



ENVIRONMENTAL
PROTECTION

April 30, 1998
98 MAY 12 PM 3:37

Mr. Scott Seery
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Re: **Dispenser Soil Sampling Report**
Shell Service Station
6039 College Avenue
Oakland, California
WIC #204-5508-3301
Cambria Project #240-503-3

Dear Mr. Seery:

On behalf of Shell Oil Products Company (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this report presenting the results of the February 11 and 12, 1998 soil sampling at the site referenced above. Sampling was conducted following the upgrade of four gasoline dispensers. Presented below are the site conditions, sampling activities, and analytic results.

SITE CONDITIONS

The site is located at the southwest corner of the intersection of Claremont Avenue and College Avenue in Oakland, California (Figure 1). The site is an active Shell service station. During upgrade activities, Paradiso Mechanical of San Leandro, California (Paradiso) installed turbine containment sumps on the gasoline underground storage tanks, secondary containment pans beneath the existing dispensers, and new leak detection sensors.

SAMPLING ACTIVITIES AND SAMPLE ANALYSIS

CAMBRIA

ENVIRONMENTAL

TECHNOLOGY, INC.

1144 65TH STREET,

SUITE B

OAKLAND,

CA 94608

PH: (510) 420-0700

Fax: (510) 420-9170

Cambria's standard procedures for dispenser and piping sampling are presented as Attachment A.

February 11 and 12, 1998: Cambria engineer Paul Waite and geologist Christina Empedocles collected soil samples beneath four dispensers. Samples were collected at approximately 2 and 4 feet into native soil. Cambria's standard procedures for dispenser and piping sampling are presented as Attachment A.

Sample Analyses: Sequoia Analytical of Redwood City, California analyzed the samples for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015, and benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tert-butyl ether (MTBE) by EPA Method 8020. MTBE detections by EPA Method 8020 were confirmed using EPA Method 8260. Due to laboratory error, the

Mr. Scott Seery
April 30, 1998

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EPA Method 8260 analyses were not conducted within the standard sample holding times, and therefore should be considered qualitatively.

ANALYTIC RESULTS

The maximum hydrocarbon concentrations detected were in the samples collected from Dispenser C, with 5,300 milligrams per kilogram (mg/kg) TPPH, 420 mg/kg MTBE, and 10 mg/kg benzene. Where detected, petroleum hydrocarbon concentrations from the other dispenser soil samples were significantly lower. Analytic results are summarized in Table 1, and the laboratory analytic reports are presented as Attachment B.

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 Dispenser Soil Samples

cc: A.E. (Alex) Perez, Shell Oil Products Company, P.O. Box 8080, Martinez, California 94553
Tim Hargraves, Shell Oil Products Company, P.O. Box 8080, Martinez, California 94553
Leroy Griffin, City of Oakland Fire Department, 505 14th Street, Suite 702, Oakland, California 94612

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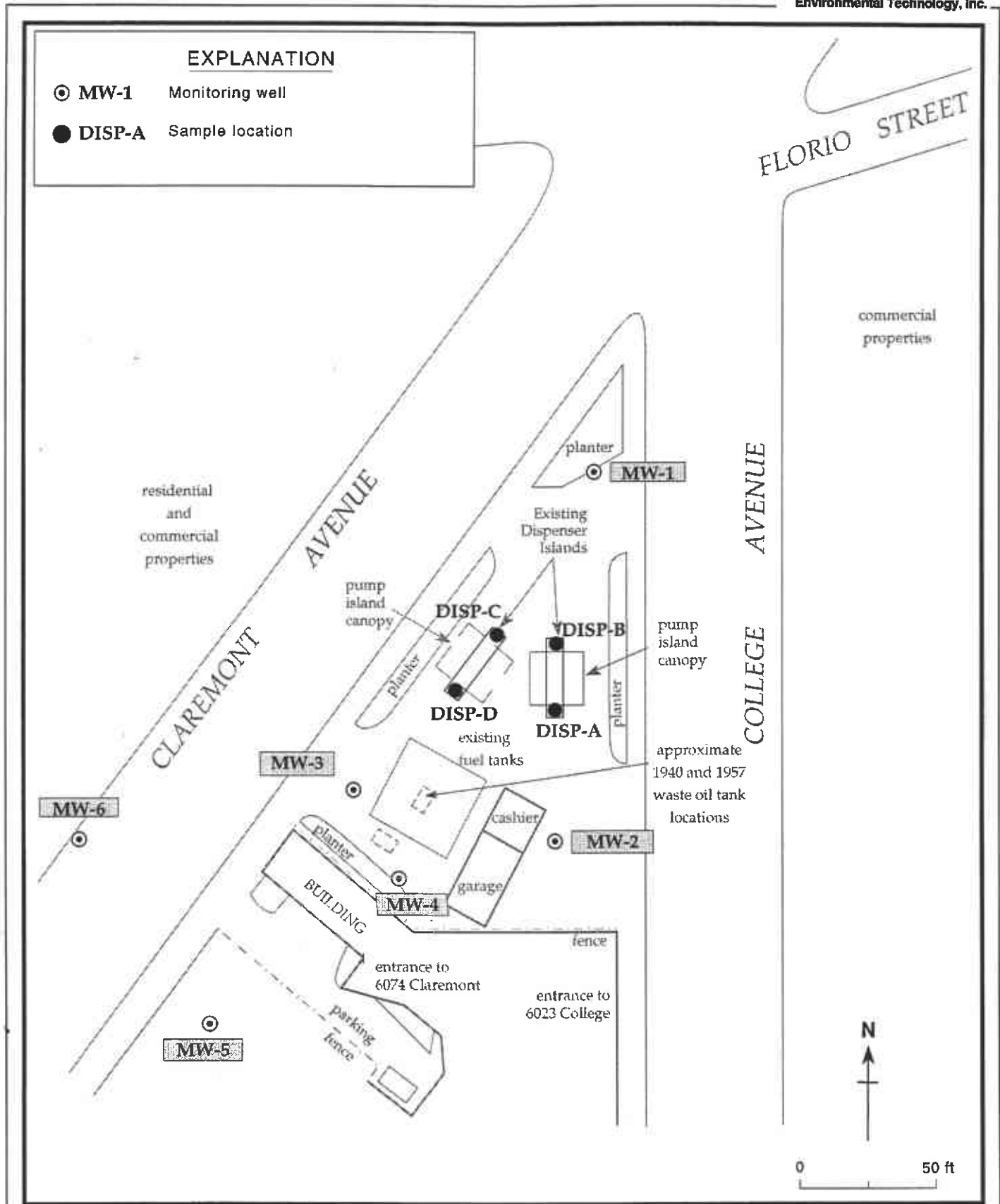


Figure 1. Dispenser Sampling Location - February 11 and 12, 1997 - Shell Service Station, 6039 College Avenue, Oakland, California

Table 1. Dispenser Sample Analytical Data - Shell Service Station - WIC# 204-5508-3301, 6039 College Avenue, Oakland, California

Sample ID - Depth in ft	TPPH	MTBE (EPA Method 8020)	MTBE * (EPA Method 8260)	Benzene	Toluene	Ethylbenzene	Xylenes
February 11 & 12, 1998 Samples:				(Concentrations reported in milligrams per kilogram)			
Disp-A-2.0'	3.2	0.51	< 0.10	0.016	0.045	< 0.0050	0.0072
Disp-A-4.0'	53	< 0.12	NA	< 0.025	< 0.025	< 0.025	< 0.025
Disp-B-2.0'	1.2	0.25	< 0.10	< 0.0050	0.011	< 0.0050	< 0.0050
Disp-B-4.0'	< 1.0	< 0.025	NA	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Disp-C-2.0'	1,900	420	240	10	190	42	260
Disp-C-4.0'	5,300	< 12	NA	< 2.5	5.0	26	250
Disp-D-2.0'	31	0.65	0.69	< 0.025	0.035	< 0.025	0.17
Disp-D-4.0'	6.3	0.10	0.13	0.011	0.013	< 0.010	< 0.010

Abbreviations/Notes:

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

MTBE = Methyl tert-butyl ether by EPA Method 8020 or EPA Method 8260, as noted.

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

NA = Not Analyzed

* Note: Analysis was not performed within the standard holding time, therefore, the results should be considered qualitatively.

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 Dispenser Soil Samples



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

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

Project: Shell 6039 College Ave.

Enclosed are the results from samples received at Sequoia Analytical on February 13, 1998.
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9802907 -01	SOLID, DISP-A-2.0'	02/11/98	TPGBMS Purgeable TPH/BTEX
9802907 -02	SOLID, DISP-A-4.0'	02/11/98	TPGBMS Purgeable TPH/BTEX
9802907 -03	SOLID, DISP-B-2.0'	02/11/98	TPGBMS Purgeable TPH/BTEX
9802907 -04	SOLID, DISP-C-2.0'	02/11/98	TPGBMS Purgeable TPH/BTEX
9802907 -05	SOLID, DISP-D-2.0'	02/11/98	TPGBMS Purgeable TPH/BTEX
9802907 -06	SOLID, DISP-D-4.0'	02/12/98	TPGBMS Purgeable TPH/BTEX
9802907 -07	SOLID, DISP-B-4.0'	02/12/98	TPGBMS Purgeable TPH/BTEX
9802907 -08	SOLID, DISP-C-4.0'	02/12/98	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





Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
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Cambria
1144 65th St. Suite C
Oakland, CA 94608

Client Proj. ID: Shell 6039 College Ave.
Sample Descript: DISP-A-2.0'
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9802907-01

Sampled: 02/11/98
Received: 02/13/98
Extracted: 02/24/98
Analyzed: 02/24/98
Reported: 02/27/98

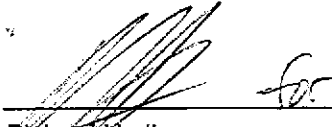
Attention: Paul Waite

QC Batch Number: GC0224988020EXA
Instrument ID: GCHP04

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	3.2
Methyl t-Butyl Ether	0.025	0.51
Benzene	0.0050	0.016
Toluene	0.0050	0.045
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	0.0072
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	72
4-Bromofluorobenzene	60	Q

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

SEQUOIA ANALYTICAL - ELAP #1271


Richard Herling
Project Manager





Sequoia Analytical

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Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 6039 College Ave. Sample Descript: DISP-A-4.0' Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9802907-02	Sampled: 02/11/98 Received: 02/13/98 Extracted: 02/25/98 Analyzed: 02/25/98 Reported: 02/27/98
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QC Batch Number: GC0225988020EXA
Instrument ID: GCHP04

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	5.0	53
Methyl t-Butyl Ether	0.12	N.D.
Benzene	0.025	N.D.
Toluene	0.025	N.D.
Ethyl Benzene	0.025	N.D.
Xylenes (Total)	0.025	N.D.
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 #1271



 Richard Herling
 Project Manager





Sequoia Analytical

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Cambria 1144 65th St. Suite C Oakland, CA 94608	Client Proj. ID: Shell 6039 College Ave. Sample Descript: DISP-B-2.0' Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9802907-03	Sampled: 02/11/98 Received: 02/13/98 Extracted: 02/24/98 Analyzed: 02/24/98 Reported: 02/27/98
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QC Batch Number: GC0224988020EXA
Instrument ID: GCHP04

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	1.2
Methyl t-Butyl Ether	0.025	0.25
Benzene	0.0050	N.D.
Toluene	0.0050	0.011
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
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 #1271


Richard Herling
Project Manager





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Cambria 1144 65th St. Suite C Oakland, CA 94608 Attention: Paul Waite	Client Proj. ID: Shell 6039 College Ave. Sample Descript: DISP-C-2.0' Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9802907-04	Sampled: 02/11/98 Received: 02/13/98 Extracted: 02/24/98 Analyzed: 02/24/98 Reported: 02/27/98
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QC Batch Number: GC0224988020EXA
Instrument ID: GCHP04

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	100	1900
Methyl t-Butyl Ether	2.5	420
Benzene	0.50	10
Toluene	0.50	190
Ethyl Benzene	0.50	42
Xylenes (Total)	0.50	260
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	730 Q
4-Bromofluorobenzene	60 140	Q

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

SEQUOIA ANALYTICAL - ELAP #1271



 Richard Berling
 Project Manager





Sequoia Analytical

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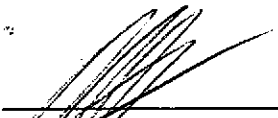
Cambria 1144 65th St. Suite C Oakland, CA 94608 Attention: Paul Waite	Client Proj. ID: Shell 6039 College Ave. Sample Descript: DISP-D-2.0' Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9802907-05	Sampled: 02/11/98 Received: 02/13/98 Extracted: 02/24/98 Analyzed: 02/24/98 Reported: 02/27/98
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QC Batch Number: GC0224988020EXA
Instrument ID: GCHP04

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	5.0	31
Methyl t-Butyl Ether	0.12	0.65
Benzene	0.025	N.D.
Toluene	0.025	0.035
Ethyl Benzene	0.025	N.D.
Xylenes (Total)	0.025	0.17
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 #1271


 Richard Herling
 Project Manager





Sequoia Analytical

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

Client Proj. ID: Shell 6039 College Ave.
Sample Descript: DISP-D-4.0'
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9802907-06


Sampled: 02/12/98
Received: 02/13/98
Extracted: 02/25/98
Analyzed: 02/25/98
Reported: 02/27/98

QC Batch Number: GC0225988020EXA
Instrument ID: GCHP04

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	2.0	6.3
Methyl t-Butyl Ether	0.050	0.10
Benzene	0.010	0.011
Toluene	0.010	0.013
Ethyl Benzene	0.010	N.D.
Xylenes (Total)	0.010	N.D.
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 #1271


Richard Herling
Project Manager





Sequoia Analytical

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

Client Proj. ID: Shell 6039 College Ave.
Sample Descript: DISP-B-4.0'
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9802907-07

Sampled: 02/12/98
Received: 02/13/98
Extracted: 02/24/98
Analyzed: 02/24/98
Reported: 02/27/98

QC Batch Number: GC0224988020EXA
Instrument ID: GCHP04

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	78
4-Bromofluorobenzene	60 140	Q

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

SEQUOIA ANALYTICAL - ELAP #1271


Richard Herling
Project Manager





Sequoia Analytical

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

Client Proj. ID: Shell 6039 College Ave.
Sample Descript: DISP-C-4.0'
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9802907-08

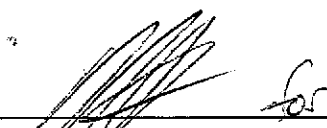
Sampled: 02/12/98
Received: 02/13/98
Extracted: 02/25/98
Analyzed: 02/25/98
Reported: 02/27/98

QC Batch Number: GC0225988020EXA
Instrument ID: GCHP04

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	500	5300
Methyl t-Butyl Ether	12	N.D.
Benzene	2.5	N.D.
Toluene	2.5	5.0
Ethyl Benzene	2.5	26
Xylenes (Total)	2.5	250
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	2300 Q
4-Bromofluorobenzene	60 140	Q

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

SEQUOIA ANALYTICAL - ELAP #1271


Richard Herling
Project Manager





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

Client Project ID: Shell 6039 College Ave.
Matrix: Solid

Work Order #: 9802907 01, 03-05, 07

Reported: Mar 3, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC0224988020EXA	GC0224988020EXA	GC0224988020EXA	GC0224988020EXA	GC0224988020EXA
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:	K. Nill	K. Nill	K. Nill	K. Nill	K. Nill
MS/MSD #:	8021325	8021325	8021325	8021325	8021325
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/24/98	2/24/98	2/24/98	2/24/98	2/24/98
Analyzed Date:	2/24/98	2/24/98	2/24/98	2/24/98	2/24/98
Instrument I.D.#:	HP4	HP4	HP4	HP4	HP4
Conc. Spiked:	0.80 mg/Kg	0.80 mg/Kg	0.80 mg/Kg	2.4 mg/Kg	6.4 mg/Kg
Result:	0.60	0.61	0.58	1.8	9.4
MS % Recovery:	75	76	73	75	147
Dup. Result:	0.59	0.60	0.56	1.8	9.5
MSD % Recov.:	74	75	70	75	148
RPD:	1.7	1.7	3.5	0.0	1.1
RPD Limit:	0-20	0-20	0-20	0-20	0.50

LCS #:	LCS022498	LCS022498	LCS022498	LCS022498	LCS022498
Prepared Date:	2/24/98	2/24/98	2/24/98	2/24/98	2/24/98
Analyzed Date:	2/24/98	2/24/98	2/24/98	2/24/98	2/24/98
Instrument I.D.#:	HP4	HP4	HP4	HP4	HP4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	6.4 mg/Kg
LCS Result:	18	18	18	56	300
LCS % Recov.:	90	90	90	93	94

MS/MSD LCS Control Limits	50-150	50-150	50-150	50-150	60-140
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Please Note:

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

SEQUOIA ANALYTICAL
ELAP #1271

Richard Herling
Project Manager

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

9802907.CCC <1>





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

Client Project ID: Shell 6039 College Ave.
Matrix: Solid

Work Order #: 9702907 02, 06, 08

Reported: Mar 3, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC0225988020EXA	GC0225988020EXA	GC0225988020EXA	GC0225988020EXA	GC0225988020EXA
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:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb
MS/MSD #:	8021326	8021326	8021326	8021326	8021326
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/25/98	2/25/98	2/25/98	2/25/98	2/25/98
Analyzed Date:	2/25/98	2/25/98	2/25/98	2/25/98	2/25/98
Instrument I.D.#:	HP4	HP4	HP4	HP4	HP4
Conc. Spiked:	0.80 mg/Kg	0.80 mg/Kg	0.80 mg/Kg	2.4 mg/Kg	6.2 mg/Kg
Result:	0.61	0.63	0.59	1.8	9.3
MS % Recovery:	76	79	74	75	150
Dup. Result:	0.61	0.62	0.58	1.8	9.2
MSD % Recov.:	76	78	73	75	148
RPD:	0.0	1.6	1.7	0.0	1.1
RPD Limit:	0-20	0-20	0-20	0-20	0.50

LCS #:	LCS022598	LCS022598	LCS022598	LCS022598	LCS022598
Prepared Date:	2/25/98	2/25/98	2/25/98	2/25/98	2/25/98
Analyzed Date:	2/25/98	2/25/98	2/25/98	2/25/98	2/25/98
Instrument I.D.#:	HP4	HP4	HP4	HP4	HP4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	6.2 mg/Kg
LCS Result:	17	17	16	52	280
LCS % Recov.:	85	85	80	87	90

MS/MSD LCS	Control Limits	50-150	50-150	50-150	50-150	60-140
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Please Note:

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

**SEQUOIA ANALYTICAL
ELAP #1271**

Richard Herling
Project Manager

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

9802907.CCC <2>





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

Client Proj. ID: Shell 6039 College Ave.
Lab Proj. ID: 9802907

Received: 02/13/98
Reported: 02/27/98

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.).

TPHGBS NOTE:

#Q - Sample #4, #8 had high surrogate recovery due to matrix coelution.

Q - The only surrogate reported is Trifluorotoluene.

SEQUOIA ANALYTICAL


Richard Herling
Project Manager





SHELL OIL COMPANY
- RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: _____
Page | of |

Site Address:
6039 COLLEGE AVE, OAKLAND CA

WIGN:
204 - 5508 - 3301

Shell Engineer: ALEX PEREZ
Phone No.: (510) 335-5027
Fax #: 335-5024

Consultant Name & Address: CAMBRIA ENVIRONMENTAL
1114 65th St. Suite C, Oakland, CA 94608

Consultant Contact: PAUL WAITE
Phone No.: 510 420-0700
Fax #: 420-9170

Comments:
Confirm ALL MTBE detections by method 8260

Sampled by: *[Signature]*

Printed Name: CHRISTINA EMPEDOCLES

Analysis Required 9802907

LAB: SEQUOIA

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 + MTBE	Asbestos	Container Size	Preparation Used	Composite Y/N
-------------------------	----------------------------	---------------------	------------------------------	-------------------	---	----------	----------------	------------------	---------------

CHECK ONE (1) BOX ONLY	CI/DI	TURF 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"/> (if found)
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. IAJ

UST AGENCY: Alameda County

Sample ID	Date	TIME - Storage	Soil	Water	Air	No. of confs.
DISP-A-2.0'	2/11/98	3:45pm	/			1
DISP-A-4.0'	2/11/98	4:15pm	/			1
DISP-B-2.0'	2/11/98	4:20pm	/			1
DISP-C-2.0'	2/11/98	4:30pm	/			1
DISP-D-2.0'	2/11/98	5:00pm	/			1
DISP-D-4.0'	2/12/98	10:30pm	/			1
DISP-B-4.0'	2/12/98	11:15pm	/			1
DISP-C-4.0'	2/12/98	11:50pm	/			1

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1	
2	
3	
4	13.12
5	
6	
7	
8	

Relinquished By (signature): *[Signature]*
Printed Name: Anthony Lopez
Date: 2/13/98
Time: 10:40

Relinquished By (signature): *[Signature]*
Printed Name: _____
Date: 2/13/98
Time: 12:15

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

Received (signature): *[Signature]*
Printed Name: ERWIN VILLEROS
Date: 2/13/98
Time: 10:40

Received (signature): *[Signature]*
Printed Name: _____
Date: _____
Time: _____

Received (signature): *[Signature]*
Printed Name: MIKE YONG
Date: 2/12/98
Time: 12:15

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

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

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: _____

Date: _____

Page 1 of 1

Site Address: 6059 COLLEGE AVE, OAKLAND CA

WIC#: 204 - 5508 - 3301

Shell Engineer: ALEX PEREZ
Phone No.: (510) 335-5027
Fax #: 335-5029

Consultant Name & Address: CAMBRIA ENVIRONMENTAL
1114 65th St. Suite C, Oakland, CA 94608

Consultant Contact: PAUL WHITE
Phone No.: 510 420-0700
Fax #: 420-9170

Comments: Confirm All MTBE detections by method 8260

Sampled by: *[Signature]*

Printed Name: CHRISTINA ESPEDRILLES

Sample ID	Date	TIME - Sludge	Soil	Water	Air	No. of confs.
DISP-A-2.0'	2/1/98	3:45pm	/			1
DISP-A-4.0'	2/1/98	4:15pm	/			1
DISP-B-2.0'	2/1/98	4:20pm	/			1
DISP-C-2.0'	2/1/98	4:30pm	/			1
DISP-D-2.0'	2/1/98	3:00pm	/			1
DISP-D-4.0'	2/12/98	10:30pm	/			1
DISP-B-4.0'	2/12/98	11:15pm	/			1
DISP-C-4.0'	2/12/98	11:50pm	/			1

Analysis Required

TPH (EPA 8015 Mod. CAS)	TPH (EPA 8015 Mod. Diesel)	STX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & STX 8020 + MTBE	Asbestos	Container Size	Preparation Used	Composite Y/N
-------------------------	----------------------------	--------------------	------------------------------	-------------------	--	----------	----------------	------------------	---------------

LAB: SEQUOIA

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

NOTE: Notify Lab as soon as possible of 24/48 hrs. 1A1

UST AGENCY: Alameda County

MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS

Relinquished By (signature): *[Signature]*
Printed Name: Anthony Lopez
Date: 2/13/98
Time: 10:40

Received (signature): *[Signature]*
Printed Name: ERWIN VILLEROS
Date: 2/13/98
Time: 10:40

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

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

(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: Paul Waite

Project: Shell 6039 College Ave.

Enclosed are the results from samples received at Sequoia Analytical on February 13, 1998.
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9803969 -01	SOLID, DISP-A-2.0	02/11/98	MTBE by 8260
9803969 -02	SOLID, DISP-B-2.0	02/11/98	MTBE by 8260
9803969 -03	SOLID, DISP-C-2.0	02/11/98	MTBE by 8260
9803969 -04	SOLID, DISP-D-2.0	02/11/98	MTBE by 8260
9803969 -05	SOLID, DISP-D-4.0	02/12/98	MTBE by 8260

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 Attention: Paul Waite	Client Proj. ID: Shell 6039 College Ave. Sample Descript: DISP-A-2.0 Matrix: SOLID Analysis Method: EPA 8260 Lab Number: 9803969-01	Sampled: 02/11/98 Received: 02/13/98 Extracted: 03/17/98 Analyzed: 03/17/98 Reported: 03/24/98
--	---	--

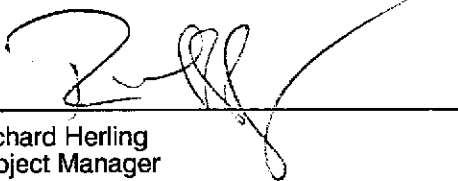
QC Batch Number: MS031798MTBEEEXA
Instrument ID: H6

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Methyl t-Butyl Ether	100	N.D.
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70 121	77

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 6039 College Ave. Sample Descript: DISP-B-2.0 Matrix: SOLID Analysis Method: EPA 8260 Lab Number: 9803969-02	Sampled: 02/11/98 Received: 02/13/98 Extracted: 03/17/98 Analyzed: 03/17/98 Reported: 03/24/98
---	---	--

QC Batch Number: MS031798MTBEEEXA
Instrument ID: H6

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Methyl t-Butyl Ether	100	N.D.
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70 121	84

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 Attention: Paul Waite	Client Proj. ID: Shell 6039 College Ave. Sample Descript: DISP-C-2.0 Matrix: SOLID Analysis Method: EPA 8260 Lab Number: 9803969-03	Sampled: 02/11/98 Received: 02/13/98 Extracted: 03/17/98 Analyzed: 03/17/98 Reported: 03/24/98
--	---	--

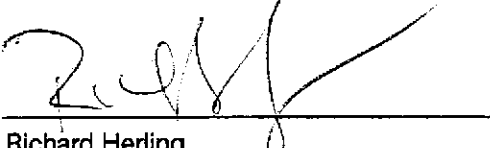
QC Batch Number: MS031798MTBEEEXA
Instrument ID: H6

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Methyl t-Butyl Ether	10000	240000
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70 121	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 Attention: Paul Waite	Client Proj. ID: Shell 6039 College Ave. Sample Descript: DISP-D-2.0 Matrix: SOLID Analysis Method: EPA 8260 Lab Number: 9803969-04	Sampled: 02/11/98 Received: 02/13/98 Extracted: 03/17/98 Analyzed: 03/17/98 Reported: 03/24/98
--	---	--

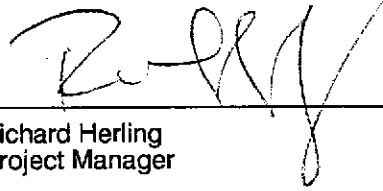
QC Batch Number: MS031798MTBEEEXA
Instrument ID: H6

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Methyl t-Butyl Ether	100	690
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70 121	79

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 Attention: Paul Waite	Client Proj. ID: Shell 6039 College Ave. Sample Descript: DISP-D-4.0 Matrix: SOLID Analysis Method: EPA 8260 Lab Number: 9803969-05	Sampled: 02/12/98 Received: 02/13/98 Extracted: 03/17/98 Analyzed: 03/17/98 Reported: 03/24/98
--	---	--

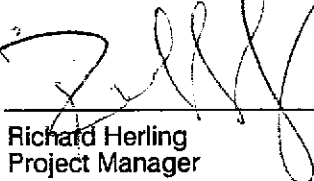
QC Batch Number: MS031798MTBEEEXA
Instrument ID: H6

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Methyl t-Butyl Ether	100	130
Surrogates	Control Limits %	% Recovery
1,2-Dichloroethane-d4	70 121	84

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: Paul Waite

Client Project ID: Shell 6039 College Ave.
Matrix: Solid

Work Order #: 9803969 01-05

Reported: Mar 26, 1998

QUALITY CONTROL DATA REPORT

Analyte: MTBE

QC Batch#: MS031798MTBEEEXA

Analy. Method: EPA 8260

Prep. Method:

Analyst: L. Zhu

MS/MSD #: 980390706

Sample Conc.: N.D.

Prepared Date: 3/17/98

Analyzed Date: 3/17/98

Instrument I.D.#: H6

Conc. Spiked: 2500 µg/Kg

Result: 2300

MS % Recovery: 92

Dup. Result: 2300

MSD % Recov.: 92

RPD: 0.0

RPD Limit: 0-25

LCS #: LCS031798

Prepared Date: 3/17/98

Analyzed Date: 3/17/98

Instrument I.D.#: H6

Conc. Spiked: 2500 µg/Kg

LCS Result: 2300

LCS % Recov.: 92

MS/MSD 60-140

LCS 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 Heffling
Project Manager

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

9803969.CCC <1>





SHELL OIL COMPANY

RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: _____

Date: _____

Page (of)

Site Address:
6039 COLLEGE AVE, OAKLAND CA

WGN:
204 - 5508 - 3301

Shell Engineer:
ALEX PEREZ

Phone No.: (510)
335-5627
Fax #: 335-5029

Consultant Name & Address: **CAMBRIA ENVIRONMENTAL**
1114 65th St. Suite C, Oakland, CA 94608

Consultant Contact:
PAUL WAITE

Phone No.: SJO
420-0700
Fax #: 420-9170

Comments:
Can firm ALL MTBE detections by method 8260

Sampled by: *[Signature]*

Printed Name: **CARISTINA ESPEDOCLES**

Analysis Required **9802907**LAB: **SEQUOIA**

CHECK ONE (1) BOX ONLY	CI/01	TURN AROUND TIME
G.W. Monitoring	<input type="checkbox"/> 4441	24 hours <input type="checkbox"/>
Site Investigation	<input checked="" type="checkbox"/> 4441	48 hours <input type="checkbox"/>
Soil Classfy/Disposal	<input type="checkbox"/> 4442	15 days <input checked="" type="checkbox"/> (Hanging)
Water Classfy/Disposal	<input type="checkbox"/> 4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M	<input type="checkbox"/> 4452	
Water Rem. or Sys. O & M	<input type="checkbox"/> 4453	
Other	<input type="checkbox"/>	

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

UST AGENCY: *Mameda County*

Sample ID	Date	TIME - Sludge	Soil	Water	Air	No. of confs.
DISP-A-2.0'	2/1/98	3:45pm	/			1
DISP-A-4.0'	2/1/98	4:15pm	/			1
DISP-B-2.0'	2/1/98	4:00pm	/			1
DISP-C-2.0'	2/1/98	4:30pm	/			1
DISP-D-2.0'	2/1/98	5:00pm	/			1
DISP-D-4.0'	2/2/98	10:30pm	/			1
DISP-B-4.0'	2/2/98	11:15pm	/			1
DISP-C-4.0'	2/2/98	11:50pm	/			1

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 + MTBE	Asbestos	Container Size	Preparation Used	Composite Y/N
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MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1	
2	
3	
4	EL 13 12 16
5	
6	
7	
8	

Relinquished By (signature): *[Signature]*
Relinquished By (signature): *[Signature]*
Relinquished By (signature): _____

Printed Name: **Anthony Lopez**
Printed Name: _____
Printed Name: _____

Date: 2/13/98
Time: 10:40
Date: 2/13/98
Time: 12:15
Date: _____
Time: _____

Received (signature): *[Signature]*
Received (signature): _____
Received (signature): *[Signature]*

Printed Name: **ERWIN VILLEROS**
Printed Name: _____
Printed Name: **MIKE YONG**

Date: 2/13/98
Time: 10:40
Date: _____
Time: _____
Date: 2/17/98
Time: 12:15

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

(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: Paul Waite

Client Proj. ID: Shell 6039 College Ave.

Received: 02/13/98

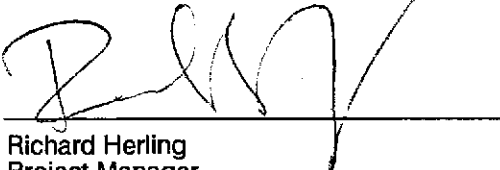
Lab Proj. ID: 9803969

Reported: 03/24/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 7 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

