



April 1, 1996

Madhulla Logan  
Hazardous Materials Specialist  
Alameda County Health Agency  
Department of Environmental Health  
Alameda, California 94502

*Shell Oil Products  
Jeff Granberry  
P.O. BOX 4023  
CONCORD, CA 94524  
(510) 675-6168*

**RE: Dispenser Replacement Sampling**  
Shell Service Station  
WIC #204-5510-0600  
4255 MacArthur Boulevard  
Oakland, California  
WA Job #81-0757-31

Dear Mr. Logan:

On behalf of Shell Oil Products Company (Shell), Weiss Associates (WA) submits this report documenting soil sampling 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. 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;
- Analyze soil samples for petroleum hydrocarbons;
- Sample and dispose of the hydrocarbon-bearing soil; and
- Report the results.

96 APR 16 PM 1:19

ENVIRONMENTAL PROTECTION

## Site Background

- Location:** The operating Shell service station is located at the corner of MacArthur Boulevard and High Street in Oakland, California (Figures 1 and 2).
- Surroundings:** Commercial and residential development.
- Local Topography:** The site is about 175 ft above mean sea level with a topographical gradient of about 0.026 ft/ft towards the southwest.
- Nearest Surface Water:** There are no surface water sources within a 1/2-mile radius of the site.
- Ground Water Depth:** Historical ground water depth in on-site monitoring wells has ranged from 7.08 feet below ground surface (bgs) in MW-1 on April 12, 1995 to 15.62 feet bgs in MW-3 on October 27, 1994.
- Ground Water Flow Direction:** Ground water flows southwestward with a gradient of about 0.1 ft/ft.

## Soil Sampling Results

- Parties Present:** WA Engineer Tim Utterback collected the soil samples. Alameda County Health Agency (ACHA) Inspector Don Hwang observed and directed the soil sampling. Al Garcia of Paradiso Construction of San Leandro, California assisted the sampling and directed the excavation of the trenches, removal of the product lines, and the replacement of the dispensers.
- Sampling Date:** November 17, 1995.
- Number of Samples:** 15: One sample from beneath each of the ten removed dispensers and five samples total from beneath the removed product lines. Photographs of some of the sample locations are included in Attachment A. Sample locations are presented on Figure 2.
- Soil Sampling Method:** Soil samples were collected by driving clean brass tubes into undisturbed soil from a backhoe bucket. All sample tubes were immediately sealed with Teflon sheeting and plastic caps and placed on ice in a cooler for transport to the state-certified analytical laboratory.
- Analytical Laboratory:** Sequoia Analytical in Redwood City, California.

*Concrete*

*check for  
product lines  
in trenches*

**Analytical Methods:**

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 certified analytical reports and chain-of-custody forms are included in Attachment B.

**Analytic Results:**

TPH-G, at 3,200 and 7,800 parts per million (ppm), were detected in samples S-1 and S-2, respectively, from beneath the former middle dispenser and 2,800 ppm in sample S-8 from the product piping corridor nearby. Up to 7,300 ppm TPH-G was detected in sample S-3 beneath the northeast dispenser island. No benzene was detected in these samples, and no benzene above 1 ppm was detected in any of the 15 samples. The analytic results are summarized in Table 1.

**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, organic lead, total threshold limit concentration (TTL) Title 22 metals, soluble threshold limit concentration (STLC) for barium, copper, lead and selenium and EPTOX extraction for barium, copper and lead. The certified analytic report and chain-of custody form are included in Attachment C.

**Soil Transport and Disposal:**

On December 21 and 26, 1995, Manley and Sons Trucking, Inc., of Sacramento, California transported about 68 cubic yards of soil to the Laidlaw Environmental facility in Buttonwillow, California for disposal. The soil disposal confirmation is presented in Attachment C.

**Conclusions**

Based on the sampling results, WA concludes that:

- Four initial soil samples from beneath the two northern-most dispenser islands contained more than 2,000 ppm TPH-G. However, no benzene was detected above method detection limits in these samples.
- TPH-G concentrations in soil were detected at 200 to 300 ppm beneath piping at the southern-most dispenser island.

*Construction*  
*In-situ remediation*  
*Lead*

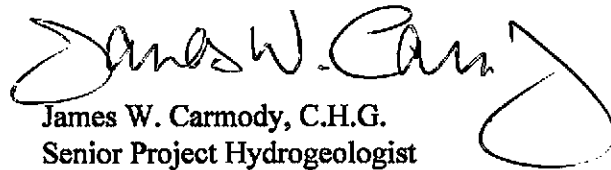
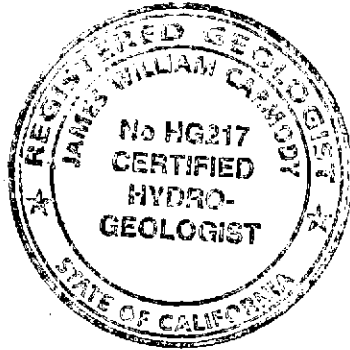
- None of the other nine soil samples exceeded 44 ppm TPH-G or 0.85 ppm benzene.
- Ground water monitoring will continue at the site's four ground water monitoring wells.

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

Sincerely,  
Weiss Associates



Tim Utterback  
Staff Engineer



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

Attachments: Figures  
Tables  
A - Pictures of Soil Below the Former Dispensers and Piping  
B - Certified Analytical Reports and Chain-of-Custody Forms for Soil  
C - 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

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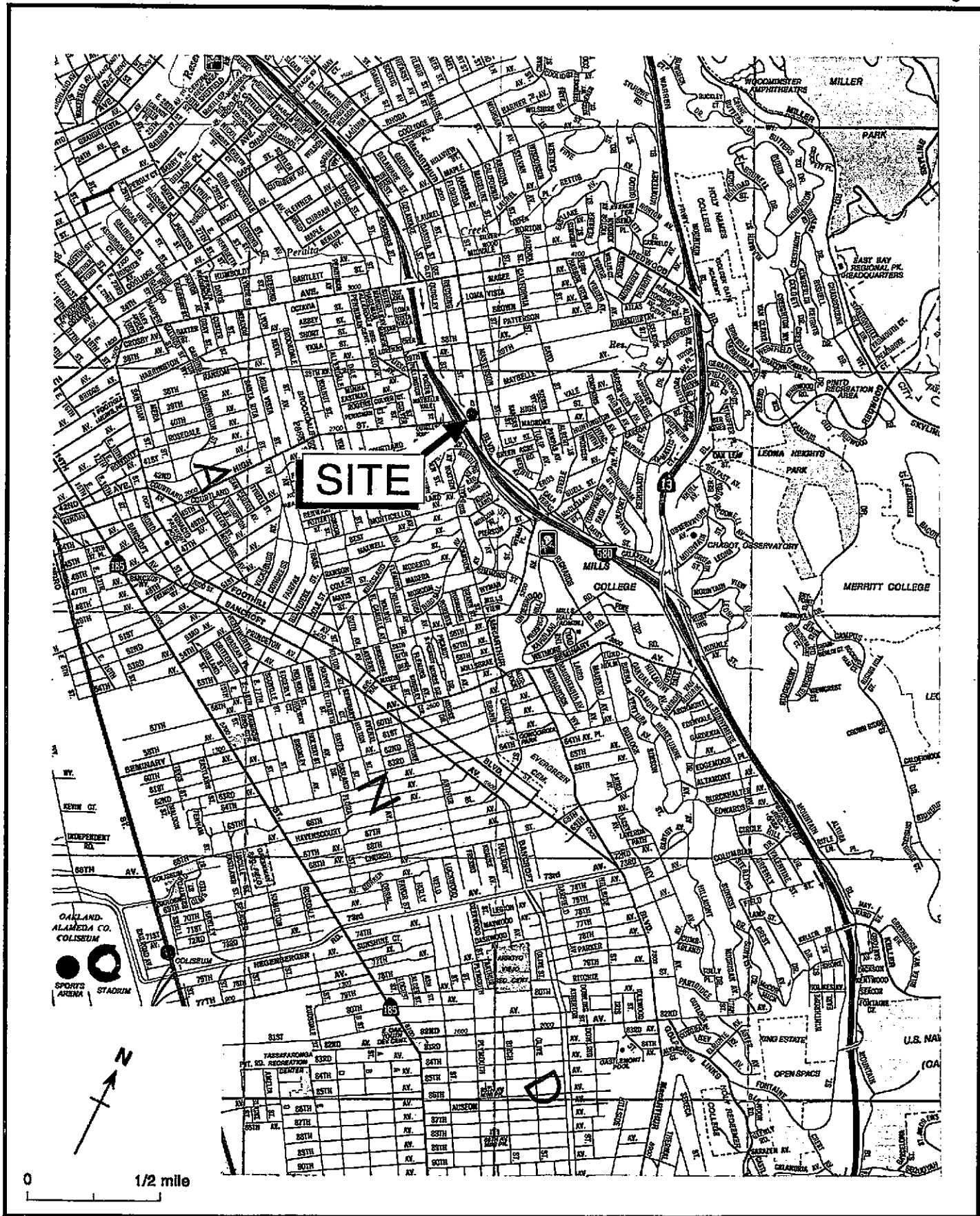


Figure 1. Site Location Map - Shell Service Station WIC# 204-5510-0600, 4255 MacArthur Boulevard, Oakland, California

Sample	Depth
S-1	3.0
S-2	2.0
S-3	2.0
S-4	2.5
S-5	3.0
S-6	2.5
S-7	3.0
S-8	3.0
S-9	3.5
S-10	3.5
S-11	3.5
S-12	4.0
S-13	4.0
S-14	4.0
S-15	5.0

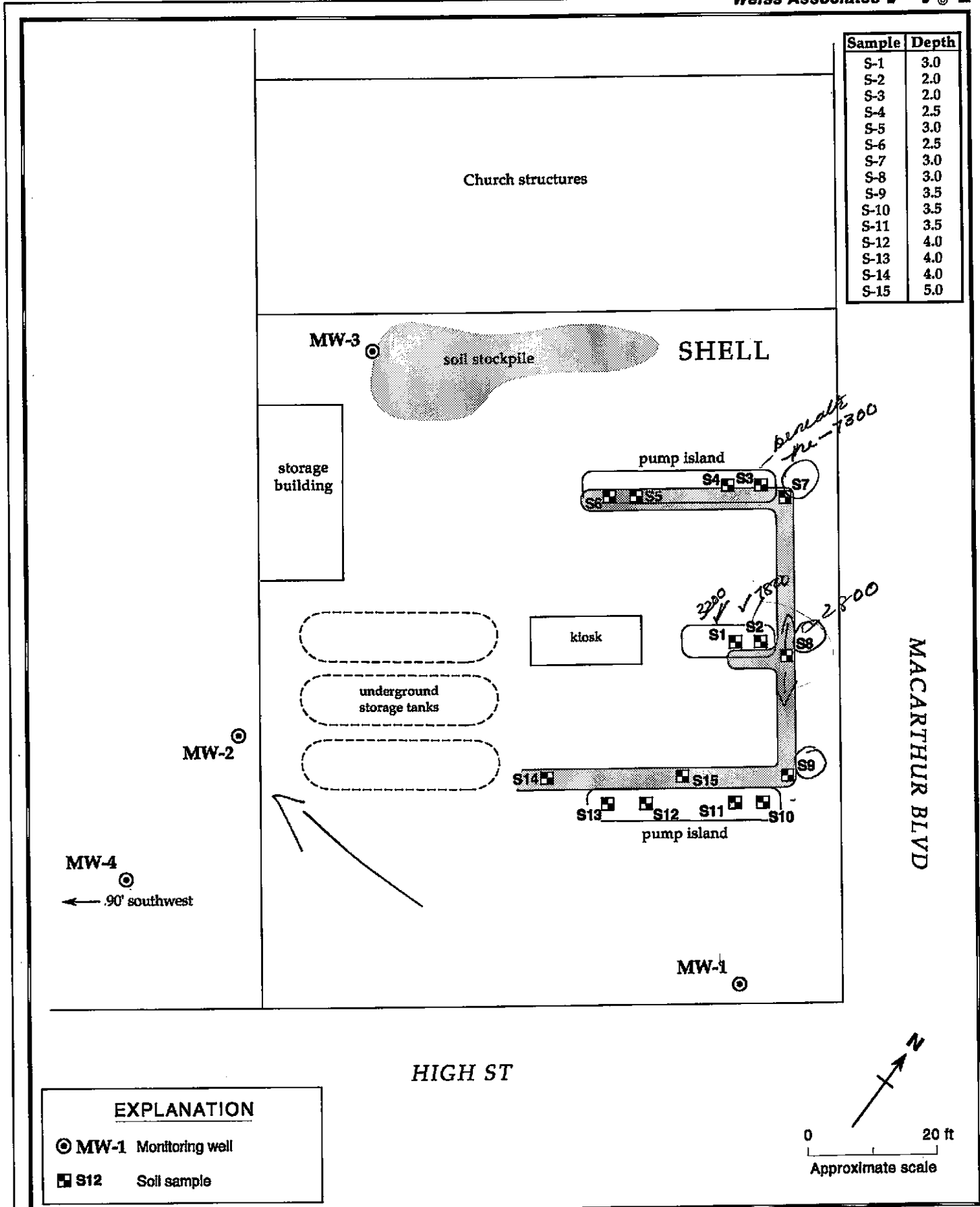


Figure 2. Site Map - Shell Service Station WIC #204-5510-0600, 4255 MacArthur Boulevard, Oakland, California

Table 1. Soil Analytical Results, Shell Service Station WIC #204-5510-0600, 4255 MacArthur Boulevard., Oakland, California

Sample ID	Depth Below Ground Surface (ft)	TPH-G	parts per million (mg/kg)			
			B	T	E	X
<b>Dispenser Island and Trench Samples</b>						
S-1	3.0	3,200	<5.0	27	39	250
S-2	2.0	7,800	<15	51	71	540
S-3	2.0	7,300	<12	14	42	500
S-4	2.5	1.5	0.052	<0.005	0.021	0.0069
S-5	3.0	1.1	<0.005	<0.005	<0.005	0.013
S-6	2.5	1.1	0.19	<0.005	0.046	0.020
S-7	3.0	10	0.12	0.030	0.24	0.98
S-8	3.0	2,800	<5.0	5.1	25	140
S-9	3.5	6.5	<0.005	<0.005	<0.005	0.021
S-10	3.5	44	<0.05	<0.05	0.051	0.22
S-11	3.5	2.6	0.026	<0.005	0.011	0.014
S-12	4.0	39	0.26	<0.05	0.42	1.7
S-13	4.0	12	0.85	0.46	0.31	1.5
S-14	4.0	300	<0.5	<0.5	3.8	10
S-15	5.0	210	0.28	<0.25	1.9	6.4

**Abbreviations:**

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015  
 B = Benzene by EPA Method 8020  
 T = Toluene by EPA Method 8020  
 E = Ethylbenzene by EPA Method 8020  
 X = Xylenes by EPA Method 8020  
 <n= Not detected at laboratory method detection limit of n mg/kg.

**Notes:**

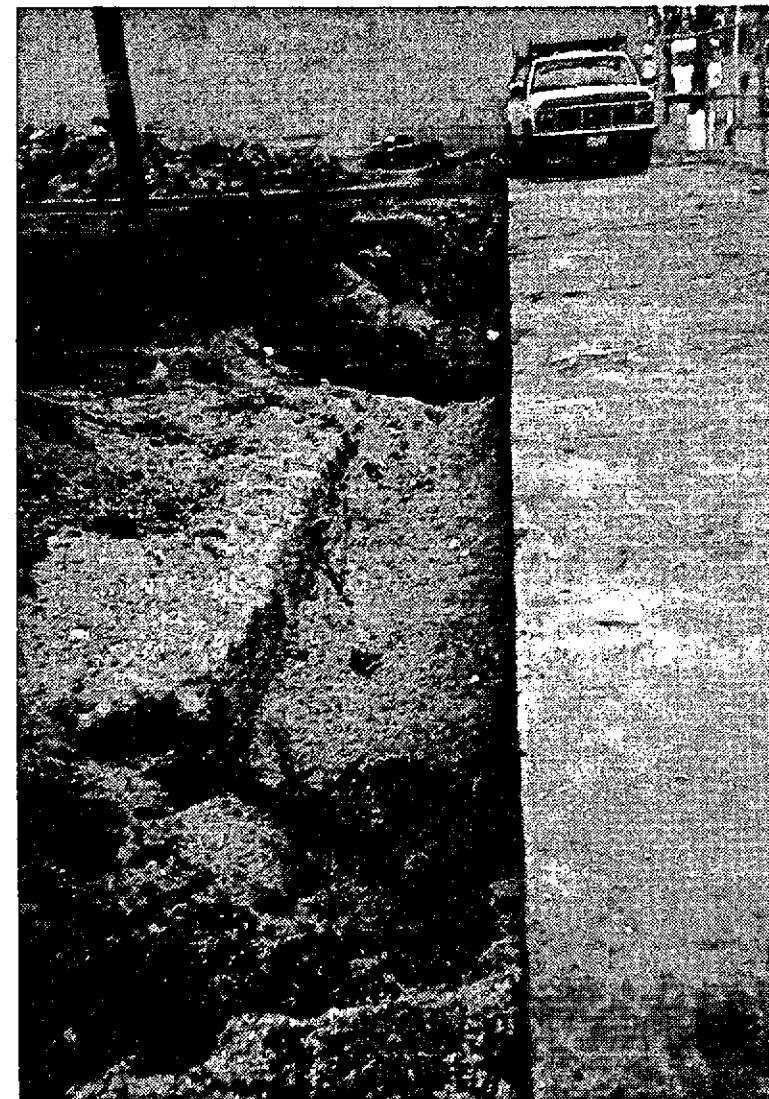
Samples collected on 11/17/95 by Weiss Associates and analyzed by Sequoia Analytical, Redwood City, California.



**ATTACHMENT A**

**PICTURES OF SOIL BELOW THE FORMER DISPENSERS AND PIPING**





Photographs of Soil Below Former Dispensers and Piping - Shell Service Station WIC#204-5510-0600, 4255 MacArthur Boulevard, Oakland, California



Photographs of Soil Below Former Dispensers and Piping - Shell Service Station WIC#204-5510-0600, 4255 MacArthur Boulevard, Oakland, California

**ATTACHMENT B**

**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

Miss Associates  
100 Shellmound  
Berkeley, CA 94608  
Attention: Tim Utterback

Subject: Shell 4255 MacArthur, Oakland

Enclosed are the results from samples received at Sequoia Analytical on November 20, 1995.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
11E41 -01	SOLID, S-1	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -02	SOLID, S-2	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -03	SOLID, S-3	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -04	SOLID, S-4	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -05	SOLID, S-5	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -06	SOLID, S-6	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -07	SOLID, S-7	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -08	SOLID, S-8	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -09	SOLID, S-9	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -10	SOLID, S-10	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -11	SOLID, S-11	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -12	SOLID, S-12	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -13	SOLID, S-13	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -14	SOLID, S-14	11/17/95	TPHGBS Purgeable TPH/BTEX
11E41 -15	SOLID, S-15	11/17/95	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**

Gregory  
Project Manager



Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
  
Attention: Tim Utterback

Client Proj. ID: Shell 4255 MacArthur, Oakland  
Sample Descript: S-1  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9511E41-01

Sampled: 11/17/95  
Received: 11/20/95  
Extracted: 11/22/95  
Analyzed: 11/22/95  
Reported: 11/29/95

QC Batch Number: GC112295BTEXEXA  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1000	3200
Benzene	5.0	N.D.
Toluene	5.0	27
Ethyl Benzene	5.0	39
Xylenes (Total)	5.0	250
Chromatogram Pattern:		C6-C12
<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  
5500 Shellmound  
Emeryville, CA 94608

Client Proj. ID: Shell 4255 MacArthur, Oakland  
Sample Descript: S-2  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9511E41-02

Sampled: 11/17/95  
Received: 11/20/95  
Extracted: 11/22/95  
Analyzed: 11/22/95  
Reported: 11/29/95

Attention: Tim Utterback

GC Batch Number: GC112295BTEXEXA  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	3000	7800
Benzene	15	N.D.
Toluene	15	51
Ethyl Benzene	15	71
Xylenes (Total)	15	540
Chromatogram Pattern:		C8-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.

**EQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager



Weiss Associates	Client Proj. ID: Shell 4255 MacArthur, Oakland	Sampled: 11/17/95
5500 Shellmound	Sample Descript: S-3	Received: 11/20/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 11/22/95
Attention: Tim Utterback	Analysis Method: 8015Mod/8020	Analyzed: 11/22/95
	Lab Number: 9511E41-03	Reported: 11/29/95

QC Batch Number: GC112295BTEXEXA  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	2500	7300
Benzene	12	N.D.
Toluene	12	14
Ethyl Benzene	12	42
Xylenes (Total)	12	500
Chromatogram Pattern:		C8-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  
 5500 Shellmound  
 Emeryville, CA 94608

Client Proj. ID: Shell 4255 MacArthur, Oakland  
 Sample Descript: S-4  
 Matrix: SOLID  
 Analysis Method: 8015Mod/8020  
 Lab Number: 9511E41-04

Sampled: 11/17/95  
 Received: 11/20/95  
 Extracted: 11/22/95  
 Analyzed: 11/22/95  
 Reported: 11/29/95

Attention: Tim Utterback

Batch Number: GC112295BTEXEXA  
 Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	1.5
Benzene	0.0050	0.052
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	0.021
Xylenes (Total)	0.0050	0.0069
Chromatogram Pattern:		C8-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	120

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

**EQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
 Project Manager





Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Tim Utterback	Client Proj. ID: Shell 4255 MacArthur, Oakland Sample Descript: S-5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9511E41-05	Sampled: 11/17/95 Received: 11/20/95 Extracted: 11/22/95 Analyzed: 11/22/95 Reported: 11/29/95
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QC Batch Number: GC112295BTEXEXA  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	1.1
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	0.013
Chromatogram Pattern:		C8-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	119

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 4255 MacArthur, Oakland Sample Descript: S-6 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9511E41-06	Sampled: 11/17/95 Received: 11/20/95 Extracted: 11/22/95 Analyzed: 11/22/95 Reported: 11/29/95
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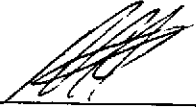
QC Batch Number: GC112295BTEXEXA  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas		
Benzene	1.0	1.1
Toluene	0.0050	0.19
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	0.046
Chromatogram Pattern:	0.0050	0.020
		C6-C12
<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 5500 Shellmound Emeryville, CA 94608 Attention: Tim Utterback	Client Proj. ID: Shell 4255 MacArthur, Oakland Sample Descript: S-7 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9511E41-07	Sampled: 11/17/95 Received: 11/20/95 Extracted: 11/22/95 Analyzed: 11/27/95 Reported: 11/29/95
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QC Batch Number: GC112295BTEXEXA  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	2.5	10
Benzene	0.012	0.12
Toluene	0.012	0.030
Ethyl Benzene	0.012	0.24
Xylenes (Total)	0.012	0.98
Chromatogram Pattern:		C8-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	102

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: Tim Utterback

Client Proj. ID: Shell 4255 MacArthur, Oakland  
Sample Descript: S-8  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9511E41-08

Sampled: 11/17/95  
Received: 11/20/95  
Extracted: 11/22/95  
Analyzed: 11/22/95  
Reported: 11/29/95

QC Batch Number: GC112295BTEXEXA  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1000	2800
Benzene	5.0	N.D.
Toluene	5.0	5.1
Ethyl Benzene	5.0	25
Xylenes (Total)	5.0	140
Chromatogram Pattern:		C8-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	109

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

**EQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager



Weiss Associates	Client Proj. ID: Shell 4255 MacArthur, Oakland	Sampled: 11/17/95
5500 Shellmound	Sample Descript: S-9	Received: 11/20/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 11/22/95
Attention: Tim Utterback	Analysis Method: 8015Mod/8020	Analyzed: 11/22/95
	Lab Number: 9511E41-09	Reported: 11/29/95

QC Batch Number: GC112295BTEXEXB  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	6.5
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	0.021
Chromatogram Pattern:		C6-C12
<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 4255 MacArthur, Oakland Sample Descript: S-10 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9511E41-10	Sampled: 11/17/95 Received: 11/20/95 Extracted: 11/22/95 Analyzed: 11/22/95 Reported: 11/29/95
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QC Batch Number: GC112295BTEXEXA  
Instrument ID: GCHP18

**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	N.D.
Ethyl Benzene	0.050	0.051
Xylenes (Total)	0.050	0.22
Chromatogram Pattern:		C8-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70                      130	109

Analyses 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 4255 MacArthur, Oakland	Sampled: 11/17/95
5500 Shellmound	Sample Descript: S-11	Received: 11/20/95
Emeryville, CA 94608	Matrix: SOLID	Extracted: 11/22/95
Attention: Tim Utterback	Analysis Method: 8015Mod/8020	Analyzed: 11/22/95
	Lab Number: 9511E41-11	Reported: 11/29/95

QC Batch Number: GC112295BTEXEXB  
Instrument ID: GCHP18

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


Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	2.6
Benzene	0.0050	0.026
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	0.011
Xylenes (Total)	0.0050	0.014
Chromatogram Pattern:		C8-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70                      130	105

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 4255 MacArthur, Oakland  
Sample Descript: S-12  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9511E41-12

Sampled: 11/17/95  
Received: 11/20/95  
Extracted: 11/22/95  
Analyzed: 11/22/95  
Reported: 11/29/95

Attention: Tim Utterback

QC Batch Number: GC112295BTEXEXB  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	10	39
Benzene	0.050	0.26
Toluene	0.050	N.D.
Ethyl Benzene	0.050	0.42
Xylenes (Total)	0.050	1.7
Chromatogram Pattern:		C8-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	120

Analyses 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: Tim Utterback

Client Proj. ID: Shell 4255 MacArthur, Oakland  
Sample Descript: S-13  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9511E41-13

Sampled: 11/17/95  
Received: 11/20/95  
Extracted: 11/22/95  
Analyzed: 11/27/95  
Reported: 11/29/95

QC Batch Number: GC112295BTEXEXB  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	2.5	12
Benzene	0.012	0.85
Toluene	0.012	0.46
Ethyl Benzene	0.012	0.31
Xylenes (Total)	0.012	1.5
Chromatogram Pattern:		C6-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  
5500 Shellmound  
Emeryville, CA 94608

Client Proj. ID: Shell 4255 MacArthur, Oakland  
Sample Descript: S-14  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9511E41-14

Sampled: 11/17/95  
Received: 11/20/95  
Extracted: 11/22/95  
Analyzed: 11/27/95  
Reported: 11/29/95

Attention: Tim Utterback

GC Batch Number: GC112295BTEXEXB  
Instrument ID: GCHP18

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

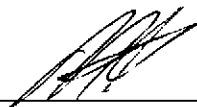
Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	100	300
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	3.8
Xylenes (Total)	0.50	10
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	112

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

**EQUOIA ANALYTICAL** - ELAP #1210

  
Mike Gregory  
Project Manager



Weiss Associates Client Proj. ID: Shell 4255 MacArthur, Oakland Sampled: 11/17/95
5500 Shellmound Sample Descript: S-15 Received: 11/20/95
Emeryville, CA 94608 Matrix: SOLID Extracted: 11/22/95
Attention: Tim Utterback Analysis Method: 8015Mod/8020 Analyzed: 11/22/95
Lab Number: 9511E41-15 Reported: 11/29/95

QC Batch Number: GC112295BTEXEXB
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 (50 mg/Kg, 210 mg/Kg), Benzene (0.25 mg/Kg, 0.28 mg/Kg), Toluene (0.25 mg/Kg, N.D.), Ethyl Benzene (0.25 mg/Kg, 1.9 mg/Kg), Xylenes (Total) (0.25 mg/Kg, 6.4 mg/Kg), Chromatogram Pattern (C8-C12), Surrogates (Control Limits % 70, 130; % Recovery 124), 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: Tim Utterback

Client Project ID: Shell 4255 MacArthur, Oakland  
Matrix: Solid

Work Order #: 9511E41 -01 -08

Reported: Nov 29, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC112295BTEXEXA	GC112295BTEXEXA	GC112295BTEXEXA	GC112295BTEXEXA
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 #:	9511E59-11	9511E59-11	9511E59-11	9511E59-11
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/22/95	11/22/95	11/22/95	11/22/95
Analyzed Date:	11/22/95	11/22/95	11/22/95	11/22/95
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	0.16	0.16	0.48
MS % Recovery:	75	80	80	80
Dup. Result:	0.15	0.15	0.16	0.46
MSD % Recov.:	75	75	80	77
RPD:	0.0	6.5	0.0	4.3
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	GBLK112295BS-D	GBLK112295BS-D	BLK112295BS-D	GBLK112295BS-D
Prepared Date:	11/22/95	11/22/95	11/22/95	11/22/95
Analyzed Date:	11/22/95	11/22/95	11/22/95	11/22/95
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
LCS Result:	0.18	0.18	0.18	0.54
LCS % Recov.:	90	90	90	90

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*  
Mike Gregory  
Project Manager

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

9511E41.WAA <1>



Weiss & Associates Client Project ID: Shell 4255 MacArthur, Oakland  
 5500 Shellmound Matrix: Solid  
 Emeryville, CA 94608  
 Attention: Tim Utterback Work Order #: 9511E41 -09 -15 Reported: Nov 29, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
<b>QC Batch#:</b>	GC112295BTEXB	GC112295BTEXB	GC112295BTEXB	GC112295BTEXB
<b>Analy. Method:</b>	EPA 8020	EPA 8020	EPA 8020	EPA 8020
<b>Prep. Method:</b>	EPA 5030	EPA 5030	EPA 5030	EPA 5030

<b>Analyst:</b>	G. Garcia	G. Garcia	G. Garcia	G. Garcia
<b>MS/MSD #:</b>	9511E59-12	9511E59-12	9511E59-12	9511E59-12
<b>Sample Conc.:</b>	N.D.	N.D.	N.D.	N.D.
<b>Prepared Date:</b>	11/22/95	11/22/95	11/22/95	11/22/95
<b>Analyzed Date:</b>	11/22/95	11/22/95	11/22/95	11/22/95
<b>Instrument I.D.#:</b>	GCHP7	GCHP7	GCHP7	GCHP7
<b>Conc. Spiked:</b>	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/kg

<b>Result:</b>	0.17	0.17	0.17	0.49
<b>MS % Recovery:</b>	85	85	85	82

<b>Dup. Result:</b>	0.17	0.17	0.17	0.52
<b>MSD % Recov.:</b>	85	85	85	87

<b>RPD:</b>	0.0	0.0	0.0	5.9
<b>RPD Limit:</b>	0-50	0-50	0-50	0-50

LCS #:	GBLK112195BS-A	GBLK112195BS-A	BLK112195BS-A	GBLK112195BS-A
<b>Prepared Date:</b>	11/22/95	11/22/95	11/22/95	11/22/95
<b>Analyzed Date:</b>	11/22/95	11/22/95	11/22/95	11/22/95
<b>Instrument I.D.#:</b>	GCHP7	GCHP7	GCHP7	GCHP7
<b>Conc. Spiked:</b>	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/kg
<b>LCS Result:</b>	0.16	0.16	0.16	0.50
<b>LCS % Recov.:</b>	80	80	80	83

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**

*[Signature]*  
 Mike Gregory  
 Project Manager



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

**CHAIN OF CUSTODY RECORD**

Serial No: 2511E41

Date: 11/17/95

Page 1 of 2

Site Address: 4255 MacArthur Blvd, Oakland

**Analysis Required**

LAB: Sequid

WIC#: 204-5510-0600

Shell Engineer: Jeff Byram Phone No.: (510) 675-6146  
Fax #: \_\_\_\_\_

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

Consultant Contact: WA JOB # 81-0757-30 Phone No.: (510) 450-6000  
Fax #: 547-5043

Comments: Dispenser and Product Piping Samples

Sampled by: Tim Utterback

Printed Name: Tim Utterback

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 checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

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

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

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
S-1	<u>11/17/95</u>		<u>X</u>			<u>1</u>						<u>X</u>					<u>1</u>	
S-2	<u>1</u>																<u>2</u>	
S-3	<u>1</u>																<u>3</u>	
S-4	<u>1</u>																<u>4</u>	
S-5	<u>1</u>																<u>5</u>	
S-6	<u>1</u>																<u>6</u>	
S-7	<u>1</u>																<u>7</u>	
S-8	<u>1</u>																<u>8</u>	

Relinquished By (signature): <u>Tim Utterback</u>	Printed Name: <u>Tim Utterback</u>	Date: <u>11/17/95</u>	Received (signature): <u>Keith R Grubb</u>	Printed Name: <u>Keith R Grubb</u>	Date: <u>11/17/95</u>
Relinquished By (signature): <u>Keith R Grubb</u>	Printed Name: <u>Keith R Grubb</u>	Date: <u>11/20/95</u>	Received (signature): _____	Printed Name: _____	Date: _____
Relinquished By (signature): _____	Printed Name: _____	Date: _____	Received (signature): <u>PHIL T. LE</u>	Printed Name: <u>PHIL T. LE</u>	Date: <u>11/20/95</u>

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



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

**CHAIN OF CUSTODY RECORD**

Serial No: 9511E41

Date: 11-17-95

Page 2 of 2

Site Address: 4255 MacArthur Blvd, Oakland

**Analysis Required**

LAB: Sequoia

WIC#: 204-5510-0600

Shell Engineer: Jeff Byram Phone No.: (510) 675-6146  
 Fax #: \_\_\_\_\_

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

Consultant Contact: WA JOB # 81-0757-30 Phone No.: (510) 450-6000  
 Fax #: 547-5043

Comments: Dispenser and Product Piping Samples

Sampled by: Jim Utterback

Printed Name: Tim Utterback

Sample ID	Date	Sludge	Soil	Water	Air	No. of confs.
S-9	11/17/95		X			1
S-10						
S-11						
S-12						
S-13						
S-14						
S-15						

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	

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

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

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
9	
10	
11	
12	
13	
14	
15	

Relinquished By (signature): [Signature] Printed Name: Tim Utterback  
 Relinquished By (signature): [Signature] Printed Name: Kerth R Grubb  
 Relinquished By (signature): \_\_\_\_\_ Printed Name: \_\_\_\_\_

Date: 11/17/95 Time: 14:56 Received (signature): [Signature] Printed Name: Kerth R Grubb Date: 11/17/95 Time: 14:56  
 Date: 11/20/95 Time: \_\_\_\_\_ Received (signature): \_\_\_\_\_ Printed Name: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received (signature): [Signature] Printed Name: PHIL T. LE Date: 11/20/95 Time: 11:55

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

**ATTACHMENT C**

**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 GRANBERRY
Station #/Wic #:	204-5510-0600
Site Address:	4255 MAC ARTHUR BLVD.
City/State:	OAKLAND, CA
Estimated YD/Ton:	65 YARDS
Actual YD/Ton:	67.87 TONS
Disposal Facility:	LAIDLAW BUTTONWILLOW
Disposal Date:	DECEMBER 21, 26, 1995
Contact:	TIM OR BONNIE
Phone #:	(800) 544-7199
Hauler:	MANLEY & SONS TRUCKING, INC.
Contact:	TIM A. MANLEY
Phone #:	(916) 381-6864
Fax #:	(916) 381-1573

Date & Time Faxed

4157

12-27-95 1:15

Shell Oil Company



P.O. Box 4848  
511 N. Brookhurst Street  
Anaheim, California 92803

FACSIMILE TRANSMITTAL

TRANSMITTING FAX PHONE NUMBER: (714) 520-3570  
(SSN) 8-520-3570 (Shell use)

DATE: 2/13/96

TO: Tina Utterback FROM: Sharon Blanton

COMPANY: Wusa COMPANY: Shell Oil Company

511 N. Brookhurst Street

Anaheim, CA. 92803

FACSIMILE: 510-547-5043 TELEPHONE: (714) 520-3312

TELEPHONE: 510-450-6193

NUMBER OF PAGES (INCLUDING TRANSMITTAL): 4

SPECIAL INSTRUCTIONS: manifests for soil (haz)  
at 4255 MacArthur, Oakland.

Sharon

TRANSMITTING EQUIPMENT: OMNIFAX G-77, AUTOMATIC

TO VERIFY RECEIPT CALL: Sharon Blanton

at: (714) 520-3312

WS/FAXSB

State of California—Environmental Protection Agency  
Form Approved OMB No. 2050-0039 (Expires 9-30-96)

See Instructions on back of page 6.

Department of Toxic Substances Control  
Sacramento, California

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. 03110201197903		Manifest Document No. 03339		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address SHELL OIL COMPANY HAZARDOUS WASTE DEPT. P.O. BOX 4848 ANAHEIM, CA 92803				A. State Manifest Document Number 92045742		B. State Generator's ID HYHQ36010177					
4. Generator's Phone (714) 520-3312				A. US EPA ID Number CAL0002759		C. State Transporter's ID 60017520		D. Transporter's Phone 916-381-6864			
5. Transporter 1 Company Name MANLEY & SONS TRUCKING				B. US EPA ID Number		E. State Facility ID CA1980675276		F. Facility's Phone 415-762-7372			
7. Transporter 2 Company Name				E. US EPA ID Number		G. State Facility ID		H. Facility's Phone			
9. Designated Facility Name and Site Address LAIDLAW ENVIRONMENTAL SERVICES 2500 N. LOKERN ROAD RATONMILLON, CA. 93295				10. US EPA ID Number CAD000675276		I. State Facility ID		J. Facility's Phone			
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) HAZARDOUS WASTE SOLID						12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol	
a. HAZARDOUS WASTE SOLID						3 0 1 D T 4 0 0 0 0 0				EPA/Other	
b.										EPA/Other	
c.										EPA/Other	
d.										EPA/Other	
13. Additional Descriptions for Materials Listed Above SOIL CONTAMINATED WITH BTL LEAD 15 MBL 9510139						K. Handling Code for Waste Listed Above 03					
15. Special Handling Instructions and Additional Information AVOID CONTACT WITH SKIN/EYES 24 HOUR EMERGENCY PHONE NUMBER (800) 424-9300 LAIDLAW PROFILE # 898-H-SHELL						L. Facility: SERVICE STATION 4255 MADARTHER BLVD OAKLAND, CA. 94619					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
Printed/Typed Name MARCED				Signature MARCED				ON BEHALF OF SHELL OIL CO.		Month Day Year 12 21 95	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name T.C. L...				Signature T.C. L...				Month Day Year 12 21 95			
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name				Signature				Month Day Year			
19. Discrepancy Indication Space											
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name MARCED											
Signature MARCED				Signature MARCED				Month Day Year 12 21 95			

20455120600-4442

DO NOT WRITE BELOW THIS LINE.

State of California—Environmental Protection Agency  
Form Approved OMB No. 2050-0039 (Expires 9-30-94)  
Block print or type. Form designed for use on site (12-pitch) typewriter.

See Instructions on back of page 6.

Department of Toxic Substances Control  
Sacramento, California

CALIFORNIA, CALL 1-800-952-7550

02076

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. CAL 002159303	Manifest Document No. 23390	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address SHELL OIL COMPANY HAZARDOUS WASTE DEPT. P.O. BOX 4848 ANAHEIM, CA 92603		A. State Manifest Document Number 92045743		B. State Generator ID HYH035010177	
4. Generator's Phone (714) 520-3312		C. State Transporter ID CAL000027769		D. Transporter's Phone 916-381-0854	
5. Transporter 1 Company Name HAWLEY & SONS TRUCKING		6. US EPA ID Number CAL000027769		E. State Transporter ID CAL000027769	
7. Transporter 2 Company Name		8. US EPA ID Number		F. State Transporter ID	
9. Designated Facility Name and Site Address LIDLAW ENVIRONMENTAL SERVICES 255 W. MADARTHR ROAD MATTOMILLOW, CA. 94706		10. US EPA ID Number CAL000067544		G. State Facility ID CAL000067544	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. MORE FROM HAZARDOUS WASTE SOLID, b. c. d.		12. Containers No. Type 0 0 1 D T	13. Total Quantity 4,800 LBS	14. Unit WT/YAL P	15. Waste Number EPA/Other EPA/Other EPA/Other EPA/Other
1. Additional Descriptions for Materials Listed Above SOLID CONTAMINATED WITH SILIC LEAD		K. Handling Codes for Wastes Listed Above 09			
15. Special Handling Instructions and Additional Information AVOID CONTACT WITH SKIN/EYES 24 HOUR EMERGENCY PHONE NUMBER (800) 424-9300 LIDLAW PROFILE # 005-H-SHELL		FACILITY: SERVICE STATION 255 MADARTHR BLVD OAKLAND, CA. 94612			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this assignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name ON BEHALF OF SHELL OIL CO.		Signature <i>[Signature]</i>		Month Day Year 11/21/95	
17. Transporter 1 Acknowledgment of Receipt of Materials Printed/Typed Name Signature Month Day Year 11/21/95					
18. Transporter 2 Acknowledgment of Receipt of Materials Printed/Typed Name Signature Month Day Year					
19. Discrepancy Indication Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest receipt or stored in item 10. Printed/Typed Name <i>[Signature]</i>		Signature <i>[Signature]</i>		Month Day Year <i>[Signature]</i>	

DO NOT WRITE BELOW THIS LINE.

State of California—Environmental Protection Agency  
Form Approved OMB No. 2050-0039 (Expires 9-30-94)  
Please print or type. Form designed for use on a 12-pitch typewriter.

See Instructions on back of page 6.

Department of Toxic Substances Control  
Sacramento, California

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7350

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. CAL00000157903		Manifest Document No. E 3 3 9 1		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address SHELL OIL COMPANY HAZARDOUS WASTE DEPT. P.O. BOX 4848 ANAHEIM, CA 92803		4. US EPA ID Number CAL0000027759		A. State Manifest Document Number 92045744		B. State Generator's ID HYH03601101717			
4. Generator's Phone (714) 520-3312		5. Transporter 1 Company Name MANLEY & SONS TRUCKING		6. US EPA ID Number CAL0000027759		C. State Transporter's ID		D. Transporter's Phone 916-381-5664	
5. Transporter 1 Company Name		7. Transporter 2 Company Name		8. US EPA ID Number		E. State Transporter's ID		F. Transporter's Phone	
9. Designated Facility Name and Site Address LADLAW ENVIRONMENTAL SERVICES 2500 W. LOKERN ROAD BUTTERNWILLAW, CA 94215		10. US EPA ID Number CAL00000575275		G. State Facility's ID CAL00000675275		H. Facility's Phone 905-752-7472			
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) HAZARDOUS WASTE SOLID		12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol		15. State L. Wash Number EPA/Other	
a.		1, D T 4 B 0 0 C P						State EPA/Other	
b.								State EPA/Other	
c.								State EPA/Other	
d.								State EPA/Other	
16. Additional Descriptions for Materials Listed Above ASPH CONTAMINATED WITH BILE LEAD 5 MB/L 9510133		K. Handling Codes for Wastes Listed Above 03							
15. Special Handling Instructions and Additional Information AVOID CONTACT WITH SKIN/EYES 24 HOUR EMERGENCY PHONE NUMBER (800) 424-9300 LADLAW PROFILE # 032-H-SHELL		FACILITY: SERVICE STATION 4255 MACARTHUR BLVD OAKLAND, CA 94612							
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the assignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.		Printed/Typed Name Signature ON BEHALF OF SHELL OIL CO.		Month Day Year 11 21 1995					
17. Transporter 1 Acknowledgment of Receipt of Materials Printed/Typed Name Signature T. J. ...		Month Day Year 11 21 1995							
18. Transporter 2 Acknowledgment of Receipt of Materials Printed/Typed Name Signature		Month Day Year							
19. Discrepancy Indication Space									
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. Printed/Typed Name Signature MORLEY		Month Day Year 11 21 1995							

20455100500-4042 JB

DO NOT WRITE BELOW THIS LINE.



# Sequoia Analytical

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

Redwood City, CA 94063  
Walnut Creek, CA 94598  
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

Project: Shell 4255 MacArthur, Oakland

Enclosed are the results from samples received at Sequoia Analytical on November 17, 1995.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9511H91 -01	SOLID, SS-1A Comp4(A-D)	11/17/95	Barium: EPTOX Extraction
9511H91 -01	SOLID, SS-1A Comp4(A-D)	11/17/95	Copper: EPTOX Extraction
9511H91 -01	SOLID, SS-1A Comp4(A-D)	11/17/95	Lead: EPTOX Extraction

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 4255 MacArthur, Oakland

Lab Proj. ID: 9511H91

Sampled: 11/17/95  
Received: 11/17/95  
Analyzed: see below

Attention: Faith Daverin

Reported: 12/04/95

**LABORATORY ANALYSIS**

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9511H91-01				
Sample Desc : SOLID,SS-1A Comp4(A-D)				
Barium: EPTOX Extraction	mg/L	12/01/95	0.10	26
Copper: EPTOX Extraction	mg/L	12/01/95	0.010	0.026
Lead: EPTOX Extraction	mg/L	12/01/95	0.10	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 Project ID: Shell 4255 MacArthur, Oakland  
Matrix: Liquid

Work Order #: 9511H91 -01

Reported: Dec 4, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1201956010MDB	ME1201956010MDB	ME1201956010MDB	ME1201956010MDB
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010

Analyte:	Beryllium	Cadmium	Chromium	Nickel
Analyst:	S. O'Donnell	S. O'Donnell	S. O'Donnell	S. O'Donnell
MS/MSD #:	9511J6301	9511J6301	9511J6301	9511J6301
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/1/95	12/1/95	12/1/95	12/1/95
Analyzed Date:	12/1/95	12/1/95	12/1/95	12/1/95
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	0.94	0.96	1.0
MS % Recovery:	100	94	96	100
Dup. Result:	1.0	0.93	0.95	1.0
MSD % Recov.:	100	93	95	100
RPD:	0.0	1.1	1.0	0.0
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	BLK120195	BLK120195	BLK120195	BLK120195
Prepared Date:	12/1/95	12/1/95	12/1/95	12/1/95
Analyzed Date:	12/1/95	12/1/95	12/1/95	12/1/95
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				
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*  
Mike Gregory  
Project Manager





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

**CHAIN OF CUSTODY RECORD**

Date: 11/17/95

Page 1 of 1

Site Address: 4255 MacArthur Blvd, Oakland

WIC#: 204-5510-0600

Shell Engineer: Jeff Byram Phone No.: 510-675-6146  
 Fax #: \_\_\_\_\_

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

Consultant Contact: Faith Daverin Phone No.: (510) 450-6000  
WA JOB # 81-0757-8 Fax #: 547-5043

Comments: Soil Stockpile

Sampled by: Tim Utterback

Printed Name: Tim Utterback

**Analysis Required**

LAB: Sedwood

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
C.W. Monitoring <input type="checkbox"/>	4441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classfy/Disposal <input checked="" type="checkbox"/>	4442	16 days <input checked="" type="checkbox"/> (Normal)
Water Classfy/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:**

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
	<u>Composite Sample Test for disposal by Shell decision tree for soil impacted by Gasoline</u>

Sample ID	Date	Sludge	Soil	Water	Air	No. of confs.	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
<u>SS-1</u>	<u>11/17/95</u>		<u>X</u>			<u>4</u>										

Relinquished By (signature): <u>Tim Utterback</u>	Printed Name: <u>Tim Utterback</u>	Date: <u>11/17/95</u>	Time: <u>14:56</u>	Received (signature): <u>Keith R Grubb</u>	Printed Name: <u>Keith R Grubb</u>	Date: <u>11/17/95</u>	Time: <u>14:56</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

11/21/1995 14:28 510-547-5043 WEISS ASSOC ENVIL PAGE 02



# Sequoia Analytical

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

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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 4255 MacArthur, Oakland

Enclosed are the results from samples received at Sequoia Analytical on November 20, 1995.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9511E74 -01	SOLID, SS-1A Comp SS-1,A-D	11/17/95	Barium: STLC Extraction
9511E74 -01	SOLID, SS-1A Comp SS-1,A-D	11/17/95	Copper: STLC Extraction
9511E74 -01	SOLID, SS-1A Comp SS-1,A-D	11/17/95	Lead: STLC Extraction
9511E74 -01	SOLID, SS-1A Comp SS-1,A-D	11/17/95	Selenium: STLC Extraction
9511E74 -01	SOLID, SS-1A Comp SS-1,A-D	11/17/95	ITTLCS Title 22: Metals, T
9511E74 -01	SOLID, SS-1A Comp SS-1,A-D	11/17/95	Organic Lead
9511E74 -01	SOLID, SS-1A Comp SS-1,A-D	11/17/95	✓ TPHGBS Purgeable TPH/BTEX
9511E74 -02	SOLID, SS-1B	11/17/95	✓ TPHGBS Purgeable TPH/BTEX
9511E74 -03	SOLID, SS-1C	11/17/95	✓ TPHGBS Purgeable TPH/BTEX
9511E74 -04	SOLID, SS-1D	11/17/95	✓ 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





Veiss Associates  
500 Shellmound  
Emeryville, CA 94608

Client Proj. ID: Shell 4255 MacArthur, Oakland

Lab Proj. ID: 9511E74

Sampled: 11/17/95  
Received: 11/20/95  
Analyzed: see below

Attention: Faith Daverin

Reported: 11/28/95

**LABORATORY ANALYSIS**

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9511E74-01				
Sample Desc: SOLID,SS-1A Comp SS-1,A-D				
Barium: STLC Extraction	mg/L	11/27/95	0.10	210
Copper: STLC Extraction	mg/L	11/27/95	0.010	39
Lead: STLC Extraction	mg/L	11/27/95	0.10	7.0
Organic Lead	mg/Kg	11/22/95	2.0	N.D.
Selenium: STLC Extraction	mg/L	11/27/95	0.10	N.D.

Analyses 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 4255 MacArthur, Oakland Sample Descript: SS-1A Comp SS-1,A-D Matrix: SOLID Analysis Method: Title 22 Lab Number: 9511E74-01	Sampled: 11/17/95 Received: 11/20/95 Analyzed: Reported: 11/28/95
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	6.8
Arsenic, As	500	5.0	N.D.
Barium, Ba	10000	5.0	1700
Beryllium, Be	75	0.50	N.D.
Cadmium, Cd	100	0.50	N.D.
Chromium, Cr	2500	0.50	46
Chromium, Cr (VI)	500	0.050	-
Cobalt, Co	8000	2.5	9.0
Copper, Cu	2500	0.50	790
Lead, Pb	1000	5.0	230
Mercury, Hg	20	0.20	2.8
Molybdenum, Mo	3500	2.5	N.D.
Nickel, Ni	2000	2.5	31
Selenium, Se	100	5.0	14
Silver, Ag	500	0.50	N.D.
Thallium, Tl	700	5.0	N.D.
Vanadium, V	2400	2.5	70
Zinc, Zn	5000	0.50	620
Asbestos, fibers/g	10000	-	-
Fluoride salts	18000	-	-

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

C Batch Number: GC112295BTEXEXA  
Instrument ID: GCHP18

Client Proj. ID: Shell 4255 MacArthur, Oakland  
Sample Descript: SS-1A Comp SS-1,A-D  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9511E74-01

Sampled: 11/17/95  
Received: 11/20/95  
Extracted: 11/22/95  
Analyzed: 11/22/95  
Reported: 11/28/95

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	2.7
Benzene	0.0050	0.023
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	0.0073
Xylenes (Total)	0.0050	0.013
Chromatogram Pattern:		C9-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70	130
		121

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

**EQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager



Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 4255 MacArthur, Oakland Sample Descript: SS-1B Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9511E74-02	Sampled: 11/17/95 Received: 11/20/95 Extracted: 11/22/95 Analyzed: 11/22/95 Reported: 11/28/95
---	--	--

QC Batch Number: GC112295BTEXEXA  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	10	79
Benzene	0.050	N.D.
Toluene	0.050	N.D.
Ethyl Benzene	0.050	0.30
Xylenes (Total)	0.050	0.82
Chromatogram Pattern:		C8-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70                      130	127

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory  
Project Manager



Veiss Associates 1500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 4255 MacArthur, Oakland Sample Descript: SS-1C Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9511E74-03	Sampled: 11/17/95 Received: 11/20/95 Extracted: 11/22/95 Analyzed: 11/22/95 Reported: 11/28/95
---	--	--

Batch Number: GC112295BTEXEXA  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	50	130
Benzene	0.25	N.D.
Toluene	0.25	N.D.
Ethyl Benzene	0.25	0.40
Xylenes (Total)	0.25	1.5
Chromatogram Pattern:		C9-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70                      130	126

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

**EQUOIA ANALYTICAL - ELAP #1210**

Mike Gregory  
Project Manager



Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Proj. ID: Shell 4255 MacArthur, Oakland Sample Descript: SS-1D Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9511E74-04	Sampled: 11/17/95 Received: 11/20/95 Extracted: 11/22/95 Analyzed: 11/22/95 Reported: 11/28/95
---	--	--

QC Batch Number: GC112295BTEXEXA  
Instrument ID: GCHP18

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

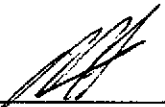
Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	2.5	22
Benzene	0.012	0.079
Toluene	0.012	0.057
Ethyl Benzene	0.012	0.16
Xylenes (Total)	0.012	0.25
Chromatogram Pattern:		C8-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	149 Q

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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FAX (916) 921-0100

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

Client Proj. ID: Shell 4255 MacArthur, Oakland  
Lab Proj. ID: 9511E74

Received: 11/20/95  
Reported: 11/28/95

### LABORATORY NARRATIVE

#Q - Surrogate coelution was confirmed.

SEQUOIA ANALYTICAL

Gregory  
Project Manager



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

Client Project ID: Shell 4255 MacArthur, Oakland  
Matrix: Solid

Work Order #: 9511E74 - 01-04

Reported: Nov 28, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC112295BTEXEXA	GC112295BTEXEXA	GC112295BTEXEXA	GC112295BTEXEXA
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 #:	9511E5911	9511E5911	9511E5911	9511E5911
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	11/22/95	11/22/95	11/22/95	11/22/95
Analyzed Date:	11/22/95	11/22/95	11/22/95	11/22/95
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	0.16	0.16	0.48
MS % Recovery:	75	80	80	80
Dup. Result:	0.15	0.15	0.16	0.46
MSD % Recov.:	75	75	80	77
RPD:	0.0	6.5	0.0	4.3
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK112295	BLK112295	BLK112295	BLK112295
Prepared Date:	11/22/95	11/22/95	11/22/95	11/22/95
Analyzed Date:	11/22/95	11/22/95	11/22/95	11/22/95
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
LCS Result:	0.18	0.18	0.18	0.54
LCS % Recov.:	90	90	90	90

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

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

9511E74.WAA <1>



Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	Client Project ID: Shell 4255 MacArthur, Oakland Matrix: Solid  Work Order #: 9511E74- 01	Reported: Nov 28, 1995
---	--	------------------------

**QUALITY CONTROL DATA REPORT**

	TTLIC	TTLIC	TTLIC	TTLIC
<b>Analyte:</b>	Beryllium	Cadmium	Chromium	Nickel
<b>QC Batch#:</b>	ME1121956010MDE	ME1121956010MDE	ME1121956010MDE	ME1121956010MDE
<b>Analy. Method:</b>	EPA 6010	EPA 6010	EPA 6010	EPA 6010
<b>Prep. Method:</b>	EPA 3050	EPA 3050	EPA 3050	EPA 3050
<b>Analyst:</b>	SO/CM	SO/CM	SO/CM	SO/CM
<b>MS/MSD #:</b>	9511E0401	9511E0401	9511E0401	9511E0401
<b>Sample Conc.:</b>	73	N.D.	N.D.	52
<b>Prepared Date:</b>	11/21/95	11/21/95	11/21/95	11/21/95
<b>Analyzed Date:</b>	11/22/95	11/22/95	11/22/95	11/22/95
<b>Instrument I.D.#:</b>	MTJA2	MTJA2	MTJA2	MTJA2
<b>Conc. Spiked:</b>	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
<b>Result:</b>	170	95	89	150
<b>MS % Recovery:</b>	97	95	89	98
<b>Dup. Result:</b>	170	94	88	150
<b>MSD % Recov.:</b>	97	94	88	98
<b>RPD:</b>	0.0	1.1	1.1	0.0
<b>RPD Limit:</b>	0-30	0-30	0-30	0-30

	BLK112195	BLK112195	BLK112195	BLK112195
<b>LCS #:</b>	BLK112195	BLK112195	BLK112195	BLK112195
<b>Prepared Date:</b>	11/21/95	11/21/95	11/21/95	11/21/95
<b>Analyzed Date:</b>	11/22/95	11/22/95	11/22/95	11/22/95
<b>Instrument I.D.#:</b>	MTJA2	MTJA2	MTJA2	MTJA2
<b>Conc. Spiked:</b>	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
<b>LCS Result:</b>	100	100	98	100
<b>LCS % Recov.:</b>	100	100	98	100

MS/MSD 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

Mike Gregory  
Project Manager



# Sequoia Analytical

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FAX (916) 921-0100

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

Client Project ID: Shell 4255 MacArthur, Oakland  
Matrix: Liquid

Work Order #: 9511E74-01

Reported: Nov 28, 1995

## QUALITY CONTROL DATA REPORT

	STLC	STLC	STLC	STLC
<b>Analyte:</b>	Beryllium	Cadmium	Chromium	Nickel
<b>QC Batch#:</b>	ME1127956010MDB	ME1127956010MDB	ME1127956010MDB	ME1127956010MDB
<b>Analy. Method:</b>	EPA 6010	EPA 6010	EPA 6010	EPA 6010
<b>Prep. Method:</b>	EPA 3010	EPA 3010	EPA 3010	EPA 3010

<b>Analyst:</b>	SO/CM	SO/CM	SO/CM	SO/CM
<b>MS/MSD #:</b>	9511D8001	9511D8001	9511D8001	9511D8001
<b>Sample Conc.:</b>	N.D.	N.D.	0.026	N.D.
<b>Prepared Date:</b>	11/27/95	11/27/95	11/27/95	11/27/95
<b>Analyzed Date:</b>	11/27/95	11/27/95	11/27/95	11/27/95
<b>Instrument I.D.#:</b>	MTJA2	MTJA2	MTJA2	MTJA2
<b>Conc. Spiked:</b>	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
<b>Result:</b>	1.0	0.99	1.0	1.0
<b>MS % Recovery:</b>	100	99	97	100
<b>Dup. Result:</b>	0.96	0.92	0.94	0.93
<b>MSD % Recov.:</b>	96	92	91	93
<b>RPD:</b>	4.1	7.3	6.2	7.3
<b>RPD Limit:</b>	0-30	0-30	0-30	0-30

<b>LCS #:</b>	BLK112795	BLK112795	BLK112795	BLK112795
<b>Prepared Date:</b>	11/27/95	11/27/95	11/27/95	11/27/95
<b>Analyzed Date:</b>	11/27/95	11/27/95	11/27/95	11/27/95
<b>Instrument I.D.#:</b>	MTJA2	MTJA2	MTJA2	MTJA2
<b>Conc. Spiked:</b>	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
<b>LCS Result:</b>	1.1	1.0	1.0	1.0
<b>LCS % Recov.:</b>	110	100	100	100

<b>MS/MSD</b>				
<b>LCS</b>	75-125	75-125	75-125	75-125
<b>Control Limits</b>				

**Please Note:**

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SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager

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

9511E74.WAA <3>





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

Client Project ID: Shell 4255 MacArthur, Oakland  
Matrix: Solid

Work Order #: 9511E74- 01

Reported: Nov 28, 1995

**QUALITY CONTROL DATA REPORT**

**Analyte:** Organic Lead  
**QC Batch#:** ME1122957000MDZ  
**Analy. Method:** LUFT  
**Prep. Method:** LUFT

**Analyst:** S. Flynn  
**MS/MSD #:** 9511F2110  
**Sample Conc.:** N.D.  
**Prepared Date:** 11/22/95  
**Analyzed Date:** 11/22/95  
**Instrument I.D.#:** MV2  
**Conc. Spiked:** 20 mg/Kg

**Result:** .22  
**MS % Recovery:** 110

**Dup. Result:** 24  
**MSD % Recov.:** 120

**RPD:** 9.0  
**RPD Limit:** 0-30

**LCS #:** BLK112295  
**Prepared Date:** 11/22/95  
**Analyzed Date:** 11/22/95  
**Instrument I.D.#:** MV2  
**Conc. Spiked:** 20 mg/Kg  
**LCS Result:** 18  
**LCS % Recov.:** 90

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

SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager

Please Note:  
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9511E74.WAA <4>





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

Client Project ID: Shell 4255 MacArthur, Oakland  
Matrix: Solid

Work Order #: 9511E74- 01

Reported: Nov 28, 1995

**QUALITY CONTROL DATA REPORT**

**Analyte:** Mercury

**QC Batch#:** ME112795747M4A  
**Analy. Method:** EPA 7471  
**Prep. Method:** EPA 7471

**Analyst:** T. Hua  
**MS/MSD #:** 9511G51-01A  
**Sample Conc.:** N.D.  
**Prepared Date:** 11/27/95  
**Analyzed Date:** 11/27/95  
**Instrument I.D.#:** MPE4  
**Conc. Spiked:** 0.020 mg/kg

**Result:** 0.17  
**MS % Recovery:** 85

**Dup. Result:** 0.19  
**MSD % Recov.:** 95

**RPD:** 11  
**RPD Limit:** 0-30

**LCS #:** BLK112795A

**Prepared Date:** 11/27/95  
**Analyzed Date:** 11/27/95  
**Instrument I.D.#:** MPE4  
**Conc. Spiked:** 0.20 mg/kg

**LCS Result:** 0.16  
**LCS % Recov.:** 80

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

**SEQUOIA ANALYTICAL**

  
Mike Gregory  
Project Manager

**Please Note:**

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9511E74.WAA <5>



# Sequoia Analytical

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

SS Associates  
1 Shellmound  
Marysville, CA 94608  
Attention: Faith Daverin

Project: Shell 4255 MacArthur, Oakland

Enclosed are the results from samples received at Sequoia Analytical on November 17, 1995.  
Requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
1H91 -01	SOLID, SS-1A Comp4(A-D)	11/17/95	Barium: EPTOX Extraction
1H91 -01	SOLID, SS-1A Comp4(A-D)	11/17/95	Copper: EPTOX Extraction
1H91 -01	SOLID, SS-1A Comp4(A-D)	11/17/95	Lead: EPTOX Extraction

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





**Sequoia  
Analytical**

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Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 4255 MacArthur, Oakland Lab Proj. ID: 9511H91	Sampled: 11/17/95 Received: 11/17/95 Analyzed: see below Reported: 12/04/95
Attention: Faith Daverin		

**LABORATORY ANALYSIS**

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9511H91-01 Sample Desc: SOLID,SS-1A Comp4(A-D)				
Barium: EPTOX Extraction	mg/L	12/01/95	0.10	26
Copper: EPTOX Extraction	mg/L	12/01/95	0.010	0.026
Lead: EPTOX Extraction	mg/L	12/01/95	0.10	N.D.

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Mike Gregory  
Project Manager







<b>Weiss Associates</b> 5500 Shellmound Emeryville, CA 94608 Attention: Faith Daverin	<b>Client Project ID:</b> Shell 4255 MacArthur, Oakland <b>Matrix:</b> Liquid <b>Work Order #:</b> 9511H91 -01	<b>Reported:</b> Dec 4, 1995
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**QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel
<b>QC Batch#:</b>	ME1201956010MDB	ME1201956010MDB	ME1201956010MDB	ME1201956010MDB
<b>Analy. Method:</b>	EPA 6010	EPA 6010	EPA 6010	EPA 6010
<b>Prep. Method:</b>	EPA 3010	EPA 3010	EPA 3010	EPA 3010

	S. O'Donnell	S. O'Donnell	S. O'Donnell	S. O'Donnell
<b>Analyst:</b>	S. O'Donnell	S. O'Donnell	S. O'Donnell	S. O'Donnell
<b>MS/MSD #:</b>	9511J6301	9511J6301	9511J6301	9511J6301
<b>Sample Conc.:</b>	N.D.	N.D.	N.D.	N.D.
<b>Prepared Date:</b>	12/1/95	12/1/95	12/1/95	12/1/95
<b>Analyzed Date:</b>	12/1/95	12/1/95	12/1/95	12/1/95
<b>Instrument I.D.#:</b>	MTJA2	MTJA2	MTJA2	MTJA2
<b>Conc. Spiked:</b>	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
<b>Result:</b>	1.0	0.94	0.96	1.0
<b>MS % Recovery:</b>	100	94	96	100
<b>Dup. Result:</b>	1.0	0.93	0.95	1.0
<b>MSD % Recov.:</b>	100	93	95	100
<b>RPD:</b>	0.0	1.1	1.0	0.0
<b>RPD Limit:</b>	0-30	0-30	0-30	0-30

LCS #:	BLK120195	BLK120195	BLK120195	BLK120195
<b>Prepared Date:</b>	12/1/95	12/1/95	12/1/95	12/1/95
<b>Analyzed Date:</b>	12/1/95	12/1/95	12/1/95	12/1/95
<b>Instrument I.D.#:</b>	MTJA2	MTJA2	MTJA2	MTJA2
<b>Conc. Spiked:</b>	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
<b>LCS Result:</b>	1.1	1.0	1.0	1.0
<b>LCS % Recov.:</b>	110	100	100	100

MS/MSD LCS	75-125	75-125	75-125	75-125
<b>Control Limits</b>				

**Please Note:**

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SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager

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

9511H91.WAA <1>





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

**CHAIN OF CUSTODY RECORD**

Serial No: 9511E74

Date: 11/17/95  
Page 1 of 1

Site Address: 4255 MacArthur Blvd., Oakland

WIC#: 204-5510-0600

Shell Engineer: Jeff Byram Phone No.: 510-675-6146  
Fax #: \_\_\_\_\_

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

Consultant Contact: Faith Davern Phone No.: (510) 450-6000  
WA JOB # 81-0757-8 Fax #: 547-5043

Comments: Soil Stockpile

Sampled by: Jim Utterback

Printed Name: Jim Utterback

**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: Sequoid

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 type="checkbox"/>
Soil Classify/Disposal <input checked="" type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

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

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

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
<u>1</u> SS-1	<u>11/17/95</u>		<u>X</u>			<u>4</u>												<u>Composite Sample. Test for disposal by Shell decision tree for soil impacted by Gasoline (UST related)</u>

Relinquished By (signature): <u>Jim Utterback</u>	Printed Name: <u>Jim Utterback</u>	Date: <u>11/17/95</u>	Received (signature): <u>Keith R Grubb</u>	Printed Name: <u>Keith R Grubb</u>	Date: <u>11/17/95</u>
Relinquished By (signature): <u>Keith R Grubb</u>	Printed Name: <u>Keith R Grubb</u>	Date: <u>11/17/95</u>	Received (signature): _____	Printed Name: _____	Date: _____
Relinquished By (signature): _____	Printed Name: _____	Date: _____	Received (signature): <u>Phil J. Le</u>	Printed Name: <u>Phil J. Le</u>	Date: <u>11/20/95</u>

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