

## C A M B R I A

April 10, 2001

Larry Seto  
 Alameda Health Care Services Agency  
 1131 Harbor Bay Parkway, Room 250  
 Oakland, California 94502-6577

Re: **Site Investigation Report**  
 Former Shell-branded Service Station  
 2160 Otis Drive  
 Alameda, California  
 Incident # 98995140  
 Cambria Project # 243-0627

APR 13 2001



Dear Mr. Seto:

Cambria Environmental (Cambria) has prepared this report on behalf of Equiva Services LLC. The work was performed in response to a February 10, 1998 Alameda County Health Care Service Agency (ACHCSA) letter requesting the installation of one groundwater monitoring well downgradient of the former onsite underground fuel storage tanks (USTs). The investigation was delayed due to construction of an OfficeMax onsite and access negotiations with the property owner. The investigation was performed in accordance with Cambria's March 25, 1998 work plan and included installation of one groundwater monitoring well in the downgradient direction from the former USTs and product dispensers. The site background and investigation results are presented below.

## SITE BACKGROUND

This former Shell Service Station is located on Otis Drive, between Willow and Park Streets, in Alameda, California approximately 3,000 feet east of San Francisco Bay. Shell discontinued operation of the station in September 1997, demolished the aboveground facilities, and removed the USTs and piping.

Based on the results of more than five years of groundwater monitoring, the ACHCSA granted no further action status on November 14, 1995 for a waste-oil tank release. During the groundwater monitoring between 1989 and 1995, the depth to groundwater at this site varied between 3 and 5 feet with a flow direction of north-northeast. Groundwater samples

Oakland, CA  
 San Ramon, CA  
 Sonoma, CA

**Cambria  
 Environmental  
 Technology, Inc.**

1144 65th Street  
 Suite B  
 Oakland, CA 94608  
 Tel (510) 420-0700  
 Fax (510) 420-9170

# C A M B R I A

collected from former wells MW-1 and MW-2 on October 11, 1994 contained over 6,500 milligrams per liter of total dissolved solids, which exceeds state guidelines for use as a drinking water source.

**August 1997 Pre-Characterization Sampling:** On August 1, 1997, soil samples were collected near the gasoline tanks to pre-characterize soils before the tanks were removed. Of the 40 samples analyzed, the maximum benzene concentration was 0.15 milligrams per kilogram (mg/kg). No benzene was detected in 35 of the samples. The maximum total petroleum hydrocarbons as gasoline (TPHg) detected in the samples was 46 mg/kg. No TPHg was detected in 30 of the samples.



**September 1997 Tank Removal Sampling:** On September 4, 1997, Paradiso Mechanical of San Leandro, California removed three 10,000-gallon fiberglass gasoline USTs and one 550-gallon fiberglass waste-oil tank, as well as associated gasoline product piping, vent piping, and dispensers. Cambria collected soil samples from near the ends of the former gasoline tanks and the waste-oil tank. Grab groundwater samples were collected from the gasoline tank and the waste-oil tank excavations. Cambria also collected six soil samples from beneath the former dispensers and product piping and one soil sample from beneath each of two former hoists and the former garage oil/water separator. The tank removal and sampling activities were documented in Cambria's October 3, 1997 *Tank Removal and Sampling Report*. Although petroleum hydrocarbons were detected in the grab groundwater samples from both tank pits, no petroleum hydrocarbons were detected in the soil sample from near the waste oil tank pit and only low petroleum hydrocarbons (no TPHg, maximum 0.11 mg/kg benzene, maximum 0.49 mg/kg methyl tert-butyl ether [MTBE]) were reported (by EPA Method 8020) in the soil samples collected around the gasoline tank pit. Maximum concentrations of 270 mg/kg TPHg, 1.7 mg/kg benzene, and 0.32 mg/kg MTBE were detected in shallow soil samples collected beneath the former dispensers.

**December 1997 Geoprobe® Investigation:** On December 17, 1997, Cambria collected soil and/or grab groundwater samples from Geoprobe® G-1 through G-5. The complete sampling activities and analytical results are documented in Cambria's January 28, 1998 *Investigation Report*. No TPHg, total extractable petroleum hydrocarbons as diesel (TPHd), or benzene, toluene, ethylbenzene or total xylenes (BTEX) were detected in any of the soil samples from near the former gasoline tanks, waste oil tank, or from the northern corner of the property. One soil sample collected near the gasoline tank pit contained 0.28 mg/kg of MTBE by (EPA Method 8020). No MTBE was detected in any other soil sample collected from any location onsite. Of the four soil samples collected from the former dispenser areas, only one contained detectable concentrations of TPHg (5.2 mg/kg) or benzene (0.0059 mg/kg).

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No TPHg, BTEX, or MTBE were detected in the grab groundwater sample collected from the northern corner of the site. Maximum concentrations of 2,900 µg/kg (parts per billion) TPHg, 240 µg/kg benzene, and 920 µg/kg MTBE (by EPA Method 8020) were detected in the two grab groundwater samples collected directly downgradient of the former dispensers and gasoline tanks.

## INVESTIGATION PROCEDURES



Using a hollow-stem auger drill rig, Cambria installed one 2-inch diameter monitoring well onsite. The well location is shown on Figure 1. Cambria's *Standard Field Procedures for Monitoring Wells* are included as Attachment A.

**Permit:** Monitoring well installation permit # W00-576 was obtained from the City of Oakland. A copy of the permit is included as Attachment B.

**Drilling Date:** November 2, 2000.

**Drilling Company:** Gregg Drilling of Martinez, California (C-57 License #485165).

<b>Personnel Present:</b>	<b>Title:</b>	<b>Company:</b>
Shannon Couch	Staff Geologist	Cambria
Rich Nessinger	Driller	Gregg Drilling

**Soil Lithology:** The area is underlain primarily by sands and silty sands to a depth of approximately 19.5 feet below grade (fbg), the maximum explored depth onsite. The well log is included as Attachment C.

**Soil Sampling:** During well installation activities, Cambria collected soil samples at approximately five-foot intervals to the depth of first-encountered groundwater. Soil samples were collected using a split-spoon sampling device. All samples were submitted to Sequoia Analytical of Morgan Hill, California for chemical analyses. Analytical results for soil samples are summarized in Table 1. Laboratory analytical results are presented as Attachment D.

**Groundwater:** Groundwater was first observed in MW-3 at approximately 15.5 fbg. Groundwater stabilized at approximately 8.5 fbg during the well installation activities.

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**Laboratory Analyses:** Soil samples from MW-3 were analyzed for:

- TPHg and TPHd by EPA Method 8015, and
- BTEX and MTBE by EPA Method 8020.

Analytical results for soil samples are summarized in Table 1. Laboratory analytical reports are presented as Attachment D.

**Well Development and Sampling:** The well was properly developed and sampled by Blaine Tech Services (Blaine) of San Jose, California in March 2001. The well will be sampled quarterly and groundwater monitoring results will be presented in forthcoming quarterly monitoring reports. During each sampling event, Blaine will gauge and collect samples from MW-3 and submit them to a State-certified laboratory for analyses. Groundwater samples from MW-3 will be analyzed using the same EPA methods used for soil samples during this investigation.

**Soil Disposal:** Drill cuttings from this project were stored onsite in a secure 55-gallon drum prior to subsequent characterization and disposal at Forward landfill in Manteca, California. The soil cuttings analytical data is presented as Attachment E.

## FINDINGS


No TPHg, BTEX or MTBE were detected in any soil samples collected. TPHd was detected at 7.00 mg/kg in soil sample MW-3 at 6.5 fbg. Laboratory analytical results for soil samples are summarized in Table 1. Laboratory analytical reports are included in Attachment D.


**C A M B R I A**  
**CLOSING**


Larry Seto  
April 10, 2001

We appreciate the opportunity to work with you on this project. Please call Stephan Bork at (510) 420-3344 if you have any questions or comments.

Sincerely,  
**Cambria Environmental Technology, Inc.**



  
Troy Buggle  
Project Scientist

  
Stephan Bork, C.E.G., C.H.G.  
Associate Hydrogeologist

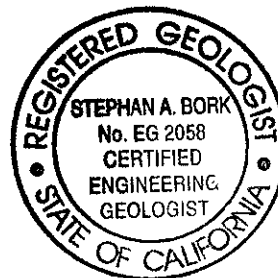


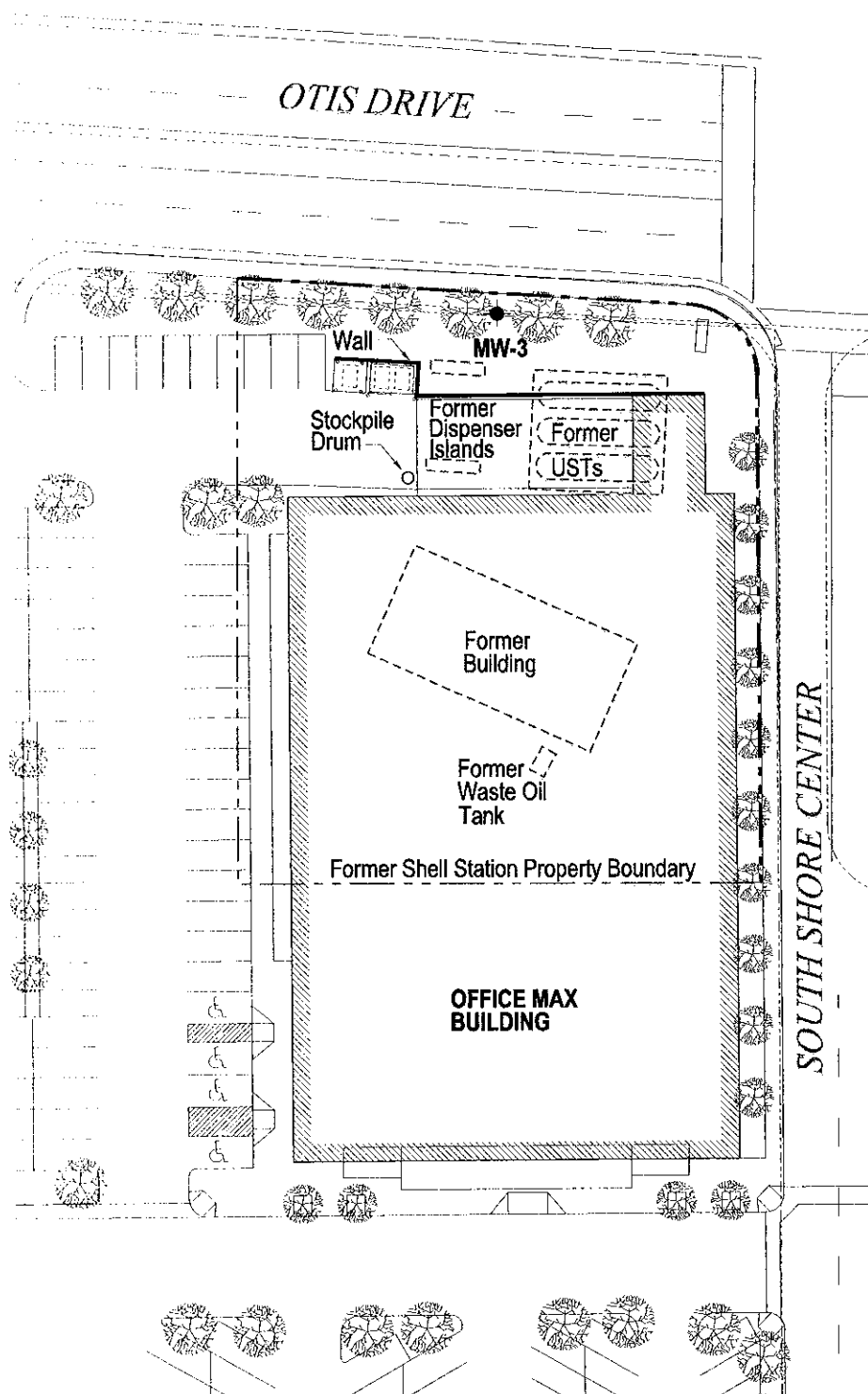
Figure: 1 - Site Plan

Table: 1 - Soil Analytical Data

Attachments: A - Standard Procedures for Monitoring Wells  
B - Drilling Permit  
C - Well Log  
D - Laboratory Analytical Results for Soil and Groundwater Samples  
E - Soil Cuttings Laboratory Analytical Results

cc: Ms. Karen Petryna, Equiva Service LLC, P.O. Box 7869, Burbank, CA 91510-7869  
Mr. Preston Niette, Harsch Investment Group, 523 W. Plaza, Alameda, CA 94501

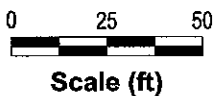
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Approximate Groundwater Gradient Direction

**EXPLANATION**

MW-3 ● Monitoring well location



Scale (ft)

FIGURE

**1**

G:\ALAMEDA\2160 OTIS\FIGURES\SITEPLAN.DWG

**Former Shell Service Station**

2160 Otis Street  
Alameda, California  
Incident #98995140



C A M B R I A

**Site Plan**

**Table 1. Soil Analytical Data - Former Shell Service Station, Incident # 98995140, 2160 Otis Drive, Alameda, California**

Sample ID	Depth (ft)	Date Sampled	TPHg ←	TPHd	MTBE	Concentrations reported in milligrams per kilogram (mg/kg or ppm)				→ Xylenes
						Benzene	Toluene	Ethylbenzene		
MW-3-6.5	6.5	11/2/00	<1.00	<b>7.00</b>	<0.0500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
MW-3-10.5	10.5	11/2/00	<1.00	<1.00	<0.0500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
MW-3-17.5	17.5	11/2/00	<1.00	<1.00	<0.0500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

**Notes and Abbreviations:**

TPHg = Total petroleum hydrocarbons as gasoline

TPHd = Total petroleum hydrocarbons as diesel

All analyses performed by EPA Method 8260B

<n = Below detection limit of n mg/kg

NA = not analyzed

**ATTACHMENT A**

**Standard Field Procedures for Monitoring Wells**



# CAMBRIA

## STANDARD FIELD PROCEDURES FOR MONITORING WELLS

This document describes Cambria Environmental Technology's standard field methods for drilling, installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

### Well Construction and Surveying

Groundwater monitoring wells are installed in soil borings to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 feet below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two ft above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I,II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security. The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

### Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

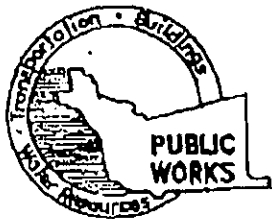
All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

### Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

**ATTACHMENT B**

**Drilling Permit**



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION  
399 ELMHURST STR. HAYWARD, CA 94544  
PHONE (510) 670-5554  
FAX (510) 782-1939

## DRILLING PERMIT APPLICATION

### FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 2160 OTIS DRIVE  
ALAMEDA CA  
(FORMER SHELL STATION)

CLIENT  
Name EQUIVA SERVICES LLC  
Address P.O. Box 70100 Phone \_\_\_\_\_  
City DALLAS TX Zip 75210

APPLICANT  
Name CAMBRIA ENVIRONMENTAL TECHNOLOGY INC.  
Address 1144 105TH STREET SW Phone 510.420.0700  
City DAYLAND, CA Zip 94608

TYPE OF PROJECT  
Well Construction  Geotechnical Investigation   
Cathodic Protection  General   
Water Supply  Contamination   
Monitoring  Well Destruction

PROPOSED WATER SUPPLY WELL USE  
New Domestic  Replacement Domestic   
Municipal  Irrigation   
Industrial  Other \_\_\_\_\_

DRILLING METHOD:  
Mud Rotary  Air Rotary  Auger   
Cable  Other  HCA

DRILLER'S LICENSE NO. CS7-495-165  
Gregg Drilling

WELL PROJECTS  
Drill Hole Diameter 7 in. Maximum Depth 15 ft.  
Casing Diameter 1 in. Number MW1  
Surface Seal Depth 2-3 ft.

GEOTECHNICAL PROJECTS  
Number of Borings \_\_\_\_\_ Maximum Depth \_\_\_\_\_ ft.  
Hole Diameter \_\_\_\_\_ in.

ESTIMATED STARTING DATE OCT 100  
ESTIMATED COMPLETION DATE OCT 3100

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [Signature] DATE 31AUG00

### FOR OFFICE USE

PERMIT NUMBER W00-576  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

### PERMIT CONDITIONS Circled Permit Requirements Apply

- A. GENERAL**
  - 1. permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
  - 2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources - **WELL COMPLETION REPORT**
  - 3. Permit to void if project not begun within 90 days of approval date.
- B. WATER SUPPLY WELLS**
  - 1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
  - 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
- C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**
  - 1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
  - 2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
- D. GEOTECHNICAL**  
Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material in areas of known or suspected contamination. Grouted cement grout shall be used in place of compacted cuttings.
- E. CATHODIC**  
Fill hole above anode zone with concrete placed by tremie.
- F. WELL DESTRUCTION**  
See attached.
- G. SPECIAL CONDITIONS**

APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

**ATTACHMENT C**

**Well Log**



Cambria Environmental Technology, Inc.  
 1144 - 65th St.  
 Oakland, CA 94608  
 Telephone: (510) 420-0700  
 Fax: (510) 420-9170

# BORING/WELL LOG

<b>CLIENT NAME</b>	Equiva Services LLC	<b>BORING/WELL NAME</b>	MW-3
<b>JOB/SITE NAME</b>	Office Max	<b>DRILLING STARTED</b>	02-Nov-00
<b>LOCATION</b>	2160 Otis Drive, Alameda, CA	<b>DRILLING COMPLETED</b>	02-Nov-00
<b>PROJECT NUMBER</b>	242-0627	<b>WELL DEVELOPMENT DATE (YIELD)</b>	NA
<b>DRILLER</b>	Gregg Drilling	<b>GROUND SURFACE ELEVATION</b>	
<b>DRILLING METHOD</b>	Hollow-stem auger	<b>TOP OF CASING ELEVATION</b>	NA
<b>BORING DIAMETER</b>	8"	<b>SCREENED INTERVAL</b>	3.5 to 18.5 ft bgs
<b>LOGGED BY</b>	S. Couch	<b>DEPTH TO WATER (First Encountered)</b>	15.5 ft (02-Nov-00) ▽
<b>REVIEWED BY</b>	S. Bork, RG# 5620	<b>DEPTH TO WATER (Static)</b>	8.5 ft (02-Nov-00) ▽

**REMARKS** Hand augered to 5 fbg. Located 71 feet north of the northwest corner of South Shore Center and Otis Drive in the planter, 18 feet

PID (ppm)	TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
			MW-3-6.5		5	SP		<b>FILL</b> greyish-brown; moist; 65% clay, 10% silt, 20% sand, 5% gravel.	2.0	<p>Portland Type I/II Cement            Bentonite Seal            Monterey Sand #2/12            2"-diameter, 0.010" Slotted Schedule 40 PVC            Bottom of Boring @ 18.5 ft</p>
			MW-3-10.5		10	SM		<b>SAND (SP)</b> ; light brown; moist; 5% silt, 95% sand; low plasticity; high estimated permeability.  @ 5 fbg - grey. @ 6 fbg - brown; damp; 100% sand.	9.0	
			MW-3-17.5		15			<b>Silty SAND (SM)</b> ; greyish-brown; damp; 15% silt, 85% sand.  @ 14 fbg - grey; wet.	15.5	
					18.5			@ 17 fbg - reddish-brown; wet; 20% silt, 80% sand; low plasticity; moderate estimated permeability.	18.5	

WELL LOG (PID/TPHG) G:\ALAMEDA-2\GINTY\ALAM2160.GPJ\_DEFAULT.GDT 12/18/00

**ATTACHMENT D**

**Laboratory Analytical Reports for Soil and Groundwater Samples**



# Sequoia Analytical

1551 Industrial Road  
San Carlos, CA 94070-4111  
(650) 232-9600  
FAX (650) 232-9612  
www.sequoialabs.com

November 17, 2000

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

RE: Shell(1)/L011052

Dear Troy Buggle:

Enclosed are the results of analyses for sample(s) received by the laboratory on November 3, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Latonya Pelt  
Project Manager

CA ELAP Certificate Number I-2360





Cambria Environmental 1144 65th St., Suite C. Oakland, CA 94608	Project: Shell(1) Project Number: 2160 Otis Drive, Alameda Project Manager: Troy Buggle	Sampled: 11/2/00 Received: 11/3/00 Reported: 11/17/00
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**ANALYTICAL REPORT FOR L011052**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-3-6.5	L011052-01	Soil	11/2/00
MW-3-10.5	L011052-02	Soil	11/2/00
MW-3-17.5	L011052-03	Soil	11/2/00







# Sequoia Analytical

1551 Industrial Road  
 San Carlos, CA 94070-4111  
 (650) 232-9600  
 FAX (650) 232-9612  
 www.sequoialabs.com

Cambria Environmental 1144 65th St., Suite C. Oakland, CA 94608	Project: Shell(1) Project Number: 2160 Otis Drive, Alameda Project Manager: Troy Buggle	Sampled: 11/2/00 Received: 11/3/00 Reported: 11/17/00
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**Sample Description:** MW-3-6.5  
**Laboratory Sample Number:** L011052-01

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT**

Purgeable Hydrocarbons as Gasoline	0110054	11/10/00	11/11/00		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	"	"	60.0-140		84.0	%	

**Diesel Hydrocarbons (C9-C24) by DHS LUFT**

Diesel Range Hydrocarbons	OK13033	11/13/00	11/15/00	DHS LUFT	1.00	7.00	mg/kg	1
<i>Surrogate: n-Pentacosane</i>	"	"	"	50-150		126	%	



Cambria Environmental 1144 65th St., Suite C. Oakland, CA 94608	Project: Shell(1) Project Number: 2160 Otis Drive, Alameda Project Manager: Troy Buggle	Sampled: 11/2/00 Received: 11/3/00 Reported: 11/17/00
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**Sample Description:** MW-3-10.5  
**Laboratory Sample Number:** L011052-02

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT**

Purgeable Hydrocarbons as Gasoline	0110054	11/10/00	11/11/00		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	"	"	60.0-140		93.0	%	

**Diesel Hydrocarbons (C9-C24) by DHS LUFT**

Diesel Range Hydrocarbons	0K13033	11/13/00	11/15/00	DHS LUFT	1.00	ND	mg/kg	
<i>Surrogate: n-Pentacosane</i>	"	"	"	50-150		89.8	%	





Cambria Environmental 1144 65th St., Suite C. Oakland, CA 94608	Project: Shell(1) Project Number: 2160 Otis Drive, Alameda Project Manager: Troy Buggle	Sampled: 11/2/00 Received: 11/3/00 Reported: 11/17/00
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**Sample Description:** MW-3-17.5  
**Laboratory Sample Number:** L011052-03

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
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**Sequoia Analytical - San Carlos**

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT**

Purgeable Hydrocarbons as Gasoline	0110054	11/10/00	11/11/00		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	"	"	"	60.0-140		85.0	%	

**Diesel Hydrocarbons (C9-C24) by DHS LUFT**

Diesel Range Hydrocarbons	0K13033	11/13/00	11/15/00	DHS LUFT	1.00	ND	mg/kg	
<i>Surrogate: n-Pentacosane</i>	"	"	"	50-150		89.8	%	





Cambria Environmental 1144 65th St., Suite C. Oakland, CA 94608	Project: Shell(1) Project Number: 2160 Otis Drive, Alameda Project Manager: Troy Buggle	Sampled: 11/2/00 Received: 11/3/00 Reported: 11/17/00
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control**  
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 0110054</b>		<b>Date Prepared: 11/9/00</b>			<b>Extraction Method: EPA 5030B [P/T]</b>					
<b>Blank</b>		<b>0110054-BLK1</b>								
Purgeable Hydrocarbons as Gasoline	11/9/00			ND	mg/kg	1.00				
Benzene	"			ND	"	0.00500				
Toluene	"			ND	"	0.00500				
Ethylbenzene	"			ND	"	0.00500				
Xylenes (total)	"			ND	"	0.00500				
Methyl tert-butyl ether	"			ND	"	0.0500				
Surrogate: a,a,a-Trifluorotoluene	"	0.200		0.215	"	60.0-140	108			
<b>Blank</b>		<b>0110054-BLK2</b>								
Purgeable Hydrocarbons as Gasoline	11/10/00			ND	mg/kg	1.00				
Benzene	"			ND	"	0.00500				
Toluene	"			ND	"	0.00500				
Ethylbenzene	"			ND	"	0.00500				
Xylenes (total)	"			ND	"	0.00500				
Methyl tert-butyl ether	"			ND	"	0.0500				
Surrogate: a,a,a-Trifluorotoluene	"	0.200		0.245	"	60.0-140	123			
<b>Blank</b>		<b>0110054-BLK3</b>								
Purgeable Hydrocarbons as Gasoline	11/13/00			ND	mg/kg	1.00				
Benzene	"			ND	"	0.00500				
Toluene	"			ND	"	0.00500				
Ethylbenzene	"			ND	"	0.00500				
Xylenes (total)	"			ND	"	0.00500				
Methyl tert-butyl ether	"			ND	"	0.0500				
Surrogate: a,a,a-Trifluorotoluene	"	0.200		0.257	"	60.0-140	128			
<b>LCS</b>		<b>0110054-BS1</b>								
Benzene	11/9/00	0.200		0.235	mg/kg	70.0-130	117			
Toluene	"	0.200		0.210	"	70.0-130	105			
Ethylbenzene	"	0.200		0.214	"	70.0-130	107			
Xylenes (total)	"	0.600		0.605	"	70.0-130	101			
Surrogate: a,a,a-Trifluorotoluene	"	0.200		0.236	"	60.0-140	118			
<b>LCS</b>		<b>0110054-BS2</b>								
Purgeable Hydrocarbons as Gasoline	11/9/00	5.00		4.87	mg/kg	70.0-130	97.4			
Surrogate: a,a,a-Trifluorotoluene	"	0.200		0.225	"	60.0-140	112			
<b>LCS</b>		<b>0110054-BS3</b>								
Benzene	11/10/00	0.200		0.242	mg/kg	70.0-130	121			
Toluene	"	0.200		0.224	"	70.0-130	112			



Cambria Environmental 1144 65th St., Suite C. Oakland, CA 94608	Project: Shell(1) Project Number: 2160 Otis Drive, Alameda Project Manager: Troy Buggle	Sampled: 11/2/00 Received: 11/3/00 Reported: 11/17/00
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control**  
**Sequoia Analytical - San Carlos**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>LCS (continued)</b>										
<b>0110054-BS3</b>										
Ethylbenzene	11/10/00	0.200		0.230	mg/kg	70.0-130	115			
Xylenes (total)	"	0.600		0.662	"	70.0-130	110			
Surrogate: a,a,a-Trifluorotoluene	"	0.200		0.242	"	60.0-140	121			
<b>LCS</b>										
<b>0110054-BS4</b>										
Purgeable Hydrocarbons as Gasoline	11/10/00	5.00		4.51	mg/kg	70.0-130	90.2			
Surrogate: a,a,a-Trifluorotoluene	"	0.200		0.201	"	60.0-140	101			
<b>LCS</b>										
<b>0110054-BS5</b>										
Benzene	11/13/00	0.200		0.235	mg/kg	70.0-130	117			
Toluene	"	0.200		0.217	"	70.0-130	108			
Ethylbenzene	"	0.200		0.225	"	70.0-130	112			
Xylenes (total)	"	0.600		0.634	"	70.0-130	106			
Surrogate: a,a,a-Trifluorotoluene	"	0.200		0.248	"	60.0-140	124			
<b>LCS</b>										
<b>0110054-BS6</b>										
Purgeable Hydrocarbons as Gasoline	11/13/00	5.00		4.83	mg/kg	70.0-130	96.6			
Surrogate: a,a,a-Trifluorotoluene	"	0.200		0.211	"	60.0-140	105			
<b>Matrix Spike</b>										
<b>0110054-MS1      L011097-01</b>										
Purgeable Hydrocarbons as Gasoline	11/10/00	5.00	ND	5.93	mg/kg	60.0-140	119			
Surrogate: a,a,a-Trifluorotoluene	"	0.200		0.176	"	60.0-140	88.0			
<b>Matrix Spike Dup</b>										
<b>0110054-MSD1      L011097-01</b>										
Purgeable Hydrocarbons as Gasoline	11/10/00	5.00	ND	4.91	mg/kg	60.0-140	98.2	25.0	19.2	
Surrogate: a,a,a-Trifluorotoluene	"	0.200		0.166	"	60.0-140	83.0			



Cambria Environmental 1144 65th St., Suite C. Oakland, CA 94608	Project: Shell(1) Project Number: 2160 Otis Drive, Alameda Project Manager: Troy Buggle	Sampled: 11/2/00 Received: 11/3/00 Reported: 11/17/00
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**Diesel Hydrocarbons (C9-C24) by DHS LUFT/Quality Control  
Sequoia Analytical - Morgan Hill**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 0K13033</b>	<b>Date Prepared: 11/13/00</b>			<b>Extraction Method: EPA 3580A</b>						
<b>Blank</b>	<b>0K13033-BLK1</b>									
Diesel Range Hydrocarbons	11/15/00			ND	mg/kg	1.00				
Surrogate: n-Pentacosane	"	1.67		1.60	"	50-150	95.8			
<b>LCS</b>	<b>0K13033-BS1</b>									
Diesel Range Hydrocarbons	11/15/00	16.7		18.6	mg/kg	60-140	111			
Surrogate: n-Pentacosane	"	1.67		1.80	"	50-150	108			
<b>Matrix Spike</b>	<b>0K13033-MS1</b>		<b>MJK0272-01</b>							
Diesel Range Hydrocarbons	11/15/00	16.7	1.00	18.4	mg/kg	50-150	104			
Surrogate: n-Pentacosane	"	1.67		1.70	"	50-150	102			
<b>Matrix Spike Dup</b>	<b>0K13033-MSD1</b>		<b>MJK0272-01</b>							
Diesel Range Hydrocarbons	11/15/00	16.7	1.00	18.5	mg/kg	50-150	105	50	0.542	
Surrogate: n-Pentacosane	"	1.67		1.60	"	50-150	95.8	6.07		





Cambria Environmental 1144 65th St., Suite C. Oakland, CA 94608	Project: Shell(1) Project Number: 2160 Otis Drive, Alameda Project Manager: Troy Buggle	Sampled: 11/2/00 Received: 11/3/00 Reported: 11/17/00
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### Notes and Definitions

#	Note
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- 1 Chromatogram Pattern: Unidentified Hydrocarbons C9-C24
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- Recov. Recovery
- RPD Relative Percent Difference



Lab Name: *Sequoia (San Carlos)*

**EQUIVA Services LLC**

**CHAIN OF CUSTODY RECORD**

Lab Address:

*LaTonya (PM)*  
TEL: *(50) 232-9600* FAX: ( )

Company Contact(s) for invoice:

*Troy Buggle*  
Technical Services

INCIDENT NUMBER

*98995140*

DATE: *11/02/00*

PAGE: \_\_\_\_\_

OF \_\_\_\_\_

EQUIVA PROJECT CONSULTANT (Name and Company): *Troy Buggle*  
**CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.**

SITE ADDRESS:

*2160 OTIS DRIVE ALAMEDA, CA*

ADDRESS: *1144 65TH STREET*

EQUIVA CONTACT:

*KAREN PETRYNA*

CONSULTANT PROJECT NO.:

*242-0627*

CITY: *OAKLAND, CA*

SAMPLER(S): (SIGNATURE)

*[Signature]*

TEL: *510.420.0700* FAX: *510.420.9170* E-MAIL: *scovch@Cambria3-env.com*

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)  
 10 DAYS  5 DAYS  72 HR  48 HR  24 HR  <24 HR

**REQUESTED ANALYSIS**

LA-RWQCB REPORT FORMAT UST AGENCY:  
MTBE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BORING \_\_\_\_\_ ALL

SPECIAL INSTRUCTIONS OR NOTES: *TEMPERATURE ON RECEIPT (C)*

*L011052*

LAB USE ONLY	Field Sample Identification	SAMPLING		MAT-RIX	NO. OF CONT.	TPH - Purgeable (8015m)	TPH - Extractable (8015m)	BTEX / MTBE (8021B)	BTEX / MTBE + Oxygenates (8260B)	VOCs Full List + Oxygenates (8260B)	MTBE Confirmation, See Note	Ethanol, Methanol (8015B)	Metals (Specify)	TRPH (418.1)	Methane (RSK-175)	Ferrous Iron +2	Sulfate, Nitrate (300.0)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (4B- )	Other:	Field PID/Reading or Laboratory Notes
		DATE	TIME																					
<i>01</i>	<i>MW-3-6.5</i>	<i>11/2/00</i>		<i>SO1</i>	<i>?</i>	<i>X</i>	<i>X</i>	<i>X</i>			<i>X</i>													<i>✓</i>
<i>02</i>	<i>MW-3-10.5</i>	<i>11/2/00</i>		<i>SO1</i>	<i>1</i>	<i>X</i>	<i>X</i>	<i>X</i>			<i>X</i>													<i>0 ppm</i>
<i>03</i>	<i>MW-3-17.5</i>	<i>11/2/00</i>		<i>SO1</i>	<i>1</i>	<i>X</i>	<i>X</i>	<i>X</i>			<i>X</i>													<i>0 ppm</i>

Relinquished by: (Signature)

*[Signature]*

*11/2/00*

Received by: (Signature)

*[Signature]*

Date: *11/3*

Time: *1120*

Relinquished by: (Signature)

*[Signature]*

Received by: (Signature)

*[Signature]*

Date: *11/3*

Time: *110 PM*

Relinquished by: (Signature)

Received by: (Signature)

Date:

Time:



**ATTACHMENT E**  
**Soil Cuttings Results**



# Sequoia Analytical

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885 Jarvis Drive  
Morgan Hill, CA 95037  
(408) 776-9600  
FAX (408) 782-6308  
[www.sequoialabs.com](http://www.sequoialabs.com)

22 November, 2000

Troy Buggle  
Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland, CA 94608

RE: Shell (8 or more day TAT)  
Sequoia Report: MJK0277

Enclosed are the results of analyses for samples received by the laboratory on 11/03/00 11:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wayne Stevenson  
Client Services Manager

CA ELAP Certificate #1210



Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Buggle

**Reported:**  
11/22/00 08:45

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-1	MJK0277-01	Soil	11/02/00 00:00	11/03/00 11:20
SP-2	MJK0277-02	Soil	11/02/00 00:00	11/03/00 11:20
SP-3	MJK0277-03	Soil	11/02/00 00:00	11/03/00 11:20
SP-4	MJK0277-04	Soil	11/02/00 00:00	11/03/00 11:20
SP-(1,2,3,4)	MJK0277-05	Soil	11/02/00 00:00	11/03/00 11:20

Sequoia Analytical - Morgan Hill

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

  
Wayne Stevenson, Client Services Manager





Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Buggle

**Reported:**  
11/22/00 08:45

**Diesel Hydrocarbons (C9-C24) by DHS LUFT  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-1 (MJK0277-01) Soil Sampled: 11/02/00 00:00 Received: 11/03/00 11:20</b>									
Diesel Range Hydrocarbons	2.40	1.00	mg/kg	1	0K13033	11/13/00	11/15/00	DHS LUFT	D-15
Surrogate: n-Pentacosane		89.8 %	50-150		"	"	"	"	
<b>SP-2 (MJK0277-02) Soil Sampled: 11/02/00 00:00 Received: 11/03/00 11:20</b>									
Diesel Range Hydrocarbons	1.90	1.00	mg/kg	1	0K13033	11/13/00	11/15/00	DHS LUFT	D-15
Surrogate: n-Pentacosane		89.8 %	50-150		"	"	"	"	
<b>SP-3 (MJK0277-03) Soil Sampled: 11/02/00 00:00 Received: 11/03/00 11:20</b>									
Diesel Range Hydrocarbons	4.70	1.00	mg/kg	1	0K13033	11/13/00	11/15/00	DHS LUFT	D-15
Surrogate: n-Pentacosane		102 %	50-150		"	"	"	"	
<b>SP-4 (MJK0277-04) Soil Sampled: 11/02/00 00:00 Received: 11/03/00 11:20</b>									
Diesel Range Hydrocarbons	4.50	1.00	mg/kg	1	0K13033	11/13/00	11/15/00	DHS LUFT	D-15
Surrogate: n-Pentacosane		89.8 %	50-150		"	"	"	"	





Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Buggle

**Reported:**  
11/22/00 08:45

**Total Metals by EPA 6000/7000 Series Methods  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-(1,2,3,4) (MJK0277-05) Soil Sampled: 11/02/00 00:00 Received: 11/03/00 11:20</b>									
Lead	ND	10.2	mg/kg	1	0K13012	11/13/00	11/14/00	EPA 6010A	





Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Buggle

**Reported:**  
11/22/00 08:45

**STLC CAM Metals by EPA 6000/7000 Series Methods**

**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-(1,2,3,4) (MJK0277-05) Soil</b> <b>Sampled: 11/02/00 00:00</b> <b>Received: 11/03/00 11:20</b>									
Lead	ND	0.200	mg/l	1	0K14020	11/13/00	11/14/00	EPA 6010A	





Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Buggle

**Reported:**  
11/22/00 08:45

## Total Purgeable Hydrocarbons by DHS LUFT Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-1 (MJK0277-01) Soil</b> Sampled: 11/02/00 00:00 Received: 11/03/00 11:20									
Purgeable Hydrocarbons as Gasoline	ND	1.00	mg/kg	1	0110078	11/14/00	11/15/00	DHS LUFT	
Surrogate: a,a,a-Trifluorotoluene		91.5 %	60.0-140		"	"	"	"	
<b>SP-2 (MJK0277-02) Soil</b> Sampled: 11/02/00 00:00 Received: 11/03/00 11:20									
Purgeable Hydrocarbons as Gasoline	ND	1.00	mg/kg	1	0110078	11/14/00	11/15/00	DHS LUFT	
Surrogate: a,a,a-Trifluorotoluene		82.5 %	60.0-140		"	"	"	"	
<b>SP-3 (MJK0277-03) Soil</b> Sampled: 11/02/00 00:00 Received: 11/03/00 11:20									
Purgeable Hydrocarbons as Gasoline	ND	1.00	mg/kg	1	0110078	11/14/00	11/15/00	DHS LUFT	
Surrogate: a,a,a-Trifluorotoluene		87.5 %	60.0-140		"	"	"	"	
<b>SP-4 (MJK0277-04) Soil</b> Sampled: 11/02/00 00:00 Received: 11/03/00 11:20									
Purgeable Hydrocarbons as Gasoline	ND	1.00	mg/kg	1	0110078	11/14/00	11/15/00	DHS LUFT	
Surrogate: a,a,a-Trifluorotoluene		80.0 %	60.0-140		"	"	"	"	



Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Buggle

**Reported:**  
11/22/00 08:45

**BTEX by DHS LUFT**  
**Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-(1,2,3,4) (MJK0277-05) Soil</b> <b>Sampled: 11/02/00 00:00</b> <b>Received: 11/03/00 11:20</b>									
Benzene	ND	0.00500	mg/kg	1	0110078	11/14/00	11/15/00	DHS LUFT	
Toluene	ND	0.00500	"	"	"	"	"	"	
Ethylbenzene	ND	0.00500	"	"	"	"	"	"	
Xylenes (total)	ND	0.00500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		90.0 %	60.0-140		"	"	"	"	





Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Buggle

**Reported:**  
11/22/00 08:45

**MTBE by DHS LUFT  
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-(1,2,3,4) (MJK0277-05) Soil</b> <b>Sampled: 11/02/00 00:00</b> <b>Received: 11/03/00 11:20</b>									
Methyl tert-butyl ether	ND	0.0500	mg/kg	1	0110078	11/14/00	11/15/00	DHS LUFT	
Surrogate: a,a,a-Trifluorotoluene		90.0 %	60.0-140		"	"	"	"	





Cambria - Oakland (Shell) 1144 65th St. Suite C Oakland CA, 94608	Project: Shell (8 or more day TAT) Project Number: 2160 Otis Dr., Alameda CA Project Manager: Troy Buggle	<b>Reported:</b> 11/22/00 08:45
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**Organic Lead by DHS LUFT  
Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-(1,2,3,4) (MJK0277-05) Soil</b> <b>Sampled: 11/02/00 00:00</b> <b>Received: 11/03/00 11:20</b>									
Organic Lead	ND	1.0	mg/kg	5	0K13019	11/13/00	11/14/00	DHS LUFT	





Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Buggle

**Reported:**  
11/22/00 08:45

**Diesel Hydrocarbons (C9-C24) by DHS LUFT - Quality Control  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 0K13033 - EPA 3580A</b>										
<b>Blank (0K13033-BLK1)</b>				Prepared: 11/13/00 Analyzed: 11/15/00						
Diesel Range Hydrocarbons	ND	1.00	mg/kg							
Surrogate: <i>n</i> -Pentacosane	1.60		"	1.67		95.8	50-150			
<b>LCS (0K13033-BS1)</b>				Prepared: 11/13/00 Analyzed: 11/15/00						
Diesel Range Hydrocarbons	18.6	1.00	mg/kg	16.7		111	60-140			
Surrogate: <i>n</i> -Pentacosane	1.80		"	1.67		108	50-150			
<b>Matrix Spike (0K13033-MS1)</b>				Source: MJK0272-01 Prepared: 11/13/00 Analyzed: 11/15/00						
Diesel Range Hydrocarbons	18.4	1.00	mg/kg	16.7	1.00	104	50-150			
Surrogate: <i>n</i> -Pentacosane	1.70		"	1.67		102	50-150			
<b>Matrix Spike Dup (0K13033-MSD1)</b>				Source: MJK0272-01 Prepared: 11/13/00 Analyzed: 11/15/00						
Diesel Range Hydrocarbons	18.5	1.00	mg/kg	16.7	1.00	105	50-150	0.542	50	
Surrogate: <i>n</i> -Pentacosane	1.60		"	1.67		95.8	50-150			





Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Buggle

**Reported:**  
11/22/00 08:45

**Total Metals by EPA 6000/7000 Series Methods - Quality Control  
Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 0K13012 - EPA 3050B</b>										
<b>Blank (0K13012-BLK1)</b>										
				Prepared: 11/13/00 Analyzed: 11/14/00						
Lead	ND	10.0	mg/kg							
<b>LCS (0K13012-BS1)</b>										
				Prepared: 11/13/00 Analyzed: 11/14/00						
Lead	52.2	10.0	mg/kg	50.0		104	80-120			
<b>Matrix Spike (0K13012-MS1)</b>										
				Source: MJK0372-01		Prepared: 11/13/00 Analyzed: 11/14/00				
Lead	128	10.2	mg/kg	51.0	19.6	213	80-120			Q-02
<b>Matrix Spike Dup (0K13012-MSD1)</b>										
				Source: MJK0372-01		Prepared: 11/13/00 Analyzed: 11/14/00				
Lead	117	9.71	mg/kg	48.5	19.6	201	80-120	8.98	20	Q-02





Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Buggle

**Reported:**  
11/22/00 08:45

**STLC CAM Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Sequoia Analytical - Morgan Hill**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 0K14020 - Title 22-STLC</b>										
<b>Blank (0K14020-BLK1)</b>										
Prepared & Analyzed: 11/14/00										
Lead	ND	0.200	mg/l							
<b>Blank (0K14020-BLK2)</b>										
Prepared & Analyzed: 11/14/00										
Lead	ND	0.200	mg/l							
<b>LCS (0K14020-BS1)</b>										
Prepared & Analyzed: 11/14/00										
Lead	2.09	0.200	mg/l	2.00		104	80-120			
<b>Matrix Spike (0K14020-MS1)</b>										
Source: MJK0372-01 Prepared & Analyzed: 11/14/00										
Lead	3.33	0.200	mg/l	2.00	0.716	131	80-120			Q-02
<b>Matrix Spike Dup (0K14020-MSD1)</b>										
Source: MJK0372-01 Prepared & Analyzed: 11/14/00										
Lead	3.36	0.200	mg/l	2.00	0.716	132	80-120	0.897	20	Q-02





Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Buggle

**Reported:**  
11/22/00 08:45

**Total Purgeable Hydrocarbons by DHS LUFT - Quality Control  
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 0110078 - EPA 5030B [P/T]</b>										
<b>Blank (0110078-BLK1)</b>										
Prepared & Analyzed: 11/14/00										
Purgeable Hydrocarbons as Gasoline	ND	1.00	mg/kg							
Surrogate: a,a,a-Trifluorotoluene	0.231		"	0.200		116	60.0-140			
<b>LCS (0110078-BS1)</b>										
Prepared & Analyzed: 11/14/00										
Surrogate: a,a,a-Trifluorotoluene	0.219		mg/kg	0.200		109	60.0-140			
<b>LCS (0110078-BS2)</b>										
Prepared & Analyzed: 11/14/00										
Purgeable Hydrocarbons as Gasoline	4.70	1.00	mg/kg	5.00		94.0	70.0-130			
Surrogate: a,a,a-Trifluorotoluene	0.224		"	0.200		112	60.0-140			
<b>Matrix Spike (0110078-MS1)</b>										
Source: MJK0277-01 Prepared & Analyzed: 11/14/00										
Surrogate: a,a,a-Trifluorotoluene	0.202		mg/kg	0.200		101	60.0-140			
<b>Matrix Spike Dup (0110078-MSD1)</b>										
Source: MJK0277-01 Prepared & Analyzed: 11/14/00										
Surrogate: a,a,a-Trifluorotoluene	0.193		mg/kg	0.200		96.5	60.0-140			





Cambria - Oakland (Shell)  
1144 65th St. Suite C  
Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Bugge

Reported:  
11/22/00 08:45

## BTEX by DHS LUFT - Quality Control Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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### Batch 0110078 - EPA 5030B [P/T]

#### Blank (0110078-BLK1)

Prepared & Analyzed: 11/14/00

Benzene	ND	0.00500	mg/kg							
Toluene	ND	0.00500	"							
Ethylbenzene	ND	0.00500	"							
Xylenes (total)	ND	0.00500	"							
Surrogate: a,a,a-Trifluorotoluene	0.231		"	0.200		116	60.0-140			

#### LCS (0110078-BS1)

Prepared & Analyzed: 11/14/00

Benzene	0.225	0.00500	mg/kg	0.200		112	70.0-130			
Toluene	0.210	0.00500	"	0.200		105	70.0-130			
Ethylbenzene	0.212	0.00500	"	0.200		106	70.0-130			
Xylenes (total)	0.612	0.00500	"	0.600		102	70.0-130			
Surrogate: a,a,a-Trifluorotoluene	0.219		"	0.200		109	60.0-140			

#### LCS (0110078-BS2)

Prepared & Analyzed: 11/14/00

Surrogate: a,a,a-Trifluorotoluene	0.224		mg/kg	0.200		112	60.0-140			
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		Source: MJK0277-01		Prepared & Analyzed: 11/14/00						
Benzene	0.209	0.00500	mg/kg	0.200	ND	105	60.0-140			
Toluene	0.192	0.00500	"	0.200	ND	96.0	60.0-140			
Ethylbenzene	0.197	0.00500	"	0.200	ND	98.5	60.0-140			
Xylenes (total)	0.561	0.00500	"	0.600	ND	93.5	60.0-140			
Surrogate: a,a,a-Trifluorotoluene	0.202		"	0.200		101	60.0-140			

#### Matrix Spike Dup (0110078-MSD1)

Source: MJK0277-01 Prepared & Analyzed: 11/14/00

Benzene	0.198	0.00500	mg/kg	0.200	ND	99.0	60.0-140	5.88	25.0	
Toluene	0.182	0.00500	"	0.200	ND	91.0	60.0-140	5.35	25.0	
Ethylbenzene	0.187	0.00500	"	0.200	ND	93.5	60.0-140	5.21	25.0	
Xylenes (total)	0.538	0.00500	"	0.600	ND	89.7	60.0-140	4.15	25.0	
Surrogate: a,a,a-Trifluorotoluene	0.193		"	0.200		96.5	60.0-140			



Cambria - Oakland (Shell) 1144 65th St. Suite C Oakland CA, 94608	Project: Shell (8 or more day TAT) Project Number: 2160 Otis Dr., Alameda CA Project Manager: Troy Buggle	Reported: 11/22/00 08:45
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**MTBE by DHS LUFT - Quality Control  
Sequoia Analytical - San Carlos**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 0110078 - EPA 5030B [P/T]**

**Blank (0110078-BLK1)** Prepared & Analyzed: 11/14/00

Methyl tert-butyl ether	ND	0.0500	mg/kg							
Surrogate: a,a,a-Trifluorotoluene	0.231		"	0.200		116	60.0-140			

**LCS (0110078-BS1)** Prepared & Analyzed: 11/14/00

Methyl tert-butyl ether	1.11	0.0500	mg/kg				70.0-130			
Surrogate: a,a,a-Trifluorotoluene	0.219		"	0.200		109	60.0-140			

**LCS (0110078-BS2)** Prepared & Analyzed: 11/14/00

Surrogate: a,a,a-Trifluorotoluene	0.224		mg/kg	0.200		112	60.0-140			
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**Matrix Spike (0110078-MS1)** Source: MJK0277-01 Prepared & Analyzed: 11/14/00

Methyl tert-butyl ether	0.970	0.0500	mg/kg		ND		60.0-140			
Surrogate: a,a,a-Trifluorotoluene	0.202		"	0.200		101	60.0-140			

**Matrix Spike Dup (0110078-MSD1)** Source: MJK0277-01 Prepared & Analyzed: 11/14/00

Methyl tert-butyl ether	0.929	0.0500	mg/kg		ND		60.0-140		25.0	
Surrogate: a,a,a-Trifluorotoluene	0.193		"	0.200		96.5	60.0-140			







Cambria - Oakland (Shell)  
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**Reported:**  
11/22/00 08:45

**Organic Lead by DHS LUFT - Quality Control**  
**Sequoia Analytical - Walnut Creek**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 0K13019 - LUFT-DHS</b>										
<b>Blank (0K13019-BLK1)</b>										
Organic Lead	ND	1.0	mg/kg							Prepared: 11/13/00 Analyzed: 11/14/00
<b>LCS (0K13019-BS1)</b>										
Organic Lead	13.0	1.0	mg/kg	20.0		65.0	10-110			Prepared: 11/13/00 Analyzed: 11/14/00
<b>LCS Dup (0K13019-BSD1)</b>										
Organic Lead	12.7	1.0	mg/kg	20.0		63.5	10-110	2.33	20	Prepared: 11/13/00 Analyzed: 11/14/00
<b>Matrix Spike (0K13019-MS1)</b>										
Organic Lead	4.45	1.0	mg/kg	20.0	ND	22.2	0-62			Source: W011241-01 Prepared: 11/13/00 Analyzed: 11/14/00
<b>Matrix Spike Dup (0K13019-MSD1)</b>										
Organic Lead	4.85	1.0	mg/kg	20.0	ND	24.2	0-62	8.60	20	Source: W011241-01 Prepared: 11/13/00 Analyzed: 11/14/00



Cambria - Oakland (Shell)  
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Oakland CA, 94608

Project: Shell (8 or more day TAT)  
Project Number: 2160 Otis Dr., Alameda CA  
Project Manager: Troy Buggle

**Reported:**  
11/22/00 08:45

### Notes and Definitions

D-15 Chromatogram Pattern: Unidentified Hydrocarbons C9-C24

Q-02 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Lab Name: Sequoia (San Carlos)

# EQUIVA Services LLC

## CHAIN OF CUSTODY RECORD

Lab Address:

Company Contact(s) for Invoice:

INCIDENT NUMBER

DATE: 11/02/00

Joy Buggle  
Technical Services

98995140

PAGE: 1 OF 1

EQUIVA PROJECT CONSULTANT (Name and Company):

CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

SITE ADDRESS:

2160 OTIS DRIVE ALAMEDA, CA

ADDRESS: 1144 65TH STREET

CITY: OAKLAND, CA

EQUIVA CONTACT: KAREN PETRYNA

CONSULTANT PROJECT NO.: 242-0627

TEL: 510.420.0700

FAX: 510.420.9170

E-MAIL: Search@Cambria2-env.com

SAMPLER(S) SIGNATURE: *[Signature]*

LAB USE ONLY: 

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TURNAROUND TIME (BUSINESS DAYS)

10 DAYS  5 DAYS  72 HR  48 HR  24 HR  <24 HR

*MJK0277*

REQUESTED ANALYSIS

LA-RWQCB REPORT FORMAT UST AGENCY:

MTBE CONFIRMATION: HIGHEST \_\_\_\_\_ HIGHEST per BORING \_\_\_\_\_ ALL

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

TPHg test needs to be run on individual samples & on composite.  
If TLC lead is  $\geq$  13 mg/kg then run Organic Lead.  
If TLC lead is  $\geq$  50 mg/kg then run STLC lead.

LAB USE ONLY	Field Sample Identification	SAMPLING		MAT-RIX	NO. OF CONT.	TPH - Purgeable (8015m)	TPH - Extractable (8015m)	BTEX / MTBE (8021B)	BTEX / MTBE + Oxygenates (8260B)	VOCs Full List + Oxygenates (8260B)	MTBE Confirmation, See Note	Ethanol, Methanol (8015B)	Metals (Specify) <i>TLC STLC</i> <i>11-TLC 3-50 mg/kg - Organic Lead</i> <i>TPH (418.1) 13 mg/kg</i>	Methane (RSK-175)	Ferrous Iron +2	Sulfate, Nitrate (300.0)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (4B- )	Other:	Field PID Reading or Laboratory Notes		
		DATE	TIME																						
	SP - (1-4)	11/2/00		soil	4	X		X			X		X												

Relinquished by: (Signature) <i>[Signature]</i>	Date: 11/2/00	Received by: (Signature) <i>[Signature]</i>	Date: 11/3	Time: 11:20
Relinquished by: (Signature) <i>[Signature]</i>	Date: <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: 11/3	Time: 12:10
Relinquished by: (Signature) <i>[Signature]</i>	Date: <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: 11/3	Time: 12:40

11/2/00 19:40 PM