



CAMBRIA

ENVIRONMENTAL  
PROTECTION

October 8, 1997

97 OCT 16 PM 4: 07

Eva Chu  
Alameda County Department of  
Environmental Health  
Hazardous Materials Division  
1131 Harbor Bay Parkway, 2nd Floor  
Alameda, California 94502-6577

Re: **Pipeline and Dispenser Soil Sampling Report**  
Shell Service Station  
1601 Webster Street  
Alameda, California  
WIC #204-0072-0403  
Cambria Project #240-467-1

Dear Ms. Chu:

On behalf of Shell Oil Products Company (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this report presenting the results of the August 27, 1997 soil sampling at the site referenced above. Sampling was conducted following the removal of three gasoline dispensers during upgrade activities. Presented below are the site conditions, sampling activities, and analytic results.

## SITE CONDITIONS

The site is located at the intersection of Webster Street and Lincoln Avenue in Alameda, California. The four monitoring wells located on site have been included in a monitoring program since April 1990.

This Shell service station has recently been remodeled by Paradiso Mechanical of San Leandro, California (Paradiso). Paradiso removed three gasoline dispensers for replacement, one from each of three pump islands (Figure 1). One of the three gasoline dispensers was located above the tank pit, portions of which were excavated for replacement of selected sections of piping.

## SAMPLING ACTIVITIES AND SAMPLE ANALYSIS

### *Cambria Personnel Present:*

Maureen Feineman

Staff Geologist

Joshua Bergstrom

Staff Geologist

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

**Contractor:** Paradiso Mechanical

**Sample Date:** August 27, 1997.

**Dispenser Sampling:** Soil samples were collected from native soil beneath dispensers D-1 and D-2 (Figure 1). No sample was collected from beneath the third dispenser, D-3, because it was located above the tank pit and native soil was inaccessible. Samples were taken from approximately 5 feet below grade. Due to field indicators of hydrocarbons, one additional sample was collected from beneath dispenser D-2 at approximately 10 feet below grade. Cambria's standard procedures for dispenser and piping sampling are presented as Attachment A.

**Piping Sampling:** Soil samples were collected from beneath the exposed piping associated with dispensers D-1 and D-2. Dispenser product pipes and ventilation pipes were identified on opposite sides of the pump islands (Figure 1). The remaining piping was either located within the tank pit or obstructed by concrete and/or asphalt.

**Sample Analyses:** Sequoia Analytical of Redwood City, California analyzed selected samples for Total Purgeable Petroleum Hydrocarbons (TPPH) by modified EPA Method 8015, and benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tert-butyl ether (MTBE) by EPA Method 8020.

## ANALYTIC RESULTS

The highest hydrocarbon concentrations in soil were found in sample D-2 at a depth of five feet below grade, with 11,000 milligrams per kilogram (mg/kg) TPPH, 6.3 mg/kg benzene, 7.8 mg/kg toluene, 96 mg/kg ethylbenzene, and 440 mg/kg total xylenes. TPPH concentrations for the same location at a depth of ten feet below grade decreased to 760 mg/kg. No MTBE was detected in the analyzed samples. Analytic results are summarized in Table 1. The laboratory analytic report is presented as Attachment B.

detection limit was 25ppm

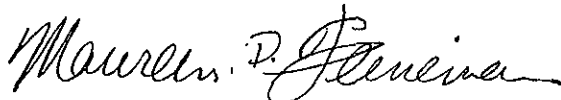
Eva Chu  
October 8, 1997

CAMBRIA

**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.



Maureen D. Feineman  
Staff Geologist



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

cc: Ms. Lisa Maglines, Shell Oil Products Company, P.O. Box 8080, Martinez, CA 94553  
Mr. A.E. (Alex) Perez, Shell Oil Products Company, P.O. Box 8080, Martinez, CA 94553

F:\PROJECTS\HELLA\LA160\REPORTS\Dispenser Sampling Report.WPD

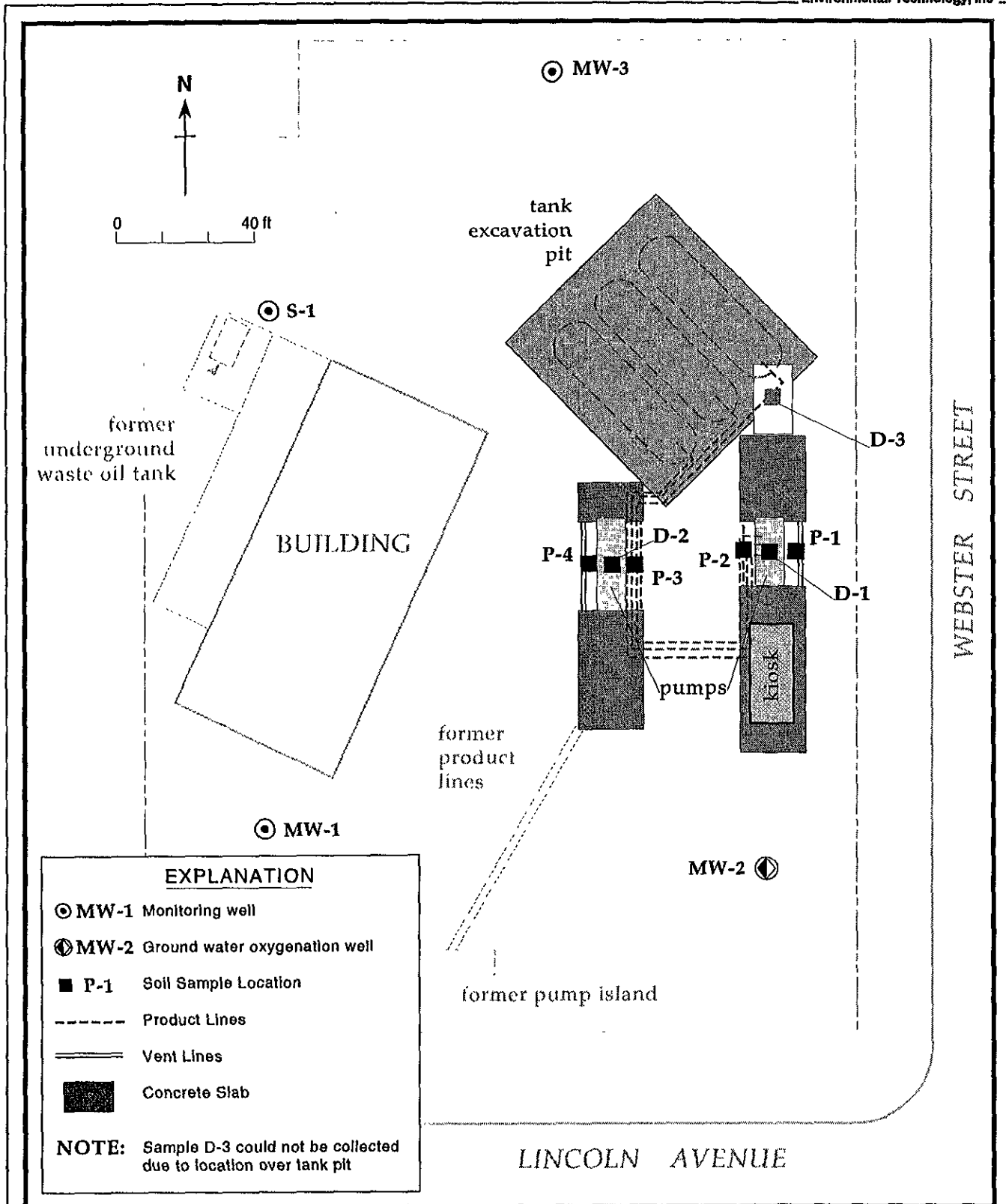


Figure 1. Dispenser Sample Locations - August 27, 1997 - Shell Service Station WIC #204-0072-0403, 1601 Webster Street, Alameda, California

# CAMBRIA

**Table 1. Dispenser and Pipe Trench Sample Analytic Data - Shell Service Station - WIC# 204-0072-0403, 1601 Webster Street, Alameda, California**

Sample ID, Depth	TPPH	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
(Concentrations reported in milligrams per kilogram)						
August 27, 1997 Samples:						
D-1, 5'	10,000	<25	<5.0	12	81	700
D-2, 5'	11,000	<25	6.3	7.8	96	440
D-2, 10' <i>below DTW</i>	760	<6.2	2.4	4.1	10	66
P-1, 5'	140	<1.2	<0.25	0.91	0.82	5.9
P-2, 5'	3,600	<6.2	1.9	1.9	36	220
P-3, 5'	1,700	<6.2	<1.2	<1.2	4.0	23
P-4, 5'	230	<1.2	<0.25	<0.25	1.2	3.4

**Abbreviations and Notes:**

TPPH = Total purgable petroleum hydrocarbons as gasoline by modified EPA method 8015.

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

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

**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.

**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

(650) 364-9600  
(510) 988-9600  
(916) 921-9600

FAX (650) 364-9233  
FAX (510) 988-9673  
FAX (916) 921-0100

Cambria  
1144 65th St. Suite C  
Oakland, CA 94608  
Attention: Maureen Feineman

Project: Shell 1601 Webster, Alameda

Enclosed are the results from samples received at Sequoia Analytical on August 27, 1997.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9708F47 -01	SOLID, D-1, 5'	08/27/97	TPGBMS Purgeable TPH/BTEX
9708F47 -02	SOLID, D-2, 5'	08/27/97	TPGBMS Purgeable TPH/BTEX
9708F47 -03	SOLID, P-1, 5'	08/27/97	TPGBMS Purgeable TPH/BTEX
9708F47 -04	SOLID, P-2, 5'	08/27/97	TPGBMS Purgeable TPH/BTEX
9708F47 -05	SOLID, P-3, 5'	08/27/97	TPGBMS Purgeable TPH/BTEX
9708F47 -06	SOLID, P-4, 5'	08/27/97	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**

Project Manager





Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 1601 Webster, Alameda Sample Descript: D-1, 5' Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9708F47-01	Sampled: 08/27/97 Received: 08/27/97 Extracted: 09/04/97 Analyzed: 09/05/97 Reported: 09/11/97
Attention: Maureen Feineman		

QC Batch Number: GC090397BTEXEXB  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1000	10000
Methyl t-Butyl Ether	25	N.D.
Benzene	5.0	N.D.
Toluene	5.0	12
Ethyl Benzene	5.0	81
Xylenes (Total)	5.0	700
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Richard Herling  
Project Manager





Cambria	Client Proj. ID: Shell 1601 Webster, Alameda	Sampled: 08/27/97
1144 65th St. Suite C	Sample Descript: D-2, 5'	Received: 08/27/97
Oakland, CA 94608	Matrix: SOLID	Extracted: 09/04/97
Attention: Maureen Feineman	Analysis Method: 8015Mod/8020	Analyzed: 09/05/97
	Lab Number: 9708F47-02	Reported: 09/11/97

QC Batch Number: GC090397BTEXEXB  
Instrument ID: GCHP18

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1000	11000
Methyl t-Butyl Ether	25	N.D.
Benzene	5.0	6.3
Toluene	5.0	7.8
Ethyl Benzene	5.0	96
Xylenes (Total)	5.0	440
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	84
4-Bromofluorobenzene	60 140	Q

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Richard Herling  
Project Manager





Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 1601 Webster, Alameda Sample Descript: P-1, 5' Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9708F47-03	Sampled: 08/27/97 Received: 08/27/97 Extracted: 09/04/97 Analyzed: 09/04/97 Reported: 09/11/97
Attention: Maureen Feineman		

QC Batch Number: GC090397BTEXEXB  
Instrument ID: GCHP22

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	50	140
Methyl t-Butyl Ether	1.2	N.D.
Benzene	0.25	N.D.
Toluene	0.25	0.91
Ethyl Benzene	0.25	0.82
Xylenes (Total)	0.25	5.9
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	110
4-Bromofluorobenzene	60 140	200 Q

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Richard Herling  
Project Manager





Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 1601 Webster, Alameda Sample Descript: P-2, 5' Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9708F47-04	Sampled: 08/27/97 Received: 08/27/97 Extracted: 09/04/97 Analyzed: 09/04/97 Reported: 09/11/97
Attention: Maureen Feineman		

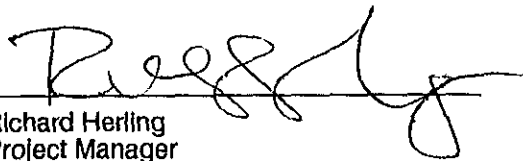
QC Batch Number: GC090397BTEXEXB  
Instrument ID: GCHP22

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	250	3600
Methyl t-Butyl Ether	6.2	N.D.
Benzene	1.2	1.9
Toluene	1.2	1.9
Ethyl Benzene	1.2	36
Xylenes (Total)	1.2	220
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140
		1500 Q

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Richard Herling  
Project Manager





Cambria	Client Proj. ID: Shell 1601 Webster, Alameda	Sampled: 08/27/97
1144 65th St. Suite C	Sample Descript: P-3, 5'	Received: 08/27/97
Oakland, CA 94608	Matrix: SOLID	Extracted: 09/04/97
Attention: Maureen Felheman	Analysis Method: 8015Mod/8020	Analyzed: 09/04/97
	Lab Number: 9708F47-05	Reported: 09/11/97

QC Batch Number: GC090397BTEXEXB  
Instrument ID: GCHP22

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

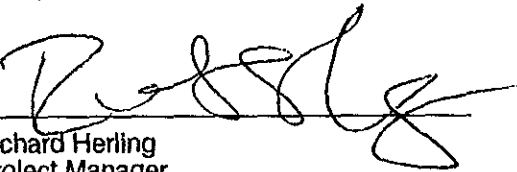
Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	250	1700
Methyl t-Butyl Ether	6.2	N.D.
Benzene	1.2	N.D.
Toluene	1.2	N.D.
Ethyl Benzene	1.2	4.0
Xylenes (Total)	1.2	23
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Richard Herling  
Project Manager





Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 1601 Webster, Alameda Sample Descript: P-4, 5' Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9708F47-06	Sampled: 08/27/97 Received: 08/27/97 Extracted: 09/04/97 Analyzed: 09/04/97 Reported: 09/11/97
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QC Batch Number: GC090397BTEXEXB  
Instrument ID: GCHP22

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	50	230
Methyl t-Butyl Ether	1.2	N.D.
Benzene	0.25	N.D.
Toluene	0.25	N.D.
Ethyl Benzene	0.25	1.2
Xylenes (Total)	0.25	3.4
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

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

**SEQUOIA ANALYTICAL - ELAP #1210**



Richard Herling  
Project Manager





# Sequoia Analytical

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

Redwood City, CA 94063  
Walnut Creek, CA 94598  
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FAX (510) 988-9673  
FAX (916) 921-0100

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

Client Project ID: Shell 1601 Webster, Alameda  
Matrix: Solid

Work Order #: 9708F47 -01-06

Reported: Sep 11, 1997

## QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC090397BTEXEXB	GC090397BTEXEXB	GC090397BTEXEXB	GC090397BTEXEXB	GC090397BTEXEXB
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	A. Porter	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	9708F6004	9708F6004	9708F6004	9708F6004	9708F6004
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/3/97	9/3/97	9/3/97	9/3/97	9/3/97
Analyzed Date:	9/4/97	9/4/97	9/4/97	9/4/97	9/4/97
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
Result:	0.17	0.16	0.16	0.46	0.90
MS % Recovery:	85	80	80	77	75
Dup. Result:	0.16	0.16	0.16	0.45	0.90
MSD % Recov.:	80	80	80	75	75
RPD:	6.1	0.0	0.0	2.2	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK090497	BLK090497	BLK090497	BLK090497	BLK090497
Prepared Date:	9/4/97	9/4/97	9/4/97	9/4/97	9/4/97
Analyzed Date:	9/4/97	9/4/97	9/4/97	9/4/97	9/4/97
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
LCS Result:	0.20	0.19	0.19	0.55	1.0
LCS % Recov.:	100	95	95	92	83

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

Richard Herling  
Project Manager

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

9708F47.CCC <1>







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

**CHAIN OF CUSTODY RECORD**

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

Date: 8/27/97  
Page 1 of 1

Site Address: 1601 Webster, Alameda

WIC#: 204-0072-0403

Shell Engineer: Lisa Maglines  
Phone No.:  
Fax #:

Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1144 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Maureen Feineman  
Phone No.: 510 420-0700  
Fax #: 420-9170

Comments:

Sampled by: Maureen Feineman

Printed Name: Maureen Feineman

**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 8020/602	Asbestos	Container Size	Preparation Used	Composite Y/N
					X				
					X				
					X				
					X				
					X				
					X				

LAB: Sequoia

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

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

UST AGENCY: Alameda County

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 8020/602	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
D-1, 5'	8/27	1	X			1						X						
D-2, 5'		2	X			1						X						9708F47
P-1, 5'		3	X			1						X						
P-2, 5'		4	X			1						X						
P-3, 5'		5	X			1						X						
P-4, 5'		6	X			1						X						

Relinquished By (signature): <i>Maureen Feineman</i>	Printed Name: Maureen Feineman	Date: 8/27/97 Time: 12:00	Received (signature): <i>[Signature]</i>	Printed Name: Ramon Aguirre	Date: 8/27/97 Time: 1:00
Relinquished By (signature): <i>[Signature]</i>	Printed Name: Ramon Aguirre	Date: 8/27/97 Time:	Received (signature): <i>[Signature]</i>	Printed Name:	Date: Time:
Relinquished By (signature): <i>[Signature]</i>	Printed Name:	Date: Time:	Received (signature): <i>[Signature]</i>	Printed Name: LO Cardenas	Date: 8-27-97 Time: 3:04

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



**Sequoia  
Analytical**

680 Chesapeake Drive	Redwood City, CA 94063	(650) 364-9600	FAX (650) 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	Client Proj. ID: Shell 1601 Webster, Alameda	Received: 08/27/97
1144 65th St. Suite C		
Oakland, CA 94608	Lab Proj. ID: 9708F47	Reported: 09/11/97
Attention: Maureen Feineman		

### LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 10 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

**SEQUOIA ANALYTICAL**

Richard Herling  
Project Manager





# Sequoia Analytical

680 Chesapeake Drive  
404 N. Wiget Lane  
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Cambria  
1144 65th St. Suite C  
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Attention: Maureen Feineman

Project: Shell 1601 Webster, Alameda

Enclosed are the results from samples received at Sequoia Analytical on August 27, 1997.  
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9708F49 -01	SOLID, D-2-10	08/27/97	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**

Project Manager





Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 1601 Webster, Alameda Sample Descript: D-2-10 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9708F49-01	Sampled: 08/27/97 Received: 08/27/97 Extracted: 09/03/97 Analyzed: 09/04/97 Reported: 09/11/97
Attention: Maureen Feineman		

QC Batch Number: GC090397BTEXEXA  
Instrument ID: GCHP22

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

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	250	760
Methyl t-Butyl Ether	6.2	N.D.
Benzene	1.2	2.4
Toluene	1.2	4.1
Ethyl Benzene	1.2	10
Xylenes (Total)	1.2	66
Chromatogram Pattern:		C6-C12
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	112
4-Bromofluorobenzene	60 140	250 Q

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Richard Herling  
Project Manager





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

Client Project ID: Shell 1601 Webster, Alameda  
Matrix: Solid

Work Order #: 9708F49 -01

Reported: Sep 12, 1997

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC090397BTEXEXA	GC090397BTEXEXA	GC090397BTEXEXA	GC090397BTEXEXA	GC090397BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	A. Porter	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	9708F9203	9708F9203	9708F9203	9708F9203	9708F9203
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/3/97	9/3/97	9/3/97	9/3/97	9/3/97
Analyzed Date:	9/3/97	9/3/97	9/3/97	9/3/97	9/3/97
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
Result:	0.18	0.18	0.18	0.50	0.90
MS % Recovery:	90	90	90	83	75
Dup. Result:	0.18	0.17	0.17	0.49	0.90
MSD % Recov.:	90	85	85	82	75
RPD:	0.0	5.7	5.7	2.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK090397	BLK090397	BLK090397	BLK090397	BLK090397
Prepared Date:	9/3/97	9/3/97	9/3/97	9/3/97	9/3/97
Analyzed Date:	9/3/97	9/3/97	9/3/97	9/3/97	9/3/97
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	1.2 mg/Kg
LCS Result:	0.19	0.19	0.19	0.53	1.0
LCS % Recov.:	95	95	95	88	83

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

*Richard Herling*  
Richard Herling  
Project Manager

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

9708F49.CCC <1>





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

**CHAIN OF CUSTODY RECORD**

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

Date: 3/27/97

Page | of | 1

Site Address: 1601 Webster Alameda

WIC#: 204-0072-0403

Shell Engineer: Lisa Maglines Phone No.: \_\_\_\_\_ Fax #: \_\_\_\_\_

Consultant Name & Address: CAMBRIA ENVIRONMENTAL  
1144 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Maureen Feineman Phone No.: 510 420-0700 Fax #: 420-9170

Comments: \_\_\_\_\_

Sampled by: Maureen Feineman

Printed Name: Maureen Feineman

**Analysis Required**

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

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

UST AGENCY: Alameda County

Sample ID	Date	Sludge	Soil	Water	Air	No. of conls.	TPH (EPA 8015 Mod. GCS)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 / MTOE	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
<u>D-2-10</u>	<u>3/27</u>		<u>X</u>			<u>1</u>						<u>X</u>						<u>9708F49</u>	

Relinquished By (signature): <u>Maureen Feineman</u>	Printed Name: <u>Maureen Feineman</u>	Date: <u>3/27/97</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>Damon Armas</u>	Date: <u>3/27/97</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>Damon Armas</u>	Date: <u>3/27/97</u>	Received (signature): <u>[Signature]</u>	Printed Name: _____	Date: _____
Relinquished By (signature): _____	Printed Name: _____	Date: _____	Received (signature): <u>[Signature]</u>	Printed Name: <u>L D Cardenas</u>	Date: <u>3-27-97</u>

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

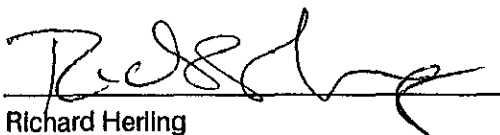


Cambria	Client Proj. ID: Shell 1601 Webster, Alameda	Received: 08/27/97
1144 65th St. Suite C		
Oakland, CA 94608	Lab Proj. ID: 9708F49	Reported: 09/11/97
Attention: Maureen Feineman		

### 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**



Richard Herling  
Project Manager

