua  
**MS/MSD #:** 950842901  
**Sample Conc.:** 0.050  
**Prepared Date:** 8/8/95  
**Analyzed Date:** 8/8/95  
**Instrument I.D.#:** MPE4  
**Conc. Spiked:** 0.20 mg/Kg

**Result:** 0.23  
**MS % Recovery:** 90

**Dup. Result:** 0.26  
**MSD % Recov.:** 95

**RPD:** 4.3  
**RPD Limit:** 0-30

**LCS #:** BLK080895  
**Prepared Date:** 8/8/95  
**Analyzed Date:** 8/8/95  
**Instrument I.D.#:** MPE4  
**Conc. Spiked:** 0.20 mg/Kg

**LCS Result:** 0.17  
**LCS % Recov.:** 85

**MS/MSD  
LCS  
Control Limits** 75-125

**Please Note:**  
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

*[Signature]*  
Mike Gregory  
Project Manager

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9508429.WAA < 4 >







Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 81-1103-9  
Matrix: Solid

Work Order #: 9508429 01-04

Reported: Aug 16, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC080895BTEXEXC	GC080895BTEXEXC	GC080895BTEXEXC	GC080895BTEXEXC
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD #:	950804115	950804115	950804115	950804115
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/8/95	8/8/95	8/8/95	8/8/95
Analyzed Date:	8/8/95	8/8/95	8/8/95	8/8/95
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.17	0.18	0.18	0.54
MS % Recovery:	85	90	90	90
Dup. Result:	0.18	0.18	0.18	0.54
MSD % Recov.:	90	90	90	90
RPD:	5.7	0.0	0.0	0.0
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:

Prepared Date:  
Analyzed Date:  
Instrument I.D.#:  
Conc. Spiked:

LCS Result:  
LCS % Recov.:

MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140
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Please Note:

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

  
Mike Gregory  
Project Manager

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9508429.WAA <5>





**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: \_\_\_\_\_

Date: 8/4/95

Page 1 of 1

Site Address: 610 Market Street, Oakland, CA

**Analysis Required**

LAB: Sequoia

WIC#: 204-5508-5702

Shell Engineer: Jeff Bryam  
Phone No.:  
Fax #:

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

Consultant Contact: Faith Davevin  
WA JOB # 81-1103-9  
Phone No.: (510) 547-5420  
Fax #: 547-5043

Comments: Soil Disposal

Sampled by: Herb Toor

Printed Name: Herb Toor

Sample ID	Date	Sludge	Soil	Water	Air	No. of conls.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N
SP-1	8/3/95		X			1					X					Y
SP-2	↓		X			1					X					Y
SP-3	↓		X			1					X					Y
SP-4	↓		X			1					X					Y

CHECK ONE (1) BOX ONLY	CT/DI	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	4441	48 hours <input checked="" type="checkbox"/>
Soil Classify/Disposal <input checked="" type="checkbox"/>	4442	15 days <input 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: Nately Lab as soon as Possible of 24/48 hrs. TAT.

UST AGENCY: \_\_\_\_\_

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
	Please composite and analyze
9508429	per Shell's minimum requirements for soil with petroleum hydrocarbon
	as gasoline - UST related.

Relinquished By (signature): Herb Toor  
Printed Name: Herb Toor  
Date: 8/7/95  
Time: 3:49

Relinquished By (signature): W. Torres  
Printed Name: W. Torres  
Date: 8/7/95  
Time: 8:40

Relinquished By (signature):  
Printed Name:  
Date:  
Time:

Received (signature):  
Printed Name:  
Date: 8/7/95  
Time: 1:53

Received (signature):  
Printed Name:  
Date:  
Time:

Received (signature):  
Printed Name:  
Date: 8/7/95  
Time: 1:54

Printed Name: W. Torres  
Date: 8/7/95  
Time: 1:53

Printed Name: M. York  
Date: 8/7/95  
Time: 1:54

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

make stored in a locked, secured area over weekend.



# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

Redwood City, CA 94063  
Walnut Creek, CA 94598  
Sacramento, CA 95834

(415) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Project: Shell 81-1103-9

Enclosed are the results from samples received at Sequoia Analytical on August 7, 1995.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9508431 -01	SOLID, SP-1A	08/07/95	TPHGBS Purgeable TPH/BTEX
9508431 -02	SOLID, SP-2A	08/07/95	TPHGBS Purgeable TPH/BTEX
9508431 -03	SOLID, SP-3A	08/07/95	TPHGBS Purgeable TPH/BTEX
9508431 -04	SOLID, SP-4A	08/07/95	Lead: TCLP Extraction
9508431 -04	SOLID, SP-4A	08/07/95	ISTLCS Title 22: Metals, S
9508431 -04	SOLID, SP-4A	08/07/95	ITLCS Title 22: Metals, T
9508431 -04	SOLID, SP-4A	08/07/95	Organic Lead
9508431 -04	SOLID, SP-4A	08/07/95	TPHGBS Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

**SEQUOIA ANALYTICAL**

Mike Gregory  
Project Manager





Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608

Client Proj. ID: Shell 81-1103-9

Lab Proj. ID: 9508431

Sampled: 08/07/95  
Received: 08/07/95  
Analyzed: see below

Attention: Faith Daverin

Reported: 08/16/95

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9508431-04				
Sample Desc: SOLID,SP-4A				
Lead: TCLP Extraction	mg/L	08/16/95	0.10	0.45
Organic Lead	mg/Kg	08/15/95	5.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory  
Project Manager





Weiss Associates	Client Proj. ID: Shell 81-1103-9	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SP-1A	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/08/95
Attention: Faith Daverin	Analysis Method: 8015Mod/8020	Analyzed: 08/08/95
	Lab Number: 9508431-01	Reported: 08/16/95

QC Batch Number: GC080895BTEXEXF  
Instrument ID: GCHP06

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	0.0064
Ethyl Benzene	0.0050	0.0094
Xylenes (Total)	0.0050	0.019
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	124

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory  
Project Manager





Weiss Associates Client Proj. ID: Shell 81-1103-9 Sampled: 08/07/95
5500 Shellmound Sample Descript: SP-2A Received: 08/07/95
Emeryville, CA 94608 Matrix: SOLID Extracted: 08/08/95
Attention: Faith Daverin Analysis Method: 8015Mod/8020 Analyzed: 08/08/95
Lab Number: 9508431-02 Reported: 08/16/95

QC Batch Number: GC080895BTEXEXF
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Table with 3 columns: Analyte, Detection Limit mg/Kg, Sample Results mg/Kg. Rows include TPHH as Gas, Benzene, Toluene, Ethyl Benzene, Xylenes (Total), Chromatogram Pattern, Surrogates, and Trifluorotoluene.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Signature of Mike Gregory
Mike Gregory
Project Manager



Weiss Associates	Client Proj. ID: Shell 81-1103-9	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SP-3A	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 08/08/95
Attention: Faith Daverin	Analysis Method: 8015Mod/8020	Analyzed: 08/08/95
	Lab Number: 9508431-03	Reported: 08/16/95

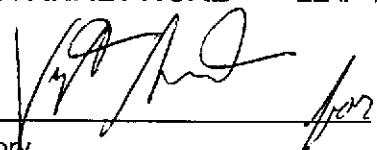
QC Batch Number: GC080895BTEXEXC  
Instrument ID: GCHP06

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	13
Benzene	0.0050	N.D.
Toluene	0.0050	0.081
Ethyl Benzene	0.0050	0.044
Xylenes (Total)	0.0050	0.085
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	228 Q

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Mike Gregory  
Project Manager



Weiss Associates	Client Proj. ID: Shell 81-1103-9	Sampled: 08/07/95
5500 Shellmound	Sample Descript: SP-4A	Received: 08/07/95
Emeryville, CA 94608	Matrix: SOLID	
Attention: Faith Daverin	Analysis Method: Title 22	Analyzed:
	Lab Number: 9508431-04	Reported: 08/16/95

**Inorganic Persistent and Bioaccumulative Toxic Substances : STLC**

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Lead, Pb	5.0	0.10	6.2

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager







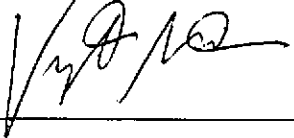
Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 81-1103-9 Sample Descript: SP-4A Matrix: SOLID Analysis Method: Title 22 Lab Number: 9508431-04	Sampled: 08/07/95 Received: 08/07/95 Analyzed: Reported: 08/16/95
---	--	--

**Inorganic Persistent and Bioaccumulative Toxic Substances : TTLC**

Analyte	Max. Limit mg/Kg	Detection Limit mg/Kg	Sample Results mg/Kg
Antimony, Sb	500	5.0	N.D.
Arsenic, As	500	5.0	N.D.
<b>Barium, Ba</b>	<b>10000</b>	<b>5.0</b>	<b>130</b>
Beryllium, Be	75	0.50	N.D.
<b>Cadmium, Cd</b>	<b>100</b>	<b>0.50</b>	<b>0.81</b>
<b>Chromium, Cr</b>	<b>2500</b>	<b>0.50</b>	<b>31</b>
<b>Cobalt, Co</b>	<b>8000</b>	<b>2.5</b>	<b>5.5</b>
<b>Copper, Cu</b>	<b>2500</b>	<b>0.50</b>	<b>32</b>
<b>Lead, Pb</b>	<b>1000</b>	<b>5.0</b>	<b>160</b>
<b>Mercury, Hg</b>	<b>20</b>	<b>0.020</b>	<b>0.21</b>
Molybdenum, Mo	3500	2.5	N.D.
<b>Nickel, Ni</b>	<b>2000</b>	<b>2.5</b>	<b>21</b>
Selenium, Se	100	5.0	N.D.
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
<b>Vanadium, V</b>	<b>2400</b>	<b>2.5</b>	<b>21</b>
<b>Zinc, Zn</b>	<b>5000</b>	<b>0.50</b>	<b>170</b>

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

  
 \_\_\_\_\_  
 Mike Gregory  
 Project Manager



Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 81-1103-9 Sample Descript: SP-4A Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9508431-04	Sampled: 08/07/95 Received: 08/07/95 Extracted: 08/08/95 Analyzed: 08/08/95 Reported: 08/16/95
---	--	--


QC Batch Number: GC080895BTEXEXF  
Instrument ID: GCHP06

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	112

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL - ELAP #1210**

  
 \_\_\_\_\_  
 Mike Gregory  
 Project Manager



# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
819 Striker Avenue, Suite 8

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Sacramento, CA 95834

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(510) 988-9600  
(916) 921-9600

FAX (415) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 81-1103-9  
Matrix: Liquid  
Work Order #: 9508431 -04

Reported: Aug 16, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	Beryllium TCLP	Cadmium TCLP	Chromium TCLP	Nickel TCLP	Mercury STLC
QC Batch#:	ME0815956010MDC	ME0815956010MDC	ME0815956010MDC	ME0815956010MDC	ME0809952451M4A
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 245.1
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010	EPA 245.1

Analyst:	S. O'Donnell	S. O'Donnell	S. O'Donnell	S. O'Donnell	N. Rocklein
MS/MSD #:	9508493-01	9508493-01	9508493-01	9508493-01	9508542-01K
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/16/95	8/16/95	8/16/95	8/16/95	8/9/95
Analyzed Date:	8/16/95	8/16/95	8/16/95	8/16/95	8/9/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2	MPE4
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L	0.0040 mg/L
Result:	1.1	1.0	1.0	1.1	0.0038
MS % Recovery:	110	100	100	110	95
Dup. Result:	1.1	1.0	1.0	1.1	0.0038
MSD % Recov.:	110	100	100	110	95
RPD:	0.0	0.0	0.0	0.0	0.0
RPD Limit:	0-30	0-30	0-30	0-30	0-30

LCS #:	BLK081695	BLK081695	BLK081695	BLK081695	BLK080995B
Prepared Date:	8/16/95	8/16/95	8/16/95	8/16/95	8/9/95
Analyzed Date:	8/16/95	8/16/95	8/16/95	8/16/95	8/9/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2	MPE4
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L	0.0040 mg/L
LCS Result:	1.1	1.0	1.0	1.0	0.0038
LCS % Recov.:	110	100	100	100	95

MS/MSD	75-125	75-125	75-125	75-125	75-125
LCS	75-125	75-125	75-125	75-125	75-125
Control Limits					

**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager

\*\* MS= Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9508431.WAA <1>



Weiss & Associates Client Project ID: Shell 81-1103-9  
 5500 Shellmound Matrix: Solid  
 Emeryville, CA 94608 Work Order #: 9508431 -04 Reported: Aug 16, 1995  
 Attention: Faith Daverin

**QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0809956010MDF	ME0809956010MDF	ME0809956010MDF	ME0809956010MDF
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser
MS/MSD #:	9508412-09	9508412-09	9508412-09	9508412-09
Sample Conc.:	N.D.	N.D.	28	26
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95
Analyzed Date:	8/10/95	8/10/95	8/10/95	8/10/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/kg	100 mg/kg	100 mg/kg	100 mg/kg
Result:	100	91	120	120
MS % Recovery:	100	91	92	94
Dup. Result:	1.1	1.0	1.0	1.1
MSD % Recov.:	110	100	100	110
RPD:	1.0	1.1	0.0	0.0
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	BLK080995	BLK080995	BLK080995	BLK080995
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95
Analyzed Date:	8/10/95	8/10/95	8/10/95	8/10/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/kg	100 mg/kg	100 mg/kg	100 mg/kg
LCS Result:	100	98	100	100
LCS % Recov.:	100	98	100	100

MS/MSD	75-125	75-125	75-125	75-125
LCS	75-125	75-125	75-125	75-125
Control Limits				

**Please Note:**  
 The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

*[Signature]*  
 Mike Gregory  
 Project Manager

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9508431.WAA <2>





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 81-1103-9  
Matrix: Solid

Work Order #: 9508431 -01 - 04

Reported: Aug 16, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC080895BTEXEXF	GC080895BTEXEXF	GC080895BTEXEXF	GC080895BTEXEXF
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD #:	9508041-30	9508041-30	9508041-30	9508041-30
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/8/95	8/8/95	8/8/95	8/8/95
Analyzed Date:	8/8/95	8/8/95	8/8/95	8/8/95
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/kg
Result:	0.18	0.17	0.17	0.52
MS % Recovery:	90	85	85	87
Dup. Result:	0.17	0.17	0.17	0.47
MSD % Recov.:	85	85	80	78
RPD:	5.7	0.0	6.1	10
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:

Prepared Date:  
Analyzed Date:  
Instrument I.D.#:  
Conc. Spiked:

LCS Result:  
LCS % Recov.:

MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140
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**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager



**SHELL OIL COMPANY**  
 RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: \_\_\_\_\_

Date: 8/7/95

Page 1 of 1

Site Address: 610 Market Street, Oakland, CA

WIC#: 204-5508-5702

Shell Engineer: Dan Kirk Phone No.:  
 Fax #:

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

Consultant Contact: Faith Davern Phone No.:  
 WA JOB # 81-1103-9 (510) 547-5420  
 Fax #: 547-5043

Comments: Soil Disposal

Sampled by: Faith Davern

Printed Name: Faith Davern

**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	Asbestos	Container Size	Preparation Used	Composite Y/N
				X					Y
				X					Y
				X					Y
				X					Y

LAB: Sequoia

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 type="checkbox"/>	4441	48 hours <input checked="" type="checkbox"/>
Soil Classify/Disposal <input checked="" type="checkbox"/>	4442	15 days <input 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: \_\_\_\_\_

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	MATERIAL DESCRIPTION		SAMPLE CONDITION/ COMMENTS
							TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	
SP-1A	8/7/95		X			1			per Shell's minimum requirements for soil with gasoline-UST related
SP-2A	↓		X			1			per Shell's minimum requirements for soil with gasoline-UST related
SP-3A	↓		X			1			per Shell's minimum requirements for soil with gasoline-UST related
SP-4A	↓		X			1			per Shell's minimum requirements for soil with gasoline-UST related

Relinquished By (signature): Faith Davern	Printed Name: Faith Davern	Date: 8/7/95 Time: 3:47	Received (signature): [Signature]	Printed Name: W. Jones	Date: 8/7/95 Time: 1:55
Relinquished By (signature): [Signature]	Printed Name: W. Jones	Date: 8/7/95 Time: 2:40	Received (signature): [Signature]	Printed Name:	Date: Time:
Relinquished By (signature): [Signature]	Printed Name:	Date: Time:	Received (signature): [Signature]	Printed Name: M. Young	Date: 8/7/95 Time: 15:15

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



# Sequoia Analytical

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FAX (415) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Project: Shell 610 Market St., Oakland

Enclosed are the results from samples received at Sequoia Analytical on August 28, 1995.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9508K22 -01	SOLID, SP-B4 (a-d) comp	08/28/95	TRPH (EPA 418.1)
9508K22 -01	SOLID, SP-B4 (a-d) comp	08/28/95	Bioassay
9508K22 -01	SOLID, SP-B4 (a-d) comp	08/28/95	PCB_S Polychlorinated Biph
9508K22 -01	SOLID, SP-B4 (a-d) comp	08/28/95	pH
9508K22 -01	SOLID, SP-B4 (a-d) comp	08/28/95	S_REAC Reactivity
9508K22 -01	SOLID, SP-B4 (a-d) comp	08/28/95	TCLPMS Metals
9508K22 -01	SOLID, SP-B4 (a-d) comp	08/28/95	TCLPSS SemiVolatile
9508K22 -01	SOLID, SP-B4 (a-d) comp	08/28/95	TCLPVS Volatiles
9508K22 -02	SOLID, SP-B1	08/28/95	TRPH (EPA 418.1)
9508K22 -03	SOLID, SP-B2	08/28/95	TRPH (EPA 418.1)
9508K22 -04	SOLID, SP-B3	08/28/95	TRPH (EPA 418.1)

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

**SEQUOIA ANALYTICAL**

Mike Gregory  
Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market St., Oakland Lab Proj. ID: 9508K22	Sampled: 08/28/95 Received: 08/28/95 Analyzed: see below Reported: 09/06/95
Attention: Faith Daverin		

**LABORATORY ANALYSIS**

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9508K22-01 Sample Desc: SOLID,SP-B4 (a-d) comp				
pH TRPH (EPA 418.1)	pH Units mg/Kg	08/29/95 08/30/95	N/A 15	8.6 260
Lab No: 9508K22-02 Sample Desc: SOLID,SP-B1				
TRPH (EPA 418.1)	mg/Kg	08/30/95	15	330
Lab No: 9508K22-03 Sample Desc: SOLID,SP-B2				
TRPH (EPA 418.1)	mg/Kg	08/30/95	15	240
Lab No: 9508K22-04 Sample Desc: SOLID,SP-B3				
TRPH (EPA 418.1)	mg/Kg	08/30/95	15	180

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Mike Gregory  
Project Manager







Weiss Associates	Client Proj. ID: Shell 610 Market St., Oakland	Sampled: 08/28/95
5500 Shellmound	Sample Descript: SP-B4 (a-d) comp	Received: 08/28/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 09/01/95
Attention: Faith Daverin	Analysis Method: EPA 8080	Analyzed: 09/01/95
	Lab Number: 9508K22-01	Reported: 09/06/95

QC Batch Number: GC0831950PCBEXA  
Instrument ID: GCHP23

**Polychlorinated Biphenyls (EPA 8080)**

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
PCB-1016	20	N.D.
PCB-1221	80	N.D.
PCB-1232	20	N.D.
PCB-1242	20	N.D.
PCB-1248	20	N.D.
PCB-1254	20	N.D.
PCB-1260	20	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Dibutylchloroendate	30                      150	27 Q

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager





Weiss Associates	Client Proj. ID: Shell 610 Market St., Oakland	Sampled: 08/28/95
5500 Shellmound	Sample Descript: SP-B4 (a-d) comp	Received: 08/28/95
Emeryville, CA 94608	Matrix: SOLID	
Attention: Faith Daverin	Analysis Method: Comb	Analyzed: 08/29/95
	Lab Number: 9508K22-01	Reported: 09/06/95

QC Batch Number: IN082995084600A

**Reactivity**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Reactivity:		
Sulfide	13	N.D.
Cyanide	0.50	N.D.
Reaction with Water		N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
\_\_\_\_\_  
Mike Gregory  
Project Manager





Weiss Associates	Client Proj. ID: Shell 610 Market St., Oakland	Sampled: 08/28/95
5500 Shellmound	Sample Descript: SP-B4 (a-d) comp	Received: 08/28/95
Emeryville, CA 94608	Matrix: SOLID	
	Analysis Method: EPA6010/7470	Analyzed:
Attention: Faith Daverin	Lab Number: 9508K22-01	Reported: 09/06/95

**TCLP Metals**

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Arsenic, As	5.0	0.10	N.D.
Barium, Ba	100	0.10	2.0
Cadmium, Cd	1.0	0.010	0.011
Chromium, Cr	5.0	0.010	0.013
Lead, Pb	5.0	0.10	0.51
Mercury, Hg	0.2	0.00020	N.D.
Selenium, Se	1.0	0.10	N.D.
Silver, Ag	5.0	0.010	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Mike Gregory  
Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 610 Market St., Oakland Sample Descript: SP-B4 (a-d) comp Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9508K22-01	Sampled: 08/28/95 Received: 08/28/95 Extracted: 09/05/95 Analyzed: 09/06/95 Reported: 09/06/95
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QC Batch Number: MS0824958270EXA  
Instrument ID: F4

**TCLP Semivolatiles (EPA 8270)**

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Total Cresol	200	0.0080	N.D.
1,4-Dichlorobenzene	7.5	0.0080	N.D.
2,4-Dinitrotoluene	0.13	0.0080	N.D.
Hexachlorobenzene	0.13	0.0080	N.D.
Hexachloro-1,3-butadiene	0.5	0.0080	N.D.
Hexachloroethane	3.0	0.0080	N.D.
Nitrobenzene	2.0	0.0080	N.D.
Pentachlorophenol	100	0.040	N.D.
Pyridine	5.0	0.040	N.D.
2,4,5-Trichlorophenol	400	0.040	N.D.
2,4,6-Trichlorophenol	2.0	0.0080	N.D.
<b>Surrogates</b>		<b>Control Limits %</b>	<b>% Recovery</b>
2-Fluorophenol		21 110	10 Q
Phenol-d6		10 110	4 Q
Nitrobenzene-d5		35 114	82
2-Fluorobiphenyl		43 116	77
2,4,6-Tribromophenol		10 123	48

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 610 Market St., Oakland Sample Descript: SP-B4 (a-d) comp Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9508K22-01	Sampled: 08/28/95 Received: 08/28/95 Extracted: 08/29/95 Analyzed: 08/31/95 Reported: 09/06/95
---	---	--

QC Batch Number: MS0830958240F2A  
Instrument ID: F2

**TCLP Volatiles (EPA 8240)**

Analyte	Max. Limit mg/L	Detection Limit mg/L	Sample Results mg/L
Benzene	0.5	0.020	N.D.
Carbon tetrachloride	0.5	0.020	N.D.
Chlorobenzene	100	0.020	N.D.
Chloroform	6.0	0.020	N.D.
1,2-Dichloroethane	0.5	0.020	N.D.
1,1-Dichloroethylene	0.7	0.020	N.D.
Methyl ethyl ketone	200	0.10	N.D.
Tetrachloroethylene	0.7	0.020	N.D.
Trichloroethylene	0.5	0.020	N.D.
Vinyl chloride	0.2	0.020	N.D.
<b>Surrogates</b>		<b>Control Limits %</b>	<b>% Recovery</b>
1,2-Dichloroethane-d4		76	114
Toluene-d8		88	110
4-Bromofluorobenzene		86	115

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager





Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Proj. ID: Shell 610 Market St., Oakland  
Lab Proj. ID: 9508K22

Received: 08/28/95  
Reported: 09/06/95

### LABORATORY NARRATIVE

PCB NOTE: RECOVERY FOR OUR PRIMARY SURROGATE, DBC, WAS LOW FOR THIS SAMPLE.  
RECOVERY FOR OUR SECONDARY SURROGATE, TMX, WAS ACCEPTABLE. TMX= 66%.

8270 NOTE: Acid surrogates failed. Sample was reextracted and rerun with the  
same results. Therefore, results are estimated.

SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager





# Sequoia Analytical

680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233  
 404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673  
 819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Weiss Associates Client Project ID: Shell 610 Market St., Oakland Sampled: 8/28/95  
 5500 Shellmound Sample Descript: SP-B4(a-d)comp Received: 8/28/95  
 Emeryville, CA 94608 Analysis Method: See below  
 Attention: Faith Daverin Lab Number: 9508-K22 -01 Reported: 9/06/95

## STATIC ACUTE HAZARDOUS WASTE BIOASSAY - DEFINITIVE

Species: Pimephales promelas  
 Common Name: Fathead Minnow

Organisms/Tank: 10  
 Organisms/Conc.: 20  
 Tank Depth: 13 cm  
 Tank Volume: 10 L  
 Supplier: Sticklebacks Unlimited  
 Acclimation Temp.: 19 °C

Mean length: 36 mm Min. length: 33 mm  
 Max. length: 40 mm  
 Mean weight: 0.32 g Min. weight: 0.28 g  
 Max. weight: 0.36 g

Control Water: Synthetic Softwater  
 Hardness 40-48

	Alkalinity, mg/L		Hardness, mg/L	
	Initial	Final	Initial	Final
Control	32	36	48	50
1000 ppm	36	40	50	52
Duplicate 1000 ppm	36	40	50	52

DATE	Initial	24 Hr	48 Hr	72 Hr	96 Hr
	8/29/95	8/30/95	8/31/95	9/1/95	9/2/95

	DO	C	pH	DO	C	pH	# M	DO	C	pH	# M	DO	C	pH	# M	DO	C	pH	# M	Total Dead
	mg/L	Temp	Units	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	
Control	9.5	19	7.4	8.0	19	7.3	0	7.3	19	7.1	0	6.9	19	7.0	0	6.7	19	7.8	0	0
1000 ppm	9.0	19	7.6	7.9	19	7.5	0	6.9	19	7.5	0	6.5	19	7.1	0	5.7	19	7.2	0	0
560 ppm	8.9	19	7.5	7.9	19	7.4	0	6.9	19	7.5	2	6.5	19	7.1	1	6.3	19	7.2	0	3
320 ppm	9.0	19	7.5	8.1	19	7.3	0	7.1	19	7.2	0	6.4	19	7.0	1	6.1	19	7.1	0	1
180 ppm	9.1	19	7.5	8.2	19	7.4	0	7.2	19	7.3	0	6.5	19	7.0	1	4.5	19	7.1	0	1
100 ppm	9.1	19	7.4	8.0	19	7.4	0	7.3	19	7.2	0	6.6	19	7.1	1	4.7	19	7.0	0	1

Duplicate	DO	C	pH	DO	C	pH	# M	DO	C	pH	# M	DO	C	pH	# M	DO	C	pH	# M	Total Dead
	mg/L	Temp	Units	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	mg/L	Temp	Units	Dead	
1000 ppm	9.1	19	7.6	7.9	19	7.4	0	6.8	19	7.2	2	6.5	19	7.1	1	5.7	19	7.2	0	3
560 ppm	8.9	19	7.5	7.9	19	7.4	0	7.0	19	7.1	0	6.5	19	7.1	0	6.3	19	7.2	0	0
320 ppm	9.1	19	7.5	8.0	19	7.4	0	7.3	19	7.2	1	6.4	19	7.0	2	6.1	19	7.1	0	1
180 ppm	9.2	19	7.4	8.1	19	7.4	0	7.3	19	7.3	1	6.5	19	7.0	0	4.5	19	7.1	0	1
100 ppm	9.2	19	7.4	8.2	19	7.3	0	7.3	19	7.3	0	6.6	19	7.1	0	4.7	19	7.0	0	0

LC-50: > 1000

LC-50 Calculation Method: Binomial

Remarks: \_\_\_\_\_

Analyst: M.Otte/  
K. Bentler

Method Reference: Static Acute Bioassay Procedures for Hazardous Waste Samples,  
November 1988, California Department of Fish and Game WPCL.

SEQUOIA ANALYTICAL

Mike Gregory  
 Project Manager



<b>Weiss &amp; Associates</b> 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	<b>Client Project ID:</b> Shell 610 Market St., Oakland <b>Matrix:</b> Liquid	<b>Work Order #:</b> 9508K22 -01	<b>Reported:</b> Sep 7, 1995
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**QUALITY CONTROL DATA REPORT**

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
<b>QC Batch#:</b>	MS0830958240F2A	MS0830958240F2A	MS0830958240F2A	MS0830958240F2A	MS0830958240F2A
<b>Analy. Method:</b>	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
<b>Prep. Method:</b>	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Analyst:</b>	M. Williams	M. Williams	M. Williams	M. Williams	M. Williams
<b>MS/MSD #:</b>	9508H89-05	9508H89-05	9508H89-05	9508H89-05	9508H89-05
<b>Sample Conc.:</b>	N.D.	2.8	N.D.	N.D.	N.D.
<b>Prepared Date:</b>	-	-	-	-	-
<b>Analyzed Date:</b>	8/30/95	8/30/95	8/30/95	8/30/95	8/30/95
<b>Instrument I.D.#:</b>	F2	F2	F2	F2	F2
<b>Conc. Spiked:</b>	50 ug/L	50 ug/L	50 ug/L	50 ug/L	50 ug/L
<b>Result:</b>	50	52	50	52	51
<b>MS % Recovery:</b>	100	104	100	104	102
<b>Dup. Result:</b>	48	50	49	49	49
<b>MSD % Recov.:</b>	96	100	98	98	98
<b>RPD:</b>	4.1	3.9	2.0	5.9	4.0
<b>RPD Limit:</b>	0-50	0-50	0-50	0-50	0-50

**LCS #:**

**Prepared Date:**

**Analyzed Date:**

**Instrument I.D.#:**

**Conc. Spiked:**

**LCS Result:**

**LCS % Recov.:**

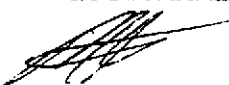
MS/MSD LCS Control Limits	DL-234	71-157	37-151	47-150	37-160
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**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference**

**SEQUOIA ANALYTICAL**



Mike Gregory  
Project Manager





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 610 Market St., Oakland  
Matrix: Liquid

Work Order #: 9508K22 -01

Reported: Sep 7, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	1,4-Dichloro-benzene	2,4-Dinitro-toluene	Pentachloro-phenol	Reactive Sulfide	Reactive Cyanide
QC Batch#:	MS0824958240EXA	MS0824958240EXA	MS0824958240EXA	IN082995084600A	IN082995084600A
Analy. Method:	EPA 1311	EPA 1311	EPA 1311	SW-846	SW-846
Prep. Method:	EPA 1311	EPA 1311	EPA 1311	N.A.	N.A.

Analyst:	E. Manuel	E. Manuel	E. Manuel	A. Pina	A. Pina
MS/MSD #:	BLK082495	BLK082495	BLK082495		
Sample Conc.:	N.D.	N.D.	N.D.		
Prepared Date:	8/24/95	8/24/95	8/24/95		
Analyzed Date:	8/24/95	8/24/95	8/24/95		
Instrument I.D.#:	F3	F3	F3		
Conc. Spiked:	400 ug/L	400 ug/L	400 ug/L		
Result:	180	270	300		
MS % Recovery:	45	68	75		
Dup. Result:	240	310	300		
MSD % Recov.:	60	78	75		
RPD:	29	14	0.0		
RPD Limit:	0-50	0-50	0-50		

LCS #:	LCS082995	LCS082995
Prepared Date:	8/29/95	8/29/95
Analyzed Date:	8/29/95	8/29/95
Instrument I.D.#:	MANUAL	MANUAL
Conc. Spiked:	10 mg/L	0.20 mg/L
LCS Result:	8.3	0.064
LCS % Recov.:	83	32

MS/MSD LCS Control Limits	20-124	39-139	14-176	80-120	6.5-40
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**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

Mike Gregory  
Project Manager

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9508K22.WAA <2>





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 610 Market St., Oakland  
Matrix: Liquid

Work Order #: 9508K22 -01

Reported: Sep 7, 1995

### QUALITY CONTROL DATA REPORT

<b>Analyte:</b>	Total Petroleum Hydrocarbons	PCB 1260	Mercury
<b>QC Batch#:</b>	IN0830954181FTA	GC083195OPCBEXA	ME0831957470M4A
<b>Analy. Method:</b>	EPA 418.1	EPA 8080	EPA 7470
<b>Prep. Method:</b>	N.A.	EPA 3550	EPA 7470

<b>Analyst:</b>	D. Williams	A. Savva	T. Hua
<b>MS/MSD #:</b>	9508K22-01A	9508M08-01	9508H94-13
<b>Sample Conc.:</b>	330	N.D.	N.D.
<b>Prepared Date:</b>	8/30/95	8/31/95	8/31/95
<b>Analyzed Date:</b>	8/30/95	8/31/95	9/1/95
<b>Instrument I.D.#:</b>	FTIR1	GCHP12	MPE4
<b>Conc. Spiked:</b>	210 mg/kg	83 ug/kg	0.0040 mg/L

<b>Result:</b>	360	99	0.0037
<b>MS % Recovery:</b>	14	119	93

<b>Dup. Result:</b>	410	85	0.0037
<b>MSD % Recov.:</b>	38	102	93

<b>RPD:</b>	13	15	0.0
<b>RPD Limit:</b>	0-40	0-50	0-30

<b>LCS #:</b>	LCS083095	BLK083195BTCLP
<b>Prepared Date:</b>	8/30/95	8/31/95
<b>Analyzed Date:</b>	8/30/95	9/1/95
<b>Instrument I.D.#:</b>	FTIR1	MPE4
<b>Conc. Spiked:</b>	210 mg/kg	0.0040 mg/L
<b>LCS Result:</b>	240	0.0036
<b>LCS % Recov.:</b>	114	90

<b>MS/MSD</b>	60-140	75-125
<b>LCS</b>	80-120	30-150
<b>Control Limits</b>		75-125

**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

  
Mike Gregory  
Project Manager

\*\* MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

9508K22.WAA <3>





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 610 Market St., Oakland  
Matrix: Solid

Work Order #: 9508K22 -01

Reported: Sep 7, 1995

**QUALITY CONTROL DATA REPORT**

**Analyte:** pH  
**QC Batch:** IN082995904500A  
**Analy. Method:** EPA 9045  
**Prep Method:** N.A.

**Analyst:** S. Lee

**Duplicate  
Sample #:** 9508K22-01

**Prepared Date:** 8/29/95  
**Analyzed Date:** 8/29/95  
**Instrument I.D.#:** MANUAL

**Sample  
Concentration:** 8.6

**Dup. Sample  
Concentration:** 8.5

**RPD:** 1.2  
**RPD Limit:** 0-30

**SEQUOIA ANALYTICAL**

  
Mike Gregory  
Project Manager

\*\* RPD=Relative % Difference

9508K22.WAA <4>





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Daverin

Client Project ID: Shell 610 Market St., Oakland  
Matrix: Liquid  
Work Order #: 9508K22 -01

Reported: Sep 7, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0830956010MDA	ME0830956010MDA	ME0830956010MDA	ME0830956010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010

Analyst:	S. O'Donnell	S. O'Donnell	S. O'Donnell	S. O'Donnell
MS/MSD #:	9508G29-02A	9508G29-02A	9508G29-02A	9508G29-02A
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/30/95	8/30/95	8/30/95	8/30/95
Analyzed Date:	8/30/95	8/30/95	8/30/95	8/30/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.0	0.97	0.98	0.97
MS % Recovery:	100	97	98	97
Dup. Result:	1.0	0.97	0.97	0.96
MSD % Recov.:	100	97	97	96
RPD:	0.0	0.0	1.0	1.0
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	BLK083095	BLK083095	BLK083095	BLK083095
Prepared Date:	8/30/95	8/30/95	8/30/95	8/30/95
Analyzed Date:	8/30/95	8/30/95	8/30/95	8/30/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.1	1.0	1.0	1.0
LCS % Recov.:	110	100	100	100

MS/MSD	75-125	75-125	75-125	75-125
LCS	75-125	75-125	75-125	75-125
Control Limits				

**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

  
Mike Gregory  
Project Manager

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9508K22.WAA <5>





**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: \_\_\_\_\_

Date: 8/28/95

Page 1 of 1

Site Address: 610 Market Street, Oakland, CA

Analysis Required

LAB: Sequoia

WIC#: 264-5508-5702

Shell Engineer: Dan Kirk  
Phone No: (510) 675-6168  
Fax #: \_\_\_\_\_

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

Consultant Contact: Faith Davern  
WA JOB # 81-1103  
Phone No.: (510) 547-5420  
Fax #: 547-5043

Comments: Soil Disposal

Sampled by: Faith Davern  
Printed Name: Faith Davern

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N
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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 type="checkbox"/>	4441	48 hours <input checked="" type="checkbox"/>
Soil Classify/Disposal <input checked="" type="checkbox"/>	4442	15 days <input type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input checked="" type="checkbox"/> <b>S-DAY</b>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

UST AGENCY: \_\_\_\_\_

Sample ID	Date	Sludge	Soil	Water	Air	No. of conls.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
SP-B1	8/28/95		X			1					X						Reax composite and	
SP-B2	↓		X			1					X						analyze for Soil contaminated	
SP-B3	↓		X			1					X						with waste oil. However,	
SP-B4	↓		X			1					X						DO not analyze for CAM	
																	Metals (TLC), or BTEX, or	
																	leads. These analyses have	
																	already been conducted. See	
																	Your lab report 9508431.	
																	Call me with questions	

Relinquished By (signature): Faith Davern	Printed Name: Faith Davern	Date: 8/28/95	Received (signature): [Signature]	Printed Name: Gary Trolesi	Date: 8/28/95
Relinquished By (signature): [Signature]	Printed Name: Gary Trolesi	Date: 8/28/95	Received (signature): [Signature]	Printed Name: M. Young	Date: 8/28/95
Relinquished By (signature): [Signature]	Printed Name: _____	Date: _____	Received (signature): [Signature]	Printed Name: _____	Date: _____

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



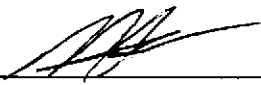
Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: 610 Market St, Oakland Lab Proj. ID: 9508K47	Sampled: 08/07/95 Received: 08/07/95 Analyzed: see below Reported: 09/07/95
Attention: Faith Daverin		

**LABORATORY ANALYSIS**

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9508K47-01 Sample Desc: <b>SOLID,SP-4 (a-d) comp</b>				
Lead: TOX Extraction	mg/L	09/07/95	0.10	0.63

Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL** - ELAP #1210

  
\_\_\_\_\_  
Mike Gregory  
Project Manager





Weiss & Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Faith Deverin

Client Project ID: 610 Market St., Oakland  
Matrix: Liquid

Work Order #: 9508K47 01

Reported: Sep 7, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0906956010MDC	ME0906956010MDC	ME0906956010MDC	ME0906956010MDC
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010

Analyst:	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser
MS/MSD #:	9508M6201	9508M6201	9508M6201	9508M6201
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/6/95	9/6/95	9/6/95	9/6/95
Analyzed Date:	9/7/95	9/7/95	9/7/95	9/7/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	0.99	0.99	0.95	0.95
MS % Recovery:	99	99	95	95
Dup. Result:	1.0	1.0	0.97	0.96
MSD % Recov.:	100	100	97	96
RPD:	1.0	1.0	2.1	1.0
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	BLK090695	BLK090695	BLK090695	BLK090695
Prepared Date:	9/6/95	9/6/95	9/6/95	9/6/95
Analyzed Date:	9/7/95	9/7/95	9/7/95	9/7/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.0	1.0	0.99	0.98
LCS % Recov.:	100	100	99	98

MS/MSD LCS Control Limits	75-125	75-125	75-125	75-125
---------------------------------	--------	--------	--------	--------

**SEQUOIA ANALYTICAL**

*(Signature)*  
Mike Gregory  
Project Manager

**Please Note:**

The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9508K47.WAA < 1 >





**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: \_\_\_\_\_

Date: 8/7/95

Page 1 of 1

Site Address: 610 Market Street, Oakland, CA

**Analysis Required**

LAB: Seq 6019

WIC#: 204-5508-5702

Shell Engineer: Dan Kirk  
Phone No.:  
Fax #:

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

Consultant Contact: Faith Davern  
WA JOB # 81-1103-9  
Phone No.: (510) 547-5420  
Fax #: 547-5043

Comments: Soil Disposal

Sampled by: Faith Davern

Printed Name: Faith Davern

Sample ID	Date	Sludge	Soil	Water	Air	No. of conls.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N
SP-1A	8/7/95		X			1					X					Y
SP-2A	↓		X			1					X					Y
SP-3A	↓		X			1					X					Y
SP-4A	↓		X			1					X					Y

CHECK ONE (1) BOX ONLY	CT/DI	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	4441	48 hours <input checked="" type="checkbox"/>
Soil Classify/Disposal <input checked="" type="checkbox"/>	4442	15 days <input 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: \_\_\_\_\_

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
	please composite and analyze per shells minimum requirements for soil with gasoline - UST related
9508431	

Relinquished By (signature): Faith Davern	Printed Name: Faith Davern	Date: 8/7/95	Time: 3:42	Received (signature): [Signature]	Printed Name: W. Jones	Date: 8/7/95	Time: 1:55
Relinquished By (signature): [Signature]	Printed Name: W. Jones	Date: 8/7/95	Time: 2:40	Received (signature): [Signature]	Printed Name: M. YONG	Date: 8/7/95	Time: 15:15

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