



ENVIRONMENTAL  
PROTECTION

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~~3849~~  
8/13/97

August 7, 1997

Mr. Brian Oliva  
Alameda County Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

Re: **Dispenser Soil Sampling and Stockpile Disposal Report**  
Shell Service Station  
105 Fifth Street  
Oakland, California 94607  
WIC #204-5510-0402  
Cambria Project #240-472-1

Dear Mr. Oliva:

On behalf of Shell Oil Products Company (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this report presenting the results of the November 27 and December 4, 1996 soil sampling at the site referenced above. The sampling was conducted following the removal of five gasoline dispensers, two diesel fuel dispensers, and associated piping. Presented below are the site conditions, sampling activities, analytic results, and stockpile disposal activities.

### SITE CONDITIONS

The site is an active Shell service station located at the intersection of Fifth Street and Oak Street in Oakland, California. The station was undergoing renovations at the time of sampling. Armer/Norman & Associates of Walnut Creek, California (Armer/Norman) removed and replaced five gasoline dispensers, two diesel dispensers, and associated piping (Figure 1). In addition, inactive piping to a former diesel fuel dispenser location was found and removed.

### SAMPLE COLLECTION

On November 27, 1996, Mr. Paul Waite and Mr. Josh Bergstrom of Cambria collected soil samples beneath the seven dispenser locations prior to replacement and beneath the inactive diesel fuel piping. On December 4, 1996, Mr. Waite and Mr. Bergstrom collected samples from stockpiled soil under the direction of Mr. Brian Oliva of the Alameda County Department of Environmental Health (ACDEH). Cambria's standard field procedures for piping and dispenser removal sampling are presented as Attachment A.

### SAMPLE ANALYSES

The samples were analyzed by Sequoia Analytical of Redwood City, California (Sequoia) for total purgeable petroleum hydrocarbons as gasoline (TPPH) and total extractable petroleum hydrocarbons

CAMBRIA  
ENVIRONMENTAL  
TECHNOLOGY, INC.  
1144 65TH STREET,  
SUITE B  
OAKLAND,  
CA 94608  
PH: (510) 420-0700  
FAX: (510) 420-9170

Mr. Brian Oliva  
August 7, 1997

CAMBRIA

as diesel (TEPH) by modified EPA Method 8015 and for benzene, ethylbenzene, toluene and xylenes (BTEX) and methyl tert-butyl ether (MTBE) using EPA Method 8020. In accordance with landfill requirements, stockpiled soil samples were also analyzed for lead content using EPA Method 6010, DHS-Luft method, and the waste extraction test.

## ANALYTIC RESULTS

Samples D-3 and D-5, collected beneath the southwest dispenser area, contained the lowest petroleum hydrocarbon concentrations. Except for samples D-3 and D-5, the soil samples contained TPPH concentrations of more than 1,000 mg/kg. Individual BTEX constituent maximum concentrations were typically less than 100 mg/kg in the samples. MTBE concentrations in the samples were less than 20 mg/kg, except for sample D-1. TEPH was detected in the three samples analyzed at concentrations ranging from 11 to 14,000 mg/kg. Analytic results are presented in Attachment B and summarized in Table 1.

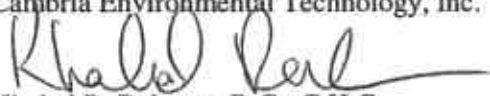
## STOCKPILE DISPOSAL

Stockpiled soil and piping were removed from the site on December 13, 1996. Manley and Sons Trucking transported the materials to the Laidlaw Environmental Services facility in Buttonwillow, California. Manifests are presented in Attachment C.

## CLOSING

We appreciate the opportunity to work with you on this project. Please call if you have any questions or comments.

Sincerely,  
Cambria Environmental Technology, Inc.

  
Khaled B. Rahman, R.G., C.H.G.  
Senior Geologist



Attachments: A - Standard Piping and Dispenser Removal Sampling Procedures  
B - Laboratory Analytic Reports for Soil  
C - Stockpile Disposal Manifests

cc: Brett Hovland, Shell Oil Products Company, P.O. Box 4023, Concord, CA 94524

F:\PROJECTSHELL\OAK105\Reports\Dispenser.WPD

5TH STREET



EXPLANATION	
● D-8	Sample Location

OAK STREET



0 10 20  
Scale (ft)



**CAMBRIA**  
Environmental Technology, Inc.

Shell Service Station  
WIC # 204-5510-0402  
105 Fifth Street  
Oakland, California

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Sample Location Map  
November 27, 1996

FIGURE  
**1**

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**Table 1. Soil Sample Analytic Data** - Shell Service Station, WIC# 204-5510-0402, 105 5th Street, Oakland, California

Sample ID	Date Collected	TPPH	TEPH	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
(Concentrations reported in milligrams per kilograms)								
D-1	11/27/96	2,500	1,400	26	21	6.7	33	49
D-2	11/27/96	3,200	---	<19	6.4	22	36	310
D-3	11/27/96	23	11	0.30	<0.025	0.064	0.15	1.6
D-4	11/27/96	1,900	---	<12	<2.5	3.6	12	85
D-5	11/27/96	1.0	---	<0.025	0.0064	<0.0050	<0.0050	<0.0050
D-6	11/27/96	1,900	---	<5.0	<1.0	1.6	8.7	75
D-7	11/27/96	1,600	14,000	<12	<2.5	11	21	65
D-8	11/27/96	6,500	---	<19	5.4	25	42	180
SP-1(A-D)	12/4/96	330	1,800	<2.5	<0.50	<0.50	2.1	7.3

**Abbreviations:**

TPPH = Total purgable petroleum hydrocarbons as gasoline by Modified EPA Method 8015.

TEPH = Total extractable petroleum hydrocarbons as diesel by Modified EPA Method 8015.

MTBE = Methyl tert-butyl ether by EPA Method 8020.

Benzene, ethylbenzene, toluene, xylenes by EPA method 8020.

Samples D-1 through D-8 taken at approximately 5 feet below grade.

**ATTACHMENT A**

Standard Piping and Dispenser  
Removal Sampling Procedures

## **STANDARD PIPING AND DISPENSER REMOVAL SAMPLING PROCEDURES**

Cambria Environmental Technology, Inc. (Cambria) has developed standard operating procedures for collecting soil samples during petroleum dispenser and piping removal. These procedures ensure that the samples are collected, handled, and documented in compliance with California Administration Code Title 23: Waters; Chapter 3: Water Resources Control Board; Subchapter 16: Underground Storage Tank Regulations (Title 23). Cambria's sampling procedures are based on guidelines contained in the California State Regional Water Quality Control Board Tri-Regional Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites dated August 10, 1990.

### **Piping and Dispenser Removal Sampling**

The objective of sample collection during routine dispenser and piping removals is to determine whether hydrocarbons or other stored chemicals have leaked to the subsurface. We collect one soil sample from the native soil beneath each dispenser unit, at each piping elbow, and at every 20 ft of product piping, as applicable.

The soil samples are collected in steam cleaned brass or steel tubes from either a driven split-spoon type sampler or the bucket of a backhoe. When a backhoe is used, approximately three inches of soil are scraped from the surface and the tube is driven into the exposed soil.

Upon removal from the split-spoon sampler or the backhoe, the samples are trimmed flush, capped with Teflon sheets and plastic end caps, labeled, logged and refrigerated for delivery under chain of custody to a State certified analytic laboratory.

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**ATTACHMENT B**

Laboratory Analytic Reports for Soil



# Sequoia Analytical

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

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

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

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

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Paul Waite

Project: Shell 204-551-0502 105 5th St

Enclosed are the results from samples received at Sequoia Analytical on December 3, 1996.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9612066 -01	SOLID, D-1	11/27/96	TPGBMS Purgeable TPH/BTEX
9612066 -01	SOLID, D-1	11/27/96	TPHD_S Extractable TPH
9612066 -02	SOLID, D-2	11/27/96	TPGBMS Purgeable TPH/BTEX
9612066 -03	SOLID, D-3	11/27/96	TPGBMS Purgeable TPH/BTEX
9612066 -03	SOLID, D-3	11/27/96	TPHD_S Extractable TPH
9612066 -04	SOLID, D-4	11/27/96	TPGBMS Purgeable TPH/BTEX
9612066 -05	SOLID, D-5	11/27/96	TPGBMS Purgeable TPH/BTEX
9612066 -06	SOLID, D-6	11/27/96	TPGBMS Purgeable TPH/BTEX
9612066 -07	SOLID, D-7	11/27/96	TPGBMS Purgeable TPH/BTEX
9612066 -07	SOLID, D-7	11/27/96	TPHD_S Extractable TPH
9612066 -08	SOLID, D-8	11/27/96	TPGBMS 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**

Kevin Follett  
Project Manager







Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 204-551-0502 105 5th St Sample Descript: D-1 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9612066-01	Sampled: 11/27/96 Received: 12/03/96 Extracted: 12/04/96 Analyzed: 12/04/96 Reported: 12/17/96
Attention: Paul Waite		

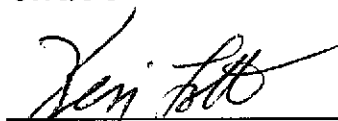
QC Batch Number: GC120496BTEXEXA  
Instrument ID: GCHP06

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	750	2500
Methyl t-Butyl Ether	19	26
Benzene	3.8	21
Toluene	3.8	6.7
Ethyl Benzene	3.8	33
Xylenes (Total)	3.8	49
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	111

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
\_\_\_\_\_  
Kevin Follett  
Project Manager





Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 204-551-0502 105 5th St Sample Descript: D-1 Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9612066-01	Sampled: 11/27/96 Received: 12/03/96 Extracted: 12/10/96 Analyzed: 12/12/96 Reported: 12/17/96
Attention: Paul Waite		

GC Batch Number: GC1210960HBPEXA  
Instrument ID: GCHP19A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	40	1400
Chromatogram Pattern: Weathered Diesel		C9-C24
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50 150	Q

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Kevin Follett  
Project Manager





Cambria 1144 65th St. Suite C Oakland, CA 94608 Attention: Paul Waite	Client Proj. ID: Shell 204-551-0502 105 5th St Sample Descript: D-2 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9612066-02	Sampled: 11/27/96 Received: 12/03/96 Extracted: 12/04/96 Analyzed: 12/04/96 Reported: 12/17/96
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QC Batch Number: GC120496BTEXEXA  
Instrument ID: GCHP06

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

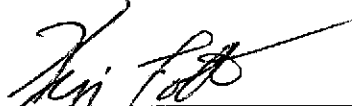
Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	750	3200
Methyl t-Butyl Ether	19	N.D.
Benzene	3.8	6.4
Toluene	3.8	22
Ethyl Benzene	3.8	36
Xylenes (Total)	3.8	210
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	93

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
 \_\_\_\_\_  
 Kevin Follett  
 Project Manager



Cambria 1144 65th St. Sulte C Oakland, CA 94608	Client Proj. ID: Shell 204-551-0502 105 5th St Sample Descript: D-3 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9612066-03	Sampled: 11/27/96 Received: 12/03/96 Extracted: 12/04/96 Analyzed: 12/05/96 Reported: 12/17/96
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Attention: Paul Waite

JC Batch Number: GC120496BTEXEXA  
Instrument ID: GCHP07

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	5.0	23
Methyl t-Butyl Ether	0.12	0.30
Benzene	0.025	N.D.
Toluene	0.025	0.064
Ethyl Benzene	0.025	0.15
Xylenes (Total)	0.025	1.6
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70	130
		108

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Kevin Follett  
Project Manager





■ Cambria	Client Proj. ID: Shell 204-551-0502 105 5th St	Sampled: 11/27/96
■ 1144 65th St. Suite C	Sample Descript: D-3	Received: 12/03/96
■ Oakland, CA 94608	Matrix: SOLID	Extracted: 12/10/96
	Analysis Method: EPA 8015 Mod	Analyzed: 12/12/96
■ Attention: Paul Waite	Lab Number: 9612066-03	Reported: 12/17/96

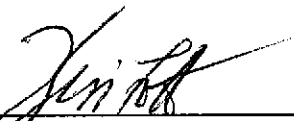
QC Batch Number: GC1210960HBPEXA  
Instrument ID: GCHP19A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	11
Chromatogram Pattern:		
Unidentified HC		C9-C13
Weathered Diesel		C9-C24
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	82

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

**SEQUOIA ANALYTICAL - ELAP #1210**



Kevin Follett  
Project Manager





Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 204-551-0502 105 5th St Sample Descript: D-4 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9612066-04	Sampled: 11/27/96 Received: 12/03/96 Extracted: 12/04/96 Analyzed: 12/04/96 Reported: 12/17/96
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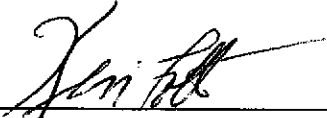
QC Batch Number: GC120496BTEXEXA  
Instrument ID: GCHP06

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	500	1900
Methyl t-Butyl Ether	12	N.D.
Benzene	2.5	N.D.
Toluene	2.5	3.6
Ethyl Benzene	2.5	12
Xylenes (Total)	2.5	85
Chromatogram Pattern: Weathered Gas		C8-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	87

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Kevin Follett  
Project Manager





Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 204-551-0502 105 5th St Sample Descript: D-5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9612066-05	Sampled: 11/27/96 Received: 12/03/96 Extracted: 12/04/96 Analyzed: 12/05/96 Reported: 12/17/96
Attention: Paul Waite		

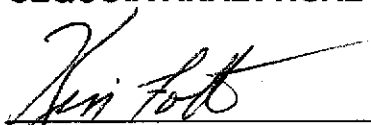
QC Batch Number: GC120496BTEXEXA  
 Instrument ID: GCHP07

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
<b>Benzene</b>	<b>0.0050</b>	<b>0.0064</b>
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	121

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

**SEQUOIA ANALYTICAL - ELAP #1210**



Kevin Follett  
 Project Manager





Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Client Proj. ID: Shell 204-551-0502 105 5th St  
Sample Descript: D-6  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9612066-06

Sampled: 11/27/96  
Received: 12/03/96  
Extracted: 12/04/96  
Analyzed: 12/04/96  
Reported: 12/17/96

Attention: Paul Waite

GC Batch Number: GC120496BTEXEXA  
Instrument ID: GCHP06

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	200	1900
Methyl t-Butyl Ether	5.0	N.D.
Benzene	1.0	N.D.
Toluene	1.0	1.6
Ethyl Benzene	1.0	8.7
Xylenes (Total)	1.0	75
Chromatogram Pattern: Weathered Gas		C8-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	85

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Kevin Follett  
Project Manager







Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 204-551-0502 105 5th St Sample Descript: D-7 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9612066-07	Sampled: 11/27/96 Received: 12/03/96 Extracted: 12/04/96 Analyzed: 12/04/96 Reported: 12/17/96
Attention: Paul Waite		

QC Batch Number: GC120496BTEXEXA  
Instrument ID: GCHP06

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
<b>TPPH as Gas</b>	<b>500</b>	<b>1600</b>
Methyl t-Butyl Ether	12	N.D.
Benzene	2.5	N.D.
Toluene	2.5	11
Ethyl Benzene	2.5	21
Xylenes (Total)	2.5	65
Chromatogram Pattern: Weathered Gas		C8-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70                      130	89

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Kevin Follett  
Project Manager





Cambria  
1144 65th St. Suite C  
Oakland, CA 94608

Client Proj. ID: Shell 204-551-0502 105 5th St  
Sample Descript: D-7  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9612066-07

Sampled: 11/27/96  
Received: 12/03/96  
Extracted: 12/10/96  
Analyzed: 12/12/96  
Reported: 12/17/96

Attention: Paul Waite

QC Batch Number: GC1210960HBPEXA  
Instrument ID: GCHP5B

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern: Unidentified HC	10	14000 C9-C24
<b>Surrogates</b> n-Pentacosane (C25)	<b>Control Limits %</b> 50                      150	<b>% Recovery</b> 127

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Kevin Follett  
Project Manager





Cambria	Client Proj. ID: Shell 204-551-0502 105 5th St	Sampled: 11/27/96
1144 65th St. Suite C	Sample Descript: D-8	Received: 12/03/96
Oakland, CA 94608	Matrix: SOLID	Extracted: 12/04/96
Attention: Paul Waite	Analysis Method: 8015Mod/8020	Analyzed: 12/04/96
	Lab Number: 9612066-08	Reported: 12/17/96

QC Batch Number: GC120496BTEXEXA  
Instrument ID: GCHP06

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

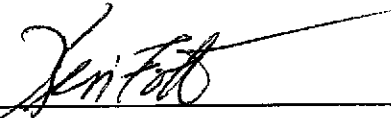
Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	750	3500
Methyl t-Butyl Ether	19	N.D.
Benzene	3.8	5.4
Toluene	3.8	25
Ethyl Benzene	3.8	42
Xylenes (Total)	3.8	180
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70                      130	72

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
\_\_\_\_\_  
Kevin Follett  
Project Manager





Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Paul Waite

Client Project ID: Shell 204-551-0502 105 5th St.  
Matrix: Solid

Work Order #: 9612066 01, 03, 07

Reported: Dec 20, 1996

**QUALITY CONTROL DATA REPORT**

**Analyte:** Diesel  
**QC Batch#:** GC1210960HBPEXA  
**Analy. Method:** EPA 8015M  
**Prep. Method:** EPA 3550

**Analyst:** N. Herrera  
**MS/MSD #:** 961212712  
**Sample Conc.:** 2800  
**Prepared Date:** 12/10/96  
**Analyzed Date:** 12/12/96  
**Instrument I.D.#:** GCHP5B  
**Conc. Spiked:** 25mg/kg

**Result:** 2200  
**MS % Recovery:** -2400

**Dup. Result:** 2100  
**MSD % Recov.:** -2800

**RPD:** 4.7  
**RPD Limit:** 0-50

**LCS #:** BLK121096  
**Prepared Date:** 12/10/96  
**Analyzed Date:** 12/12/96  
**Instrument I.D.#:** GCHP5B  
**Conc. Spiked:** 25 mg/kg  
**LCS Result:** 23  
**LCS % Recov.:** 92

**MS/MSD** 50-150  
**LCS** 60-140  
**Control Limits**

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

**SEQUOIA ANALYTICAL**

*Kevin Follett*  
Kevin Follett  
Project Manager

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

9612066.CCC <1>





# Sequoia Analytical

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

Cambria Environmental Tech. Client Project ID: Shell 204-551-0502 105 5th St.  
 1144 65th St., Ste. C Matrix: Solid  
 Oakland, CA 94608  
 Attention: Paul Waite Work Order #: 9612066 01-08 Reported: Dec 20, 1996

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC120496BTEXEXA	GC120496BTEXEXA	GC120496BTEXEXA	GC120496BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	9611H3815	9611H3815	9611H3815	9611H3815
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/4/96	12/4/96	12/4/96	12/4/96
Analyzed Date:	12/4/96	12/4/96	12/4/96	12/4/96
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.16	0.17	0.17	0.52
MS % Recovery:	80	85	85	87
Dup. Result:	0.17	0.17	0.17	0.52
MSD % Recov.:	85	85	85	87
RPD:	6.1	0.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK120496	BLK120496	BLK120496	BLK120496
Prepared Date:	12/4/96	12/4/96	12/4/96	12/4/96
Analyzed Date:	12/4/96	12/4/96	12/4/96	12/4/96
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
LCS Result:	0.17	0.18	0.17	0.54
LCS % Recov.:	85	90	85	90

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

**Please Note:**

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

**SEQUOIA ANALYTICAL**

*Kevin Follett*  
 Kevin Follett  
 Project Manager

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

9612066.CCC <2>



Site Address: 105 - 5th St  
WIC#: 204-5510-0402  
Shell Engineer: Brett Howland  
Phone No.:  
Fax #:  
Consultant Name & Address: Cambria Env. Tech Inc.  
Consultant Contact: Paul Waite  
Phone No.: 510-420-9185  
Fax #: 4120-912  
Comments:

**Analysis Required**

LAB: Sepco 4

CHECK ONE (1) BOX ONLY	CI/DI	TURN AROUND TIME
G.W. Monitoring <input type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input checked="" type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	16 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	NOTE: Notify Lab as soon as possible of 24/48 hrs. IAT.
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

Sampled by: [Signature]  
Printed Name: Paul Waite & John Bergstrom

Sample ID	Date	Time	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	
D-1		950	X			1	X					X X					
D-2		1001				1						X X					
D-3		1030				1	X					X X					
D-4		1036				1						X X					
D-5		1045				1						X X					
D-6		1120				1						X X					
D-7		1127				1	X					X X					
D-8		1130				1						X X					

UST AGENCY: Alameda

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
	Diesel
	Diesel
	Diesel

Relinquished By (signature): [Signature]	Printed Name: Paul Waite	Date: 11/27 Time: 1200	Received (signature): [Signature]	Printed Name: Chuck Headlee	Date: 11/27/96 Time: 1200
Relinquished By (signature): [Signature]	Printed Name: Chuck Headlee	Date: 12/3/96 Time: 1035	Received (signature): [Signature]	Printed Name: JOHN HOWE	Date: 12/3/96 Time: 1035
Relinquished By (signature): [Signature]	Printed Name: JOHN HOWE	Date: 12/3/96 Time: 1210	Received (signature): [Signature]	Printed Name: R. Herling	Date: 12/3/96 Time: 1210

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



Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Paul Waite

Client Proj. ID: Shell 204-551-0502 105 5th St  
Lab Proj. ID: 9612066

Received: 12/03/96  
Reported: 12/17/96

### LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 16 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

**SEQUOIA ANALYTICAL**

Kevin Follett  
Project Manager



**Sequoia  
Analytical**

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

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

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

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

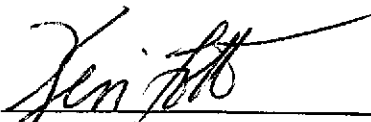
Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 204-5510-0402 Lab Proj. ID: 9612232	Sampled: 12/04/96 Received: 12/05/96 Analyzed: see below Reported: 12/09/96
Attention: Paul Waite		

**LABORATORY ANALYSIS**

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9612232-01 Sample Desc: SOLID,SP-1(A-D) Comp				
Lead	mg/Kg	12/07/96	10	380

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
Kevin Follett  
Project Manager







Cambria 1144 65th St. Suite C Oakland, CA 94608 Attention: Paul Waite	Client Proj. ID: Shell 204-5510-0402 Sample Descript: SP-1(A-D) Comp Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9612232-01	Sampled: 12/04/96 Received: 12/05/96 Extracted: 12/05/96 Analyzed: 12/09/96 Reported: 12/09/96
--	---	--

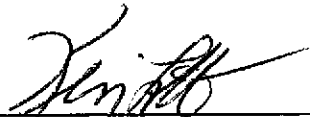
QC Batch Number: GC120596BTEXEXB  
 Instrument ID: GCHP06

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	100	330
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	2.1
Xylenes (Total)	0.50	7.3
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	82

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
 \_\_\_\_\_  
 Kevin Follett  
 Project Manager



Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 204-5510-0402 Sample Descript: SP-1(A-D) Comp Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9612232-01	Sampled: 12/04/96 Received: 12/05/96 Extracted: 12/05/96 Analyzed: 12/06/96 Reported: 12/09/96
---	---	--

QC Batch Number: GC1205960HBPEXA  
Instrument ID: GCHP19B

### Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	40	1800 C9-C24
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	Q

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Kevin Follett  
Project Manager





# Sequoia Analytical

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

Cambria Environmental Tech. Client Project ID: Shell 204-5510-0402  
 1144 65th St., Ste. C Matrix: Solid  
 Oakland, CA 94608  
 Attention: Paul Waite Work Order #: 9612232 01 Reported: Dec 11, 1996

## QUALITY CONTROL DATA REPORT

**Analyte:** Diesel  
**QC Batch#:** GC1205960HBPEXA  
**Analy. Method:** EPA 8015M  
**Prep. Method:** EPA 3550

**Analyst:** J. Minkel  
**MS/MSD #:** 961219602  
**Sample Conc.:** 61  
**Prepared Date:** 12/5/96  
**Analyzed Date:** 12/5/96  
**Instrument I.D.#:** GCHP5A  
**Conc. Spiked:** 25 mg/kg

**Result:** 82  
**MS % Recovery:** 84

**Dup. Result:** 50  
**MSD % Recov.:** -44

**RPD:** 49  
**RPD Limit:** 0-50

**LCS #:** BLK120596  
**Prepared Date:** 12/5/96  
**Analyzed Date:** 12/5/96  
**Instrument I.D.#:** GCHP5A  
**Conc. Spiked:** 25 mg/kg

**LCS Result:** 28  
**LCS % Recov.:** 112

**MS/MSD** 50-150  
**LCS** 60-140  
**Control Limits**

**Please Note:**

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

**SEQUOIA ANALYTICAL**

*Kevin Follett*  
 Kevin Follett  
 Project Manager

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

9612232.CCC <1>



Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Paul Waite

Client Project ID: Shell 204-5510-0402  
Matrix: Solid

Work Order #: 9612232 01

Reported: Dec 11, 1996

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC120596BTEXEXB	GC120596BTEXEXB	GC120596BTEXEXB	GC120596BTEXEXB
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Heider	J. Heider	J. Heider	J. Heider
MS/MSD #:	9611H3805	9611H3805	9611H3805	9611H3805
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/5/96	12/5/96	12/5/96	12/5/96
Analyzed Date:	12/5/96	12/5/96	12/5/96	12/5/96
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.17	0.17	0.17	0.52
MS % Recovery:	85	85	85	87
Dup. Result:	0.17	0.17	0.17	0.52
MSD % Recov.:	85	85	85	87
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK120596	BLK120596	BLK120596	BLK120596
Prepared Date:	12/5/96	12/5/96	12/5/96	12/5/96
Analyzed Date:	12/5/96	12/5/96	12/5/96	12/5/96
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
LCS Result:	0.17	0.17	0.17	0.52
LCS % Recov.:	85	85	85	87

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

**Please Note:**

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

**SEQUOIA ANALYTICAL**

  
Kevin Follett  
Project Manager

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

9612232.CCC <2>





Cambria Environmental Tech. Client Project ID: Shell 204-5510-0402  
 1144 65th St., Ste. C Matrix: Solid  
 Oakland, CA 94608  
 Attention: Paul Waite Work Order #: 9612232 01 Reported: Dec 11, 1996

**QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1206966010MDE	ME1206966010MDE	ME1206966010MDE	ME1206966010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050

Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	961212701	961212701	961212701	961212701
Sample Conc.:	N.D.	N.D.	96	150
Prepared Date:	12/6/96	12/6/96	12/6/96	12/6/96
Analyzed Date:	12/7/96	12/7/96	12/7/96	12/7/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
Result:	93	94	180	230
MS % Recovery:	93	94	84	80
Dup. Result:	91	92	190	230
MSD % Recov.:	91	92	94	80
RPD:	2.2	2.2	5.4	0.0
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	BLK120696	BLK120696	BLK120696	BLK120696
Prepared Date:	12/6/96	12/6/96	12/6/96	12/6/96
Analyzed Date:	12/7/96	12/7/96	12/7/96	12/7/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg
LCS Result:	100	100	100	99
LCS % Recov.:	100	100	100	99

MS/MSD LCS Control Limits	80-120	80-120	80-120	80-120
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**Please Note:**  
 The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

**SEQUOIA ANALYTICAL**

*Kevin Follett*  
 Kevin Follett  
 Project Manager



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

**CHAIN OF CUSTODY RECORD**

Date: 12/4/96  
Page 1 of 1

Site Address: 105 - 5<sup>th</sup> St

WIC#: 204-5510-0402

Shell Engineer: R. Jeff Grandberry  
Phone No.: 675-6168  
Fax #: 675-6170

Consultant Name & Address: Cambria Environmental Tech Inc.

Consultant Contact: Paul Waite  
Phone No.: 420-4185  
Fax #: 420-4170

Comments:

Sampled by: [Signature]

Printed Name: Paul Waite/Josh Bergstrom

**Analysis Required**

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

LAB: Sequoia

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

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

UST AGENCY: Alameda

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 Gas and Diesel	Total Lead	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
SP-1A	12/4					1			X			X	X						Composite 4 samples for one analysis	Dec 15
SP-1B						1		X			X	X								
SP-1C						1		X			X	X								
SP-1D						1		X			X	X								

Relinquished By (signature): [Signature]	Printed Name:	Date: 12/5/96	Received (signature): [Signature]	Printed Name:	Date: 12/5/96
Relinquished By (signature): [Signature]	Printed Name: JOHN HOWE	Date: 12/5/96	Received (signature): [Signature]	Printed Name:	Date:
Relinquished By (signature): [Signature]	Printed Name:	Date:	Received (signature): [Signature]	Printed Name: J. Cardenas	Date: 12/5/96

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



Sequoia  
Analytical

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

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

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

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

Cambridge  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Paul Waite

Client Proj. ID: Shell 204-5510-0402

Received: 12/05/96

Lab Proj. ID: 9612232

Reported: 12/09/96

### LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 8 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Kevin Follett  
Project Manager

FAXED





# Sequoia Analytical

680 Chesapeake Drive  
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FAX (510) 988-9673  
FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Paul Waite

Project: Shell 204-5510-0402

Enclosed are the results from samples received at Sequoia Analytical on December 10, 1996.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9612484 -01	SOLID, SP-1D(A-D) Comp	12/04/96	Lead: STLC Extraction
9612484 -01	SOLID, SP-1D(A-D) Comp	12/04/96	Organic Lead

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**

Kevin Follett  
Project Manager







Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 204-5510-0402  Lab Proj. ID: 9612484	Sampled: 12/04/96 Received: 12/10/96 Analyzed: see below  Reported: 12/13/96
Attention: Paul Waite		

**LABORATORY ANALYSIS**

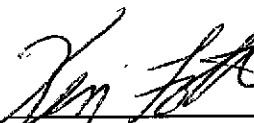
Analyte	Units	Date Analyzed	Detection Limit	Sample Results
---------	-------	---------------	-----------------	----------------

Lab No: 9612484-01  
Sample Desc : **SOLID,SP-1D(A-D) Comp**

<b>Lead: STLC Extraction</b>	mg/L	12/12/96	0.50	8.3
Organic Lead	mg/Kg	12/12/96	5.0	N.D.

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

**SEQUOIA ANALYTICAL - ELAP #1210**

  
\_\_\_\_\_  
Kevin Follett  
Project Manager



# Sequoia Analytical

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

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

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

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

Cambria Environmental Tech.  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Paul Waite

Client Project ID: Shell 204-5510-0402  
Matrix: Liquid

Work Order #: 9612484 01

Reported: Dec 17, 1996

## QUALITY CONTROL DATA REPORT - STLC

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1212966010MDA	ME1212966010MDA	ME1212966010MDA	ME1212966010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010

Analyst:	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser
MS/MSD #:	961245302	961245302	961245302	961245302
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/12/96	12/12/96	12/12/96	12/12/96
Analyzed Date:	12/12/96	12/12/96	12/12/96	12/12/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	0.98	0.96	0.97	0.96
MS % Recovery:	98	96	97	96
Dup. Result:	1.0	0.99	1.0	0.99
MSD % Recov.:	100	99	100	99
RPD:	2.0	3.1	3.0	3.1
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	BLK121296	BLK121296	BLK121296	BLK121296
Prepared Date:	12/12/96	12/12/96	12/12/96	12/12/96
Analyzed Date:	12/12/96	12/12/96	12/12/96	12/12/96
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.0	1.0	1.0	1.0
LCS % Recov.:	100	100	100	100

MS/MSD LCS Control Limits	80-120	80-120	80-120	80-120
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**Please Note:**

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

SEQUOIA ANALYTICAL

*Kevin Follett*  
Kevin Follett  
Project Manager

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

9612484.CCC <1>





**Cambria Environmental Tech.**  
1144 65th St., Ste. C  
Oakland, CA 94608  
Attention: Paul Walte

**Client Project ID:** Shell 204-5510-0402  
**Matrix:** Solid

**Work Order #:** 9612484 01

**Reported:** Dec 17, 1996

**QUALITY CONTROL DATA REPORT**

**Analyte:** Organic Lead

**QC Batch#:** ME1212967000MDA

**Analy. Method:** LUFT

**Prep. Method:** LUFT

**Analyst:** J. Hills

**MS/MSD #:** 961249601

**Sample Conc.:** N.D.

**Prepared Date:** 12/12/96

**Analyzed Date:** 12/12/96

**Instrument I.D.#:** MV2

**Conc. Spiked:** 8.0 mg/Kg

**Result:** 7.1

**MS % Recovery:** 8.8

**Dup. Result:** 5.6

**MSD % Recov.:** 7.0

**RPD:** 5.9

**RPD Limit:** 0-30

**LCS #:** BLK121296

**Prepared Date:** 12/12/96

**Analyzed Date:** 12/12/96

**Instrument I.D.#:** MV2

**Conc. Spiked:** 5.0 mg/Kg

**LCS Result:** 5.0

**LCS % Recov.:** 199

**MS/MSD** 75-125

**LCS** 80-120

**Control Limits**

**Please Note:**

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

**SEQUOIA ANALYTICAL**

Kevin Follett  
Project Manager

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

9612484.CCC <2>

# Sequoia Analytical Relog Sheet

Reason for Relog:  Client Request  Login Correction  Other: \_\_\_\_\_

CLIENT: Cambria DATE RELOG: 12-10-96  
PROJECT ID: Shell 204-5510-0402 DATE DUE: 12-13-96  
PROJ. MANAGER: Follett DATE SAMPLED: 12-4-96  
MATRIX: Liquid  Solid  Other

## PREVIOUSLY LOGGED IN SAMPLES

TAT Change status to: 10Day 7Day 5Day  3Day 2Day 1Day ASAP  
Change status as of: Date: \_\_\_\_\_ Time: \_\_\_\_\_

CHANGE ANALYSIS  RERUN  
Cancel Analysis   
Add to this work order   
Create new work order   
Redigest & Reanalyze   
Re-extract & Reanalyze   
Reanalyze Only

New work order #: 9612484 Assign new sample #:

Sample Number	Analysis	
<u>9612232-01 (AD)</u>	<u>STLC Lead &amp; Organic Lead</u>	<u>12 10 3 0</u>

**72 HOUR RUSH**

## SAMPLES ON HOLD

Add analyses to existing work order  New work order #:   
Create a new work order  TAT \_\_\_\_\_

Sample Description	Analyses

Client Authorization (person/date/time): Paul White 12-10-96 @ 1030  
Project Manager: Kim Follett