

Denis L. Brown

**Shell Oil Products US** 

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February 13, 2006

Jerry Wickham Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Re:

Site Investigation Report

Shell-branded Service Station

5755 Broadway Oakland, California SAP Code 135699 Incident #98995756

Dear Mr. Wickham:

Attached for your review and comment is a copy of the *Site Investigation Report* for the above referenced site. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown

Sr. Environmental Engineer

RECEIVED

By lopprojectop at 4:02 pm, Feb 15, 2006

February 13, 2006

Jerry Wickham Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Re: Site Investigation Report

Shell-branded Service Station 5755 Broadway Oakland, California Incident #98995756 ACHCSA Case # RO-0026 Cambria Project #248-0483-008



Dear Mr. Wickham:

Cambria Environmental Technology, Inc. (Cambria) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document the activities proposed in Cambria's October 13, 2005 *Site Investigation Work Plan*. The purpose was to conduct additional on-site investigation of two areas where a recent geophysical survey identified anomalies consistent with potential buried tanks or drums, and one area where site inspection revealed gray soils similar to those observed in the tank pit sidewall adjacent to the geophysical anomalies. Cambria followed the proposed scope of work approved in Alameda County Health Care Services Agency (ACHCSA) correspondence dated October 27, 2005 and performed the work in accordance with ACHCSA and San Francisco Bay Regional Water Quality Control Board guidelines.

#### SITE LOCATION AND DESCRIPTION

Site Description: This Shell-branded service station is located on the northern corner of the Broadway and Taft Street intersection in a mixed commercial and residential area of Oakland, California (Figures 1 and 2). Current site features include three gasoline underground storage tanks (USTs), four dispenser islands, a station building, and a temporary groundwater extraction (GWE) system with an aboveground storage tank.

Cambria Environmental Technology, Inc.

5900 Hollis Street Suite A Emeryville, CA 94608 Tel (510) 420-0700 Fax (510) 420-9170

#### **PREVIOUS WORK**



1985 Soil and Groundwater Investigation: In June 1985, EMCON Associates (EMCON) conducted a subsurface investigation that consisted of advancing two on-site soil borings and converting one boring into groundwater monitoring well S-1. The maximum total petroleum hydrocarbons as gasoline (TPHg) detected in soil was 3 parts per million (ppm) in S-A at 5.5 feet below grade (fbg). No soil analytical data was obtained from S-1. A groundwater sample collected from S-1 on July 3, 1985 contained 2,400 parts per billion (ppb) TPHg and 240 ppb benzene. Figure 2 shows well and boring locations. Soil and groundwater analytical results are presented in Tables 1 and 2, respectively. EMCON's August 1, 1985 report presents investigation details.

1989 Well Installation: In September 1989, Harding Lawson Associates installed on-site groundwater monitoring wells S-2 and S-3. Cambria's historical files are limited and do not contain a report by Harding Lawson Associates regarding this phase of investigation. Available soil analytical data reported in a subsequent Weiss Associates (WA) report (Soil Sampling and Sanitary Sewer Upgrade, June 18, 1993) is presented in Table 1. Soil sample S-2-1 collected from S-2 at 3 fbg contained 92 ppm TPHg and 0.12 ppm benzene.

1992 Product Release and Tank Backfill Well Purging: In December, 1992, Gettler-Ryan of Hayward, California replaced a defective pipe fitting reported to have released approximately 200 gallons of unleaded gasoline.

Tank backfill well purging was conducted on a daily basis from December 24, 1992 through January 7, 1993, at which point the free product originally observed in the well was reduced to a sheen. According to Shell records, a total of approximately 40,000 gallons of water mixed with gasoline was purged from the tank backfill wells.

1993 Soil Sampling and Sanitary Sewer Upgrade: Concurrent with purging free product from tank backfill wells, three trenches at the site's southeast corner were excavated to identify hydrocarbon-impacted areas near sewer piping. Soil samples were collected within the trench excavations from 1.5 to 12 fbg. The highest TPHg and benzene concentrations detected in sewer trench excavation samples were 1,300 and 1.1 ppm, respectively, in sample S-J at 4 fbg (Figure 2, Table 1).

The on-site sanitary sewer piping and portions of the off-site sewer piping were replaced with piping resistant to hydrocarbon penetration. Additionally, a horizontal GWE well was installed within the excavated sewer trench below a section of sewer piping. A grout barrier was also installed in the sewer trench to prevent further off-site migration of residual hydrocarbons. Approximately 126 cubic yards of soil were excavated during sewer upgrade activities. WA's June 18, 1993 Soil Sampling and Sanitary Sewer Upgrade report presents details of the soil investigation, sewer replacement, grout barrier installation, and horizontal well installation.



1998 Dispenser Upgrade: In March, 1998, Paradiso Mechanical of San Leandro, California upgraded the station's dispensers and UST turbine pumps. Soil samples, collected below each dispenser, showed field indications of hydrocarbons, including odor and soil discoloration. The maximum TPHg, benzene, and methyl tertiary butyl ether (MTBE) concentrations detected in soil were 990, 1.8, and 25 ppm, respectively, in sample D-4 at 2 fbg (Figure 2, Table 1). Cambria's April 9, 1998 Dispenser Sampling Report presents details of the dispenser upgrade activities.

2002 Soil Borings: In August 2002, Cambria advanced 11 soil borings as proposed in our January 24, 2002 On/Offsite Subsurface Investigation Work Plan. The maximum TPHg concentration detected in soil was 260 ppm in B-5 at 5.5 fbg (B-5-5.5). The maximum benzene concentration detected in soil was 0.096 ppm in B-9 at 5 fbg (B-9-5.0). The only MTBE detection in soil was 0.9 ppm in B-9 at 5 fbg (B-9-5.0). Grab groundwater samples collected from these borings contained maximum concentrations of 66,000 ppb TPHg in B-8-W, 1,800 ppb benzene in B-10-W, and 9,100 ppb MTBE in B-10-W. No TPHg, benzene, toluene, ethylbenzene, and xylenes (BTEX), or MTBE was detected in soil or groundwater samples collected from borings B-2 through B-4, drilled adjacent to utility conduits in Taft Street. Sample locations are shown on Figure 2. Soil and groundwater analytical data are presented in Tables 1 and 2, respectively. Investigation results are presented in Miller Brooks' October 21, 2002 Subsurface Investigation Report.

2001-2003 Interim Remediation Activities: Mobile GWE using a vacuum truck was conducted periodically at the site from April to November 2000. A single dual-phase vacuum extraction (DVE) event was performed at the site on February 7, 2001, and monthly mobile DVE was conducted at the site from May to November 2001. GWE and DVE have extracted approximately 20,038 gallons of groundwater from wells S-2, H-1, and T-2, and removed 0.46 pounds of MTBE. Cambria suspended monthly DVE from wells S-2 and H-1 due to the low influent volume of groundwater from S-2 and the low influent MTBE concentrations from H-1.

2003 Proposed GWE System: Cambria submitted a March 14, 2003 Interim Remedial Work Plan describing the proposed installation of a GWE system. Building permits were obtained from the City of Oakland and a groundwater discharge permit was obtained from East Bay Municipal

Utilities District. Due to the localized nature of the groundwater impact, plans for installing a fixed GWE system were suspended, and a temporary GWE system was installed to pump from well S-2.

2003 Temporary GWE System: Temporary GWE system operation began on October 28, 2003. Groundwater is extracted from the well using an electric submersible pump installed in well S-2. Extracted water is stored on site in a Baker tank, and periodically removed by a vacuum truck for off-site disposal. Through November 10, 2004, the temporary GWE system has removed a total of 18,355 gallons of water, which corresponds to an average flow rate of approximately 0.03 gallons per minute. A total of 0.49 pounds of MTBE has been recovered. The system was shut down in December 2004 during fuel system upgrade activities (described below), and remained off until upgrade activities were completed. The temporary GWE system remained off during the third quarter 2005 due to low MTBE concentrations across the site, but was restarted on October 14, 2005 due to increasing MTBE concentrations.



2004-5 Fuel System Upgrade Activities: Fillner Construction, Inc. (Fillner) of Rocklin, California initiated fuel system upgrade activities at the site during November 2004. On November 19, 2004, a water line was apparently damaged during the construction activities. On November 20, 2004, station personnel observed that water leaking from the broken line had entered the tank backfill and caused the uncovered tanks to float in the tank excavation. Cambria and Shell personnel responded at the site and secured the tanks. Piping had been previously disconnected from the tanks. Cambria observed a small amount of fuel dripping from one of the tank sumps. Shell estimates that less than 0.1 gallon of fuel was lost. Fillner used a bucket to contain the fuel until the sump was repaired. Absorbent cloths were used to remove fuel from within the tank backfill.

On December 17, 2004, Fillner coordinated and directed the removal of three 10,000-gallon double-walled fiberglass gasoline USTs. As the Oakland Fire Department requested, a groundwater sample (TP-GW-1) was collected from the tank pit on this day. On January 31, 2005, Cambria collected soil samples from the northwestern, northern, and eastern UST excavation sidewalls at the soil-water interface, in the approximate locations of the former USTs. Four samples (TP-1-14, TP-2-14, TP-3-14, and TP-4-14) were collected at a depth of approximately 14 fbg. On February 9, 2005, Cambria collected soil samples from the southeastern, southern, and southwestern UST excavation sidewalls at the soil-water interface, in the approximate locations of the former USTs. Four samples (TP-5-14, TP-6-14, TP-7-14, and TP-8-14) were collected at a depth of approximately 14 fbg (Figure 2).

While digging in the tank pit with an excavator on January 31, 2005, Fillner uncovered visibly hydrocarbon-impacted soil or fill material in the northeast corner of the tank pit. Based on the soil type, this material appeared to be non-native fill. As requested by Oakland Fire Department, to investigate the potential for unidentified tanks or drums which could be the source of the

hydrocarbons impacting the non-native soils, Cambria directed a limited geophysical survey of the triangular region in the northeastern portion of the site. Of the four geophysical anomalies identified during the geophysical survey, two had features consistent with buried objects such as drums or USTs (Figure 2).

On February 17, 2005, Cambria collected soil samples from beneath the former dispensers (D-1-2, D-2-2, D-3-2, and D-4-2) and former piping (P-1-1, P-2-2 and P-3-2) from native soil at depths between 1 and 2 fbg (Figure 2). On February 24, 2005, Cambria directed limited over-excavation in the dispenser and piping areas. Seven confirmation samples (D-1-4', D-2'6', D-3-6', D-4-4', P-1-6', P-2-4' and P-3-6') were collected at the vertical extents of excavation (Figure 2).



Upgrade activities also included repaving the site. During a June 2005 site inspection after pavement removal northeast of the USTs, Cambria observed an area of gray-colored soil approximately 15 feet from the UST pit, near the geophysical anomaly areas (Figure 2). The gray soil appeared similar to the hydrocarbon-impacted soils observed in the UST pit sidewall following UST removal.

During upgrade activities, a total of approximately 291,077 gallons of groundwater was removed from the tank pit area using pumps, on-site storage tanks, and vacuum trucks. Based on groundwater analytical data for a recent sample collected from the tank pit (TP-GW-1), an estimated 0.08 pounds of MTBE were removed during upgrade activities. Fuel system upgrade soil sampling, soil excavation, and geophysical survey activities are presented in Cambria's August 9, 2005 report.

*Groundwater Depth and Flow Direction:* Depth to groundwater has ranged from 0.5 to 7.4 fbg since groundwater monitoring was initiated in January of 1991. The groundwater gradient is generally to the south.

#### **INVESTIGATION SUMMARY**

Cambria oversaw the advancement of three hand-auger soil borings (SB-12, SB-13, and SB-14) at the locations shown on Figure 2. Bedrock was encountered at depths ranging from 5.5 to 8 fbg in the soil borings. Subsequent refusal prevented advancing hand-auger equipment to the proposed depth of 10 fbg. Cambria presents our standard field procedures for hand-auger soil borings in Attachment A and summarizes the details of this subsurface investigation below.

Cambria Personnel Present: Cambria senior staff scientist Stewart Dalie directed the field

activities, working under the supervision of California

Professional Geologist Aubrey Cool.

**Permit:** Cambria obtained a soil boring permit (Permit # W2005-1107)

from the Alameda County Public Works Agency

(Attachment B).

Drilling Company: Gregg Drilling and Testing, Inc. of Martinez, California,

C57 License No. 485165.

Drilling Date: November 18, 2005

**Drilling Method:** 3-inch hand-auger.

Number of Boring: Three, 3-inch hand-auger soil borings were advanced on site.

Figure 2 shows boring locations.

Boring Depths: Soil boring SB-12 was advanced to 6.5 fbg, and SB-13 and

SB-14 were advanced to 8.5 fbg.

Groundwater Depths: Cambria did not observe groundwater in any soil borings during

this investigation.

Soil Sampling Methods: Cambria logged soil types using the Unified Soil Classification

System. Encountered soils are described in the boring logs presented in Attachment C. Cambria collected soil samples at selected intervals for soil description, headspace analysis, and potential chemical analysis. Cambria screened soil samples from the boring for the presence of organic vapors using a photo-ionization detector (PID). PID readings are recorded on

the boring logs.

Soil Classification: Soils consisted of clay (CL) and silt (ML) to between 5 and

7 fbg, underlain by a silty gravel (GM) lens in all three boring locations. The silty gravel lens extends to between 5.5 and 8 fbg, before grading into bedrock. Highly fractured, angular shale bedrock is consistent with previous investigation results,

and was observed at the bottom of all three borings.

Chemical Analyses:

Selected soil samples from borings SB-12, SB-13, and SB-14 were analyzed for TPHg, BTEX, MTBE, di-isopropyl ether (DIPE), tertiary amyl methyl ether (TAME), ethyl tertiary butyl ether (ETBE), tertiary butyl alcohol (TBA), 1,2-dichloroethane (1,2 DCA), and ethylene dibromide (EDB) by EPA Method 8260B, for total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015M, and for total oil and grease (TOG) by EPA Method 9071B. State-certified Severn Trent Laboratories of Pleasanton, California performed the analyses. The certified analytical laboratory report is included in Attachment D.

3

Soil Disposal:

Cambria temporarily stored soil generated during the field activities in drums on site pending laboratory analysis, waste characterization, and disposal. The laboratory report is included in Attachment D. On December 20, 2005, Manley and Sons Trucking, Inc. of Sacramento, California transported the soil to Allied Waste Industries' Forward Landfill in Manteca, California for disposal as non-hazardous waste. Soil disposal confirmation is included as Attachment E.

#### INVESTIGATION RESULTS

Analytical Results in Soil: TPHg was detected at concentrations of 100, 180, and 99 ppm in soil samples SB-12-5, SB-13-5, and SB-14-5, respectively. TPHd was detected at concentrations ranging from 2.2 to 68 ppm in all soil samples collected during this investigation except SB-14-8. However, the analytical report indicated that the hydrocarbons reported as diesel are in the early or late diesel range and/or do not match the laboratory diesel standard. Benzene and toluene were not detected in any soil samples collected during this investigation. Ethylbenzene was detected at 0.84 and 0.0072 ppm in soil samples SB-13-5 and SB-13-8, respectively. Total xylenes were detected at 1.9 and 0.014 ppm in soil samples SB-13-5 and SB-13-8, respectively. No fuel oxygenates (MTBE, TAME, ETBE, DIPE, and TBA) or lead scavengers (1,2 DCA and EDB) were detected in any soil samples collected during this investigation. TOG was detected at 210 and 300 ppm in soil samples SB-12-2, and SB-14-2, respectively.

Table 1 summarizes soil chemical analytical data, and Figure 2 presents TPHg, TPHd, benzene, and TOG concentrations. The laboratory analytical report is included in Attachment D.

#### **CONCLUSIONS**

Cambria advanced three hand-auger soil borings (B-12, B-13, and B-14) to investigate two areas of geophysical anomalies that had features consistent with buried objects such as drums or tanks, and one area where gray-colored soil was observed northeast of the USTs. Bedrock was encountered at depths ranging from 5.5 to 8 fbg, which prevented advancement of hand-auger equipment to the proposed depth of 10 fbg. No tanks, drums, or other potential hydrocarbon sources were encountered. The absence of pea gravel or other fill material suggests that there are no foreign objects buried in the area of investigation.



Soil sample results indicate the presence of petroleum hydrocarbons in shallow soils beneath the site. The diesel range detections in soil do not match the laboratory diesel standard. Analytes detected are consistent with the previously identified petroleum hydrocarbon release at this site, and do not suggest a release from an unknown tank or drum. No further investigation is recommended at this time.

#### CLOSING

We appreciate your continued assistance with this project. Please call Cynthia Vasko at (510) 420-3344 if you have any questions or comments regarding the contents of this report.

Sincerely,

Cambria Environmental Technology, Inc.



Cynthia Vasko Project Engineer

Diane Lundquest, P.E. Principal Engineer

Figures:

1 - Vicinity/Well Survey Map

2 - Soil Chemical Concentration Map

Tables:

1 - Cumulative Soil Analytical Data

2 - Historical Groundwater Analytical Data

Attachments:

A - Standard Field Procedures for Hand-Auger Soil Borings

B - Permit

C - Boring Logs

D - Laboratory Analytical Reports

E - Soil Disposal Confirmation

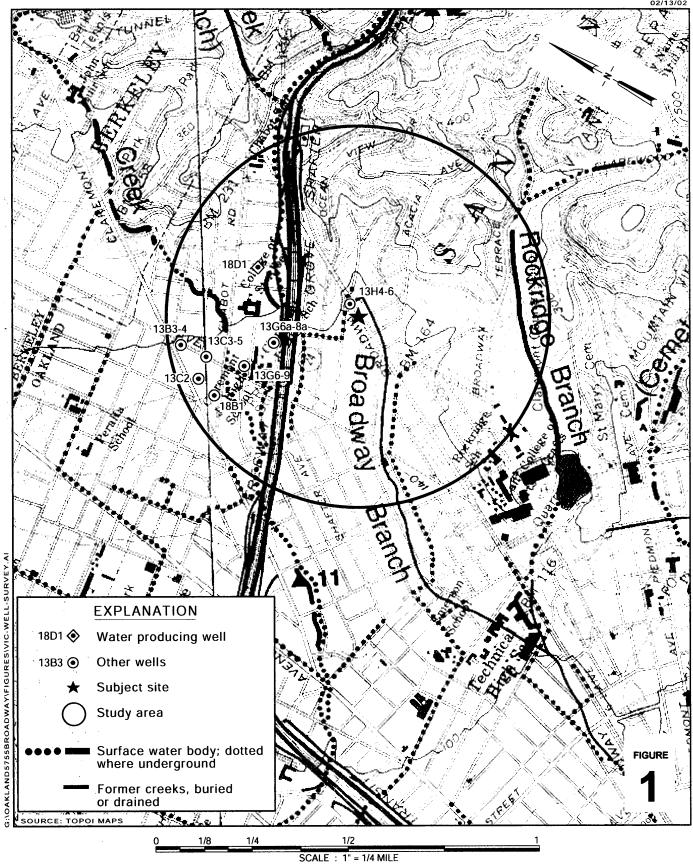
cc:

Denis Brown, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810 Thrifty Oil Company, c/o Mr. Raymond Fredricksen, PO Box 2128, Santa Fe Springs, CA 90670 (property owner)

No. C46725

Keith Matthews, Oakland Fire Department, Hazardous Materials Management Program, 250 Frank H. Ogawa Plaza, Suite 3341 Oakland, California 94612

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**Shell-branded Service Station** 

5755 Broadway
Oakland, California
Incident #98995756

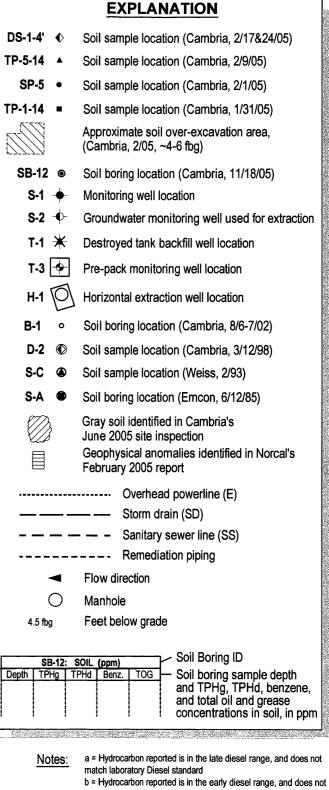


Vicinity / Well Survey Map

(1/2-Mile Radius)

CAMBRIA

Shell-branded

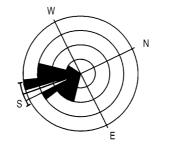


- match laboratory Diesel standard
- c = Hydrocarbon reported does not match the pattern of laboratory diesel standard

**FIGURE** 

5755 Broadway Oakland, California Incident No.98995756

Scale (ft)



Groundwater Flow Direction (09/07/99 to 11/03/05)

S-3 -

T-1

TP-2-14 ■

SP-5,-6 ● SB-12

DS-2-2,

USTs

T-2

P-2-2, P-2-4

**BROADWAY** 

**Shell Station** 

5755 Broadway

B-8 o

P-3-2, P-3-6'

S-1

DS-4-2, DS-4-4'

4" SCH 40 PVC

vertical access pipe to horizontal well H-1

▲TP-6-14

Water Producing Well

Temporary

Groundwater

Extraction

Equipment

**⊚** \_§-E

2.1 fbg

● <sup>18D1</sup>

residential

4" horizontal

aroundwater

extraction well

Location of Nearest Sensitive

Receptor Relative to Site (1,320 ft., N4°W)

B-3

12"ØSD

B-2 °

6.5 fbg

| SB-12: SOIL (ppm) | Depth | TPHg | TPHd | Benz. | TOG | 2 | <1.0 | 8.7a | <0.0050 | 210 |

/SB-13/

•

SB-14

B-11 o DS-1-2, DS-1-4'

SB-13: SOIL (ppm)

Depth TPHg TPHd Benz. TOG 2 <1.0 **2.2c** <0.0050 <100 5 **180 68b** <0.50 <100 8 <1.0 **2.2a** <0.0050 <100

5 **100 34b** <0.50 <100

residential SB-14: SOIL (ppm)

Depth TPHg TPHd Benz. TOG

2 <1.0 9.9a <0.0050 300

5 **99 9.2b** <0.50 <100 8 <1.0 <1.0 <0.0050 <100

4.5 fbg

		: SOIL		
Depth	TPHg	TPHd	Benz.	TOG

Table 1. Cumulative Soil Analytical Data - Shell-branded Service Station, 5755 Broadway, Oakland, California

	Sample	*****	***				Ethyl-	Total					<del></del>			Total Oil	
Sample ID	-	Sample Date	_	TPHd	Benzene	Toluene	benzene	Xylenes	MTBE	ТВА	DIPE	ETBE	TAME	1,2-DCA	EDB	& Grease	Lead
	(fbg)	<del></del>	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
June 1985	<i>EMCON</i>	Soil Borings															
S-A	5.5	6/11/1985	3														
S-A	10	6/11/1985	2														
S-A	11.5	6/11/1985	<2														
September	1989 Hai	rding Lawson \															
S-2-1	3	9/18/1989	92		0.12	0.80	0.58	4.2									
S-3-1	3	9/18/1989	<10		< 0.025	0.062	< 0.025	0.120									
•		s Associates So	-														
S-C	1.5	2/2/1993	7.9		0.094	0.0098	0.12	1.1									
		2444000				•											
S-E	3.5	2/4/1993	150		0.9	2.3	1.5	7.7									
0.5	E	2/4/1002	. 1		0.021	-0.0025	<0.0025	< 0.0025									
S-F	5	2/4/1993	<1		0.021	<0.0025	<0.0023	<0.0023	<del></del>								
0.0	0.5	0/4/1002	. 1		-0.0035	-0.0025	-0.0035	-0.0025									
S-G	2.5	2/4/1993	<1		<0.0025	<0.0025	<0.0025	< 0.0025							<b></b>		
S-H	3.5	2/4/1993	<1		0.024	<0.0025	<0.0025	< 0.0025									
5-п S-Н	5.5 5	2/4/1993	290		0.024	1.8	1.8	<b>6.5</b>									
S-H	8	2/12/1993	2.1		0.33	0.0064	0.0097	0.075									
S-H	10	2/12/1993	2.1 <1		<0.0025	<0.0025	<0.0025	<0.0025									
S-Н S-Н	11.5	2/12/1993	<1 <1		<0.0025	<0.0025	<0.0025	<0.0025		-						-	-
<b>⊳-</b> Π	11.3	411411993	< <i>1</i>		<0.0023	<b>\0.0023</b>	<b>\0.0023</b>	<b>~</b> 0.0023									

Table 1. Cumulative Soil Analytical Data - Shell-branded Service Station, 5755 Broadway, Oakland, California

	Sample			<del>-</del>			Ethyl-	Total								Total Oil	
Sample ID	-	Sample Date	TPHg	TPHd	Benzene	Toluene	benzene	Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	& Grease	Lead
4	(fbg)		(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
C I	_	2/4/1993	17		0.074	0.095	0.0038	0.10									
S-I	5		1.7			0.093	<0.0025	0.10									
S-I	8	2/11/1993	<1		0.011												
S-I	10	2/11/1993	<1		0.021	0.011	<0.0025	0.021									
S-I	12	2/11/1993	<1		< 0.0025	<0.0025	< 0.0025	< 0.0025									
S-J	2	2/9/1993	140		0.40	1.1	0.71	4.1									
S-J	4	2/9/1993	1,300		1.1	9.5	<i>8.1</i>	44									
S-K	6.5	2/9/1993	1.0		0.35	0.23	0.31	0.64									
S-L	2	2/10/1993	<1		< 0.0025	< 0.0025	< 0.0025	< 0.0025									
S-L	4	2/10/1993	<1		< 0.0025	< 0.0025	< 0.0025	< 0.0025									
S-L	6	2/10/1993	320		0.99	2.0	1.5	5.2									
S-L	7.5	2/11/1993	<1		0.039	0.042	0.0074	0.045									
S-L	10	2/11/1993	<1		< 0.0025	< 0.0025	< 0.0025	< 0.0025									
S-L	12	2/11/1993	<1		< 0.0025	< 0.0025	< 0.0025	< 0.0025									
S-M	2	2/10/1993	<1		< 0.0025	< 0.0025	< 0.0025	< 0.0025									
S-M	4	2/10/1993	<1		< 0.0025	< 0.0025	< 0.0025	< 0.0025									
S-M	7.5	2/10/1993	<1		0.020	0.028	0.0072	0.053									
S-M	10	2/11/1993	5.9		0.020	0.038	0.023	0.17									
S-M	12	2/11/1993	< <i>l</i>		0.0026	0.0069	0.0028	0.027									
O-141	12	2/11/1//3	_1		0.0020	0.0007	0.0020	0.027									

Table 1. Cumulative Soil Analytical Data - Shell-branded Service Station, 5755 Broadway, Oakland, California

	Sample					<del></del>	Ethyl-	Total						<del>-</del>	·	Total Oil	
Sample ID	Depth	Sample Date	TPHg	TPHd	Benzene	Toluene	benzene	Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	& Grease	Lead
	(fbg)		(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
S-N	2	2/10/1993	<1		< 0.0025	< 0.0025	< 0.0025	< 0.0025									
S-N	4	2/10/1993	<1		< 0.0025	< 0.0025	< 0.0025	< 0.0025									
S-N	7.5	2/10/1993	11		0.067	0.51	0.18	1.1									
S-N	10	2/10/1993	<1		0.0035	0.0061	0.0033	0.019									
S-N	12	2/10/1993	1.2		< 0.0025	< 0.0025	< 0.0025	0.025									
S-O	7.5	2/12/1993	<1		0.021	< 0.0025	< 0.0025	0.0043									
S-O	10	2/12/1993	<1		< 0.0025	< 0.0025	< 0.0025	< 0.0025									
S-O	11.5	2/12/1993	1.3		0.013	0.0046	< 0.0025	0.032									
S-O	14	2/12/1993	<1		< 0.0025	< 0.0025	< 0.0025	< 0.0025									
March 199	8 Cambr	ia Upgrade Soi	l Samplii	ng													
D-2	2	3/12/1998	260		1.7	< 0.50	3.3	5.4	<2.5								
D-3	2	3/12/1998	<i>750</i>		< 0.50	<i>3.4</i>	6.5	41	9.8								
D-4	2	3/12/1998	990		1.8	2.3	13	<b>68</b>	25								
August 200	02 Cambi	ria Soil Borings	5														
B-1-5.0	5	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.010	< 0.5								
B-1-9.0	9	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	< 0.5								
B-1-15.5	15.5	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	< 0.5								
B-2-5.0	5	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.010	< 0.5					<del></del>			
B-2-10.0	10	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	< 0.5								
B-2-15.5	15.5	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	< 0.5								

Table 1. Cumulative Soil Analytical Data - Shell-branded Service Station, 5755 Broadway, Oakland, California

	Sample				<del></del>		Ethyl-	Total			····		***	· · · · · · · · · · · · · · · · · · ·		Total Oil	**
Sample ID		Sample Date	TPHg	TPHd	Benzene	Toluene	benzene	Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	& Grease	Lead
	(fbg)		(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
B-3-5.0	5	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	< 0.5								
B-3-10.0	10	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	< 0.5								
B-3-15.5	15.5	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	< 0.5								
B-4-5.0	5	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	< 0.5								
B-4-10.0	10	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	< 0.5								
B-4-15.5	15.5	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	< 0.5								
B-5-5.5	5.5	8/6/2002	260		< 0.005	< 0.005	1.6	6.7	< 0.5								
B-5-10.0	10	8/6/2002	4.5		< 0.005	< 0.005	0.018	0.021	< 0.5								
B-5-15.5	15.5	8/6/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	< 0.5								
B-6-5.0	5	8/7/2002	110		0.039	< 0.025	1.5	0.3	<0.5								
B-6-10.0	10	8/7/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	<0.5								
B-6-15.5	15.5	8/7/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	<0.5								
									10.0								
B-7-5.0	5	8/7/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	<0.5								
B-7-10.5	10.5	8/7/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	<0.5								
<i>_ ,</i>	20.0								70.5								
B-8-5.0	5	8/7/2002	210		< 0.025	< 0.025	2.2	3.8	<0.5								
B-8-10.5	10.5	8/7/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	<0.5								
D-0-10.J	10.5	0///2002	1.0		<b>\0.003</b>	\0.005	10.003	10.005	₹0.5								
B-9.5.0	5	8/7/2002	82		0.096	0.028	0.85	4.3	0.9								
J-7.J.U	5	0/1/2002	02		0.070	0.020	0.00	4.5	U.7								

Table 1. Cumulative Soil Analytical Data - Shell-branded Service Station, 5755 Broadway, Oakland, California

	C1						Ethyl-	Total				<del></del>				Total Oil	
Sample ID	Sample Depth	Sample Date	TPHg	TPHd	Benzene	Toluene	benzene	Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	& Grease	Lead
Sample 1D	(fbg)	Sample Date	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
B-9-10.5	10.5	8/7/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	<0.5								
B-10-5.0	5	8/7/2002	29		0.016	< 0.005	0.060	0.018	<0.5								
B-10-10.5	10.5	8/7/2002	<1.0		< 0.005	< 0.005	< 0.005	0.014	< 0.5								
B-11-5.0	5	8/7/2002	1.7		0.0063	< 0.005	0.019	0.018	<0.5								
B-11-10.5	10.5	8/7/2002	<1.0		< 0.005	< 0.005	< 0.005	< 0.005	< 0.5								
Ianuary 20	05 Camb	bria UST Excav	ation So	il Sampli	ing												
TP-1-14	14	1/31/2005	<1.0		<0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050				
TP-2-14	14	1/31/2005	1.5		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050				
TP-3-14	14	1/31/2005	32		< 0.023	< 0.023	< 0.023	< 0.023	0.082	< 0.047	< 0.047	< 0.023	< 0.023				
TP-4-14	14	1/31/2005	29		< 0.024	< 0.024	< 0.024	< 0.024	< 0.024	< 0.049	< 0.049	< 0.024	< 0.024				
=	005 Cam	ibria UST Exca		oil Samp													
TP-5-14	14	2/9/2005	<1.0		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050				
TP-6-14	14	2/9/2005	<1.0		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050				
TP-7-14	14	2/9/2005	<1.0		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050				
TP-8-14	14	2/9/2005	<1.0		< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050				
F 1 2	005 C		J D:	C													
-		-	_			-0.50	11	1.0	-0.50	-2.5	-1 Λ	<b>-0.50</b>	<b>-0.50</b>				6.1
			•														
DS-4-2	2	2/17/2005	460		<0.50	<0.50	1.8	3.5	<0.50	<2.5	<1.0	<0.50	<0.50				/ <b>.4</b>
P-1-1	1	2/17/2005	180		< 0.50	< 0.50	0.97	1.4	< 0.50	<2.5	<1.0	< 0.50	< 0.50				5.9
DS-1-2 DS-2-2 DS-3-2 DS-4-2	2 2 2 2	abria Dispenser 2/17/2005 2/17/2005 2/17/2005 2/17/2005 2/17/2005	190 150 1,100 460	  	<0.50 <0.50 <0.50 <0.50	<0.50 <0.50 <b>0.63</b> <0.50	1.1 0.51 10 1.8	1.0 0.55 75 3.5	<0.50 <0.50 <0.50 <0.50	<2.5 <2.5 <2.5 <2.5 <2.5	<1.0 <1.0 <1.0 <1.0	<0.50 <0.50 <0.50 <0.50	<0.50 <0.50 <0.50 <0.50	  	  	   	6.1 6.5 6.8 7.4

Table 1. Cumulative Soil Analytical Data - Shell-branded Service Station, 5755 Broadway, Oakland, California

	Sample			·			Ethyl-	Total								Total Oil	
Sample ID	Depth	Sample Date	TPHg	TPHd	Benzene	Toluene	benzene	Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	& Grease	Lead
	(fbg)		(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
P-2-2	2	2/17/2005	130		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.1	<1.0	< 0.50	< 0.50				7.3
P-3-2	2	2/17/2005	420		< 0.50	< 0.50	6.2	23	0.84	<2.5	<1.0	< 0.50	< 0.50				17
February 2	2005 Cam	bria Over-Exc	avation S	oil Samp	oling												
DS-1-4'	4	2/24/2005	26		< 0.025	< 0.025	< 0.025	0.034	0.035	0.060	< 0.050	< 0.025	< 0.025				<b>6.7</b>
DS-2-6'	6	2/24/2005	1,000		< 0.50	< 0.50	13	24	1.7	<2.5	<1.0	< 0.50	< 0.50				6.5
DS-3-6'	6	2/24/2005	1.8		< 0.0050	< 0.0050	0.0073	0.013	0.13	0.13	< 0.010	< 0.0050	< 0.0050				5.5
DS-4-4'	4	2/24/2005	44		< 0.025	< 0.025	< 0.025	0.066	< 0.025	0.093	< 0.050	< 0.025	< 0.025				6.4
D 1 (1		0/04/0005	410		0.66	-0.50	5.0	0.2	1.0	2.5	.1.0	-0.50	0.50				
P-1-6' P-2-4'	6 4	2/24/2005 2/24/2005	410 260		<b>0.66</b> < 0.50	<0.50 <0.50	5.2 1.5	8.2 6.0	1.9 <0.50	<2.5	<1.0	< 0.50	< 0.50				5.6
P-2-4 P-3-6'	4 6	2/24/2005	480		<0.50	<0.50	4.1	0.0 3.9	<0.30 <b>0.61</b>	<2.5 <2.5	<1.0 <1.0	<0.50 <0.50	<0.50 <0.50				7.3 6.0
1-3-0	U	212412003	400		<0.50	<b>\0.50</b>	7.1	3.7	0.01	<b>\2.</b> J	<1.0	<0.50	<b>\0.50</b>				0.0
November .	2005 Can	nbria Soil Bori	ngs														
SB-12-2	2	11/18/2005	<1.0	8.7 <sup>a</sup>	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.0050	210	
SB-12-5	5	11/18/2005	100	34 <sup>b</sup>	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<100	
				٠.													
SB-13-2	2	11/18/2005	<1.0	2.2 <sup>c</sup>	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.0050	<100	
SB-13-5	5	11/18/2005	180	68 <sup>b</sup>	<0.50	<0.50	0.84	1.9	< 0.50	<2.5	<1.0	<0.50	-0.50	-0.50	-0.50	-100	
3D-13-3	3	11/16/2003	100		<0.50	<0.50	0.04	1.9	<0.30	<2.3	<1.0	<0.50	< 0.50	< 0.50	< 0.50	<100	
SB-13-8	8	11/18/2005	<1.0	2.2 <sup>a</sup>	< 0.0050	< 0.0050	0.0072	0.014	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.0050	<100	
SB-14-2	2	11/18/2005	<1.0	9.9 <sup>a</sup>	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.0050	300	
SB-14-5	5	11/18/2005	99	9.2 <sup>b</sup>	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5	<1.0	< 0.50	< 0.50	< 0.50	< 0.50	<100	
SB-14-8	8	11/18/2005	<1.0	<1.0	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.0050	<100	

Table 1. Cumulative Soil Analytical Data - Shell-branded Service Station, 5755 Broadway, Oakland, California

Sample						Ethyl-	Total								Total Oil	
Sample ID Depth	Sample Date	TPHg	TPHd	Benzene	Toluene	benzene	Xylenes	MTBE	TBA	DIPE	<b>ETBE</b>	<b>TAME</b>	1,2-DCA	EDB	& Grease	Lead
(fbg)		(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)

#### **Abbreviations and Notes:**

TPHg = Total petroleum hydrocarbons as gasoline

TPHd = Total petroleum hydrocarbons as diesel

MTBE = Methyl tertiary butyl ether

TBA = Tert-butyl alcohol

DIPE = Di-isopropyl ether

ETBE = Ethyl tert butyl ether

TAME = Tert-amyl methyl ether

1,2-DCA = 1,2-dichloroethane

EDB = Ethylene dibromide

fbg = Feet below grade

ppm = Parts per million, equivalent to mg/kg

<n = Below laboratory reporting limit of n ppm

-- = Not analyzed

TPHg analyzed by modified EPA Method 8260B; results in italics analyzed by EPA Method 8015M.

TPHd analyzed by EPA Method 8015M.

Benzene, ethylbenzene, toluene and total xylenes analyzed by EPA Method 8260B; results in italics analyzed by EPA Method 8020.

MTBE analyzed by EPA Methods 8260B; results in italics analyzed by EPA Method 8020.

TBA, DIPE, ETBE, TAME, 1,2-DCA and EDB analyzed by EPA Method 8260B.

Total Oil and Grease analyzed by EPA Method 9071B

Lead analyzed by EPA Method 6010B.

- a = Hydrocarbon reported is in the late Diesel range, and does not match laboratory Diesel standard
- b = Hydrocarbon reported is in the early Diesel range, and does not match laboratory Diesel standard
- c = Hydrocarbon reported does not match the pattern of laboratory Diesel standard

Table 2. Historical Groundwater Analytical Data - Shell-branded Service Station, 5755 Broadway, Oakland, California

Sample ID	Sample Date	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE (ppb)	TBA	DIPE (ppb)	ETBE (ppb)	TAME (ppb)
June 1985	EMCON Soil	Borings									
S-1	7/3/1985	2,400	240	9.8	380	380					
August 200	02 Cambria Se	oil Boring	gs								
B-1-W	8/6/2002	<1,000	<10	<10	<10	<10	3,500				
B-2-W	8/6/2002	<50	< 0.50	< 0.50	< 0.50	< 0.50	<5.0				
B-3-W	8/6/2002	<50	< 0.50	< 0.50	< 0.50	< 0.50	<5.0				
B-4-W	8/6/2002	<50	< 0.50	< 0.50	< 0.50	< 0.50	<5.0				
B-5-W	8/6/2002	12,000	4.5	<2.0	350	340	380				
B-6-W	8/7/2002	680	15	< 0.50	49	18	30				
B-7-W	8/7/2002	370	< 0.50	< 0.50	3.4	11	42				
B-8-W	8/7/2002	66,000	990	78	2,600	12,000	930				
B-9.W	8/7/2002	21,000	1,100	47	650	3,300	7,100				
B-10-W	8/7/2002	31,000	1,800	66	1,300	4,200	9,100				
B-11-W	8/8/2002	28,000	900	<10	980	2,500	1,200				
December	2004 Cambrid	a UST Ex	xcavation								
TP-GW-1	12/17/2004	640	11	3.2	6.1	47	38	8.7	< 0.50	< 0.50	< 0.50

Table 2. Historical Groundwater Analytical Data - Shell-branded Service Station, 5755 Broadway, Oakland, California

				Ethyl-	Total		· —		-	
		_				) (TED E	mm A	DIDE	EEDE	T 4 3 (T)
Sample ID Sample Date	TPHg	Benzene	Toluene	benzene	Xylenes	MTBE	TBA	DIPE	ETBE	TAME
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)

#### **Abbreviations and Notes:**

TPHg = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tertiary butyl ether

TBA = Tert-butyl alcohol

DIPE = Di-isopropyl ether

ETBE = Ethyl tert butyl ether

TAME = Tert-amyl methyl ether

ppb = Parts per billion, equivalent to μg/kg

<n = Below laboratory reporting limit of n ppm

-- = Not analyzed or not measured

TPHg analyzed by modified EPA Method 8260B; results in italics analyzed by EPA Method 8015M.

Benzene, ethylbenzene, toluene and total xylenes analyzed by EPA Method 8260B; results in italics analyzed by EPA Method 8020.

MTBE analyzed by EPA Methods 8260B.

TBA, DIPE, ETBE, TAME, 1,2-DCA and EDB analyzed by EPA Method 8260B.

# ATTACHMENT A

Standard Field Procedures for Hand-Auger Soil Borings



#### STANDARD FIELD PROCEDURES FOR HAND-AUGER SOIL BORINGS

This document describes Cambria Environmental Technology's standard field methods for drilling and sampling soil borings using a hand-auger. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

#### **Objectives**

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor odor or staining, estimate ground water depth and quality and to submit samples for chemical analysis.

#### Soil Classification/Logging

All soil samples are classified according to the Unified Soil Classification System by a trained geologist or engineer working under the supervision of a California Professional Geologist (PG) or a Certified Engineering Geologist (CEG). The following soil properties are noted for each soil sample:

- Principal and secondary grain size category (i.e. sand, silt, clay or gravel)
- Approximate percentage of each grain size category,
- Color.
- Approximate water or product saturation percentage,
- Observed odor and/or discoloration,
- Other significant observations (i.e. cementation, presence of marker horizons, mineralogy), and
- Estimated permeability.

#### Soil Boring and Sampling

Hand-auger borings are typically drilled using a hand-held bucket auger to remove soil to the desired sampling depth. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments beyond the bottom of the augered hole. The vertical location of each soil sample is determined using a tape measure. All sample depths use the ground surface immediately adjacent to the boring as a datum. The horizontal location of each boring is measured in the field from an onsite permanent reference using a measuring wheel or tape measure.

Augering and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

#### Sample Storage, Handling and Transport

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4°C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

#### **Field Screening**

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable photoionization detector (PID) measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. PID measurements are used along with the field observations, odors, stratigraphy and ground water depth to select soil samples for analysis.

#### **Water Sampling**

Water samples, if they are collected from the boring, are collected from the open borehole using bailers. The ground water samples 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.

#### **Duplicates and Blanks**

Blind duplicate water samples are collected usually collected only for monitoring well sampling programs, at a rate of one blind sample for every 10 wells sampled. Laboratory-supplied trip blanks accompany samples collected for all sampling programs to check for cross-contamination caused by sample handling and transport. These trip blanks are analyzed if the internal laboratory QA/QC blanks contain the suspected field contaminants. An equipment blank may also be analyzed if non-dedicated sampling equipment is used.

#### Grouting

The borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

#### **Waste Handling and Disposal**

Soil cuttings from drilling activities are usually stockpiled onsite on top of and covered by plastic sheeting. At least four individual soil samples are collected from the stockpiles for later compositing at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Ground water removed during sampling and/or rinsate generated during decontamination procedures are stored onsite in sealed 55-gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Disposal of the water is based on the analytic results for the well samples. The water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.

12/30/05

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## **ATTACHMENT B**

Permit

#### Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street Hayward, CA 94544-1395 Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 11/16/2005 By jamesy

Permits Issued:

W2005-1107

Application ld: Site Location:

1132098383510

5755 Broadway, Oakland, CA 94609

**Project Start Date:** 

11/18/2005

Applicant:

Cambria - Stu Dalie

5900 Hollis St., #A, Emeryville, CA 94608

Property Owner:

Shell Oil Products Co. (US)

Client:

20945 S Wilmington Ave, Carson, CA 90810
\*\* same as Property Owner \*\*

Total Due:

Receipt Number: WR2005-2192

City of Project Site: Oakland

Completion Date: 11/18/2005

Permits Valid from 11/18/2005 to 11/18/2005

Phone: 510-420-3339

Phone: 707-865-0251

\$200.00

Total Amount Paid:

\$200.00

Paid By: CHECK

**PAID IN FULL** 

#### **Works Requesting Permits:**

Borehole(s) for Investigation-Contamination Study - 3 Boreholes

Driller: Gregg Drilling - Lic #: 485165 - Method: air

Work Total: \$200.00

#### **Specifications**

Permit	Issued Dt	Expire Dt	#	Hole Diam	Max Depth
Number			Boreholes		
W2005-	11/16/2005	02/16/2006	3	3.00 in.	10.00 ft
1107					

### **Specific Work Permit Conditions**

- 1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.
- 2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
- 3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 4. Applicant shall contact James Yoo for an inspection time at 510-670-6633 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
- 5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
- 6. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.
- 7. Spot Check Only

## Alameda County Public Works Agency - Water Resources Well Permit

Inspector does not have to be present for the grout Inspection.

### PROGRAMS AND SERVICES

Well Standards Program

The Alameda County Public Works Agency, Water Resources is located at: 399 Elmhurst Street
Hayward, CA 94544

For Driving Directions or General Info, Please Contact 510-670-5480 or wells@acpwa.org

For Drilling Permit information and process contact James Yoo at

Phone: 510-670-6633 FAX: 510-782-1939

Email: Jamesy@acpwa.org

Alameda County Public Works is the administering agency of General Ordinance Code, Chapter 6.88. The purpose of this chapter is to provide for the regulation of groundwater wells and exploratory holes as required by California Water Code. The provisions of these laws are administered and enforced by Alameda County Public Works Agency through its Well Standards Program.

Drilling Permit Jurisdictions in Alameda County: There are four jurisdictions in Alameda County.

Location:	Agency with Jurisdiction	Contact Number
Berkeley	City of Berkeley	Ph: 510-981-7460 Fax: 510-540-5672
Fremont, Newark, Union City	Alameda County Water District	Ph: 510-668-4460 Fax: 510-651-1760
Pleasanton, Dublin, Livermore, Sunol	Zone 7 Water Agency	Ph: 925-454-5000 Fax: 510-454-5728

The Alameda County Public Works Agency, Water Resources has the responsibility and authority to issue drilling permits and to enforce the County Water Well Ordinance 73-68. This jurisdiction covers the western Alameda County area of Oakland, Alameda, Piedmont, Emeryville, Albany, San Leandro, San Lorenzo, Castro Valley, and Hayward. The purpose of the drilling permits are to ensure that any new well or the destruction of wells, including geotechnical investigations and environmental sampling within the above jurisdiction and within Alameda County will not cause pollution or contamination of ground water or otherwise jeopardize the health, safety or welfare of the people of Alameda County.

**Permits** are required for all work pertaining to wells and exploratory holes at any depth within the jurisdiction of the Well Standards Program. A completed permit application (30 Kb)\*, along with a site map, should be submitted at least **ten (10) working days prior to the planned start of work**. Submittals should be sent to the address or fax number provided on the application form. When submitting an application via fax, please use a high resolution scan to retain legibility.

Complete Permit Application Check List (24 Kb)\*

#### Fees

Beginning April 11, 2005, the following fees shall apply:

A permit to construct, rehabilitate, or destroy wells, including cathodic protection wells, but excluding dewatering wells, shall cost \$300.00 per well.

A permit to bore exploratory holes, including temporary test wells, shall cost \$200 per site. A site includes the project parcel as well as any adjoining parcels.

Please make checks payable to: Treasurer, County of Alameda

#### Permit Fees are exempt to State & Federal Projects

Applicants shall submit a letter from the agency requesting the fee exemption.

#### Scheduling Work/Inspections:

Alameda County Public Works Agency (ACPWA), Water Resources Section requires scheduling and inspection of permitted work. All drilling activities must be scheduled in advance. Availability of inspections will vary from week to week and will come on a first come, first served bases. To ensure inspection availability on your desired or driller scheduled date, the following procedures are required:

Please contact George Bolton at 510-670-5594 to schedule the inspection date and time (You must have drilling permit approved prior to scheduling).

Schedule the work as far in advance as possible (at least 5 days in advance); and confirm the scheduled drilling date(s) at least 24 hours prior to drilling.

Once the work has been scheduled, an ACPWA Inspector will coordinate the inspection requirements as well as how the Inspector can be reached if they are not at the site when Inspection is required. Expect for special circumstances given, all work will require the inspection to be conducted during the working hours of 8:30am to 2:30pm., Monday to Friday, excluding holidays.

#### **Request for Permit Extension:**

Permits are only valid from the start date to the completion date as stated on the drilling permit application and Conditions of Approval. To request an extension of a drilling permit application, applicants must request in writing prior to the completion date as set forth in the Conditions of Approval of the drilling permit application. Please send fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. There are no additional fees for permit extensions or for re-scheduling inspection dates. You may not extend your drilling permit dates beyond 90 days from the approval date of the permit application. **NO refunds** shall be given back after 90 days and the permit shall be deemed voided.

#### Cancel a Drilling Permit:

Applicants may cancel a drilling permit only in writing by mail, fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. If you do not cancel your drilling permit application before the drilling completion date or notify in writing within 90 days, Alameda County Public Works Agency, Water Resources Section may void the permit and No refunds may be given back.

#### Refunds/Service Charge:

A service charge of \$25.00 dollars for the first check returned and \$35.00 dollars for each subsequent check returned.

Applicants who cancel a drilling permit application **before** we issue the approved permit(s), will receive a **FULL** refund (at any amount) and will be mailed back within two weeks.

Applicants who cancel a drilling permit application **after** a permit has been issued will then be charged a service fee of \$50.00 (fifty Dollars). To collect the remaining funds will be determined by the amount of the refund to be refunded (see process below).

Board of Supervisors Minute Order, File No. 9763, dated January 9, 1996, gives blanket authority to the Auditor-Controller to process claims, from all County departments for the refund of fees which do not exceed \$500 (Five Hundred Dollars)(with the exception of the County Clerk whose limit is \$1,500).

Refunds over the amounts must be authorized by the Board of Supervisors Minute Order, File No. 9763 require specific approval by the Board of Supervisors.

The forms to request for refunds under \$500.00 (Five Hundred Dollars) are available at this office or any County Offices.

If the amount is exceeded, a Board letter and Minute Order must accompany the claim. Applicant shall fill out the request form and the County Fiscal department will process the request.

#### **Enforcement**

Penalty. Any person who does any work for which a permit is required by this chapter and who fails to obtain a permit shall be guilty of a misdemeanor punishable by fine not exceeding Five Hundred Dollars (\$500.00) or by imprisonment not exceeding six months, or by both such fine and imprisonment, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such violation is committed, continued, or permitted, and shall be subject to the same punishment as for the original offense. (Prior gen. code §3-160.6)

#### Enforcement actions will be determined by this office on a case-by-case basis

Drilling without a permit shall be the cost of the permit(s) and a fine of \$500.00 (Five Hundred Dollars).

Well Completion Reports (State DWR-188 forms) must be filed with the Well Standards Program within 60 days of completing work. Staff will review the report, assign a state well number, and then forward it to the California Department of Water Resources (DWR). Drillers should not send completed reports to DWR directly. Failure to file a Well Completion Report or deliberate falsification of the information is a misdemeanor; it is also grounds for disciplinary action by the Contractors' State License Board. Also note that filed Well Completion Reports are considered private record protected by state law and can only be released to the well owner or those specifically authorized by government agencies. Links to pertinent forms are provided below.

Well Completion Report Form\*
Well Owner's Request Form for Previously Filed Forms (41Kb)\*
Government Authorization Form for the Release of Forms (46 Kb)\*
Site Hazard Information Form (51 Kb)\*

\* Adobe PDF Reader is Required.

#### Dalie, Stewart

From: weils@acpwa.org

Sent: Wednesday, November 16, 2005 2:06 PM

To: Dalie, Stewart

Subject: Alameda County Well Permit Approval Notification

Thank you for your Online Request for Wells Permits.

Your Application Id is: 1132098383510 Application submitted on: 11/15/2005

Project Site City/Location: Oakland / 5755 Broadway, Oakland, CA 94609

Project Start Date: 11/18/2005 Completion Date: 11/18/2005

Your Permit Application has been approved.

Permit Number(s) Issued: W2005-1107 Valid from 11/18/2005 to 11/18/2005

Attached are 2 PDF files, one serves as your receipt and permit(s), please print for your record.

The other includes the General Conditions and Instructions you must follow.

Note: You need to have the free Adobe Reader to open the pdf file.

#### Conditions of Permit:

Please follow and comply with conditions and instructions listed in the general conditions document. In addition, you must comply with all specific conditions listed in your permit.

If you need further assistance regarding your permit, please visit our website at: <a href="http://www.acgov.org/pwa/wells/">http://www.acgov.org/pwa/wells/</a> or contact us at <a href="mailto:weells@acpwa.org">wells@acpwa.org</a>, and include your application id number.

Thank you,

Public Works Agency-Water Resources

## **ATTACHMENT C**

**Boring Logs** 





Cambria Environmental Technology, Inc. 5900 Hollis Street, Suite A Emeryville, CA 94608 Telephone: 510-420-0700 Fax: 510-420-9170

JOB/SI' LOCAT PROJE DRILLE DRILLE BORING LOGGE REVIEV REMAR	CT NUMBI RR NG METHO G DIAMET ED BY WED BY RKS	57 00 ER 24 G DD Ha ER 3" S. A.	755 Broad akland, 47-0483 regg Dri and aug Dalie Cool, F	adway California 008 Illing er	a 		BORING/WELL NAME DRILLING STARTED DRILLING COMPLETED WELL DEVELOPMENT D. GROUND SURFACE ELE TOP OF CASING ELEVAT SCREENED INTERVALS DEPTH TO WATER (First	pove msi	e msl		
PID (ppm)	BLOW	SAMPLE ID	EXTENT	(reg) U.S.C.S.	GRAPHIC LOG		OGIC DESCRIPTION		CONTACT DEPTH (fbg)	WEL	L DIAGRAM
WELL LOG (PID) G:\OAKLAND 5755 BROADWAYGINT\6755.GPJ DEFAULT.GDT 12\21\05		SB-12-2 SB-12-5	5	CL ML		10% small gravel; high SILT; Olive gray 5Y4/ 10% small gravel; low Sility GRAVEL: Olive 980% medium gravel (s	2; firm; dry; 5% clay, 85% to medium plasticity.  gray 5Y4/2; loose; damp; shale fragments). y; hard; damp; highly fract	silt,	0.8 2.0 5.5 6.5		▼ Portland Type I/II  Bottom of Boring @ 6.5 fbg





Cambria Environmental Technology, Inc. 5900 Hollis Street, Suite A Emeryville, CA 94608 Telephone: 510-420-0700

l elep	onone:	510-	420-
Fax:	510-42	20-91	70

,	DRILLEF DRILLIN BORING LOGGE!	E NAME ON OT NUMB OR OF	57 03 ER 24 G OD Ha ER 3" S.	7-0 egg and Da	Broadwind, Cal 483-00 Drilling auger	ay Ilfornia 8 g		ny (US)	BORING/WELL NAME SB-13  DRILLING STARTED 18-Nov-05  DRILLING COMPLETED 18-Nov-05  WELL DEVELOPMENT DATE (YIELD) NA  GROUND SURFACE ELEVATION 0 ft above msl  TOP OF CASING ELEVATION Not Surveyed  SCREENED INTERVALS NA  DEPTH TO WATER (First Encountered) NA  DEPTH TO WATER (Static) NA				<u>\</u>
	PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHO	DLOGIC DESCRIPTION	,	CONTACT DEPTH (fbg)	WEL	L DIAGRAM
	40		SB-13·2			ML		very fine sand With clay, 15% clay	4/2; stiff; dry; 5% clay, 90%		5.0		✓ Portland Type i/II
	4.5		SB-13-5			GM		65% medium gravel	e gray 5Y4/2; loose; damp; (shale fragments).  ay; hard; damp; highly fract		7.0 8.5		Bottom of Boring @ 8 fbg
WELL LOG (PID) GNOAKLAND 5755 BROADWAYIGINTIS755.GPJ DEFAULT.GDT 12/21/05													





Cambria Environmental Technology, Inc. 5900 Hollis Street, Suite A Emeryville, CA 94608 Telephone: 510-420-0700

i eiep	mone:	510-420
Fax:	510-42	20-9170

	DRILLER DRILLIN BORING LOGGEI	E NAME ON CT NUMB C G METH G DIAMET D BY TED BY	57 O ER 24 G OD H ER 3' S A	755 akla 47-0 rego and . Da	Broady and, Ca 483-00 Drillin auger	vay lifornia 8 g		ny (US)	BORING/WELL NAME SB-14  DRILLING STARTED 18-Nov-05  DRILLING COMPLETED 18-Nov-05  WELL DEVELOPMENT DATE (YIELD) NA  GROUND SURFACE ELEVATION 0 ft above msl  TOP OF CASING ELEVATION Not Surveyed  SCREENED INTERVALS NA  DEPTH TO WATER (First Encountered) NA  DEPTH TO WATER (Static) NA				
	PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHO	DLOGIC DESCRIPTION		CONTACT DEPTH (fbg)	WEL	L DIAGRAM
WELL LOG (PID) GNOAKLAND 5755 BROADWAYIGINTS755.GPJ DEFAULT.GDT 1221/05	450 450 8.2		SB-14-5 SB-14-8		5	CL ML		10% very fine sand;  SILT; Black 10YR5/ plasticity.  Silty GRAVEL; Oliv. silt, 75% medium gr	1; firm; dry; 25% clay, 75% e brown 2.5Y4/3; loose; dar avel (shale fragments). own 2.5Y4/3; hard; dry; hig	silt; low	0.8 2.5 7.0 8.0 8.5		▼ Portland Type I/II  Bottom of Boring @ 8.5 fbg
VELL LOG (PID)													

# ATTACHMENT D

Laboratory Analytical Reports



### Cambria Environmental Emeryville

December 12, 2005

5900 Hollis Street, Ste. A Emeryville, CA 94608

Attn.: Stu Dalie

Project#: 247-0483-008 Project: 98995756

Site: 5755 Broadway, Oakland, CA

Dear Mr. Dalie:

Attached is our report for your samples received on 11/22/2005 15:00 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 01/06/2006 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: mbrewer@stl-inc.com Sincerely,

Melissa Brewer

Melissa Brewer Project Manager



## Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SB-14-2	11/18/2005 11:30	Soil	1
SB-14-5	11/18/2005 10:45	Soil	2
SB-14-8	11/18/2005 11:00	Soil	3
SB-13-2	11/18/2005 12:30	Soil	4
SB-13-5	11/18/2005 12:45	Soil	5
SB-13-8	11/18/2005 13:00	Soil	6
SB-12-2	11/18/2005 14:00	Soil	7
SB-12-5	11/18/2005 14:15	Soil	8



## Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 3550/8015M Test(s): 8015M

 Sample ID:
 SB-14-2
 Lab ID:
 2005-11-0260 - 1

 Sampled:
 11/18/2005 11:30
 Extracted:
 11/30/2005 17:24

 Matrix:
 Soil
 QC Batch#:
 2005/11/30-02.10

Compound Conc. RL Unit Dilution Analyzed Flag 1.0 1.00 12/01/2005 19:12 ldr Diesel 9.9 mg/Kg Surrogate(s) % 1.00 | 12/01/2005 19:12 60-130 o-Terphenyl 83.6



## Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emervville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 3550/8015M Test(s): 8015M

 Sample ID:
 SB-14-5
 Lab ID:
 2005-11-0260 - 2

 Sampled:
 11/18/2005 10:45
 Extracted:
 11/30/2005 17:24

 Matrix:
 Soil
 QC Batch#:
 2005/11/30-02.10

Unit Dilution Conc. RL Analyzed Flag Compound 1.00 12/02/2005 03:58 9.2 1.0 edr Diesel mg/Kg Surrogate(s) 60-130 % 1.00 12/02/2005 03:58 85.2 o-Terphenyl



## Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 3550/8015M Test(s): 8015M

 Sample ID:
 SB-14-8
 Lab ID:
 2005-11-0260 - 3

 Sampled:
 11/18/2005 11:00
 Extracted:
 11/30/2005 17:24

 Matrix:
 Soil
 QC Batch#:
 2005/11/30-02.10

Compound	Conc.	RL.	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	12/02/2005 04:24	
Surrogate(s)						
o-Terphenyl	86.4	60-130	%	1.00	12/02/2005 04:24	



## Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emervville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 3550/8015M

Sample ID: SB-13-2

11/18/2005 12:30

Sampled: Matrix:

Soil

Test(s):

8015M

Lab ID:

2005-11-0260 - 4

Extracted:

11/30/2005 17:24 QC Batch#: 2005/11/30-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	2.2	1.0	mg/Kg	1.00	12/02/2005 04:50	ndp
Surrogate(s)						
o-Terphenyl	90.2	60-130	%	1.00	12/02/2005 04:50	



### Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 3550/8015M Test(s): 8015M

 Sample ID:
 SB-13-5
 Lab ID:
 2005-11-0260 - 5

 Sampled:
 11/18/2005 12:45
 Extracted:
 11/30/2005 17:24

 Matrix:
 Soil
 QC Batch#:
 2005/11/30-02.10

Unit Dilution Analyzed RL Flag Compound Conc. 1.00 12/02/2005 07:27 68 1.0 mg/Kg edr Diesel Surrogate(s) 60-130 % 1.00 l 12/02/2005 07:27 92.7 o-Terphenyl

12/02/2005 16:05

Page 6 of 13



## Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s):

3550/8015M

Test(s):

8015M

Sample ID: SB-13-8

Lab ID:

2005-11-0260 - 6

Sampled:

11/18/2005 13:00

Extracted:

11/30/2005 17:24

Matrix:

Soil

QC Batch#: 2005/11/30-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesei	2.2	1.0	mg/Kg	1.00	12/02/2005 07:53	ldr
Surrogate(s) o-Terphenyl	89.6	60-130	%	1.00	12/02/2005 07:53	

Page 7 of 13



# Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 3550/8015M

Sample ID: SB-12-2

Sampled:

Matrix:

11/18/2005 14:00

Soil

Test(s): 8015M

Lab ID: Extracted:

2005-11-0260 - 7 11/30/2005 17:24

QC Batch#: 2005/11/30-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	8.7	1.0	mg/Kg	1.00	12/02/2005 02:39	ldr
Surrogate(s) o-Terphenyl	84.9	60-130	%	1.00	12/02/2005 02:39	



# Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 3550/8015M

Sample ID: SB-12-5

Test(s):

8015M

Lab ID:

2005-11-0260 - 8

Sampled: 11/18/2005 14:15

Extracted:

11/30/2005 17:24

Matrix: Soil

QC Batch#: 2005/11/30-02.10

Compound	Conc.	RL _	Unit	Dilution	Analyzed	Flag
Diesel	34	1.0	mg/Kg	1.00	12/02/2005 08:20	edr
Surrogate(s) o-Terphenyl	94.2	60-130	%	1.00	12/02/2005 08:20	



# Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 3550/8015M Method Blank diesel

Soil

Test(s): 8015M

QC Batch # 2005/11/30-02.10

MB: 2005/11/30-02.10-001

Date Extracted: 11/30/2005 17:24

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	12/01/2005 16:07	
Surrogates(s) o-Terphenyl	78.4	60-130	%	12/01/2005 16:07	



## Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 3550/8015M Test(s): 8015M

Laboratory Control Spike diesel Soil QC Batch # 2005/11/30-02.10

LCS 2005/11/30-02.10-002 Extracted: 11/30/2005 Analyzed: 12/01/2005 16:34 LCSD 2005/11/30-02.10-003 Extracted: 11/30/2005 Analyzed: 12/01/2005 17:00

Exp.Conc. RPD Ctrl.Limits % Conc. mg/Kg Recovery % Flags Compound LCS LCSD LCS LCSD % Rec. **RPD** LCS LCSD 88.9 Diesel 36.9 40.6 41.5 97.6 9.3 60-130 25 Surrogates(s) o-Terphenyl 17.2 17.7 20.0 86.2 88.5 60-130 0



## Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

3550/8015M Test(s): 8015M Prep(s):

QC Batch # 2005/11/30-02.10 Matrix Spike (MS / MSD) Soil

SB-14-2 >> MS

Lab ID:

2005-11-0260 - 001

12/01/2005 20:05

MS: 2005/11/30-02.10-004 Extracted: 11/30/2005

Analyzed:

12/01/2005 19:38

2005/11/30-02.10-005 M\$D:

Extracted: 11/30/2005

Dilution:

1.00

Analyzed: Dilution:

1.00

Compound	Conc.	mg	/Kg	Spk.Level	R	ecovery	%	Limits	%	Fla	ags
Compound	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Diesel	54.8	42.4	11.4	41.6	104.3	75.1	32.6	60-130	25		R1
Surrogate(s) o-Terphenyl	17.9	16.5		20.0	89.3	82.5		60-130	0		



## Diesel (C9-C24)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Legend and Notes**

#### **Result Flag**

edr

Hydrocarbon reported is in the early Diesel range, and does not match our Diesel standard

ldr

Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

R1

Analyte RPD was out of QC limits.



# Hexane Extractable Oil & Grease (Total)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
SB-14-2	11/18/2005 11:30	Soil	1
SB-14-5	11/18/2005 10:45	Soil	2
SB-14-8	11/18/2005 11:00	Soil	3
SB-13-2	11/18/2005 12:30	Soil	4
SB-13-5	11/18/2005 12:45	Soil	5
SB-13-8	11/18/2005 13:00	Soil	6
SB-12-2	11/18/2005 14:00	Soil	7
SB-12-5	11/18/2005 14:15	Soil	8



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Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 9071B

Matrix:

Sample ID: SB-14-2

Sampled: 11/18/2005 11:30

Soil

Test(s): 9071B

Lab ID:

2005-11-0260 - 1

Extracted:

12/2/2005 12:52

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Oil & Grease (total)	300	100	mg/Kg	1.00	12/02/2005 18:30	



# Hexane Extractable Oil & Grease (Total)

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Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 9071B

Sampled:

Matrix:

Sample ID: SB-14-5

11/18/2005 10:45

Soil

Test(s):

Extracted:

9071B

Lab ID:

2005-11-0260 - 2

12/2/2005 12:52

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Oil & Grease (total)	ND	100	mg/Kg	1.00	12/02/2005 18:30	



# Hexane Extractable Oil & Grease (Total)

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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 9071B

Matrix:

Sample ID: SB-14-8

Sampled: 11/18/2005 11:00 Soil

Test(s): 9071B

Lab ID:

2005-11-0260 - 3

Extracted:

12/2/2005 12:52

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Oil & Grease (total)	ND	100	mg/Kg	1.00	12/02/2005 18:30	



# Hexane Extractable Oil & Grease (Total)

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Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 9071B

Matrix:

Sample ID: SB-13-2

Sampled: 11/18/2005 12:30

Soil

Test(s): 9071B

Lab ID:

2005-11-0260 - 4

Extracted: 12/2

12/2/2005 12:52

Compound	Conc.	RL.	Unit	Dilution	Analyzed	Flag
Oil & Grease (total)	ND	100	mg/Kg	1.00	12/02/2005 18:30	



## Hexane Extractable Oil & Grease (Total)

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Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 9071B

Sample ID: SB-13-5

11/18/2005 12:45

Sampled: Matrix:

Soil

Test(s):

9071B

Lab ID: Extracted:

2005-11-0260 - 5 12/2/2005 12:52

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Oil & Grease (total)	ND	100	mg/Kg	1.00	12/02/2005 18:30	



# Hexane Extractable Oil & Grease (Total)

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Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s):

9071B

Sample ID: SB-13-8

Sampled:

Matrix:

11/18/2005 13:00

Soil

Test(s):

9071B

Lab ID:

2005-11-0260 - 6 12/2/2005 12:52

Extracted:

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Oil & Grease (total)		100	mg/Kg	1.00	12/02/2005 18:30	



# **Hexane Extractable Oil & Grease (Total)**

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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 9071B

Sampled:

Matrix:

Sample ID: SB-12-2

11/18/2005 14:00

Soil

Test(s): 9071B

Lab ID: Extracted: 2005-11-0260 - 7

QC Batch#: 2005/12/02-01.23

12/2/2005 12:52

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Oil & Grease (total)	210	100	mg/Kg	1.00	12/02/2005 18:30	



# Hexane Extractable Oil & Grease (Total)

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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 9071B

Sampled:

Matrix:

Sample ID: SB-12-5

11/18/2005 14:15

Soil

Test(s): 9071B

Lab ID: Extracted: 2005-11-0260 - 8 12/2/2005 12:52

Compound	Conc.	RL	Unit	Dilution	Anaiyzed	Flag
Oil & Grease (total)	ND	100	mg/Kg	1.00	12/02/2005 18:30	



## Hexane Extractable Oil & Grease (Total)

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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 9071B Method Blank

Soil

Test(s): 9071B QC Batch # 2005/12/02-01.23

Date Extracted: 12/02/2005 12:52

MB: 2005/12/02-01.23-001

Compound	Conc.	RL	Unit	Analyzed	Flag
Oil & Grease (total)	ND	100	mg/Kg	12/02/2005 18:30	



#### **Hexane Extractable Oil & Grease (Total)**

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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### Batch QC Report

Prep(s): 9071B Test(s): 9071B

Laboratory Control Spike Soil QC Batch # 2005/12/02-01.23

LCS 2005/12/02-01.23-002 Extracted: 12/02/2005 Analyzed: 12/02/2005 18:30 LCSD 2005/12/02-01.23-003 Extracted: 12/02/2005 Analyzed: 12/02/2005 18:30

Exp.Conc. RPD Ctrl.Limits % mg/Kg Recovery % Flags Conc. Compound LCS LCSD LCS LCSD % Rec. RPD LÇS LCSD Oil & Grease (total) 704 699 800 88.0 87.4 79-114



## Hexane Extractable Oil & Grease (Total)

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Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 9071B

Test(s): 9071B

Matrix Spike (MS/MSD)

Soil

QC Batch # 2005/12/02-01.23

SB-14-2 >> MS

2005-11-0260 - 001

MS:

2005/12/02-01.23-004

Extracted: 12/02/2005

Lab ID: Analyzed:

12/02/2005 18:30

Dilution:

1.00

MSD:

Analyzed:

Dilution:

Compound	Conc. mg/Kg Spk.Level		el Recovery %		Recovery %		Limits %		Flags		
Compound	MS	MSD	Sample	mg/Kg	мѕ	MSD	RPD	Rec.	RPD	MS	MSD
Oil & Grease (total)	1080		305	800	96.9			79-114	18		



# Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Samples Reported**

Sample Name	Date Sampled	Matrix	Lab#
SB-14-2	11/18/2005 11:30	Soil	1
SB-14-8	11/18/2005 11:00	Soil	3
SB-13-2	11/18/2005 12:30	Soil	4
SB-13-8	11/18/2005 13:00	Soil	6
SB-12-2	11/18/2005 14:00	Soil	7



# Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 5030B Test(s): 8260B

 Sample ID:
 SB-14-2
 Lab ID:
 2005-11-0260 - 1

 Sampled:
 11/18/2005 11:30
 Extracted:
 12/1/2005 16:16

 Matrix:
 Soil
 QC Batch#:
 2005/12/01-1B.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	12/01/2005 16:16	
Benzene	ND	0.0050	mg/Kg	1.00	12/01/2005 16:16	
Toluene	ND	0.0050	mg/Kg	1.00	12/01/2005 16:16	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/01/2005 16:16	
Total xylenes	ND	0.0050	mg/Kg	1.00	12/01/2005 16:16	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	12/01/2005 16:16	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	12/01/2005 16:16	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	12/01/2005 16:16	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	12/01/2005 16:16	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	12/01/2005 16:16	
1,2-DCA	ND	0.0050	mg/Kg	1.00	12/01/2005 16:16	
EDB	ND	0.0050	mg/Kg	1.00	12/01/2005 16:16	
Surrogate(s)						
1,2-Dichloroethane-d4	96.1	76-124	%	1.00	12/01/2005 16:16	
Toluene-d8	97.0	75-116	%	1.00	12/01/2005 16:16	



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Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 5030B Test(s): 8260B

 Sample ID:
 SB-14-8
 Lab ID:
 2005-11-0260 - 3

 Sampled:
 11/18/2005 11:00
 Extracted:
 12/1/2005 17:08

 Matrix:
 Soil
 QC Batch#:
 2005/12/01-1B.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	12/01/2005 17:08	
Benzene	ND	0.0050	mg/Kg	1.00	12/01/2005 17:08	
Toluene	ND	0.0050	mg/Kg	1.00	12/01/2005 17:08	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/01/2005 17:08	
Total xylenes	ND	0.0050	mg/Kg	1.00	12/01/2005 17:08	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	12/01/2005 17:08	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	12/01/2005 17:08	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	12/01/2005 17:08	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	12/01/2005 17:08	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	12/01/2005 17:08	
1,2-DCA	ND	0.0050	mg/Kg	1.00	12/01/2005 17:08	
EDB	ND	0.0050	mg/Kg	1.00	12/01/2005 17:08	
Surrogate(s)	}					
1,2-Dichloroethane-d4	92.8	76-124	%	1.00	12/01/2005 17:08	
Toluene-d8	93.7	75-116	%	1.00	12/01/2005 17:08	



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Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 5030B Test(s): 8260B

 Sample ID:
 SB-13-2
 Lab ID:
 2005-11-0260 - 4

 Sampled:
 11/18/2005 12:30
 Extracted:
 12/1/2005 17:35

 Matrix:
 Soil
 QC Batch#:
 2005/12/01-1B.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	12/01/2005 17:35	
Benzene	ND	0.0050	mg/Kg	1.00	12/01/2005 17:35	
Toluene	ND	0.0050	mg/Kg	1.00	12/01/2005 17:35	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/01/2005 17:35	
Total xylenes	ND	0.0050	mg/Kg	1.00	12/01/2005 17:35	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	12/01/2005 17:35	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	12/01/2005 17:35	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	12/01/2005 17:35	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	12/01/2005 17:35	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	12/01/2005 17:35	
1,2-DCA	ND	0.0050	mg/Kg	1.00	12/01/2005 17:35	
EDB	ND	0.0050	mg/Kg	1.00	12/01/2005 17:35	
Surrogate(s)						
1,2-Dichloroethane-d4	88.4	76-124	%	1.00	12/01/2005 17:35	
Toluene-d8	92.3	75-116	%	1.00	12/01/2005 17:35	



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Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 5030B Test(s): 8260B

 Sample ID:
 SB-13-8
 Lab ID:
 2005-11-0260 - 6

 Sampled:
 11/18/2005 13:00
 Extracted:
 12/1/2005 18:01

 Matrix:
 Soil
 QC Batch#:
 2005/12/01-1B.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	12/01/2005 18:01	
Benzene	ND	0.0050	mg/Kg	1.00	12/01/2005 18:01	
Toluene	ND	0.0050	mg/Kg	1.00	12/01/2005 18:01	
Ethyl benzene	0.0072	0.0050	mg/Kg	1.00	12/01/2005 18:01	
Total xylenes	0.014	0.0050	mg/Kg	1.00	12/01/2005 18:01	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	12/01/2005 18:01	•
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	12/01/2005 18:01	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	12/01/2005 18:01	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	12/01/2005 18:01	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	12/01/2005 18:01	
1,2-DCA	ND	0.0050	mg/Kg	1.00	12/01/2005 18:01	
EDB	ND	0.0050	mg/Kg	1.00	12/01/2005 18:01	
Surrogate(s)						
1,2-Dichloroethane-d4	87.0	76-124	%	1.00	12/01/2005 18:01	
Toluene-d8	94.6	75-116	%	1.00	12/01/2005 18:01	



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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 5030B

Sample ID: SB-12-2

11/18/2005 14:00

Matrix: Soil

Sampled:

Test(s): 8260B

Lab ID: Extracted: 2005-11-0260 - 7

12/2/2005 04:27

QC Batch#: 2005/12/01-2A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	12/02/2005 04:27	
Benzene	ND	0.0050	mg/Kg	1.00	12/02/2005 04:27	
Toluene	ND	0.0050	mg/Kg	1.00	12/02/2005 04:27	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	12/02/2005 04:27	
Total xylenes	ND	0.0050	mg/Kg	1.00	12/02/2005 04:27	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	12/02/2005 04:27	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	12/02/2005 04:27	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	12/02/2005 04:27	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	12/02/2005 04:27	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	12/02/2005 04:27	
1,2-DCA	ND	0.0050	mg/Kg	1.00	12/02/2005 04:27	
EDB	ND	0.0050	mg/Kg	1.00	12/02/2005 04:27	
Surrogate(s)						
1,2-Dichloroethane-d4	90.8	76-124	%	1.00	12/02/2005 04:27	
Toluene-d8	94.1	75-116	%	1.00	12/02/2005 04:27	



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Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 5030B Method Blank

MB: 2005/12/01-1B.62-006

Soil

Test(s): 8260B QC Batch # 2005/12/01-1B.62

Date Extracted: 12/01/2005 09:06

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	12/01/2005 09:06	
Gasoline [Shell]	ND	1.0	mg/Kg	12/01/2005 09:06	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	12/01/2005 09:06	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	12/01/2005 09:06	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	12/01/2005 09:06	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	12/01/2005 09:06	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	12/01/2005 09:06	
1,2-DCA	ND	0.0050	mg/Kg	12/01/2005 09:06	
EDB	ND	0.0050	mg/Kg	12/01/2005 09:06	
Benzene	ND	0.0050	mg/Kg	12/01/2005 09:06	
Toluene	ND	0.0050	mg/Kg	12/01/2005 09:06	
Ethyl benzene	ND	0.0050	mg/Kg	12/01/2005 09:06	
Total xylenes	ND	0.0050	mg/Kg	12/01/2005 09:06	
Surrogates(s)					
1,2-Dichloroethane-d4	86.0	76-124	%	12/01/2005 09:06	
Toluene-d8	92.2	75-116	%	12/01/2005 09:06	



### Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

 Prep(s):
 5030B
 Test(s):
 8260B

 Method Blank
 Soil
 QC Batch # 2005/12/01-2A.62

 MB:
 2005/12/01-2A.62-048
 Date Extracted:
 12/01/2005 20:48

Compound Conc. RL Unit Analyzed Flag ND 1.0 mg/Kg 12/01/2005 20:48 Gasoline [Shell] ND mg/Kg 12/01/2005 20:48 Gasoline [Shell] 1.0 ND 0.010 mg/Kg 12/01/2005 20:48 tert-Butvi alcohol (TBA) ND 0.0050 mg/Kg 12/01/2005 20:48 Methyl tert-butyl ether (MTBE) ND mg/Kg 12/01/2005 20:48 Di-isopropyl Ether (DIPE) 0.010 Ethyl tert-butyl ether (ETBE) ND 0.0050 mg/Kg 12/01/2005 20:48 ND mg/Kg 12/01/2005 20:48 tert-Amvl methyl ether (TAME) 0.0050 ND mg/Kg 12/01/2005 20:48 1,2-DCA 0.0050 mg/Kg 12/01/2005 20:48 **EDB** ND 0.0050 0.0050 mg/Kg ND 12/01/2005 20:48 Benzene Toluene ND 0.0050 mg/Kg 12/01/2005 20:48 ND 0.0050 mg/Kg 12/01/2005 20:48 Ethyl benzene mg/Kg 12/01/2005 20:48 Total xylenes ND 0.0050 Surrogates(s) % 12/01/2005 20:48 1.2-Dichloroethane-d4 90.4 76-124 94.0 75-116 % 12/01/2005 20:48 Toluene-d8



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

### **Batch QC Report**

Prep(s): 5030B Test(s): 8260B

Laboratory Control Spike Soil QC Batch # 2005/12/01-1B.62

LCS 2005/12/01-1B.62-014 Extracted: 12/01/2005 Analyzed: 12/01/2005 08:14
LCSD 2005/12/01-1B.62-040 Extracted: 12/01/2005 Analyzed: 12/01/2005 08:40

Compound	Conc.	mg/Kg	Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD_
Methyl tert-butyl ether (MTBE) Benzene Toluene	0.0444 0.0414 0.0425	0.0447 0.0418 0.0462	0.05 0.05 0.05	88.8 82.8 85.0	89.4 83.6 92.4	0.7 1.0 8.3	65-165 69-129 70-130	20 20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	405 464	399 468	500 500	81.0 92.8	79.8 93.6		76-124 75-116			



#### Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville

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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 5030B Test(s): 8260B

**Laboratory Control Spike** 

Soil

QC Batch # 2005/12/01-2A.62

LCS 2005/12/01-2A.62-056

Extracted: 12/01/2005

Analyzed: 12/01/2005 19:56 Analyzed: 12/01/2005 20:22

LCSD 2005/12/01-2A.62-022

Extracted: 12/01/2005

Exp.Conc. Recovery % RPD Ctrl.Limits % Flags Conc. mg/Kg Compound LCS LCSD LCS LCSD % Rec. RPD LCS LCSD Methyl tert-butyl ether (MTBE) 0.0440 0.0459 0.05 88.0 91.8 4.2 65-165 20 0.0421 0.05 84.8 84.2 69-129 20 Benzene 0.0424 0.7 Toluene 0.0430 0.0435 0.05 86.0 87.0 1.2 70-130 20 Surrogates(s) 1,2-Dichloroethane-d4 399 389 500 79.8 77.8 76-124 Toluene-d8 466 458 500 93.2 91.6 75-116



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville

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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 5030B Test(s): 8260B

Matrix Spike ( MS / MSD ) Soil QC Batch # 2005/12/01-1B.62

MS/MSD Lab ID: 2005-11-0255 - 001

MS: 2005/12/01-1B.62-009 Extracted: 12/01/2005 Analyzed: 12/01/2005 10:09

Dilution:

1.00

MSD: 2005/12/01-1B.62-036 Extracted: 12/01/2005 Analyzed: 12/01/2005 10:36

Dilution:

1.00

Compound	Conc.	Conc. mg/l		Spk.Level	Spk.Level Recovery %				s %	Flags		
Compound	мѕ	MSD	Sample	mg/Kg	мѕ	MSD	RPD	Rec.	RPD	MS	MSD	
Methyl tert-butyl ether	0.0438	0.0443	0.00925	0.046641	74.1	78.5	5.8	65-165	20		Į	
Benzene	0.0356	0.0344	ND	0.046641	76.3	77.1	1.0	69-129	20		[	
Toluene	0.0360	0.0348	ND	0.046641	77.2	78.0	1.0	70-130	20			
Surrogate(s)					ļ		1				1	
1,2-Dichloroethane-d4	432	407		500	86.4	81.4		76-124			1	
Toluene-d8	476	450		500	95.2	90.0		75-116	1	1	l	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville

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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 5030B Test(s): 8260B

Matrix Spike (MS / MSD) Soil QC Batch # 2005/12/01-2A.62

MS/MSD Lab ID: 2005-11-0259 - 005

MS: 2005/12/01-2A.62-018 Extracted: 12/01/2005 Analyzed: 12/01/2005 22:18

Dilution: 1.00

MSD: 2005/12/01-2A.62-044 Extracted: 12/01/2005 Analyzed: 12/01/2005 22:44

Dilution: 1.00

Compound	Conc.	mg/Kg		Spk.Level	R	ecovery	%	Limit	s %	Flags	
Compound	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether Benzene Toluene	0.505 0.217 0.220	0.657 0.186 0.194	1.13 ND ND	0.238095 0.238095 0.238095	91.1	-191.1 75.1 78.4	-31. 19.3 16.4	65-165 69-129 70-130	20 20 20	M5	R1,M5
Surrogate(s) 1,2-Dichloroethane-d4 Toluene-d8	405 475	399 477		500 500	81.0 95.0	79.8 95.4		76-124 75-116			



# Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville

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Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Legend and Notes**

#### **Result Flag**

M5

MS/MSD spike recoveries were below acceptance limits.

See blank spike (LCS).

R1

Analyte RPD was out of QC limits.



# Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Samples Reported**

Sample Name	Date Sampled	Matrix	Lab#
SB-14-5	11/18/2005 10:45	Soil	2
SB-13-5	11/18/2005 12:45	Soil	5
SB-12-5	11/18/2005 14:15	Soil	8



## Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

Attn.: Stu Dalie

Matrix:

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 5030B

Sample ID: SB-14-5

Sampled: 11/18/2005 10:45

Soil

Test(s): 8260B

Lab ID: 2005-11-0260 - 2

Extracted:

12/2/2005 17:13

QC Batch#: 2005/12/01-3A.69

	<del></del>													
Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag								
Gasoline [Shell]	99	50	mg/Kg	1.00	12/02/2005 17:13									
Benzene	ND	0.50	mg/Kg	1.00	12/02/2005 17:13									
Toluene	ND	0.50	mg/Kg	1.00	12/02/2005 17:13									
Ethyl benzene	ND	0.50	mg/Kg	1.00	12/02/2005 17:13									
Total xylenes	ND	0.50	mg/Kg	1.00	12/02/2005 17:13									
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	1.00	12/02/2005 17:13									
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	1.00	12/02/2005 17:13									
Di-isopropyl Ether (DIPE)	ND	1.0	mg/Kg	1.00	12/02/2005 17:13									
Ethyl tert-butyl ether (ETBE)	ND	0.50	mg/Kg	1.00	12/02/2005 17:13									
tert-Amyl methyl ether (TAME)	ND	0.50	mg/Kg	1.00	12/02/2005 17:13									
1,2-DCA	ND	0.50	mg/Kg	1.00	12/02/2005 17:13									
EDB	ND	0.50	mg/Kg	1.00	12/02/2005 17:13									
Surrogate(s)														
1,2-Dichloroethane-d4	86.0	53-129	%	1.00	12/02/2005 17:13									
Toluene-d8	86.0	47-136	%	1.00	12/02/2005 17:13									



### Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 5030B Test(s): 8260B

 Sample ID:
 SB-13-5
 Lab ID:
 2005-11-0260 - 5

 Sampled:
 11/18/2005 12:45
 Extracted:
 12/2/2005 17:36

 Matrix:
 Soil
 QC Batch#:
 2005/12/01-3A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	180	50	mg/Kg	1.00	12/02/2005 17:36	
Benzene	ND	0.50	mg/Kg	1.00	12/02/2005 17:36	
Toluene	ND	0.50	mg/Kg	1.00	12/02/2005 17:36	
Ethyl benzene	0.84	0.50	mg/Kg	1.00	12/02/2005 17:36	
Total xylenes	1.9	0.50	mg/Kg	1.00	12/02/2005 17:36	
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	1.00	12/02/2005 17:36	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	1.00	12/02/2005 17:36	
Di-isopropyl Ether (DIPE)	ND	1.0	mg/Kg	1.00	12/02/2005 17:36	
Ethyl tert-butyl ether (ETBE)	ND	0.50	mg/Kg	1.00	12/02/2005 17:36	
tert-Amyl methyl ether (TAME)	ND	0.50	mg/Kg	1.00	12/02/2005 17:36	
1,2-DCA	ND	0.50	mg/Kg	1.00	12/02/2005 17:36	
EDB	ND	0.50	mg/Kg	1.00	12/02/2005 17:36	1
Surrogate(s)			1			
1,2-Dichloroethane-d4	99.9	53-129	%	1.00	12/02/2005 17:36	
Toluene-d8	102.4	47-136	%	1.00	12/02/2005 17:36	



## Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 5030B

Sampled:

Sample ID: SB-12-5

11/18/2005 14:15

Soil

Test(s): 8260B

Lab ID:

2005-11-0260 - 8

Extracted:

12/2/2005 17:59 QC Batch#: 2005/12/01-3A.69

Matrix:

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	100	50	mg/Kg	1.00	12/02/2005 17:59	
Benzene	ND	0.50	mg/Kg	1.00	12/02/2005 17:59	
Toluene	ND	0.50	mg/Kg	1.00	12/02/2005 17:59	
Ethyl benzene	ND	0.50	mg/Kg	1.00	12/02/2005 17:59	
Total xylenes	ND	0.50	mg/Kg	1.00	12/02/2005 17:59	
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	1.00	12/02/2005 17:59	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	1.00	12/02/2005 17:59	
Di-isopropyl Ether (DIPE)	ND	1.0	mg/Kg	1.00	12/02/2005 17:59	
Ethyl tert-butyl ether (ETBE)	ND	0.50	mg/Kg	1.00	12/02/2005 17:59	
tert-Amyl methyl ether (TAME)	ND	0.50	mg/Kg	1.00	12/02/2005 17:59	
1,2-DCA	ND	0.50	mg/Kg	1.00	12/02/2005 17:59	
EDB	ND	0.50	mg/Kg	1.00	12/02/2005 17:59	
Surrogate(s)					;	
1,2-Dichloroethane-d4	105.0	53-129	%	1.00	12/02/2005 17:59	
Toluene-d8	101.0	47-136	%	1.00	12/02/2005 17:59	



# Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 5030B Method Blank

MB: 2005/12/01-3A.69-015

Test(s): 8260B
Soil QC Batch # 2005/12/01-3A.69

Date Extracted: 12/03/2005 16:15

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	mg/Kg	12/03/2005 16:15	
Benzene	ND	0.50	mg/Kg	12/03/2005 16:15	
Toluene	ND	0.50	mg/Kg	12/03/2005 16:15	ŀ
Total xylenes	ND	0.50	mg/Kg	12/03/2005 16:15	1
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	12/03/2005 16:15	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	12/03/2005 16:15	
Di-isopropyl Ether (DIPE)	ND	1.0	mg/Kg	12/03/2005 16:15	]
Ethyl tert-butyl ether (ETBE)	ND	0.50	mg/Kg	12/03/2005 16:15	
tert-Amyl methyl ether (TAME)	ND	0.50	mg/Kg	12/03/2005 16:15	
1,2-DCA	ND	0.50	mg/Kg	12/03/2005 16:15	
EDB	ND	0.50	mg/Kg	12/03/2005 16:15	
Surrogates(s)					
1,2-Dichloroethane-d4	104.0	53-129	%	12/03/2005 16:15	
Toluene-d8	98.0	47-136	%	12/03/2005 16:15	<u> </u>



## Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

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Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 5030B Test(s): 8260B

Laboratory Control Spike Soil QC Batch # 2005/12/01-3A.69

LCS 2005/12/01-3A.69-036 Extracted: 12/02/2005 Analyzed: 12/02/2005 05:36 LCSD 2005/12/01-3A.69-059 Extracted: 12/02/2005 Analyzed: 12/02/2005 05:59

Compound	Conc.	mg/Kg	Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags		
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD	
Benzene Toluene Methyl tert-butyl ether (MTBE)	10.6 10.7 11.9	8.90 8.80 10.1	10 10 10	106.0 107.0 119.0	89.0 88.0 101.0		69-129 70-130 65-165	20 20 20			
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	273 267	243 236	250 250	109.2 106.8	97.2 94.4		53-129 47-136				

AB STL San francisc									SH	EL	_L (	Ch	aiı	n C	of (	Cus	sto	dy	R	ec	or	ď				114738
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Cambria Environma	ntal	CETO					6 ADDI	-		-		klar	nd.	СА	•	-					としし BYT ID		1270			<del></del>
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PROJECT CONTACT (Herscopy-	or PDF Report (a)	_									ria-en		<u>n</u>		510	-420-	3339			sdal	ie@d	camb	ліа-ел	nv.cor	<u>m</u>	247-0483-008
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510-420-3339 TURNAROUND TIME (BL	510-420-9170 JSINESS DAYS):	sdalie(	<u>Dcambria</u>	-env.com		+										_										
☑ 10 DA☐ 5 DAYS ☐		24 HO	urs 🗌 i	ESS THAN 2	4 Hours											R	EQUI	EST	ED A	NAL	-YSI	S				
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GC/MS MTBE CONFIRMA		HIGHEST	per BORIN	G	ALL	1								[ <u>\$</u>	(8021		(TO-16)	اي		848)		١,	Ē		No ste	FIELD NOTES:
SPECIAL INSTRUCTION	NS OR NOTES: CI	HECK BOX I	F EDD IS N	OT NEEDE		┧॒			-			_		Volat	atte		ᆵ	0.15	•	(ASTM D1846)		ache	8		8	Container/Preservative
please_cc lab reuits	to cvasko@cambria-e	ny com ar	nailche h	ardmente.	-any com	8260	8260	3260)	0.Sppb RL)	ľ	1	100	<u></u>	٥	Arom		JTM/	L 18	416ш	(AST	<u> </u>	e att	table		T I I	or PID Readings or Laboratory Notes
please cc lab reuits to cvasko@cambria-env.com and sdalie@cambria-env.com				GIZV.COIII	at hod	the state	Pod	8		<u>۾</u>	(080	82	I i	ated/		BTEX/MTBE	Full List (TO-15)	TM 3	3583	FE	lal, Si	rtrac		Confirmation,	Of Cabbriatory Roles	
					PA M	PAM	A Met	260B	nates	(8260)	& Gre	200	5035 Extraction for Volatiles	logen	.€ (÷			H (AS	ğ	Jispor	Spor	1961 E		0 (00)	660	
Field Sampl	e Identification	SAM	PLING	MATRIX	NO. OF CONT,	TPHg (EPA Method 8260)	BTEX (EPA Method 8260)	TBA (EPA Method 8260)	MTBE (8260B -	5 oxygenates	Elhanol (8260B)	TPH (OII & Greese)	EDB & 1,2-DCA (8260B)	EPA 503	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs	Vapor VOCs	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases	Test for Disposal ( 4B	Test for Disposal, see attached	TPH - Diesel, Extractable (8015m)		MTBE (8260B)	TEMPERATURE ON RECEIPT
SB-14-2		11/18/0	30	soll	1	1	<u>-</u> ×		Ī	X		ゾ	メ		-		<del>-</del>	-	^	_		-	t	┝─┤	_ ₹	<del></del>
SB-14-5			1045	1	1	1,	,			1					$\neg$		+	-	$\dashv$			-	1	$\vdash$		358-14/
SB-14-8			11			11				$\dagger$								7	$\exists$				H	H	H	3-11
SB-13-2			1230			H			-	1						$\dashv$	+	$\dashv$	$\dashv$	$\dashv$		_		$\vdash$	Н	
SB-13-5		<del>                                     </del>	1745			11	Π.					$\dagger$	+		Ť		$\dashv$	+	-	1			$\vdash$	$\vdash$	$\vdash$	
SB-13 <b>-</b> 8			100			$\dagger \dagger$	$\top$					$\dashv$	+-		$\dashv$	_	$\dashv$	$\dashv$	$\dashv$				H		$\vdash$	<del></del>
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SB-12-5		1.1	715	1		† ',			_	$\exists$		$\mathbf{H}$	+		-		$\dashv$	$\dashv$	$\dashv$	-+				$\vdash \vdash$		775
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#### Cambria Environmental Emeryville

December 07, 2005

5900 Hollis Street, Ste. A Emeryville, CA 94608

Attn.: Stu Dalie

Project#: 247-0483-008 Project: 98995756

Site: 5755 Broadway, Oakland, CA

Dear Mr. Dalie:

Attached is our report for your samples received on 11/22/2005 15:00 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 01/06/2006 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: mbrewer@stl-inc.com Sincerely,

melissa Brewer

Melissa Brewer Project Manager



# Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
SP-1	11/18/2005 15:00	Soil	1



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 5030B Test(s): 8260B

 Sample ID:
 SP-1
 Lab ID:
 2005-11-0257 - 1

 Sampled:
 11/18/2005 15:00
 Extracted:
 12/2/2005 14:09

 Matrix:
 Soil
 QC Batch#:
 2005/12/02-3A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	12/02/2005 14:09	
Benzene	ND	0.0050	mg/Kg	1.00	12/02/2005 14:09	
Toluene	ND	0.0050	mg/Kg	1.00	12/02/2005 14:09	
Ethyl benzene	0.013	0.0050	mg/Kg	1.00	12/02/2005 14:09	
Total xylenes	0.022	0.0050	mg/Kg	1.00	12/02/2005 14:09	
Surrogate(s)						
1,2-Dichloroethane-d4	98.8	76-124	%	1.00	12/02/2005 14:09	
Toluene-d8	89.9	75-116	%	1.00	12/02/2005 14:09	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

### **Batch QC Report**

 Prep(s):
 5030B
 Test(s):
 8260B

 Method Blank
 Soil
 QC Batch # 2005/12/02-3A.69

 MB:
 2005/12/02-3A.69-024
 Date Extracted:
 12/02/2005 13:24

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	12/02/2005 13:24	
Benzene	ND	0.0050	mg/Kg	12/02/2005 13:24	
Toluene	ND	0.0050	mg/Kg	12/02/2005 13:24	
Ethyl benzene	ND	0.0050	mg/Kg	12/02/2005 13:24	
Total xylenes	ND	0.0050	mg/Kg	12/02/2005 13:24	
Surrogates(s)					
1,2-Dichloroethane-d4	101.6	76-124	%	12/02/2005 13:24	
Toluene-d8	90.2	75-116	%	12/02/2005 13:24	



## Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 5030B

LCS

LCSD

Test(s): 8260B

**Laboratory Control Spike** 

2005/12/02-3A.69-038

Soil

QC Batch # 2005/12/02-3A.69

2005/12/02-3A.69-001

Extracted: 12/02/2005 Extracted: 12/02/2005 Analyzed: 12/02/2005 12:38 Analyzed: 12/02/2005 13:01

Compound	Conc.	mg/Kg	Exp.Conc.	Reco	very %	RPD	Ctrl.Lin	nits %	Fla	ags
<u> </u>	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene	0.0379 0.0378	0.0396 0.0405	0.05 0.05	75.8 75.6	79.2 81.0	4.4 6.9	69-129 70-130	20 20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	468 451	474 470	500 500	93.6 90.2	94.8 94.0		76-124 75-116			



# **Total Lead**

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
SP-1	11/18/2005 15:00	Soil	1



#### **Total Lead**

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

Prep(s): 3050B

Sample ID: SP-1

Sampled: 11/18/2005 15:00

Matrix:

Soil

Test(s): 6010B

Lab ID:

2005-11-0257 - 1

Extracted:

12/2/2005 15:31 QC Batch#: 2005/12/02-01.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	2.7	1.0	mg/Kg	1.00	12/02/2005 21:21	



#### **Total Lead**

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 3050B Method Blank

Soil

Test(s): 6010B

QC Batch # 2005/12/02-01.15

MB: 2005/12/02-01.15-001

Date Extracted: 12/02/2005 15:31

Compound	Conc.	RL	Unit	Analyzed	Flag
Lead	ND	1.0	mg/Kg	12/02/2005 19:44	



#### **Total Lead**

Cambria Environmental Emeryville

Attn.: Stu Dalie

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-3339 Fax: (510) 420-9170

Project: 247-0483-008

98995756

Received: 11/22/2005 15:00

Site: 5755 Broadway, Oakland, CA

#### **Batch QC Report**

Prep(s): 3050B Test(s): 6010B

Laboratory Control Spike Soil QC Batch # 2005/12/02-01.15

LCS 2005/12/02-01.15-002 Extracted: 12/02/2005 Analyzed: 12/02/2005 19:47 LCSD 2005/12/02-01.15-003 Extracted: 12/02/2005 Analyzed: 12/02/2005 19:51

Exp.Conc. RPD Ctrl.Limits % mg/Kg Recovery % Flags Conc. Compound LCS LCSD LCS LCSD % Rec. **RPD** LCS LCSD 92.4 94.5 100.0 92.4 94.5 2.2 80-120 20 Lead

**AB STL San francisc SHELL Chain Of Custody Record** Shell Project Manager to be invoiced: INCIDENT NUMBER (S&E ONLY) SCIENCE & ENGINEERING Denis Brown DATE: 11/18/05 TECHNICAL SERVICES SAP OF CRMT NUMBER (TS/CRMT) アロクケーリ ーロスケチ CRIMT HOUSTON Page 1 of SAMPLING COMPANY Cambria Environmantal CETO 5755 Broadway, Oakland, CA T0600101270 5900 Hollis Street, Suite A, Emeryville, CA CONSULTANT PROJECT NO PROJECT CONTACT (Hardcopy or PDF Report to). shelloaklandedf@cambria-env.com 510-420-3339 sdalie@cambria-env.com Stewart A. Dalle IV 247-0483-008 SAMPLER NAME(S) (Print): Stu Dalle TELEPHONE: LAB USE ONLY 510-420-3339 510-420-9170 sdalie@cambria-env.com TURNAROUND TIME (BUSINESS DAYS): ☑ 10 DA
☐ 5 DAYS
☐ 72 HOURS
☐ 48 HOURS
☐ 24 HOURS
☐ LESS THAN 24 HOURS
☐ REQUESTED ANALYSIS ☐ LA - RWQC8 REPORT FORM☐ UST AGENCY: VOCs Halogenated/Aromatic (8021B) (TO-15) GC/MS MTBE CONFIRMATION: HIGHEST HIGHEST per BORING Vapor Fixed Gases (ASTM D1946) (8015m) ATBE (8260B) Confirmation, See Note **FIELD NOTES:** Full List (TO-15) SPECIAL INSTRUCTIONS OR NOTES: Test for Disposal, see attached CHECK BOX IF EDD IS NOT NEEDED Vapor VOCs BTEX / MTBE BTEX (EPA Method 8260) MTBE (8280B - 0.5ppb RL) Vapor TPH (ASTM 3416m) Container/Preservative TPHg (EPA Method 8260) TPH - Diesel, Extractable EPA 5035 Extraction for EDB & 1,2-DCA (8260B) please cc lab reults to cvasko@cambria-env.com and sdalle@cambria-env.com or PID Readings Fest for Disposal ( 4B-or Laboratory Notes TPH (Oll & Greese) Ethanol (8260B) **FRPH (418.1)** Field Sample Identification NO. OF TEMPERATURE ON REC DATE TIME SP-1A 200 11/18/05 SP-1B SP-1C SP-1D Relinquished by: (Signature) Testin Sch lex Received by: (Signature) DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

10/16/00 Revision

100c-11-0287

This information is business proprietary and confidential and must not be divulged or shared outside the company. The use of this information is strictly for the purpose of doing business with the Centralized Residual Management Team (CRMT). Upon termination of the relationship with the CRMT, this information is not to be forwarded, duplicated, shared or used for any purpose other than for the documentation of past actions.

#### RESIDUAL MANAGEMENT PROCEDURE

ISSUED DATE: 08/01/01

CANCELS ISSUE: ISSUED BY: LRR

RESIDUAL STREAM:

SOIL WITH UNLEADED GASOLINE

VENDOR:

ALLIED-BFI

LOCATION:

ALLIED WASTE - MANTECA 9999 SOUTH AUSTIN ROAD

MANTECA, CA 95336

CALIFORNIA - TRANSPORTATION AND RETAIL

BTEX - EPA 8021B/8260B (IF BENZENE IS > OR = TO 10 MG/KG THEN TCLP BENZENE IS REQUIRED)

CAM METALS = TTLC METALS - lead only

STLC ON ALL TTLC METALS 10 TIMES STLC MAXIMUM

TTLC LEAD=>13 MG/KG REQUIRES ORGANIC LEAD ANALYSIS

IF ANY TTLC TOTAL METAL IS > OR = TO 20 TIMES TCLP REGULATORY LEVELS, TCLP IS REQUIRED

TOTAL PETROLEUM HYDROCARBONS, METHOD 418.1 OR 8015

OR (8015) - GASOLIN

- MTBE METHOD 8260B (GC/MS) --

AQUATIC BIOASSAY (FISH TOX) IS ONLY TO BE RUN ON SAMPLES > OR = TO 5000 PPM TPH. AQUATIC BIOASSAY (FISH TOX) = PART 800 OF STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER (15TH EDITION)

LABORATORY INSTRUCTIONS (MINIMUM GUIDELINES ONLY)

- -ALTERNATE APPROVED TEST METHODS PER SW846 ARE ALSO ACCEPTABLE
- -ALL REQUIRED TESTS ON COMPOSITE (Max 4:1)
- -LABORATORY IS TO SUPPLY QA/QC INFORMATION WITH ALL ANALYTICAL REPORTS
- -MAIL OR PAX ALL ANALYSIS TO THE CENTRALIZED RESIDUAL MANAGEMENT TEAM

PROCEDURE ORIGINAL DATE: 08/01/01 PROCEDURE REVISED DATE: 08/01/01

# ATTACHMENT E

Soil Disposal Confirmation



# Hazardous Waste Hauler (Registration # 2843)

P.O. Box 292547 \* Sacramento, CA 95829 \* FAX 916-381-1573

# **Disposal Confirmation**

Request for	Transportation Received:	12/08/2005

12/23/2005

Date of Invoice:

Consultant Information Company: Cambria Contact: Stu Phone: 510-420-3339 Fax: 510-420-9170 Site Information PO# Street Address: 5755 Broadway City, State, ZIP: Oakland, Ca Customer: Shell Oil Company RESA-0023-LDC RIPR #: 49563 SAP # / Location: 135699 Incident #: 98995756 Location / WIC #: 204-2210-0303 Environmental Engineer: Denis Brown Material Description: Soil < 1 CY < 1 Cy (4 5-gallon drums) **Estimated Quantity:** Service Requested Date: ASAP!! Disposal Facility: Forward Landfill Contact: Scott 800 204-4242 Phone: Approval #: 6029 Date of Disposal: 12/20/2005 **Actual Tonnage** 0.37 Tons Manley & Sons Trucking, Inc. Transporter: Jennifer Rogers Contact: Phone: 916 381-6864 Fax: 916 381-1573 Invoice: 200512-15