



Weiss Associates

5500 Shellmound Street, Emeryville, CA 94608-2411

Environmental and Geologic Services

Fax: 510-547-5043 Phone: 510-450-6000

July 6, 1995

Eva Chu  
Hazardous Materials Specialist  
Alameda County Health Agency  
Division of Environmental Protection  
Department of Environmental Health  
1131 Harbor Bay Parkway, 2nd Floor  
Alameda, CA 94502

ENVIRONMENTAL  
EXAMINER  
95 JUL 11 PHM:JL  
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**Re: Tank Removal Closure Report**

Shell Service Station  
WIC #204-5508-2808

9750 9570 Golf Links Road  
Oakland, California  
WA Job #81-1055-35

Dear Ms. Chu:

On behalf of Shell Oil Products Company (Shell), Weiss Associates (WA) is submitting this report documenting the excavation and removal of the underground waste oil storage tank from the above referenced site (Figure 1). Tank removal documentation and soil sampling activities were conducted in accordance with the California Administrative Code, Title 23, Chapter 3, Subchapter 16, UST regulations and the "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" (Tri-Regional Guidelines). Our scope of work, site background information and soil sampling results are presented below.

## Scope of Work

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

- Observe the removal of the tank;
- Inspect and document the condition of the tank;
- Collect soil samples from below the tank and from the former tank pit soil stockpile;
- Direct overexcavation activities and collect additional soil samples;
- Analyze the soil samples according to the Tri-Regional Guidelines;
- Characterize the excavated soil and coordinate handling and disposal of soil from the former tank pit; and
- Report the results.

## Tank Removal

**Station Setting:**

The site is an operating Shell service station located at the north corner of Golf Links Road and Mountain Boulevard in Oakland, California (Figure 1). The area surrounding the site is commercial and residential.

**Tank Identification Number and Size:**

Waste oil tank 15422 was a 550-gallon, single walled, steel tank.

**Tank Removal Date:**

March 7, 1995

**Parties Present:**

Eva Chu, Alameda County Health Care Services Agency, Division of Environmental Protection, Department of Environmental Health; Joan L. Austin, City of Oakland, Fire Prevention Bureau; Mark Freitas, Paradiso Mechanical Inc.; and Tim Utterback, WA

**Tank Purging:**

The tank was emptied and purged prior to removal. Ms. Austin measured the vapor concentration in the tank. The measurement indicated the tank was safe to remove.

**Tank Condition:**

The tank was rusted in areas, was pitted and had several holes up to 1/2 inch in diameter.

**Tank Disposal:**

Erickson Inc. transported the tank to their facility in Richmond, California for recycling. Tank manifests and certificates of destruction are presented as Attachment B.

**Soil Handling Transport  
and Disposal:**

Prior to disposal, the soil stockpile was stored behind the service station as shown in Figure 2. On May 19, 1995, Manley and Sons Trucking of Sacramento, California hauled about 60 cubic yards of soil to Forward landfill of Stockton, California for disposal.

## **Soil Sampling and Excavation Results**

**Sampling and**

**Excavation Date:**

March 7, 1995

**Sediments Encountered:**

Gravel road base to a depth of about 1 foot below ground surface (bgs), sandy clay to about 10 feet bgs, and gravelly clay to about 11 feet bgs.

**Maximum Excavation**

**Depth:**

11 feet bgs

**Ground Water Depth:**

No ground water was encountered in the excavation.

**Soil Sampling Method:**

Samples were collected by driving clean brass tubes into undisturbed soil, which a backhoe collected from the excavation bottom and sidewalls. Soil stockpile samples were collected by driving clean brass tubes at least 12 inches beneath the stockpile surface. Sample tubes were immediately sealed with Teflon tape and plastic caps and placed in an iced cooler for transport to the analytical laboratory.

**Analytical Laboratory:**

Sequoia Analytical in Redwood City, California.

**Analytical Methods:**

Soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and diesel (TPH-D) by modified EPA Method 8015, benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020, volatile organic compounds (VOCs) by EPA Method 8240, semi-volatile organic compounds (SVOCs) and creosote by EPA Method 8270, polynuclear aromatic compounds (PNAs) by EPA Method 8100, polychlorinated biphenyls (PCBs) by EPA Method 8080, petroleum oil and grease (POG) by American Public Health Association Standard Method 5520E and cadmium, chromium, nickel, lead, and zinc by EPA Method 6010.

**Number of Soil Samples:** 6 tank removal samples, and 1 tank pit soil stockpile composite. WO1 was collected immediately beneath the tank after tank removal. After WA directed overexcavation of the tank pit, WA collected confirmatory soil samples WO2, NSW, ESW, SSW and WSW.

**Analytical Results**

**Before Overexcavation:**

Sample WO1 was collected 7 feet bgs. The soil sample contained 12,000 parts per million (ppm) POG, 3,900 ppm TPH-D, 190 ppm TPH-G, 0.43 ppm toluene and no benzene. The analytic results are summarized in Table 1.

*Overexcavation: This is part of*

*According to 60 yd<sup>3</sup>.*

WA directed the overexcavation of the tank pit. About four feet of soil was overexcavated from the tank pit bottom to a total depth of 11 feet bgs, and about six inches of soil was overexcavated from each sidewall. About 15 cubic yards of soil was removed.

*8/13/95 Tim Utterback Weiss*

**Analytical Results**

**After Overexcavation:**

Tank pit sidewall soil samples NSW, ESW, SSW, and WSW were below laboratory detection limits for POG, TPH-D, TPH-G, benzene, semivolatile organic compounds, polynuclear aromatic compounds, and PCBs. Pit bottom sample WO2 was below laboratory detection limits for TPH-D, TPH-G, benzene, semivolatile organic compounds, polynuclear aromatic compounds, and PCB's. The only detected hydrocarbons were 62 ppm POG and 0.083 ppm toluene in WO2.

## Closure Request

WA recommends closure for the former waste oil tank based on the results of the tank excavation, tank pit overexcavation and soil sampling because:

- the tank was removed and disposed according to state and federal regulations;
- although petroleum hydrocarbons had impacted soil around the tank, the analytic results for the confirmatory soil samples suggest that nearly all petroleum hydrocarbon-bearing soil was removed; and,
- because waste oil is relatively immobile, it is very unlikely that petroleum hydrocarbons impacted ground water. This was confirmed by the near 200-fold attenuation of POG between 7 feet (W01) and 11 feet (W02).

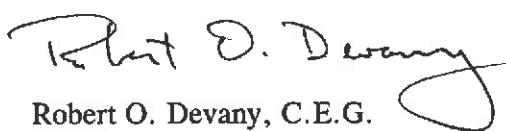
We trust this submittal meets your needs. Please call us if you have any questions or comments.



Sincerely,  
Weiss Associates



Tim R. Utterback  
Staff Engineer

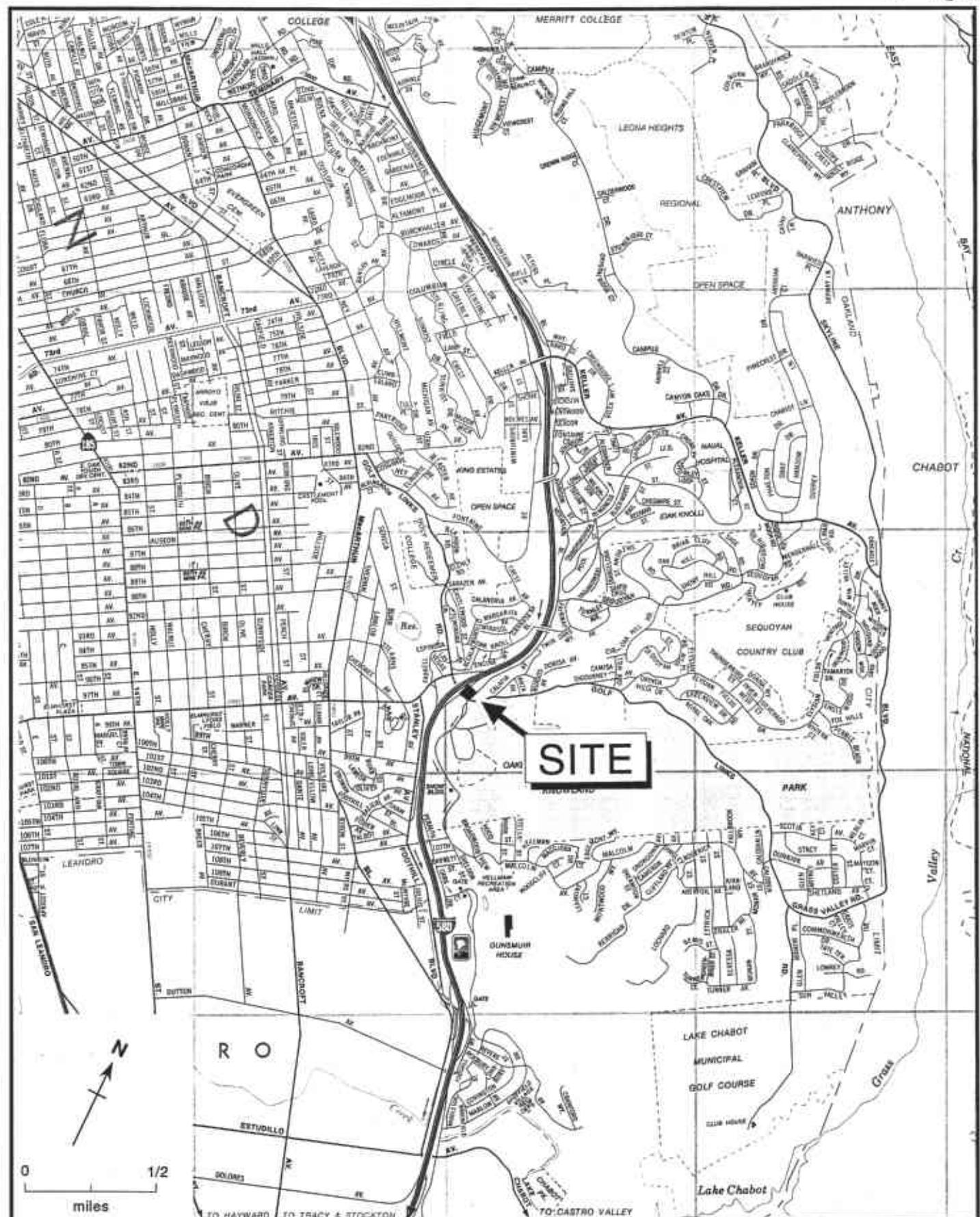


Robert O. Devany, C.E.G.  
Senior Project Hydrogeologist

Attachments:  
Figure 1. Site Location Map  
Figure 2. Soil Sample Locations  
Table 1. Summary of Soil Sample Analytic Results

Attachment A. Photographs of Tank Removal Activities  
Attachment B. Analytic Results  
Attachment C. Tank Manifests and Certificates

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



**Figure 1.** Site Location Map - Shell Service Station, WIC# 204-5508-2808, 9570 Golf Links Road, Oakland, California

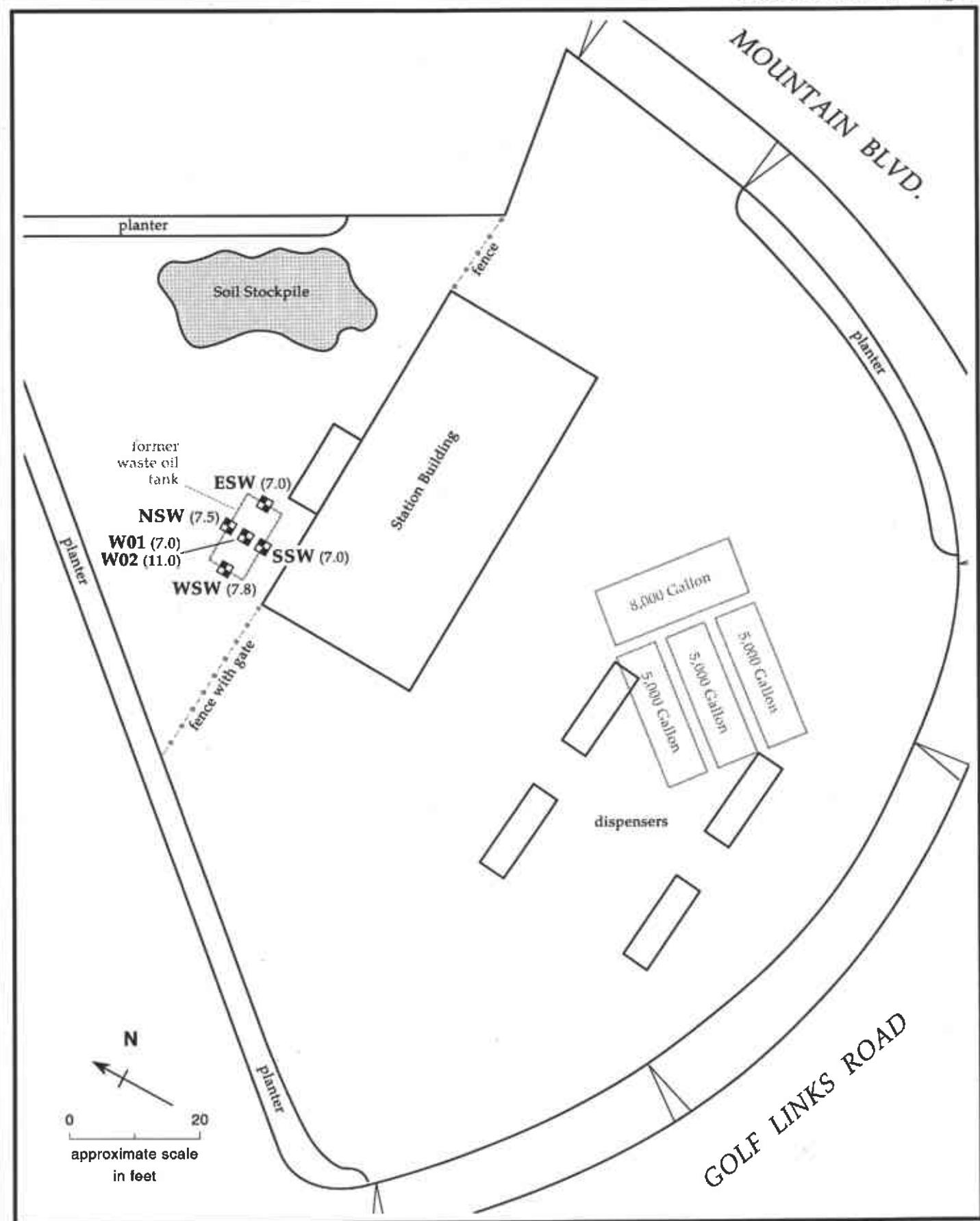


Figure 2. Soil Sample Locations - Shell Service Station, WIC#204-5508-2808, 9570 Golf Links Road, Oakland, California

Table 1. Soil Analytic Results, Shell Service Station , WIC #204-5508-2808, 9570 Golf Links Rd., Oakland, California

SAMPLE NAME/ID	DEPTH BELOW GROUND SURFACE (ft)	POG	TPH-D	TPH-G	B	T	E	X	Cd	Cr	Pb	Ni	Zn	VOCs	SVOCs	PNAs	PCBs	CREOSOTE
									parts per million (mg/kg)								Total	
W01	7.0	12,000	3900	190	<0.25	0.43	1.0	2.2	<0.5	49	18	39	55	a	ND	ND	0.60	<1,700
W02	11.0	62	<1.0	<1.0	<0.005	0.072	<0.005	<0.005	<0.5	12	11	7.8	210	ND	ND	ND	ND	<1,700
NSW	7.5	<50	<1.0	<1.0	<0.005	0.10	<0.005	<0.005	<0.5	51	7.0	37	59	a	ND	ND	ND	<1,700
SSW	7.0	<50	<1.0	<1.0	<0.005	0.19	<0.005	<0.005	<0.5	44	6.7	39	79	ND	ND	ND	ND	<1,700
ESW	7.0	<50	<1.0	<1.0	<0.005	0.18	<0.005	<0.005	<0.5	46	<5.0	48	69	a	ND	ND	ND	<1,700
WSW	7.8	<50	<1.0	<1.0	<0.005	0.083	<0.005	<0.005	<0.5	56	6.5	40	62	ND	ND	ND	ND	<1,700

Abbreviations:

POG = Total oil and grease by EPA Method 5520E

TPH-D = Total petroleum hydrocarbons as diesel by modified EPA Method 8015

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

VOCs = Volatile organic compounds by EPA Method 8240

SVOCs = Semivolatile organic compounds by EPA Method 8270

PNAs = Polynuclear organic compounds by EPA Method 8100

PCBs = Polychlorinated biphenyls by EPA Method 8080

CREOSOTE = Creosote by EPA Method 8270

Cd, Cr, Pb, Ni, Zn = Total cadmium, chromium, lead, nickel and zinc by EPA Method 6010

<n = Not detected at detection limit of n mg/kg

ND = All compounds tested by this method were below laboratory detection limits.

Notes:

Samples collected on 03/08/95 by Weiss Associates and analyzed by Sequoia Analytical, Redwood City, California

a = No VOCs detected except for constituents of BTEX

Archler  
1242 and  
1254

**ATTACHMENT A**

**PHOTOGRAPHS OF TANK REMOVAL ACTIVITIES**



Waste oil tank 15422 immediately after removal from the tank pit.



Inspection of waste oil tank 15422.



Waste oil tank pit before overexcavation.



Waste oil tank pit after final excavation.

**ATTACHMENT B**

**ANALYTIC RESULTS**



# Sequoia Analytical

680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233  
1900 Bates Avenue, Suite L Concord, CA 94520 (510) 686-9600 FAX (510) 686-9689  
819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

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

Project: Shell 9570 Golf Links, OkInd

Enclosed are the results from samples received at Sequoia Analytical on March 8, 1995.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9503630 -01	SOLID, WO1-7	03/08/95	Total Oil & Grease (5520E)
9503630 -01	SOLID, WO1-7	03/08/95	8080_S Organochlorine Pest
9503630 -01	SOLID, WO1-7	03/08/95	8100_S PNAs
9503630 -01	SOLID, WO1-7	03/08/95	8240_S Volatile Organic Co
9503630 -01	SOLID, WO1-7	03/08/95	8270_S SemiVolatile Organi
9503630 -01	SOLID, WO1-7	03/08/95	Cadmium
9503630 -01	SOLID, WO1-7	03/08/95	Chromium
9503630 -01	SOLID, WO1-7	03/08/95	Nickel
9503630 -01	SOLID, WO1-7	03/08/95	Lead
9503630 -01	SOLID, WO1-7	03/08/95	Zinc
9503630 -01	SOLID, WO1-7	03/08/95	TICSVS 8270 Semivolatile T
9503630 -01	SOLID, WO1-7	03/08/95	TPHD_S Extractable TPH
9503630 -01	SOLID, WO1-7	03/08/95	TPHGBS Purgeable TPH/BTEX
9503630 -02	SOLID, WO2-11	03/08/95	Total Oil & Grease (5520E)
9503630 -02	SOLID, WO2-11	03/08/95	8080_S Organochlorine Pest
9503630 -02	SOLID, WO2-11	03/08/95	8100_S PNAs
9503630 -02	SOLID, WO2-11	03/08/95	8240_S Volatile Organic Co
9503630 -02	SOLID, WO2-11	03/08/95	8270_S SemiVolatile Organi
9503630 -02	SOLID, WO2-11	03/08/95	Cadmium
9503630 -02	SOLID, WO2-11	03/08/95	Chromium
9503630 -02	SOLID, WO2-11	03/08/95	Nickel



**Sequoia  
Analytical**

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Concord, CA 94520  
Sacramento, CA 95834

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(916) 921-9600

FAX (415) 364-9233  
FAX (510) 686-9689  
FAX (916) 921-0100

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9503630 -02	SOLID, WO2-11	03/08/95	Lead
9503630 -02	SOLID, WO2-11	03/08/95	Zinc
9503630 -02	SOLID, WO2-11	03/08/95	TICSVS 8270 Semivolatile T
9503630 -02	SOLID, WO2-11	03/08/95	TPHD_S Extractable TPH
9503630 -02	SOLID, WO2-11	03/08/95	TPHGBS Purgeable TPH/BTEX
9503630 -03	SOLID, NSW-7.5	03/08/95	Total Oil & Grease (5520E)
9503630 -03	SOLID, NSW-7.5	03/08/95	8080_S Organochlorine Pest
9503630 -03	SOLID, NSW-7.5	03/08/95	8100_S PNAs
9503630 -03	SOLID, NSW-7.5	03/08/95	8240_S Volatile Organic Co
9503630 -03	SOLID, NSW-7.5	03/08/95	8270_S SemiVolatile Organi
9503630 -03	SOLID, NSW-7.5	03/08/95	Cadmium
9503630 -03	SOLID, NSW-7.5	03/08/95	Chromium
9503630 -03	SOLID, NSW-7.5	03/08/95	Nickel
9503630 -03	SOLID, NSW-7.5	03/08/95	Lead
9503630 -03	SOLID, NSW-7.5	03/08/95	Zinc
9503630 -03	SOLID, NSW-7.5	03/08/95	TICSVS 8270 Semivolatile T
9503630 -03	SOLID, NSW-7.5	03/08/95	TPHD_S Extractable TPH
9503630 -03	SOLID, NSW-7.5	03/08/95	TPHGBS Purgeable TPH/BTEX
9503630 -04	SOLID, SSW-7.0	03/08/95	Total Oil & Grease (5520E)
9503630 -04	SOLID, SSW-7.0	03/08/95	8080_S Organochlorine Pest
9503630 -04	SOLID, SSW-7.0	03/08/95	8100_S PNAs
9503630 -04	SOLID, SSW-7.0	03/08/95	8240_S Volatile Organic Co
9503630 -04	SOLID, SSW-7.0	03/08/95	8270_S SemiVolatile Organi
9503630 -04	SOLID, SSW-7.0	03/08/95	Cadmium
9503630 -04	SOLID, SSW-7.0	03/08/95	Chromium



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

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9503630 -04	SOLID, SSW-7.0	03/08/95	Nickel
9503630 -04	SOLID, SSW-7.0	03/08/95	Lead
9503630 -04	SOLID, SSW-7.0	03/08/95	Zinc
9503630 -04	SOLID, SSW-7.0	03/08/95	TICSVS 8270 Semivolatile T
9503630 -04	SOLID, SSW-7.0	03/08/95	TPHD_S Extractable TPH
9503630 -04	SOLID, SSW-7.0	03/08/95	TPHGBS Purgeable TPH/BTEX
9503630 -05	SOLID, ESW-7.0	03/08/95	Total Oil & Grease (5520E)
9503630 -05	SOLID, ESW-7.0	03/08/95	8080_S Organochlorine Pest
9503630 -05	SOLID, ESW-7.0	03/08/95	8100_S PNAs
9503630 -05	SOLID, ESW-7.0	03/08/95	8240_S Volatile Organic Co
9503630 -05	SOLID, ESW-7.0	03/08/95	8270_S SemiVolatile Organi
9503630 -05	SOLID, ESW-7.0	03/08/95	Cadmium
9503630 -05	SOLID, ESW-7.0	03/08/95	Chromium
9503630 -05	SOLID, ESW-7.0	03/08/95	Nickel
9503630 -05	SOLID, ESW-7.0	03/08/95	Lead
9503630 -05	SOLID, ESW-7.0	03/08/95	Zinc
9503630 -05	SOLID, ESW-7.0	03/08/95	TICSVS 8270 Semivolatile T
9503630 -05	SOLID, ESW-7.0	03/08/95	TPHD_S Extractable TPH
9503630 -05	SOLID, ESW-7.0	03/08/95	TPHGBS Purgeable TPH/BTEX
9503630 -06	SOLID, WSW-7.75	03/08/95	Total Oil & Grease (5520E)
9503630 -06	SOLID, WSW-7.75	03/08/95	8080_S Organochlorine Pest
9503630 -06	SOLID, WSW-7.75	03/08/95	8100_S PNAs
9503630 -06	SOLID, WSW-7.75	03/08/95	8240_S Volatile Organic Co
9503630 -06	SOLID, WSW-7.75	03/08/95	8270_S SemiVolatile Organi
9503630 -06	SOLID, WSW-7.75	03/08/95	Cadmium



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

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9503630 -06	SOLID, WSW-7.75	03/08/95	Chromium
9503630 -06	SOLID, WSW-7.75	03/08/95	Nickel
9503630 -06	SOLID, WSW-7.75	03/08/95	Lead
9503630 -06	SOLID, WSW-7.75	03/08/95	Zinc
9503630 -06	SOLID, WSW-7.75	03/08/95	TICSVS 8270 Semivolatile T
9503630 -06	SOLID, WSW-7.75	03/08/95	TPHD_S Extractable TPH
9503630 -06	SOLID, WSW-7.75	03/08/95	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



Sequoia  
Analytical

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Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Lab Proj. ID: 9503630

Sampled: 03/08/95  
Received: 03/08/95  
Analyzed: see below

Attention: Tim Utterback

Reported: 03/20/95

### LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9503630-01 Sample Desc : SOLID,WO1-7				
Cadmium	mg/Kg	03/14/95	0.50	N.D.
Chromium	mg/Kg	03/14/95	0.50	49
Lead	mg/Kg	03/14/95	5.0	18
Nickel	mg/Kg	03/14/95	2.5	39
Total Oil & Grease (5520E)	mg/Kg	03/11/95	50	12000
Zinc	mg/Kg	03/14/95	0.50	55
Lab No: 9503630-02 Sample Desc : SOLID,WO2-11				
Cadmium	mg/Kg	03/14/95	0.50	N.D.
Chromium	mg/Kg	03/14/95	0.50	12
Lead	mg/Kg	03/14/95	5.0	11
Nickel	mg/Kg	03/14/95	2.5	7.8
Total Oil & Grease (5520E)	mg/Kg	03/11/95	50	62
Zinc	mg/Kg	03/14/95	0.50	210
Lab No: 9503630-03 Sample Desc : SOLID,NSW-7.5				
Cadmium	mg/Kg	03/14/95	0.50	N.D.
Chromium	mg/Kg	03/14/95	0.50	51
Lead	mg/Kg	03/14/95	5.0	7.0
Nickel	mg/Kg	03/14/95	2.5	37
Total Oil & Grease (5520E)	mg/Kg	03/11/95	50	N.D.
Zinc	mg/Kg	03/14/95	0.50	59
Lab No: 9503630-04 Sample Desc : SOLID,SSW-7.0				
Cadmium	mg/Kg	03/14/95	0.50	N.D.
Chromium	mg/Kg	03/14/95	0.50	44

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

Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 9570 Golf Links, OkInd Lab Proj. ID: 9503630	Sampled: 03/08/95 Received: 03/08/95 Analyzed: see below
Attention: Tim Utterback		Reported: 03/20/95

### LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lead	mg/Kg	03/14/95	5.0	6.7
Nickel	mg/Kg	03/14/95	2.5	39
Total Oil & Grease (5520E)	mg/Kg	03/11/95	50	N.D.
Zinc	mg/Kg	03/14/95	0.50	79
Lab No: 9503630-05				
Sample Desc : SOLID,ESW-7.0				
Cadmium	mg/Kg	03/14/95	0.50	N.D.
Chromium	mg/Kg	03/14/95	0.50	46
Lead	mg/Kg	03/14/95	5.0	N.D.
Nickel	mg/Kg	03/14/95	2.5	48
Total Oil & Grease (5520E)	mg/Kg	03/11/95	50	N.D.
Zinc	mg/Kg	03/14/95	0.50	69
Lab No: 9503630-06				
Sample Desc : SOLID,WSW-7.75				
Cadmium	mg/Kg	03/14/95	0.50	N.D.
Chromium	mg/Kg	03/14/95	0.50	56
Lead	mg/Kg	03/14/95	5.0	6.5
Nickel	mg/Kg	03/14/95	2.5	40
Total Oil & Grease (5520E)	mg/Kg	03/11/95	50	N.D.
Zinc	mg/Kg	03/14/95	0.50	62

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, Okind  
Sample Descript: WO1-7  
Matrix: SOLID  
Analysis Method: EPA 8080  
Lab Number: 9503630-01

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/14/95  
Reported: 03/20/95

QC Batch Number: GC0309958080EXA  
Instrument ID: GCHP10

### Organochlorine Pesticides and PCBs (EPA 8080)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	5.0	N.D.
alpha-BHC	5.0	N.D.
beta-BHC	5.0	N.D.
delta-BHC	5.0	N.D.
gamma-BHC (Lindane)	5.0	N.D.
Chlordane	100	N.D.
4,4'-DDD	30	N.D.
4,4'-DDE	10	N.D.
4,4'-DDT	30	N.D.
Dieldrin	10	N.D.
Endosulfan I	10	N.D.
Endosulfan II	10	N.D.
Endosulfan sulfate	30	N.D.
Endrin	10	N.D.
Endrin aldehyde	30	N.D.
Heptachlor	5.0	N.D.
Heptachlor epoxide	5.0	N.D.
Methoxychlor	100	N.D.
Toxaphene	400	N.D.
PCB-1016	100	N.D.
PCB-1221	400	N.D.
PCB-1232	100	N.D.
PCB-1242	.....	100
PCB-1248	.....	100
PCB-1254	.....	100
PCB-1260	.....	100

Surrogates	Control Limits %	% Recovery
Dibutylchlorendate	30 150	134

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

SEQUOIA ANALYTICAL - ELAP #1210

  
Mike Gregory  
Project Manager



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Analytical

680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233  
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Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
  
Attention: Tim Utterback

Client Proj. ID: Shell 9570 Golf Links, Okind  
Sample Descript: WO1-7  
Matrix: SOLID  
Analysis Method: EPA 8100  
Lab Number: 9503630-01

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/14/95  
Analyzed: 03/15/95  
Reported: 03/20/95

QC Batch Number: GC0309958100EXB  
Instrument ID: GCHP11

### Polynuclear Aromatic Hydrocarbons (EPA 8100)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	2500	N.D.
Acenaphthylene	2500	N.D.
Anthracene	2500	N.D.
Benz(a)anthracene	2500	N.D.
Benz(a)pyrene	2500	N.D.
Benz(b)fluoranthene	2500	N.D.
Benz(g,h,i)perylene	2500	N.D.
Benz(k)fluoranthene	2500	N.D.
Chrysene	2500	N.D.
Dibenzo(a,h)anthracene	2500	N.D.
Fluoranthene	2500	N.D.
Fluorene	2500	N.D.
Indeno(1,2,3-cd)pyrene	2500	N.D.
Naphthalene	2500	N.D.
Phenanthrene	2500	N.D.
Pyrene	2500	N.D.

Surrogates	Control Limits %	% Recovery
2-Fluorobiphenyl	50                  150	84

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

SEQUOIA ANALYTICAL - ELAP #1210



Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, Oklnd  
Sample Descript: WO1-7  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9503630-01

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/14/95  
Reported: 03/20/95

QC Batch Number: MS0308958240EXA  
Instrument ID: F3

### Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	1000	N.D.
Benzene	200	N.D.
Bromodichloromethane	200	N.D.
Bromoform	200	N.D.
Bromomethane	200	N.D.
2-Butanone	1000	N.D.
Carbon disulfide	200	N.D.
Carbon tetrachloride	200	N.D.
Chlorobenzene	200	N.D.
Chloroethane	200	N.D.
2-Chloroethyl vinyl ether	1000	N.D.
Chloroform	200	N.D.
Chloromethane	200	N.D.
Dibromochloromethane	200	N.D.
1,1-Dichloroethane	200	N.D.
1,2-Dichloroethane	200	N.D.
1,1-Dichloroethene	200	N.D.
cis-1,2-Dichloroethene	200	N.D.
trans-1,2-Dichloroethene	200	N.D.
1,2-Dichloropropane	200	N.D.
cis-1,3-Dichloropropene	200	N.D.
trans-1,3-Dichloropropene	200	N.D.
Ethylbenzene	200	910
2-Hexanone	1000	N.D.
Methylene chloride	500	N.D.
4-Methyl-2-pentanone	1000	N.D.
Styrene	200	N.D.
1,1,2,2-Tetrachloroethane	200	N.D.
Tetrachloroethene	200	N.D.
Toluene	200	210
1,1,1-Trichloroethane	200	N.D.
1,1,2-Trichloroethane	200	N.D.
Trichloroethene	200	N.D.
Trichlorofluoromethane	200	N.D.
Vinyl acetate	200	N.D.



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Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, Oklnd Sample Descript: WO1-7 Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9503630-01	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/13/95 Analyzed: 03/14/95 Reported: 03/20/95
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QC Batch Number: MS0308958240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Vinyl chloride	200	N.D.
Total Xylenes	200	1600
<b>Surrogates</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



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

Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: WO1-7 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9503630-01	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/11/95 Analyzed: 03/16/95 Reported: 03/20/95
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QC Batch Number: MS0311958270EXA  
Instrument ID: H5

### Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	25000	N.D.
Acenaphthylene	25000	N.D.
Anthracene	25000	N.D.
Benzoic Acid	50000	N.D.
Benzo(a)anthracene	25000	N.D.
Benzo(b)fluoranthene	25000	N.D.
Benzo(k)fluoranthene	25000	N.D.
Benzo(g,h,i)perylene	25000	N.D.
Benzo(a)pyrene	25000	N.D.
Benzyl alcohol	25000	N.D.
Bis(2-chloroethoxy)methane	25000	N.D.
Bis(2-chloroethyl)ether	25000	N.D.
Bis(2-chloroisopropyl)ether	25000	N.D.
Bis(2-ethylhexyl)phthalate	50000	N.D.
4-Bromophenyl phenyl ether	25000	N.D.
Butyl benzyl phthalate	25000	N.D.
4-Chloroaniline	50000	N.D.
2-Chloronaphthalene	25000	N.D.
4-Chloro-3-methylphenol	25000	N.D.
2-Chlorophenol	25000	N.D.
4-Chlorophenyl phenyl ether	25000	N.D.
Chrysene	25000	N.D.
Dibenzo(a,h)anthracene	25000	N.D.
Dibenzofuran	25000	N.D.
Di-n-butyl phthalate	50000	N.D.
1,2-Dichlorobenzene	25000	N.D.
1,3-Dichlorobenzene	25000	N.D.
1,4-Dichlorobenzene	25000	N.D.
3,3-Dichlorobenzidine	50000	N.D.
2,4-Dichlorophenol	25000	N.D.
Diethyl phthalate	25000	N.D.
2,4-Dimethylphenol	25000	N.D.
Dimethyl phthalate	25000	N.D.
4,6-Dinitro-2-methylphenol	50000	N.D.
2,4-Dinitrophenol	50000	N.D.



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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: WO1-7  
Matrix: SOLID  
Analysis Method: EPA 8270  
Lab Number: 9503630-01

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/11/95  
Analyzed: 03/16/95  
Reported: 03/20/95

QC Batch Number: MS0311958270EXA  
Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
2,4-Dinitrotoluene	25000	N.D.
2,6-Dinitrotoluene	25000	N.D.
Di-n-octyl phthalate	25000	N.D.
Fluoranthene	25000	N.D.
Fluorene	25000	N.D.
Hexachlorobenzene	25000	N.D.
Hexachlorobutadiene	25000	N.D.
Hexachlorocyclopentadiene	50000	N.D.
Hexachloroethane	25000	N.D.
Indeno(1,2,3-cd)pyrene	25000	N.D.
Isophorone	25000	N.D.
2-Methylnaphthalene	25000	N.D.
2-Methylphenol	25000	N.D.
4-Methylphenol	25000	N.D.
Naphthalene	25000	N.D.
2-Nitroaniline	50000	N.D.
3-Nitroaniline	50000	N.D.
4-Nitroaniline	50000	N.D.
Nitrobenzene	25000	N.D.
2-Nitrophenol	25000	N.D.
4-Nitrophenol	50000	N.D.
N-Nitrosodiphenylamine	25000	N.D.
N-Nitroso-di-n-propylamine	25000	N.D.
Pentachlorophenol	50000	N.D.
Phenanthrene	25000	N.D.
Phenol	25000	N.D.
Pyrene	25000	N.D.
1,2,4-Trichlorobenzene	25000	N.D.
2,4,5-Trichlorophenol	50000	N.D.
2,4,6-Trichlorophenol	25000	N.D.

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

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Mike Gregory  
Project Manager



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

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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: WO1-7  
Matrix: SOLID  
Analysis Method: EPA 8270  
Lab Number: 9503630-01

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/11/95  
Analyzed: 03/16/95  
Reported: 03/20/95

Instrument ID: H5

### Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/Kg	Sample Results * ug/Kg
CREOSOTE	1700000	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library.  
Positive identification or specification between isomers cannot be made without retention time standards.

\* Estimated

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

Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: WO1-7 Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9503630-01	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/14/95 Analyzed: 03/16/95 Reported: 03/20/95
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QC Batch Number: GC0313950HBPEXA  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	..... 1.0	..... 3900 ..... C16-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 0 Q

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

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Mike Gregory  
Project Manager



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

Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: WO1-7 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9503630-01	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/12/95 Analyzed: 03/14/95 Reported: 03/20/95
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QC Batch Number: GC031295BTEXEXB  
Instrument ID: GCHP07

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	50	190
Benzene	0.25	N.D.
Toluene	0.25	0.43
Ethyl Benzene	0.25	1.0
Xylenes (Total)	0.25	2.2
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	112

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

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Project Manager



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Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: WO2-11 Matrix: SOLID Analysis Method: EPA 8080 Lab Number: 9503630-02	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/13/95 Analyzed: 03/14/95 Reported: 03/20/95
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QC Batch Number: GC0309958080EXA  
Instrument ID: GCHP10

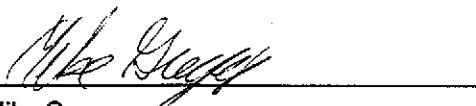
### Organochlorine Pesticides and PCBs (EPA 8080)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	1.0	N.D.
alpha-BHC	1.0	N.D.
beta-BHC	1.0	N.D.
delta-BHC	1.0	N.D.
gamma-BHC (Lindane)	1.0	N.D.
Chlordane	20	N.D.
4,4'-DDD	6.0	N.D.
4,4'-DDE	2.0	N.D.
4,4'-DDT	6.0	N.D.
Dieldrin	2.0	N.D.
Endosulfan I	2.0	N.D.
Endosulfan II	2.0	N.D.
Endosulfan sulfate	6.0	N.D.
Endrin	2.0	N.D.
Endrin aldehyde	6.0	N.D.
Heptachlor	1.0	N.D.
Heptachlor epoxide	1.0	N.D.
Methoxychlor	20	N.D.
Toxaphene	80	N.D.
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.

Surrogates	Control Limits %	% Recovery
Dibutylchloroendate	30      150	84

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

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Mike Gregory  
Project Manager



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

Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: WO2-11 Matrix: SOLID Analysis Method: EPA 8100 Lab Number: 9503630-02	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/14/95 Analyzed: 03/15/95 Reported: 03/20/95
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QC Batch Number: GC0309958100EXB  
Instrument ID: GCHP11

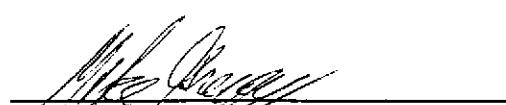
### Polynuclear Aromatic Hydrocarbons (EPA 8100)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Naphthalene	250	N.D.
Phenanthrene	250	N.D.
Pyrene	250	N.D.

Surrogates	Control Limits %	% Recovery
2-Fluorobiphenyl	50 150	65

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

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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: WO2-11  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9503630-02

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/13/95  
Reported: 03/20/95

QC Batch Number: MS0308958240EXA  
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	100	N.D.



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

Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: WO2-11 Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9503630-02	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/13/95 Analyzed: 03/13/95 Reported: 03/20/95
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QC Batch Number: MS0308958240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	88
Toluene-d8	81	102
4-Bromofluorobenzene	74	100

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Mike Gregory  
Project Manager

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Analytical

680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233  
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819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: WO2-11 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9503630-02	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/11/95 Analyzed: 03/15/95 Reported: 03/20/95
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QC Batch Number: MS0311958270EXA  
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.



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

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

Client Proj. ID: Shell 9570 Golf Links, Okind  
 Sample Descript: WO2-11  
 Matrix: SOLID  
 Analysis Method: EPA 8270  
 Lab Number: 9503630-02

Sampled: 03/08/95  
 Received: 03/08/95  
 Extracted: 03/11/95  
 Analyzed: 03/15/95  
 Reported: 03/20/95

QC Batch Number: MS0311958270EXA  
 Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
2,4-Dinitrotoluene	250	N.D.
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
Phenol-d5	24	113
Nitrobenzene-d5	23	120
2-Fluorobiphenyl	30	115
2,4,6-Tribromophenol	19	122
p-Terphenyl-d14	18	137

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory  
 Project Manager



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Weiss Associates 5500 Shellmound Emeryville, CA 94608 Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: W02-11 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9503630-02	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/11/95 Analyzed: 03/15/95 Reported: 03/20/95
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Instrument ID: H5

### Semivolatile Tentatively Identified Compounds

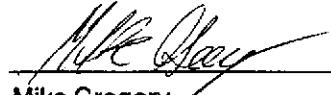
Analyte	Detection Limit * ug/Kg	Sample Results * ug/Kg
CREOSOTE	17000	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library.  
Positive identification or specification between isomers cannot be made without retention time standards.

\* Estimated

**SEQUOIA ANALYTICAL - ELAP #1210**

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



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

Client Proj. ID: Shell 9570 Golf Links, Okind  
Sample Descript: WO2-11  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9503630-02

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/14/95  
Analyzed: 03/16/95  
Reported: 03/20/95

QC Batch Number: GC0313950HBPEXA  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
Surrogates n-Pentacosane (C25)	Control Limits % 50                  150	% Recovery 93

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

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

Client Proj. ID: Shell 9570 Golf Links, Okind  
Sample Descript: WO2-11  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9503630-02

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/12/95  
Analyzed: 03/14/95  
Reported: 03/20/95

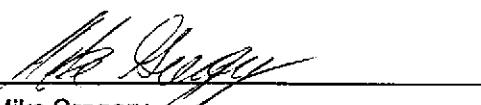
QC Batch Number: GC031295BTEXEXB  
Instrument ID: GCHP07

### 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	0.072
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:	.....	C7-C8
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	91

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

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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: NSW-7.5  
Matrix: SOLID  
Analysis Method: EPA 8080  
Lab Number: 9503630-03

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/14/95  
Reported: 03/20/95

QC Batch Number: GC0309958080EXA  
Instrument ID: GCHP10

### Organochlorine Pesticides and PCBs (EPA 8080)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	1.0	N.D.
alpha-BHC	1.0	N.D.
beta-BHC	1.0	N.D.
delta-BHC	1.0	N.D.
gamma-BHC (Lindane)	1.0	N.D.
Chlordane	20	N.D.
4,4'-DDD	6.0	N.D.
4,4'-DDE	2.0	N.D.
4,4'-DDT	6.0	N.D.
Dieldrin	2.0	N.D.
Endosulfan I	2.0	N.D.
Endosulfan II	2.0	N.D.
Endosulfan sulfate	6.0	N.D.
Endrin	2.0	N.D.
Endrin aldehyde	6.0	N.D.
Heptachlor	1.0	N.D.
Heptachlor epoxide	1.0	N.D.
Methoxychlor	20	N.D.
Toxaphene	80	N.D.
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.

Surrogates	Control Limits %	% Recovery
Dibutylchlorendate	30 150	91

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

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Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: NSW-7.5  
Matrix: SOLID  
Analysis Method: EPA 8100  
Lab Number: 9503630-03

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/14/95  
Analyzed: 03/15/95  
Reported: 03/20/95

QC Batch Number: GC0309958100EXB  
Instrument ID: GCHP11

### Polynuclear Aromatic Hydrocarbons (EPA 8100)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benz(a)anthracene	250	N.D.
Benz(a)pyrene	250	N.D.
Benz(b)fluoranthene	250	N.D.
Benz(g,h,i)perylene	250	N.D.
Benz(k)fluoranthene	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Naphthalene	250	N.D.
Phenanthrene	250	N.D.
Pyrene	250	N.D.

Surrogates	Control Limits %	% Recovery
2-Fluorobiphenyl	50      150	67

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

SEQUOIA ANALYTICAL - ELAP #1210

  
Mike Gregory  
Project Manager

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

Client Proj. ID: Shell 9570 Golf Links, Okind  
Sample Descript: NSW-7.5  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9503630-03

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/13/95  
Reported: 03/20/95

QC Batch Number: MS0308958240EXA  
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	120
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	100	N.D.



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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: NSW-7.5  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9503630-03

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/13/95  
Reported: 03/20/95

QC Batch Number: MS0308958240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	87
Toluene-d8	81	101
4-Bromofluorobenzene	74	100

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: NSW-7.5  
Matrix: SOLID  
Analysis Method: EPA 8270  
Lab Number: 9503630-03

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/11/95  
Analyzed: 03/15/95  
Reported: 03/20/95

QC Batch Number: MS0311958270EXA  
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.



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Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, Okind Sample Descript: NSW-7.5 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9503630-03	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/11/95 Analyzed: 03/15/95 Reported: 03/20/95
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QC Batch Number: MS0311958270EXA  
Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
2,4-Dinitrotoluene	250	N.D.
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	66
Phenol-d5	24	75
Nitrobenzene-d5	23	77
2-Fluorobiphenyl	30	79
2,4,6-Tribromophenol	19	57
p-Terphenyl-d14	18	90

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Mike Gregory  
Project Manager



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680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233  
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Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
Attention: Tim Utterback

Client Proj. ID: Shell 9570 Golf Links, Oklnd  
Sample Descript: NSW-7.5  
Matrix: SOLID  
Analysis Method: EPA 8270  
Lab Number: 9503630-03

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/11/95  
Analyzed: 03/15/95  
Reported: 03/20/95

Instrument ID: H5

### Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/Kg	Sample Results * ug/Kg
CREOSOTE	17000	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library.  
Positive identification or specification between isomers cannot be made without retention time standards.

\* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

  
Mike Gregory  
Project Manager



Sequoia  
Analytical

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

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

Client Proj. ID: Shell 9570 Golf Links, Okind  
Sample Descript: NSW-7.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9503630-03

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/14/95  
Analyzed: 03/16/95  
Reported: 03/20/95

QC Batch Number: GC0313950HBPEXA  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
Surrogates n-Pentacosane (C25)	Control Limits % 50                    150	% Recovery 97

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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: NSW-7.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9503630-03

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/12/95  
Analyzed: 03/14/95  
Reported: 03/20/95

QC Batch Number: GC031295BTEXXB  
Instrument ID: GCHP07

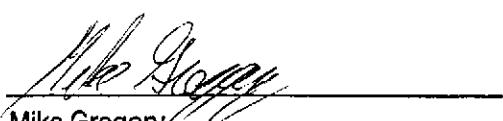
### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	0.10
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:	.....	C7-C8

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	101

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Mike Gregory  
Project Manager



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

Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: SSW-7.0 Matrix: SOLID Analysis Method: EPA 8080 Lab Number: 9503630-04	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/13/95 Analyzed: 03/14/95 Reported: 03/20/95
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QC Batch Number: GC0309958080EXA  
Instrument ID: GCHP10

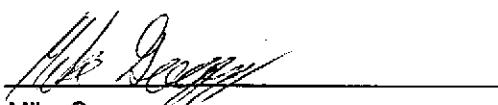
### Organochlorine Pesticides and PCBs (EPA 8080)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	1.0	N.D.
alpha-BHC	1.0	N.D.
beta-BHC	1.0	N.D.
delta-BHC	1.0	N.D.
gamma-BHC (Lindane)	1.0	N.D.
Chlordane	20	N.D.
4,4'-DDD	6.0	N.D.
4,4'-DDE	2.0	N.D.
4,4'-DDT	6.0	N.D.
Dieldrin	2.0	N.D.
Endosulfan I	2.0	N.D.
Endosulfan II	2.0	N.D.
Endosulfan sulfate	6.0	N.D.
Endrin	2.0	N.D.
Endrin aldehyde	6.0	N.D.
Heptachlor	1.0	N.D.
Heptachlor epoxide	1.0	N.D.
Methoxychlor	20	N.D.
Toxaphene	80	N.D.
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.

Surrogates	Control Limits %	% Recovery
Dibutylchlorendate	30      150	114

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Mike Gregory  
Project Manager



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Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, Okind Sample Descript: SSW-7.0 Matrix: SOLID Analysis Method: EPA 8100 Lab Number: 9503630-04	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/14/95 Analyzed: 03/15/95 Reported: 03/20/95
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QC Batch Number: GC0309958100EXB  
Instrument ID: GCHP11

### Polynuclear Aromatic Hydrocarbons (EPA 8100)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Naphthalene	250	N.D.
Phenanthrene	250	N.D.
Pyrene	250	N.D.

Surrogates	Control Limits %	% Recovery
2-Fluorobiphenyl	50      150	71

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Mike Gregory  
Project Manager

Page:

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

Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608

Attention: Tim Utterback

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: SSW-7.0  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9503630-04

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/13/95  
Reported: 03/20/95

QC Batch Number: MS0308958240EXA  
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	100	N.D.



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

Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: SSW-7.0 Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9503630-04	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/13/95 Analyzed: 03/13/95 Reported: 03/20/95
Attention: Tim Utterback		

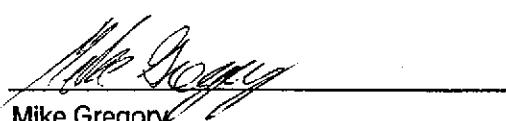
QC Batch Number: MS0308958240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	90
Toluene-d8	81	101
4-Bromofluorobenzene	74	101

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Mike Gregory  
Project Manager



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Analytical

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

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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: SSW-7.0  
Matrix: SOLID  
Analysis Method: EPA 8270  
Lab Number: 9503630-04

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/11/95  
Analyzed: 03/15/95  
Reported: 03/20/95

QC Batch Number: MS0311958270EXA  
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.



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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: SSW-7.0  
Matrix: SOLID  
Analysis Method: EPA 8270  
Lab Number: 9503630-04

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/11/95  
Analyzed: 03/15/95  
Reported: 03/20/95

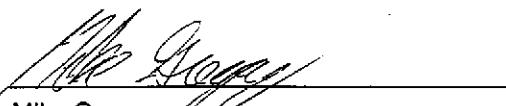
QC Batch Number: MS0311958270EXA  
Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
2,4-Dinitrotoluene	250	N.D.
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
Phenol-d5	24	113
Nitrobenzene-d5	23	120
2-Fluorobiphenyl	30	115
2,4,6-Tribromophenol	19	122
p-Terphenyl-d14	18	137

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: SSW-7.0  
Matrix: SOLID  
Analysis Method: EPA 8270  
Lab Number: 9503630-04

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/11/95  
Analyzed: 03/15/95  
Reported: 03/20/95

Instrument ID: H5

### Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/Kg	Sample Results * ug/Kg
CREOSOTE	17000	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library.  
Positive identification or specification between isomers cannot be made without retention time standards.

\* Estimated

**SEQUOIA ANALYTICAL - ELAP #1210**

Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, Okind  
Sample Descript: SSW-7.0  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9503630-04

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/16/95  
Reported: 03/20/95

QC Batch Number: GC0313950HBPEXA  
Instrument ID: GCHP4A

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
Surrogates n-Pentacosane (C25)	Control Limits % 50                    150	% Recovery 98

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, Oklnd  
Sample Descript: SSW-7.0  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9503630-04

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/12/95  
Analyzed: 03/14/95  
Reported: 03/20/95

QC Batch Number: GC031295BTEXEXB  
Instrument ID: GCHP01

### 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	0.19
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:	.....	C7
Surrogates		
Trifluorotoluene	Control Limits % 70                  130	% Recovery 123

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory  
Project Manager

Page:

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680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233  
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Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
  
Attention: Tim Utterback

Client Proj. ID: Shell 9570 Golf Links, Okind  
Sample Descript: ESW-7.0  
Matrix: SOLID  
Analysis Method: EPA 8080  
Lab Number: 9503630-05

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/14/95  
Reported: 03/20/95

QC Batch Number: GC0309958080EXA  
Instrument ID: GCHP10

### Organochlorine Pesticides and PCBs (EPA 8080)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	1.0	N.D.
alpha-BHC	1.0	N.D.
beta-BHC	1.0	N.D.
delta-BHC	1.0	N.D.
gamma-BHC (Lindane)	1.0	N.D.
Chlordane	20	N.D.
4,4'-DDD	6.0	N.D.
4,4'-DDE	2.0	N.D.
4,4'-DDT	6.0	N.D.
Dieldrin	2.0	N.D.
Endosulfan I	2.0	N.D.
Endosulfan II	2.0	N.D.
Endosulfan sulfate	6.0	N.D.
Endrin	2.0	N.D.
Endrin aldehyde	6.0	N.D.
Heptachlor	1.0	N.D.
Heptachlor epoxide	1.0	N.D.
Methoxychlor	20	N.D.
Toxaphene	80	N.D.
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.

Surrogates	Control Limits %	% Recovery
Dibutylchlorendate	30 150	95

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Mike Gregory  
Project Manager



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680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233  
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Weiss Associates  
5500 Shellmound  
Emeryville, CA 94608  
  
Attention: Tim Utterback

Client Proj. ID: Shell 9570 Golf Links, Oklnd  
Sample Descript: ESW-7.0  
Matrix: SOLID  
Analysis Method: EPA 8100  
Lab Number: 9503630-05

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/14/95  
Analyzed: 03/15/95  
Reported: 03/20/95

QC Batch Number: GC0309958100EXB  
Instrument ID: GCHP11

### Polynuclear Aromatic Hydrocarbons (EPA 8100)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Naphthalene	250	N.D.
Phenanthrene	250	N.D.
Pyrene	250	N.D.

Surrogates	Control Limits %	% Recovery
2-Fluorobiphenyl	50      150	72

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

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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: ESW-7.0  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9503630-05

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/13/95  
Reported: 03/20/95

QC Batch Number: MS0308958240EXA  
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	.....	290
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	100	N.D.



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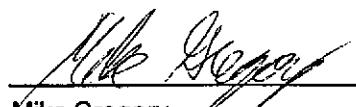
Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: ESW-7.0 Matrix: SOLID Analysis Method: EPA 8240 Lab Number: 9503630-05	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/13/95 Analyzed: 03/13/95 Reported: 03/20/95
Attention: Tim Utterback		

QC Batch Number: MS0308958240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	92
Toluene-d8	81	104
4-Bromofluorobenzene	74	104

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

Weiss Associates 5500 Shellmound Emeryville, CA 94608	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: ESW-7.0 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9503630-05	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/11/95 Analyzed: 03/15/95 Reported: 03/20/95
Attention: Tim Utterback		

QC Batch Number: MS0311958270EXA  
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.



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Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, OkInd Sample Descript: ESW-7.0 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9503630-05	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/11/95 Analyzed: 03/15/95 Reported: 03/20/95
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QC Batch Number: MS0311958270EXA  
Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
2,4-Dinitrotoluene	250	N.D.
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	63
Phenol-d5	24	77
Nitrobenzene-d5	23	78
2-Fluorobiphenyl	30	81
2,4,6-Tribromophenol	19	49
p-Terphenyl-d14	18	93

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, Oklnd  
Sample Descript: ESW-7.0  
Matrix: SOLID  
Analysis Method: EPA 8270  
Lab Number: 9503630-05

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/11/95  
Analyzed: 03/15/95  
Reported: 03/20/95

Instrument ID: H5

### Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/Kg	Sample Results * ug/Kg
CREOSOTE	17000	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library.  
Positive identification or specification between isomers cannot be made without retention time standards.

\* Estimated

**SEQUOIA ANALYTICAL - ELAP #1210**

Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, Oklnd  
Sample Descript: ESW-7.0  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9503630-05

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/14/95  
Analyzed: 03/16/95  
Reported: 03/20/95

QC Batch Number: GC0313950HBPEXA  
Instrument ID: GCHP4A

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 100

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: ESW-7.0  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9503630-05

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/12/95  
Analyzed: 03/14/95  
Reported: 03/20/95

QC Batch Number: GC031295BTEXEXB  
Instrument ID: GCHP01

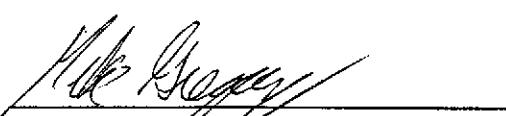
### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	0.18
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:	.....	C7

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

Page:

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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: WSW-7.75  
Matrix: SOLID  
Analysis Method: EPA 8080  
Lab Number: 9503630-06

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/14/95  
Reported: 03/20/95

QC Batch Number: GC0309958080EXA  
Instrument ID: GCHP10

### Organochlorine Pesticides and PCBs (EPA 8080)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Aldrin	1.0	N.D.
alpha-BHC	1.0	N.D.
beta-BHC	1.0	N.D.
delta-BHC	1.0	N.D.
gamma-BHC (Lindane)	1.0	N.D.
Chlordane	20	N.D.
4,4'-DDD	6.0	N.D.
4,4'-DDE	2.0	N.D.
4,4'-DDT	6.0	N.D.
Dieldrin	2.0	N.D.
Endosulfan I	2.0	N.D.
Endosulfan II	2.0	N.D.
Endosulfan sulfate	6.0	N.D.
Endrin	2.0	N.D.
Endrin aldehyde	6.0	N.D.
Heptachlor	1.0	N.D.
Heptachlor epoxide	1.0	N.D.
Methoxychlor	20	N.D.
Toxaphene	80	N.D.
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.

Surrogates	Control Limits %	% Recovery
Dibutylchlorendate	30      150	91

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

SEQUOIA ANALYTICAL - ELAP #1210

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Project Manager



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

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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: WSW-7.75  
Matrix: SOLID  
Analysis Method: EPA 8100  
Lab Number: 9503630-06

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/14/95  
Analyzed: 03/15/95  
Reported: 03/20/95

QC Batch Number: GC0309958100EXB  
Instrument ID: GCHP11

### Polynuclear Aromatic Hydrocarbons (EPA 8100)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Naphthalene	250	N.D.
Phenanthrene	250	N.D.
Pyrene	250	N.D.

Surrogates	Control Limits %	% Recovery
2-Fluorobiphenyl	50      150	66

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

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Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, Oklnd  
Sample Descript: WSW-7.75  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9503630-06

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/13/95  
Reported: 03/20/95

QC Batch Number: MS0308958240EXA  
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	100	N.D.



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

Client Proj. ID: Shell 9570 Golf Links, Oklnd  
Sample Descript: WSW-7.75  
Matrix: SOLID  
Analysis Method: EPA 8240  
Lab Number: 9503630-06

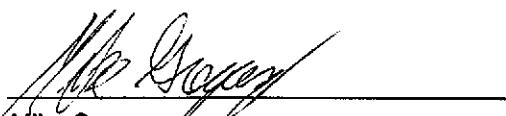
Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/13/95  
Analyzed: 03/13/95  
Reported: 03/20/95

QC Batch Number: MS0308958240EXA  
Instrument ID: F3

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70	90
Toluene-d8	81	102
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

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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: WSW-7.75  
Matrix: SOLID  
Analysis Method: EPA 8270  
Lab Number: 9503630-06

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/11/95  
Analyzed: 03/15/95  
Reported: 03/20/95

QC Batch Number: MS0311958270EXA  
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.



# Sequoia Analytical

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1900 Bates Avenue, Suite L Concord, CA 94520 (510) 686-9600 FAX (510) 686-9689  
819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Weiss Associates 5500 Shellmound Emeryville, CA 94608  Attention: Tim Utterback	Client Proj. ID: Shell 9570 Golf Links, Okind Sample Descript: WSW-7.75 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9503630-06	Sampled: 03/08/95 Received: 03/08/95 Extracted: 03/11/95 Analyzed: 03/15/95 Reported: 03/20/95
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QC Batch Number: MS0311958270EXA  
Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
2,4-Dinitrotoluene	250	N.D.
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
Phenol-d5	24	113
Nitrobenzene-d5	23	120
2-Fluorobiphenyl	30	115
2,4,6-Tribromophenol	19	122
p-Terphenyl-d14	18	137

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: WSW-7.75  
Matrix: SOLID  
Analysis Method: EPA 8270  
Lab Number: 9503630-06

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/11/95  
Analyzed: 03/15/95  
Reported: 03/20/95

Instrument ID: H5

### Semivolatile Tentatively Identified Compounds

Analyte	Detection Limit * ug/Kg	Sample Results * ug/Kg
CREOSOTE	17000	N.D.

Please Note:

All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA NIST library.  
Positive identification or specification between isomers cannot be made without retention time standards.

\* Estimated

SEQUOIA ANALYTICAL - ELAP #1210

  
Mike Gregory  
Project Manager



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

Client Proj. ID: Shell 9570 Golf Links, Oklnd  
Sample Descript: WSW-7.75  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9503630-06

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/14/95  
Analyzed: 03/16/95  
Reported: 03/20/95

QC Batch Number: GC0313950HBPEXA  
Instrument ID: GCHP4B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
Surrogates n-Pentacosane (C25)	Control Limits % 50                    150	% Recovery 94

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Mike Gregory  
Project Manager

Page:

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

Client Proj. ID: Shell 9570 Golf Links, OkInd  
Sample Descript: WSW-7.75  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9503630-06

Sampled: 03/08/95  
Received: 03/08/95  
Extracted: 03/12/95  
Analyzed: 03/14/95  
Reported: 03/20/95

QC Batch Number: GC031295BTEXEXB  
Instrument ID: GCHP01

### 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	0.083
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:	.....	C7
Surrogates	Control Limits %	% Recovery
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



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

Client Proj. ID: Shell 9570 Golf Links, Okind

Received: 03/08/95

Lab Proj. ID: 9503630

Reported: 03/20/95

## LABORATORY NARRATIVE

OQ - Surrogate diluted out.

**SEQUOIA ANALYTICAL**

Mike Gregory  
Project Manager



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

Client Project ID: Shell 9570 Golf Links, Oakland  
Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 20, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS0308958240EX4	MS0308958240EX4	MS0308958240EX4	MS0308958240EX4	MS0308958240EX4
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	-	-	-	-	-

<b>Analyst:</b>	B.Pitamah	B.Pitamah	B.Pitamah	B.Pitamah	B.Pitamah
<b>MS/MSD #:</b>	950317608	950317608	950317608	950317608	950317608
<b>Sample Conc.:</b>	N.D.	N.D.	N.D.	N.D.	N.D.
<b>Prepared Date:</b>	3/8/95	3/8/95	3/8/95	3/8/95	3/8/95
<b>Analyzed Date:</b>	3/8/95	3/8/95	3/8/95	3/8/95	3/8/95
<b>Instrument I.D. #:</b>	F3	F3	F3	F3	F3
<b>Conc. Spiked:</b>	2500 ug/kg				
<b>Result:</b>	2000	2500	2400	2500	2500
<b>MS % Recovery:</b>	80	100	96	100	100
<b>Dup. Result:</b>	2200	2600	2600	2700	2700
<b>MSD % Recov.:</b>	88	104	104	108	108
<b>RPD:</b>	9.5	3.9	8.0	7.7	7.7
<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.:

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

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

9503630.WAA <2>



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

Client Project ID: Shell 9570 Golf Links, Oakland  
Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 20, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC031295BTEXEXB	GC031295BTEXEXB	GC031295BTEXEXB	GC031295BTEXEXB
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 #:	950314110	950314110	950314110	950314110
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/12/95	3/12/95	3/12/95	3/12/95
Analyzed Date:	3/14/95	3/14/95	3/14/95	3/14/95
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:	0.18	0.18	0.19	0.56
MS % Recovery:	90	90	95	93
Dup. Result:	0.20	0.21	0.21	0.63
MSD % Recov.:	100	105	105	105
RPD:	11	15	10	12
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:

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**SEQUOIA ANALYTICAL**

Mike Gregory  
Project Manager



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

Client Project ID: Shell 9570 Golf Links, Oakland  
Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 20, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	Naphthalene	Acenapthene	Pyrene
QC Batch#:	GC0309958100EXB	GC0309958100EXB	GC0309958100EXB
Analy. Method:	EPA 8100	EPA 8100	EPA 8100
Prep. Method:	EPA 3550	EPA 3550	EPA 3550

Analyst:	L.Haar	L.Haar	L.Haar
MS/MSD #:	BLK030995	BLK030995	BLK030995
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	3/9/95	3/9/95	3/9/95
Analyzed Date:	3/10/95	3/10/95	3/10/95
Instrument I.D. #:	GCHP11	GCHP11	GCHP11
Conc. Spiked:	50 mg/kg	50 mg/kg	50 mg/kg
Result:	37	36	39
MS % Recovery:	74	72	78
Dup. Result:	35	34	38
MSD % Recov.:	70	68	76
RPD:	5.6	5.7	2.6
RPD Limit:	0-50	0-50	0-50

LCS #:

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

LCS Result:  
LCS % Recov.:

MS/MSD	DL-124	DL-124	DL-140
LCS Control Limits			

Please Note:

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SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager

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

9503630.WAA <4>



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

Client Project ID: Shell 9570 Golf Links, Oakland  
Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 20, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	Heptachlor	Aldrin	Dieldrin	Total Oil & Grease
QC Batch#:	GC0309958080EXA	GC0309958080EXA	GC0309958080EXA	OP0306955520EXA
Analy. Method:	EPA 8080	EPA 8080	EPA 8080	SM 5520E
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	L.Haar	L.Haar	L.Haar	C.Garde
MS/MSD #:	950344604	950344604	950344604	BLK030695
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/9/95	3/9/95	3/9/95	3/6/95
Analyzed Date:	3/9/95	3/9/95	3/9/95	3/7/95
Instrument I.D. #:	GCHP10	GCHP10	GCHP10	MANUAL
Conc. Spiked:	3.3 ug/kg	3.3 ug/kg	3.3 ug/kg	1000 mg/kg
Result:	*	*	*	1100
MS % Recovery:	*	*	*	110
Dup. Result:	*	*	*	1100
MSD % Recov.:	*	*	*	110
RPD:	*	*	*	0.0
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK030995	BLK030995	BLK030995
Prepared Date:	3/9/95	3/9/95	3/9/95
Analyzed Date:	3/9/95	3/9/95	3/9/95
Instrument I.D. #:	GCHP10	GCHP10	GCHP10
Conc. Spiked:	3.3 ug/kg	3.3 ug/kg	13 ug/kg
LCS Result:	3.3	3.2	15
LCS % Recov.:	100	97	115

MS/MSD LCS Control Limits	39-137	47-139	62-132	70-110
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**SEQUOIA ANALYTICAL**

Mike Gregory  
Project Manager



**Sequoia  
Analytical**

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---	---	--	--

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

Client Project ID: Shell 9570 Golf Links, Oakland  
Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 20, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch #:	ME0314956010MDC	ME0314956010MDC	ME0314956010MDC	ME0314956010MDC
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 #:	9503630-01	9503630-01	9503630-01	9503630-01
Sample Conc.:	0.50	N.D.	49	39
Prepared Date:	3/14/95	3/14/95	3/14/95	3/14/95
Analyzed Date:	3/14/95	3/14/95	3/14/95	3/14/95
Instrument I.D. #:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/kg	100 mg/kg	100 mg/kg	100 mg/kg
Result:	100	95	150	140
MS % Recovery:	99	95	101	101
Dup. Result:	100	96	150	140
MSD % Recov.:	99	96	101	101
RPD:	0.0	1.0	0.0	0.0
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	BLK031495	BLK031495	BLK031495	BLK031495
Prepared Date:	3/14/95	3/14/95	3/14/95	3/14/95
Analyzed Date:	3/14/95	3/14/95	3/14/95	3/14/95
Instrument I.D. #:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/kg	100 mg/kg	100 mg/kg	100 mg/kg
LCS Result:	100	99	110	100
LCS % Recov.:	100	99	110	100

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

**SEQUOIA ANALYTICAL**

  
Mike Gregory  
Project Manager

Please Note:

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Sequoia  
Analytical

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

Client Project ID: Shell 9570 Golf Links, Oakland  
Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 20, 1995

## QUALITY CONTROL DATA REPORT

Analyte: Diesel

QC Batch#: C0313950HBPTEXA  
Analy. Method: EPA 8015 M  
Prep. Method: EPA 3550

Analyst: B.Ali  
MS/MSD #: 9503739-05  
Sample Conc.: 1.7  
Prepared Date: 3/13/95  
Analyzed Date: 3/14/95  
Instrument I.D.#: GCHP4B  
Conc. Spiked: 15 mg/kg

Result: 7.4  
MS % Recovery: 38

Dup. Result: 7.1  
MSD % Recov.: 36

RPD: 4.1  
RPD Limit: 0-50

LCS #: BLK031395

Prepared Date: 3/13/95  
Analyzed Date: 3/14/95  
Instrument I.D.#: GCHP4B  
Conc. Spiked: 15 mg/kg

LCS Result: 8.4  
LCS % Recov.: 56

MS/MSD  
LCS 38-122  
Control Limits

SEQUOIA ANALYTICAL

Mike Gregory  
Project Manager

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**Sequoia  
Analytical**

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

Client Project ID: Shell 9570 Golf Links, Oakland  
Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 22, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro benzene	N-Nitroso-Di- N-propylamine
QC Batch#:	MS0311958270EXA	MS0311958270EXA	MS0311958270EXA	MS0311958270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	L.Duong	L.Duong	L.Duong	L.Duong
MS/MSD #:	9503276-01	9503276-01	9503276-01	9503276-01
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/11/95	3/11/95	3/11/95	3/11/95
Analyzed Date:	3/16/95	3/16/95	3/16/95	3/16/95
Instrument I.D. #:	GCHP5	GCHP5	GCHP5	GCHP5
Conc. Spiked:	3300 ug/kg	3300 ug/kg	3300 ug/kg	3300 ug/kg
Result:	2800	2400	2400	2300
MS % Recovery:	85	73	73	70
Dup. Result:	3000	2600	2400	2400
MSD % Recov.:	91	79	73	73
RPD:	6.9	8.0	0.0	4.3
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	5-112	23-134	20-124	DL-230
LCS Control Limits				

Please Note:

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

**SEQUOIA ANALYTICAL**

Mike Gregory  
Project Manager



**Sequoia  
Analytical**

680 Chesapeake Drive      Redwood City, CA 94063      (415) 364-9600      FAX (415) 364-9233  
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 819 Striker Avenue, Suite 8      Sacramento, CA 95834      (916) 921-9600      FAX (916) 921-0100

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

Client Project ID: Shell 9570 Golf Links, Oakland  
Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 22, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	1,2,4-Trichloro benzene	4-Chloro-3 Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS0311958270EXA	MS0311958270EXA	MS0311958270EXA	MS0311958270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550

Analyst:	L.Duong	L.Duong	L.Duong	L.Duong
MS/MSD #:	9503276-01	9503276-01	9503276-01	9503276-01
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/11/95	3/11/95	3/11/95	3/11/95
Analyzed Date:	3/16/95	3/16/95	3/16/95	3/16/95
Instrument I.D. #:	GCHP5	GCHP5	GCHP5	GCHP5
Conc. Spiked:	3300 ug/kg	3300 ug/kg	3300 ug/kg	3300 ug/kg
Result:	2500	2400	2300	1400
MS % Recovery:	76	73	70	42
Dup. Result:	2500	2600	2400	1800
MSD % Recov.:	76	79	73	55
RPD:	0.0	8.0	4.3	25
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	44-142	22-147	47-145	DL-132
LCS Control Limits				

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Project Manager



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Emeryville, CA 94608  
Attention: Tim Utterback

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Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 22, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
QC Batch#:	MS0311958270EXA	MS0311958270EXA	MS0311958270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550

Analyst:	L.Duong	L.Duong	L.Duong
MS/MSD #:	9503276-01	9503276-01	9503276-01
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	3/11/95	3/11/95	3/11/95
Analyzed Date:	3/16/95	3/16/95	3/16/95
Instrument I.D. #:	GCHP5	GCHP5	GCHP5
Conc. Spiked:	3300 ug/kg	3300 ug/kg	3300 ug/kg
Result:	1900	1300	2200
MS % Recovery:	58	39	67
Dup. Result:	2100	1200	2400
MSD % Recov.:	64	36	73
RPD:	10	8.0	8.7
RPD Limit:	0-50	0-50	0-50

LCS #:

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

LCS Result:  
LCS % Recov.:

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

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

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Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 22, 1995

## QUALITY CONTROL DATA REPORT

**Analyte:** Diesel

**QC Batch#:** GC0313950HBPEXA  
**Analy. Method:** EPA 8015 M  
**Prep. Method:** EPA 3550

**Analyst:** B.Ali  
**MS/MSD #:** 9503739-05  
**Sample Conc.:** 1.7  
**Prepared Date:** 3/13/95  
**Analyzed Date:** 3/14/95  
**Instrument I.D. #:** GCHP4B  
**Conc. Spiked:** 15 mg/kg

**Result:** 7.4  
**MS % Recovery:** 38

**Dup. Result:** 7.1  
**MSD % Recov.:** 36

**RPD:** 4.1  
**RPD Limit:** 0-50

**LCS #:** BLK031395

**Prepared Date:** 3/13/95  
**Analyzed Date:** 3/14/95  
**Instrument I.D. #:** GCHP4B  
**Conc. Spiked:** 15 mg/kg

**LCS Result:** 8.4  
**LCS % Recov.:** 56

**MS/MSD**  
**LCS** 38-122  
**Control Limits**

SEQUOIA ANALYTICAL

*Mike Gregory*  
Mike Gregory  
Project Manager

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Emeryville, CA 94608  
Attention: Tim Utterback

Client Project ID: Shell 9570 Golf Links, Oakland  
Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 22, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS0308958240EXA	MS0308958240EXA	MS0308958240EXA	MS0308958240EXA	MS0308958240EXA
Anal. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	-	-	-	-	-

Analyst:	B.Pitamah	B.Pitamah	B.Pitamah	B.Pitamah	B.Pitamah
MS/MSD #:	9503176-08	9503176-08	9503176-08	9503176-08	9503176-08
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/8/95	3/8/95	3/8/95	3/8/95	3/8/95
Analyzed Date:	3/8/95	3/8/95	3/8/95	3/8/95	3/8/95
Instrument I.D. #:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 ug/kg				
Result:	2000	2500	2400	2500	2500
MS % Recovery:	80	100	96	100	100
Dup. Result:	2200	2600	2600	2700	2700
MSD % Recov.:	88	104	104	108	108
RPD:	9.5				
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	DL-234	LCS	71-157	Control Limits	37-151	47-150	37-160
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\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

**SEQUOIA ANALYTICAL**

Mike Gregory  
Project Manager



**Sequoia  
Analytical**

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--	--	--	--

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

Client Project ID: Shell 9570 Golf Links, Oakland  
Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 22, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC031295BTEXEXB	GC031295BTEXEXB	GC031295BTEXEXB	GC031295BTEXEXB
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 #:	9503141-10	9503141-10	9503141-10	9503141-10
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/12/95	3/12/95	3/12/95	3/12/95
Analyzed Date:	3/14/95	3/14/95	3/14/95	3/14/95
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:	0.18	0.18	0.19	0.56
MS % Recovery:	90	90	95	93
Dup. Result:	0.20	0.21	0.21	0.63
MSD % Recov.:	100	105	105	105
RPD:	11	15	10	12
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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5500 Shellmound  
Emeryville, CA 94608  
Attention: Tim Utterback

Client Project ID: Shell 9570 Golf Links, Oakland  
Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 22, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	Naphthalene	Acenaphthene	Pyrene
QC Batch#:	GC0309958100EXB	GC0309958100EXB	GC0309958100EXB
Analy. Method:	EPA 8100	EPA 8100	EPA 8100
Prep. Method:	EPA 3550	EPA 3550	EPA 3550

Analyst:	L.Haar	L.Haar	L.Haar
MS/MSD #:	BLK030995	BLK030995	BLK030995
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	3/9/95	3/9/95	3/9/95
Analyzed Date:	3/10/95	3/10/95	3/10/95
Instrument I.D. #:	GCHP11	GCHP11	GCHP11
Conc. Spiked:	50 mg/L	50 mg/L	50 mg/L
Result:	37	36	39
MS % Recovery:	74	72	78
Dup. Result:	35	34	38
MSD % Recov.:	70	68	76
RPD:	5.6	5.7	2.6
RPD Limit:	0-50	0-50	0-50

LCS #:

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

LCS Result:  
LCS % Recov.:

MS/MSD	DL-124	DL-124	DL-140
LCS Control Limits			

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Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 22, 1995

## QUALITY CONTROL DATA REPORT

Analyte:	Heptachlor	Aldrin	Dieldrin
QC Batch#:	GC0309958080EXA	GC0309958080EXA	GC0309958080EXA
Analy. Method:	EPA 8080	EPA 8080	EPA 8080
Prep. Method:	EPA 3550	EPA 3550	EPA 3550

Analyst:	L.Haar	L.Haar	L.Haar
MS/MSD #:	950344604	950344604	950344604
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	3/9/95	3/9/95	3/9/95
Analyzed Date:	3/9/95	3/9/95	3/9/95
Instrument I.D. #:	GCHP10	GCHP10	GCHP10
Conc. Spiked:	3.3 ug/kg	3.3 ug/kg	13 ug/kg
Result:	*	*	*
MS % Recovery:	*	*	*
Dup. Result:	*	*	*
MSD % Recov.:	*	*	*
RPD:	*	*	*
RPD Limit:	0-50	0-50	0-50

LCS #:	BLK030995	BLK030995	BLK030995
Prepared Date:	3/9/95	3/9/95	3/9/95
Analyzed Date:	3/9/95	3/9/95	3/9/95
Instrument I.D. #:	GCHP10	GCHP10	GCHP10
Conc. Spiked:	3.3 ug/kg	3.3 ug/kg	3.3 ug/kg
LCS Result:	3.3	3.2	15
LCS % Recov.:	100	97	115

MS/MSD LCS Control Limits	39-137	47-139	62-132
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\* - Diluted Out

**SEQUOIA ANALYTICAL**

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Project Manager

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Matrix: Solid

Work Order #: 9503630 -01 - 06

Reported: Mar 22, 1995

### QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel	Total Oil & Grease
QC Batch#:	ME0314956010MDC	ME0314956010MDC	ME0314956010MDC	ME0314956010MDC	OP0306955520EXA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010	SM 5520E
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050	EPA 3550

Analyst:	S. O'Donnell	S. O'Donnell	S. O'Donnell	S. O'Donnell	C. Garde
MS/MSD #:	9503630-01	9503630-01	9503630-01	9503630-01	BLK030695
Sample Conc.:	0.50	N.D.	49	39	N.D.
Prepared Date:	3/14/95	3/14/95	3/14/95	3/14/95	3/6/95
Analyzed Date:	3/14/95	3/14/95	3/14/95	3/14/95	3/7/95
Instrument I.D. #:	MTJA2	MTJA2	MTJA2	MTJA2	MANUAL
Conc. Spiked:	100 mg/kg	100 mg/kg	100 mg/kg	100 mg/kg	1000 mg/kg
Result:	100	95	150	140	1100
MS % Recovery:	99	95	101	101	110
Dup. Result:	100	96	150	140	1100
MSD % Recov.:	99	96	101	101	110
RPD:	0.0	1.0	0.0	0.0	0.0
RPD Limit:	0-30	0-30	0-30	0-30	0-50

LCS #:	BLK031495	BLK031495	BLK031495	BLK031495
Prepared Date:	3/14/95	3/14/95	3/14/95	3/14/95
Analyzed Date:	3/14/95	3/14/95	3/14/95	3/14/95
Instrument I.D. #:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/kg	100 mg/kg	100 mg/kg	100 mg/kg
LCS Result:	100	99	110	100
LCS % Recov.:	100	99	110	100

MS/MSD				70-110
LCS	75-125	75-125	75-125	75-125
Control Limits				

**SEQUOIA ANALYTICAL**

  
Mike Gregory  
Project Manager

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SHELL OIL COMPANY

RETAIL ENVIRONMENTAL ENGINEERING - WEST

Site Address: 9570 Golf Links Rd., Oakland

WIC# 204-5508-2808

Shell Engineer: Jeff Byram Phone No.:  
Fax #:Consultant Name & Address: WEISS ASSOCIATES  
5500 SHELLMOUND ST EMERYVILLE CA 94608Consultant Contact: Tim Utterback Phone No.:  
(510) 547-5420  
WA JOB # 81-1055-30 Fax #: 547-5043

Comments: Tank pit soil samples

Sampled by: Tim Utterback

Printed Name: Tim Utterback

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Oil and Grease Fuel 448.1 55208	SVOC EPA 8270 PEP, PCB, PNA, Chemosite	Asbestos TLC for Cd, Cr, Pb, Ni, Zn	Container Size	Preparation Used	Composite Y/N	UST AGENCY:		
W01-7			X			2	X	XX	X				X	X	X				Soil / 1A-B	Excellent	
W02-11			X			1	X	XX	X				X	X	X				Soil / 2A		
NSW-7.5			X			1	X	X	X	X			X	X	X				Soil / 3		
SSW-7.0			X			1	X	X	X	X			X	X	X				Soil / 4		
ESW-7.0			X			1	X	X	X	X			X	X	X				Soil / 5		
WSW-7.75			X			1	X	X	X	X			X	X	X				Soil / 6		

Relinquished By (signature):

Relinquished By (signature):

Relinquished By (signature):

Printed Name: Tim Utterback

Printed Name: C. Westwater

Printed Name:

Date: 3/8/95

Time: 10:30

Date: 3-8-95

Time: 3:50

Date:

Time:

Received (signature):

Received (signature):

Received (signature):

Printed Name: C. Westwater

Printed Name:

Printed Name: M. YONG

Date: 3-8-95

Time: 10:30

Date:

Time:

Date: 3/8/95

Time: 16:05

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

Shell Oil Co. Chain of Custody

**ATTACHMENT C**

**TANK MANIFESTS AND CERTIFICATES**

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. <b>CAD09814331982311718</b>	Manifest Document No. <b>2   3   1   7   8</b>	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address  <b>SHELL OIL COMPANY HAZARDOUS WASTE DEPT. P.O. BOX 4848</b>		A. State/Manifest Document Number <b>92044376</b>			
4. Generator's Phone <b>(714) 520-3312</b> ANAHEIM, CA 92803		B. State/Generator's ID <b>H Y H D 3 6 0 1 0 1 7 7</b>			
5. Transporter 1 Company Name <b>CROSBY &amp; OVERTON, INC.</b>		C. State/Transporter's ID <b>731838</b>			
6. US EPA ID Number <b>CAD0982524480</b>		D. Transporter's Phone <b>510-633-0336</b>			
7. Transporter 2 Company Name		E. State/Transporter's ID			
8. US EPA ID Number		F. Transporter's Phone			
9. Designated Facility Name and Site Address <b>ROMIC ENVIRONMENTAL 2081 BAY ROAD FAST PALO ALTO, CA. 94302</b>		G. State/Facility's ID			
10. US EPA ID Number <b>CAD0094526557</b>		H. Facility's Phone <b>415-324-1638</b>			
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)  <b>RU WASTE FLAMMABLE LIQUID, N.O.S. (BENZENE, TETRAETHYL LEAD), 3, UN1993, I (D001) , (D008) , (D018)</b>		12. Containers No. Type <b>2   0   1   T   T   0   0   2   7   5</b>	13. Total Quantity <b>00275</b>	14. Unit Wt/Vol <b>G</b>	L. Waste Number <b>State: F-14 EPA/Other: D001</b>
b.					State: <b>F-14</b> EPA/Other: <b>D001</b>
c.					State: <b>F-14</b> EPA/Other: <b>D001</b>
d.					State: <b>F-14</b> EPA/Other: <b>D001</b>
13. Additional Descriptions for Materials Listed Above <b>TETRAETHYL BENZENE (N.O.S.) (BENZENE, TETRAETHYL LEAD), 3, UN1993, I</b>		K. Handling Codes for Wastes Listed Above <b>01</b>			
15. Special Handling Instructions and Additional Information  <b>AVOID CONTACT WITH EYES/SKIN 24 HOUR EMERGENCY PHONE NUMBER (800) 424-9300 FLAMMABLE PLACARD REF UN1993 PROFILE # 006884</b>		FACILITY: <b>SERVICE STATION 9750 GOLF LINKS ROAD OAKLAND, CA. 94605</b>			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the 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 <b>Doherty, J. B.</b>		Signature <b>Doherty</b>		ON BEHALF OF <b>SHELL OIL CO.</b>	Month Day Year <b>013017 915</b>
17. Transporter 1 Acknowledgement of Receipt of Materials  <b>Richard Lays</b>		Signature <b>Richard Lays</b>		Month Day Year <b>013017 915</b>	
Printed/Typed Name <b>Richard Lays</b>		Signature <b>Richard Lays</b>		Month Day Year <b>013017 915</b>	
18. Transporter 2 Acknowledgement of Receipt of Materials  <b>Mike Porter</b>		Signature <b>Mike Porter</b>		Month Day Year <b>013017 915</b>	
Printed/Typed Name <b>Mike Porter</b>		Signature <b>Mike Porter</b>		Month Day Year <b>013017 915</b>	
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.  <b>Mike Porter</b>		Signature <b>Mike Porter</b>		Month Day Year <b>013017 915</b>	

29455082800+3982 JB

DO NOT WRITE BELOW THIS LINE.

See Instructions on back of page 6.

915282  
Department of Toxic Substances Control  
Sacramento, California

92044377  
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. <b>CAD0981403108 2 3 1 7 1</b>	Manifest Document No. <b>2 3 1 7 1</b>	2. Page 1 <b>of 1</b>	Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address  <b>SHELL OIL COMPANY HAZARDOUS WASTE DEPT. P.O. BOX 4848</b>		A. State Manifest Document Number <b>92044377</b>					
4. Generator's Phone <b>(714) 520-3312 ANAHEIM, CA 92803</b>		B. State Generator's ID <b>IHYH013601010177</b>					
5. Transporter 1 Company Name <b>CROSBY &amp; OVERTON, INC.</b>		C. State Transporter's ID <b>137861</b>					
6. US EPA ID Number <b>CAD982524480</b>		D. Transporter's Phone <b>510-533-6036</b>					
7. Transporter 2 Company Name  <b>ERICKSON, INC.</b>		E. State Transporter's ID					
8. US EPA ID Number  <b>CAD09466392</b>		F. Transporter's Phone					
9. Designated Facility Name and Site Address  <b>ERICKSON, INC. 255 PARR BLVD. RICHMOND, CA 94801</b>		G. State Facility's ID <b>CAD09466392</b>					
10. US EPA ID Number  <b>CAD09466392</b>		H. Facility's Phone <b>510-233-1193</b>					
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)  <b>a. NON-RCRA HAZARDOUS WASTE SOLID,</b>		12. Containers No. <b>0 0 1</b>	Type <b>T P</b>	13. Total Quantity <b>0 0 5 5 0</b>	14. Unit Wt/Vol <b>P</b>	I. Waste Number <b>STATE P1</b>	
b.		<b>1 1</b>	<b>1</b>	<b>1 1 1</b>	<b>1</b>	EPA/Other	
c.		<b>1 1</b>	<b>1</b>	<b>1 1 1</b>	<b>1</b>	State	
d.		<b>1 1</b>	<b>1</b>	<b>1 1 1</b>	<b>1</b>	EPA/Other	
e.		<b>1 1</b>	<b>1</b>	<b>1 1 1</b>	<b>1</b>	State	
f.		<b>1 1</b>	<b>1</b>	<b>1 1 1</b>	<b>1</b>	EPA/Other	
g.		<b>1 1</b>	<b>1</b>	<b>1 1 1</b>	<b>1</b>	State	
h.		<b>1 1</b>	<b>1</b>	<b>1 1 1</b>	<b>1</b>	EPA/Other	
i.		<b>1 1</b>	<b>1</b>	<b>1 1 1</b>	<b>1</b>	State	
j.		<b>1 1</b>	<b>1</b>	<b>1 1 1</b>	<b>1</b>	EPA/Other	
k. Additional Descriptions for Materials Listed Above  <b>EMPTY WASTE OIL TANK AND ASSOCIATED PIPING</b>		L. Handling Codes for Wastes Listed Above  <b>O1</b>					
15. Special Handling Instructions and Additional Information  <b>AVOID CONTACT WITH EYES/SKIN 24 HOUR EMERGENCY PHONE NUMBER (800) 424-9300</b>		M. Facility Name  <b>FACILITY: SERVICE STATION 9750 GOLF LINKS ROAD OAKLAND, CA 94605</b>					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the 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 <b>Dale L. Lewis</b>		Signature <b>Dale L. Lewis</b>		ON BEHALF OF <b>SHELL OIL CO.</b>	Month <b>03</b>	Day <b>01</b>	Year <b>1995</b>
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <b>Richard Leger</b>		Signature <b>Richard Leger</b>			Month <b>03</b>	Day <b>01</b>	Year <b>1995</b>
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 <b>Karen Buffal</b>		Signature <b>Karen Buffal</b>		Month <b>03</b>	Day <b>01</b>	Year <b>1995</b>	

DO NOT WRITE BELOW THIS LINE.

DAY OR NIGHT  
TELEPHONE  
(510) 235-1393

# CERTIFICATE

## CERTIFIED SERVICES COMPANY

255 Parr Boulevard • Richmond, California 94801

NO. 19306

CUSTOMER  
SHELL - JOSE ME  
JOB NO.  
965282

FOR: ERICKSON, INC. TANK NO. 15422

LOCATION: RICHMOND DATE: 95/03/15 TIME: 08:23

TEST METHOD VTSUAL GASTECH/1314 SMPN LAST PRODUCT UO

This is to certify that I have personally determined that this tank is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE 550 GALLON TANK CONDITION SAFE FOR FIRE

REMARKS: OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1%  
ERICKSON, INC. HEREBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN  
CUT OPEN, PROCESSED, AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS  
WASTE FACILITY.  
ERICKSON, INC. HAS THE APPROPRIATE PERMITS FOR, AND HAS ACCEPTED THE TANK  
SHIPPED TO US FOR PROCESSING.

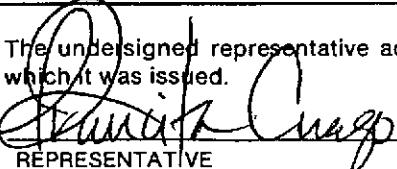
In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or if in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

### STANDARD SAFETY DESIGNATION

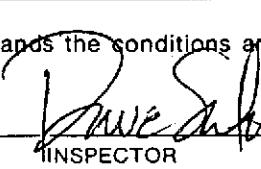
SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Inspector, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) In the judgment of the Inspector, the residues are not capable of producing a higher concentration than permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

  
REPRESENTATIVE

TITLE

  
INSPECTOR