CAMBRIA

#3646

COPY

96 NOV 22 PM 1:5

November 8, 1996

Mr. Don Hwang
Alameda County Environmental Health Department
1131 Harbor Bay Parkway, Suite #250
Alameda, California 94502-6577

Re: **Soil and Air Sampling Report**
Shell Service Station
WIC #204-5508-5900
540 Hegenberger Road
Oakland, California

Dear Mr. Hwang:

On behalf of Shell Oil Products Company (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this soil and air sampling report for the site referenced above. The sampling was in response to a potential gasoline release identified during dispenser repair. The sampling procedures and results are presented below.

SOIL SAMPLING

On August 8, 1996, Paul Waite and N. Scott MacLeod of Cambria collected a soil sample beneath dispenser piping at the northwest corner of the northwest pump island that was being repaired. A site map is included as Attachment A. The sample (D-1) was collected from native soil about 1 foot below the piping trench and analyzed for total petroleum hydrocarbons as gasoline (TPHg), methyl tert-butyl ether (MTBE), and benzene, toluene, ethylbenzene, and xylenes (BTEX). Hydrocarbon concentrations are presented in the table below and the laboratory analytic report is included as Attachment B. Our standard soil sampling procedures are included in Attachment C.

Table 1. Hydrocarbon Concentrations in Soil
Concentrations in parts per million (ppm)

Sample ID	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
D-1	3,400	720	17	280	84	450

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

AIR SAMPLING

On September 3, 1993, Cambria sampled air in utility vaults and manholes for indications of hydrocarbon vapors using a Gastech organic vapor analyzer. Our objective was to assess whether liquid-phase hydrocarbons had been released from the dispenser in sufficient quantity to cause hydrocarbon vapors to accumulate in underground air space near the dispenser. The air in the sewer manhole on the west edge of the site about 15 ft west of the dispenser contained 2,060 ppm by volume (ppmv) volatile vapors. However, the vapors did not smell like gasoline and no sheen or liquid-phase hydrocarbons were observed on the standing water in the sewer manhole. Therefore, the vapors were most likely sewer gas. No other utility vault contained more than 40 ppmv.

We also measured vapor concentrations in the tank observation wells at the southeast and southwest corners of the underground storage tanks. Vapor concentrations in these wells were initially up to 600 ppmv based on field screening. After purging for ten minutes with a portable air pump the concentrations stabilized at 3,460 ppmv. We collected an air sample after purging from the southeast observation well for laboratory analysis. The sample, labeled Air-1, was collected in an inert Tedlar sampling bag using a bell jar sampler and inert tygon tubing and was analyzed for TPHg, MTBE, and BTEX. Analytic results are included on Table 2. Analytic reports are attached.

On September 6, 1996, Cambria investigated reports of petroleum odors in the office of the station building. Employees indicated that petroleum odors had been noticeable inside the storeroom of the building and appeared to emanate from the sink or sewer drain. We used the Gastech organic vapor analyzer to screen vapor concentrations in the ambient air and in the sink and floor drains. No vapors were detected in the ambient air. Up to 40 ppmv were detected in the sink drain and up to 460 ppmv were detected before purging the floor drain. An air sample analyzed by the laboratory collected before purging the floor drain (Air-2-Pre-Purge) was analyzed for TPHG, MTBE, and BTEX. The sample contained 0.029 ppmv toluene, but no other hydrocarbons were detected. Analytic results are included on Table 2.

On September 19, 1996, station employees again noticed petroleum odors in the storeroom. No vapors were detected in ambient air, however, up to 5,100 ppmv were detected in the floor drain using the Gastech. Cambria collected three air samples from the floor drain before, during, and after purging (Air 919-1, Air 919-2, and Air 919-3, respectively) and screened the samples with the Gastech. Since sample Air 919-2 contained the highest vapor concentrations using the Gastech, this sample was analyzed for TPHg, MTBE, and BTEX by the laboratory. No MTBE, benzene, or ethylbenzene were detected in the sample, although 170 ppmv TPHg, 1.9 ppmv toluene, and 0.54 ppmv xylenes were detected. Analytical results are summarized in Table 2.

Table 2. Hydrocarbon Concentrations in Air
Concentrations in parts per million by volume (ppmv)

Sample ID	Date	Location	TPHg	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes
Air-1	9/3/96	SE Tank Backfill observation well	900	420	6.9	48	2.3	14
Air-2	9/6/96	Storeroom	< 1.4	< 1.4	< 0.016	0.029	< 0.012	< 0.012
Air 919-2	9/19/96	Storeroom	170	< 25	< 0.25	1.9	< 0.25	0.54

CLOSING

Based on the soil and air sampling results, the hydrocarbon release from the dispenser appears to be limited in volume. There was no indication of accumulated liquid-phase hydrocarbons or associated vapors in any underground air spaces near the dispensers. Although gasoline vapors were detected in the tank backfill monitoring well, the concentrations detected are not indicative of liquid-phase hydrocarbons. Had liquid-phase hydrocarbons been present, we would expect hydrocarbon vapor concentrations to approach the lower explosive limit for gasoline, or about 14,000 ppmv. Although hydrocarbons were detected in the floor drain, the concentrations were relatively low and do not exceed permissible exposure limits.

We appreciate the opportunity to work with you on this case. Please call me at (510) 420-9172 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.

N. Scott MacLeod, R.G.
Principal Geologist

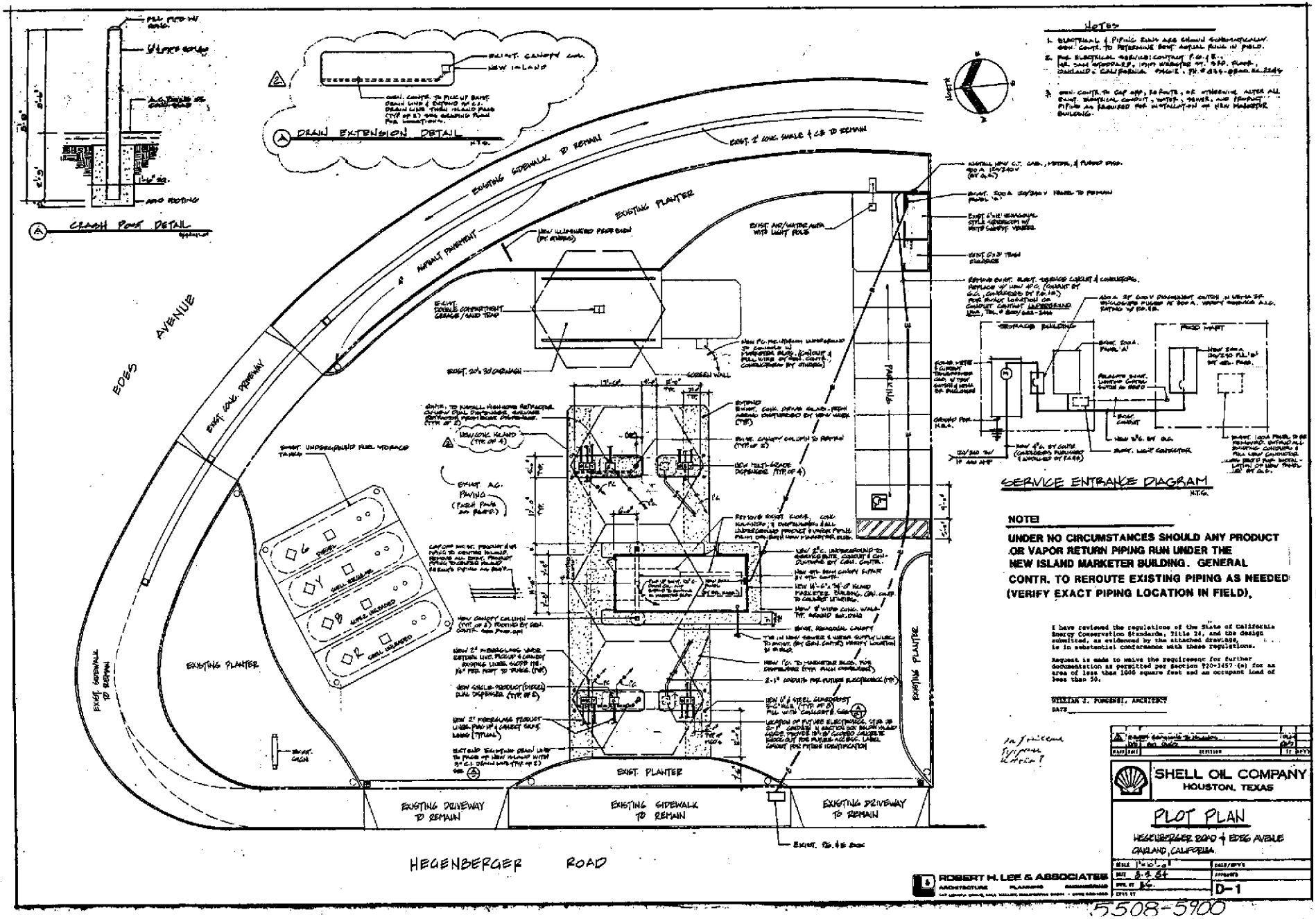
Attachments: A - Site Map
B - Analytical Reports
C -Standard Field Procedures for Soil Sampling

cc: R. Jeff Granberry, Shell Oil Products Company
Brett Hovland, Shell Oil Products Company

F:\PROJECT\SHELL\OAK540\REPORT-1.WPD

ATTACHMENT A

Site Map



I have reviewed the regulations of the State of California Energy Conservation Standards, Title 24, and the design submitted, as evidenced by the attached drawings, is in substantial conformance with these regulations.

Request is made to waive the requirement for further documentation as permitted per Section T20-1457-(e) for an area of less than 1000 square feet and an occupant load of less than 50.

WILLIAM J. PONCHINI, ARCHITECT

DATE

SHELL OIL COMPANY
HOUSTON, TEXAS

PLOT PLAN

HEGENBERGER ROAD & EDES AVENUE
OAKLAND, CALIFORNIA

ROBERT H. LEE & ASSOCIATES
ARCHITECTURE PLANNING

D-1

5508-5900

TYBE 614

ATTACHMENT B

Analytical Reports

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

Project: SHELL 204-5508-5900 / Oakland

Enclosed are the results from samples received at Sequoia Analytical on August 22, 1996. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9608E16 -01	SOLID, D-1	08/20/96	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

Project Manager

Quality Assurance Department

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	Client Proj. ID: SHELL 204-5508-5900 / Oakland	Sampled: 08/20/96
1144 65th St. Suite C	Sample Descript: D-1	Received: 08/22/96
Oakland, CA 94608	Matrix: SOLID	Extracted: 08/26/96
	Analysis Method: 8015Mod/8020	Analyzed: 08/26/96
Attention: Paul Waite	Lab Number: 9608E16-01	Reported: 09/04/96

QC Batch Number: GC082696BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**300**	**3400**
Methyl t-Butyl Ether	**7.5**	**720**
Benzene	**1.5**	**17**
Toluene	**1.5**	**280**
Ethyl Benzene	**1.5**	**84**
Xylenes (Total)	**1.5**	**450**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	174 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 204-5508-5900 / Oakland	
1144 65th St., Ste. C	Matrix:	Solid	
Oakland, CA 94608			
Attention: Paul Waite	Work Order #:	9608E16 01	Reported: Sep 4, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC082596BTEXEXA	GC082596BTEXEXA	GC082596BTEXEXA	GC082596BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	Y. Arteaga	Y. Arteaga	Y. Arteaga	Y. Arteaga
MS/MSD #:	9608B2614	9608B2614	9608B2614	9608B2614
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/26/96	8/26/96	8/26/96	8/26/96
Analyzed Date:	8/26/96	8/26/96	8/26/96	8/26/96
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.18	0.19	0.19	0.56
MS % Recovery:	90	95	95	93
Dup. Result:	0.18	0.18	0.18	0.53
MSD % Recov.:	90	90	90	88
RPD:	0.0	5.4	5.4	5.5
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK082696	BLK082696	BLK082696	BLK082696
Prepared Date:	8/26/96	8/26/96	8/26/96	8/26/96
Analyzed Date:	8/26/96	8/26/96	8/26/96	8/26/96
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
LCS Result:	0.20	0.21	0.21	0.63
LCS % Recov.:	100	105	105	105
MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

SEQUOIA ANALYTICAL

Kevin Follett
Project Manager

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

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 8/20/95
Page 1 of 1

Site Address: 540 Hegenberger Rd, Oakland

WIC#: 204-5508-5900

Shell Engineer: R. Jeff Granberry
Phone No.: 510-675-6168
Fax #: 675-6172

Consultant Name & Address: Cambria, 1144-65th St, Oakland 94608

Consultant Contact: Paul Waite
Phone No.: 510-420-9185
Fax #: 420-9170

Comments:

Sampled by: DJ W

Printed Name: Paul Waite

LAB: Sequoia

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602) 8020	Volatile Organics (EPA 8240) 8240	Test for Disposal	Combination TPH 8015 & BTEX 8020	MTBE 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
01 D-1			X			1						X	X						

CHECK ONE (1) BOX ONLY — CT/DT

- G.W. Monitoring ☐ 4461
- Site Investigation ☒ 4441
- Soil Classify/Disposal ☐ 4442
- Water Classify/Disposal ☐ 4443
- Soil/Air Rem. or Sys. O & M ☐ 4452
- Water Rem. or Sys. O & M ☐ 4453
- Other ☐

TURN AROUND TIME

- 24 hours ☐
- 48 hours ☐
- 15 days ☒ (Normal)
- Other ☐ ____

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

UST AGENCY: _____

Relinquished By (signature):	Printed Name: Paul Waite	Date: 8/21/95 Time: 1005	Received (signature):
Relinquished By (signature):	Printed Name: SUBWAY	Date: 8/21/95 Time: 1143	Received (signature):
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):

Printed Name: J. WRIGHT	Date: 8/22/95 Time: 1005	
Printed Name:	Date: Time:	
Printed Name: W.N Hale	Date: 8/22/95 Time: 1145	

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

Rev. 7/12/93

Shell Oil Chain of Custody

114

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	Client Project ID:	Shell #204-5508-5900	Sampled: Sep 3, 1996
1144 65th Street Ste C	Sample Matrix:	Air	Received: Sep 4, 1996
Oakland, CA 94608	Analysis Method:	EPA 5030/8015 Mod./8020	Reported: Sep 12, 1996
Attention: Paul Waite	First Sample #:	609-0162	

QC Batch Number: GC090696
8020118

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit PPMV	Sample I.D. 609-0162 Air -1
Purgeable Hydrocarbons	2.4	900
Benzene	0.016	6.9
Toluene	0.013	48
Ethyl Benzene	0.012	2.3
Total Xylenes	0.012	14
MTBE:	0.069	420
Chromatogram Pattern:		Gasoline

Quality Control Data

Report Limit Multiplication Factor:	10
Date Analyzed:	9/6/96
Instrument Identification:	HP-11
Surrogate Recovery, %: (QC Limits = 70-130%)	134

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Melissa A. Brewer

Melissa A. Brewer
Client Services Representative

6090162.CAM <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
1144 65th Street Ste C
Oakland, CA 94608
Attention: Paul Waite

Client Project ID: Shell #204-5508-5900
Matrix: Liquid
QC Sample Group: 6090162

Reported: Sep 12, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC090696	GC090696	GC090696	GC090696
	8020118	8020118	8020118	8020118
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	M. Brewer	M. Brewer	M. Brewer	M. Brewer
MS/MSD #:	BLK090696	BLK090696	BLK090696	BLK090696
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/6/96	9/6/96	9/6/96	9/6/96
Analyzed Date:	9/6/96	9/6/96	9/6/96	9/6/96
Instrument I.D.#:	HP-11	HP-11	HP-11	HP-11
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	8.4	8.2	8.1	23
MS % Recovery:	84	82	81	77
Dup. Result:	9.4	9.0	9.1	26
MSD % Recov.:	94	90	91	87
RPD:	11	9.3	12	12
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	11LCS090696	11LCS090696	11LCS090696	11LCS090696
Prepared Date:	9/6/96	9/6/96	9/6/96	9/6/96
Analyzed Date:	9/6/96	9/6/96	9/6/96	9/6/96
Instrument I.D.#:	HP-11	HP-11	HP-11	HP-11
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
LCS Result:	21	22	23	66
LCS % Recov.:	105	110	115	110
MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL, #1271

Melissa A. Brewer

Melissa A. Brewer
Client Services Representative

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

6090916

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No:

Date: 9/3/96

Page 1 of 1

Site Address: 540 Hegenberger Rd

WIC#: 204-5508-5900

Shell Engineer: R. Jeff Granberry — Phone No.: 510.675.6168 Fax #: 675-6172

Consultant Name & Address: Cambria, 1144-65th St. Oakland CA

Consultant Contact: Paul Waite — Phone No.: 510.420-9185 Fax #: 420-9170

Comments:

Sampled by: PW

Printed Name: Paul Waite

LAB: Sequoia

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	MTBE 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
Air-1	9/3				X	1						X	X						
																		6090162	

Analysis Required

CHECK ONE (1) BOX ONLY — CT/DT — TURN AROUND TIME

- G.W. Monitoring — 4461
- Site Investigation — X — 4441 — 24 hours
- Soil Classify/Disposal — 4442 — 48 hours
- Water Classify/Disposal — 4443 — 15 days — X (Normal)
- Soil/Air Rem. or Sys. O & M — 4462 — Other
- Water Rem. or Sys. O & M — 4463 — NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT
- Other

UST AGENCY: Alameda

	Printed Name:	Date:	Time:
Relinquished By (signature):	Paul Waite	9/4	200
Relinquished By (signature):	Neil VanSlambrook	9-4	1730
Relinquished By (signature):			
Received (signature):			
Received (signature):			
Received (signature):	A. Hawkins	9/5/96	1730

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

SENT BY:SEQUOIA ANALYTICAL ; 9-12-96 ; 16:45 ; WALNUT CREEK→ ;# 4

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	Client Proj. ID: 204-5508-5900	Sampled: 09/06/96
1144 65th St. Suite C	Sample Descript: Air-2-Pre-Purge	Received: 09/07/96
Oakland, CA 94608	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/10/96
Attention: Paul Waite	Lab Number: 9609289-01	Reported: 09/11/96

QC Batch Number: GC091096BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ppmV	Sample Results ppmV
TPPH as Gas	1.4	N.D.
Methyl t-Butyl Ether	1.4	N.D.
Benzene	0.016	N.D.
Toluene	**0.013**	**0.029**
Ethyl Benzene	0.012	N.D.
Xylenes (Total)	0.012	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	122

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

Client Project ID: 204-5508-5900
Matrix: Air
Work Order #: 9609289 01

Reported: Sep 12, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC091096BTEX17A	GC091096BTEX17A	GC091096BTEX17A	GC091096BTEX17A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	R.Burton	R.Burton	R.Burton	R.Burton
MS/MSD #:	9608l1704	9608l1704	9608l1704	9608l1704
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/10/96	9/10/96	9/10/96	9/10/96
Analyzed Date:	9/10/96	9/10/96	9/10/96	9/10/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	11	10	30
MS % Recovery:	110	110	100	100
Dup. Result:	12	11	11	33
MSD % Recov.:	120	110	110	110
RPD:	8.7	0.0	9.5	9.5
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK090996	BLK090996	BLK090996	BLK090996
Prepared Date:	9/10/96	9/10/96	9/10/96	9/10/96
Analyzed Date:	9/10/96	9/10/96	9/10/96	9/10/96
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	9.8	9.3	28
LCS % Recov.:	100	98	93	93
MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

SEQUOIA ANALYTICAL

Kevin Follett
Project Manager

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

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 9/6/96
Page 1 of 1

Site Address: 540 Hegenberger, Oakland

WIC#: 204-5508-5900

Shell Engineer: Jeff Granberry
Phone No.: 510-675-6176
Fax #: 675-6172

Consultant Name & Address: 1144 65th St, Suite C
Cambria Environmental Tech. Inc.

Consultant Contact: Paul Waite
Phone No.: 510-420-0700
Fax #: 420-9170

Comments:

Sampled by: [signature]

Printed Name: Paul Waite

LAB: Seqwia

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	MTBE 8020		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
Air-2-Pre-Purge	9/6	6:30 pm			X	1						X	X							
Air-2-Post Purge	9/6	6:45 pm				1														HOLD
																			9609289	

CHECK ONE (1) BOX ONLY — CT/DT

- G.W. Monitoring ☐ 4461
- Site Investigation ☒ 4441
- Soil Classify/Disposal ☐ 4442
- Water Classify/Disposal ☐ 4443
- Soil/Air Rem. or Sys. O & M ☐ 4452
- Water Rem. or Sys. O & M ☐ 4453
- Other ☐

TURN AROUND TIME

- 24 hours ☐
- 48 hours ☐
- 15 days ☒ (Normal)
- Other ☐ _____

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

Relinquished By (signature): [signature]	Printed Name: Paul Waite	Date: 9/7/96 Time: 1:15	Received (signature):
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature):
Relinquished By (signature):	Printed Name:	Date: Time:	Received (signature): [signature]

Printed Name:		Date: Time:
Printed Name:		Date: Time:
Printed Name: LDCardenas		Date: 9-7-96 Time: 1315

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

Rev. 7/1/93

Shell Oil Chain of Custody

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	Client Proj. ID: Shell, 204-5508-5900, Oakland	Sampled: 09/19/96
1144 65th St. Suite C	Sample Descript: Air 919-2	Received: 09/20/96
Oakland, CA 94608	Matrix: AIR	
	Analysis Method: 8015Mod/8020	Analyzed: 09/20/96
Attention: Paul Waite	Lab Number: 9609B76-01	Reported: 09/24/96

QC Batch Number: GC092096BTEX17A
Instrument ID: GCHP17

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**25**	**170**
Methyl t-Butyl Ether	25	N.D.
Benzene	0.25	N.D.
Toluene	**0.25**	**1.9**
Ethyl Benzene	0.25	N.D.
Xylenes (Total)	**0.25**	**0.54**
Chromatogram Pattern:		
Gas & Unidentified HC		**<C8**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	183 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Kevin Follett
Project Manager

SEP 24 '96 12:42 SEQUOIA ANALYTICAL P.2

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date:
Page 1 of 1

Site Address: 540 Hegenberger Rd, Oakland

WIC#: 204-5508-5900

Shell Engineer: R. Jeff Granberry — Phone No.: 510-675-6168 — Fax #:

Consultant Name & Address: Cambria 1144-65th St, Oakland CA

Consultant Contact: Paul Waite — Phone No.: 510-420-0155 — Fax #: 420-9170

Comments:

Sampled by:

Printed Name:

LAB: Sequoia

Analysis Required

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	MTBE 8020	9609876	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
Air 919-1	9/19				X	1														Hold
Air 919-2	9/19				X	1						X	X							
Air 919-3	9/19				X	1														Hold

CHECK ONE (1) BOX ONLY — CT/DT — TURN AROUND TIME

	CT/DT	TURN AROUND TIME
G.W. Monitoring	4461	24 hours ☐
Site Investigation	☒ 4441	48 hours ☒
Soil Classify/Disposal	4442	15 days ☐ (Normal)
Water Classify/Disposal	4443	Other ☐ ____
Soil/Air Rem. or Sys. O & M	4452	NOTE: Notify lab as soon as Possible of 24/48 hr. TAT.
Water Rem. or Sys. O & M	4453	
Other	☐	

UST AGENCY: Alameda

Relinquished By (signature)	Printed Name	Date / Time	Received (signature)	Printed Name	Date / Time
S. Ranganathan	SAM RANGARAJAN	Date: 9/20/96 Time: 3PM	Heather Hess	M. Hess	Date: 9-20-96 Time: 3:00
Heather Hess		Date: Time:			Date: Time:
		Date: Time:	L Cardenas	L D Cardenas	Date: 9-20-96 Time: 1609

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

SEP 24 '96 12:43 SEQUOIA ANALYTICAL P.3

CAMBRIA

ATTACHMENT C

Standard Field Procedures for Soil Sampling

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.