R0428

CAMBRIA

September 20, 2004

Rosanna Garcia-LaGrille
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Site Investigation Report**
Shell-branded Service Station
350 Grand Avenue
Oakland, California
SAP Code 135698
Incident #98995755

Dear Ms. Garcia-LaGrille:

Cambria Environmental Technology, Inc. (Cambria) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document site investigation activities at the above-referenced site. The purpose of this investigation was to further assess the lateral extent of impacted soil and groundwater beneath the site and near utility lines offsite. Cambria followed the scope of work presented in our September 26, 2002 *Tank Backfill Well Installation Report and Work Plan Addendum*. Although the Alameda County Health Care Services Agency (ACHCSA) did not provide written approval of the work plan, Cambria notified the ACHCSA of Shell's intent to implement the work plan addendum, in Cambria's *Groundwater Monitoring Report – Fourth Quarter 2003* dated January 26, 2004.

The work was performed in accordance with Regional Water Quality Control Board (RWQCB) and Alameda County Public Works Agency (ACPWA) guidelines.

SITE BACKGROUND

Site Description: The site is an active Shell-branded Service Station, located at the northeast corner of the intersection of Grand Avenue and Perkins Street in Oakland, California (Figure 1). Lakeside Park is located at the southwest corner of this intersection. The area surrounding the site consists of mixed commercial and residential properties. The station layout consists of three gasoline USTs, four fuel dispensers, and a kiosk (Figure 2). Underground utility lines and historical sample locations are depicted on Figure 2, for reference.

Cambria Environmental Technology, Inc.

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PREVIOUS WORK

1990 Soil Borings: On May 11, 1990, GeoStrategies Inc. of Hayward, California (GSI) drilled five exploratory soil borings (S-A through S-E). The highest hydrocarbon concentration in soil was in boring S-A, located at the southwest corner of the property in the vicinity of the gasoline USTs. Constituents detected at a depth of 9.5 feet below grade (fbg) in this area were 2,900 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg), 2,400 ppm total petroleum hydrocarbons as diesel (TPHd), and 13 ppm benzene.

1991 Monitoring Well Installation: On January 7, 1991, GSI installed three monitoring wells (S-1, S-2, and S-3) at the site (Figure 2). Groundwater was encountered between 7 and 9 fbg. Well construction details are included on Table 1. The highest hydrocarbon concentrations in soil and groundwater were reported in well S-2, located at the southwest corner of the property in the vicinity of the gasoline USTs. The maximum concentrations in soil at S-2 were 440 ppm TPHg, 360 ppm TPHd, and 4.5 ppm benzene in soil at 8.5 fbg. Groundwater from S-2 contained 2,500 parts per billion (ppb) TPHg, 1,200 ppb TPHd, and 550 ppb benzene in groundwater. No TPHg, TPHd, or benzene was detected in the groundwater sample from well S-1.

1993 Hydropunch Borings: On January 27, 1993, GSI installed three hydropunch borings off site (Figure 2). The highest hydrocarbon concentrations were detected in boring HP-1, located crossgradient of the USTs. Maximum concentrations in that boring were 1,500 ppm TPHg, 18 ppm TPHd, and 0.11 ppm benzene in soil at 6.5 fbg and 22,000 ppb TPHg, 14,000 ppb TPHd, and 2,500 ppb benzene in groundwater. TPHg and benzene were not detected in soil or groundwater samples from borings HP-2 and HP-3, located downgradient of the USTs.

1996 Tank Removal: On April 22, 1996, Weiss Associates of Emeryville, California (WA) observed the removal of three 10,000-gallon gasoline USTs and one 10,000-gallon diesel UST and collected soil samples. Up to 4,800 ppm TPHg, 2,800 ppm TPHd, and 22 ppm benzene were detected in samples collected from the UST excavation, product piping trenches, and beneath the product dispensers.

1998 Potential Receptor Survey: In April 1998, Cambria identified wells and surface water bodies within a ½-mile radius of the site. As depicted on Figure 1, three water producing wells are located between 2,640 feet and 3,960 feet crossgradient of the site. Lake Merritt is located approximately 900 feet downgradient of the site. The potential receptor survey results were presented to the ACHCSA in Cambria's May 31, 1998 *MTBE Investigation Report.*

1998 Conduit Study: In September 1998, Cambria performed an investigation to locate underground utilities and local drainage systems near the site in an effort to identify potential preferential pathways for contaminant migration. Cambria contacted Underground Service Alert and used a private utility line locator to identify underground utilities. The City of Oakland was contacted to research locations, depths, and construction information of water, storm drain and sanitary sewer conduits. The *Watershed Map of the Oakland-Berkeley Area* was reviewed to identify buried creeks, underground culverts, storm drains, and engineered channels in the area. The results of the study are depicted graphically on Figure 2.

1998 Geoprobe Well Installation: On April 16, 1998, Cambria installed two ¾-inch diameter pre-packed wells (S-4 and S-5) within the Grand Avenue right-of-way, downgradient of the site. No TPHg, benzene, toluene, ethylbenzene, or xylenes (BTEX), or methyl tertiary butyl ether (MTBE) were detected in soil or groundwater from wells (S-4 and S-5).

1999 Geoprobe Boring Installation: In March 1999, Cambria installed three Geoprobe borings to evaluate whether utility conduit trenches serve as preferential pathways for the migration of impacted groundwater. Two borings (HP-4 and HP-5) were advanced within the sanitary sewer conduit trench along the north sidewalk on Grand Ave, and the third boring (HP-6) was advanced within Perkins Street. The maximum TPHg concentration detected in soil was 408 ppm in soil sample HP-4-10. The maximum MTBE concentration reported (by EPA Method 8020) in soil was 2.52 ppm in soil sample HP-4-10. Grab groundwater samples collected from HP-4 contained 100,000 ppb TPHg, 83,000 ppb TPHd, and 2,000 ppb MTBE (by EPA Method 8020). Grab groundwater samples from HP-5, near the diesel UST complex, contained 160 ppb TPHg. TPHg, BTEX, and MTBE were below detection limits in grab groundwater samples from HP-5 and HP-6.

2001 Dual-Phase Vapor Extraction (DVE) Pilot Test: In June 2001, Cambria conducted an 8-hour DVE pilot test on groundwater monitoring well S-2. DVE is the process of applying high vacuum through an airtight well seal to simultaneously extract soil vapors from the vadose zone and enhance groundwater extraction from the saturated zone. Approximately 50 gallons of groundwater were extracted during the 8-hour test. This data is consistent with the low permeability soil (sandy silt and silt) encountered at this site. Estimated mass removal through groundwater extraction of TPHg, benzene, and MTBE was 0.008, 0.0004, and 0.009 pounds, respectively. Estimated mass removal through vapor extraction of TPHg, benzene, and MTBE was 2.44, 0.002, and 0.005 pounds, respectively. Based on this data, DVE from monitoring well S-2 does not appear to effectively recover hydrocarbons and MTBE from the subsurface.

Groundwater Monitoring: Groundwater monitoring has been conducted at the site since well installation in 1991. Historical onsite maximum concentrations of constituents have been found in well S-2 with up to 120,000 ppb TPHg, 36,000 ppb TPHd, 10,000 ppb benzene, and 30,200 ppb MTBE, by EPA Method 8260. The current onsite maximum concentrations of constituents are also reported in well S-2 with 16,000 ppb TPHg, 7,000 ppb TPHd, 650 ppb benzene, and 10,000 ppb MTBE, by EPA Method 8260. The majority of the TPHd found in well S-2 can be attributed to the heavier portion of weathered gasoline that falls in the TPHd range. Although still elevated, the concentrations in well S-2, and other site wells, are declining. Offsite wells S-4 and S-5 delineate the downgradient extent of the plumes.

July 2002 - Tank Backfill Wells: On July 10, 2002, two UST backfill wells were installed (T-1 and T-2). The installation activities were documented in Cambria's *Tank Backfill Well Installation Report and Investigation Work Plan Addendum* dated September 26, 2002.

2002 Groundwater Remediation: Cambria initiated mobile groundwater extraction (GWE) from the tank backfill wells using a vacuum truck at the site in October 2002 and continued until January 2004. The cumulative estimated volume of water removed from the site through GWE is 54,679 gallons. This volume of water corresponds to the removal of approximately 2.56 pounds of MTBE.

2003 Interim Remediation: In an attempt to reduce the elevated concentrations of contaminants localized at well S-2, Cambria conducted DVE from groundwater monitoring well S-2 between September 16 and September 18, 2003. Approximately 35 gallons of groundwater were extracted during approximately 50 hours of DVE from S-2. Estimated mass removal through groundwater extraction is considered negligible. Cambria also conducted soil vapor extraction (SVE) from tank backfill well T-1 on September 18 in an effort to maximize mass removal and gain additional information about the site. Estimated mass removal from the site through vapor extraction of TPHg, benzene, and MTBE was 0.152 pounds, 0.0009 pounds, and 0.0042 pounds, respectively.

In correspondence dated March 29, 2002 and July 9, 2002, the ACHCSA requested sampling of groundwater near utility lines and also downgradient of the UST complex. Cambria proposed the installation of four borings (HP-7 through HP-10) in the *Tank Backfill Well Installation Report and Investigation Work Plan Addendum* dated September 26, 2002. In Cambria's *Groundwater Monitoring Report – Fourth Quarter 2003,* dated January 26, 2004, Cambria notified the ACHCSA of Shell's intent to implement the work plan addendum, although no written approval had been received. The results of this investigation are presented herein.

INVESTIGATION RESULTS

Personnel Present: Cambria geologist Scott Lewis directed the field activities, working under the supervision of California Registered Geologist Ana Friel.

Permits: Boring permit No. W04-0367 was obtained from Alameda County Public Works Agency and an excavation permit (Appl # X0400778) was obtained from the City of Oakland (Appendix A).

Drilling Company: Gregg Drilling and Testing, Inc. of Martinez, California (C57 License No. 485165).

Drilling Date: April 13, 2004.

Drilling Method: Hand-auger and Geoprobe.

Number of Borings: Four soil borings (HP-7 through HP-10) were drilled. Boring specifications are described in Table 1 and locations are shown on Figure 3.

Boring Depths: Boring HP-7 was extended to 20 fbg, HP-8 to 16 fbg, and HP-9 and HP-10 to 10 fbg.

Soil Sampling Methods: Soil types were logged using the Unified Soil Classification System and Munsell Soil Color Charts. Encountered soil is described on the exploratory boring logs presented in Appendix B. In boring HP-7, soil samples were collected continuously for lithologic description. In all borings, soil samples were retained at five-foot intervals for logging and potential chemical analyses. Soil samples were screened in the field for the presence of organic vapors using a photo-ionization detector (PID). PID readings are recorded on the boring logs.

Groundwater Depths: During drilling activities, first encountered groundwater was observed in boring HP-7 at 19.5 fbg, in boring HP-8 at 11 fbg, and in borings HP-9 and HP-10 at 9.5 fbg.

Soil Types: Soil types encountered while drilling the borings generally consisted of layers of clayey silt, and clayey sandy silt (ML) interbedded with layers of sandy gravel (GW) to the total explored depth of 20 fbg (Appendix B).

Soil Disposal: Soil generated during field activities was stored on and covered with plastic sheeting, sampled, and profiled for disposal. On April 29, 2004, Manley and Sons Trucking, Inc. (Manley) of Sacramento, California transported approximately 0.26 tons of soil from the site to Allied Waste Industries' Forward Landfill in Manteca, California. The disposal documentation and profile results are included in Appendix C.

Chemical Analyses: Groundwater and soil samples were analyzed for TPHg, BTEX, and MTBE by EPA Method 8260B. The certified analytical reports are included in Appendix D.

HYDROCARBON DISTRIBUTION IN SOIL

TPHg was detected in soil samples collected from boring HP-7 at depths of 5, 10, and 15 fbg at concentrations ranging from 3.3 to 85 ppm. MTBE was detected in soil samples collected from boring HP-7 at depths of 5 and 15 fbg at concentrations of 0.045 and 0.023 ppm, respectively. No benzene was detected in the soil samples collected from boring HP-7.

TPHg was detected in a soil sample collected from boring HP-9 at a depth of 10 fbg at a concentration of 4,300 ppm. No BTEX or MTBE were detected in the soil samples collected from boring HP-9.

No TPHg, BTEX, or MTBE were detected in soil from HP-8 or HP-10.

The soil chemical analytical data is summarized on Table 2, the TPHg, benzene, and MTBE concentrations are presented on Figure 3, and the laboratory analytical report is included in Appendix D.

HYDROCARBON DISTRIBUTION IN WATER

TPHg was reported in water samples from all four borings, at concentrations ranging from 57 ppb in HP-8 to 89,000 ppb in HP-9. In samples from HP-8 and HP-10, the laboratory noted that the material reported as TPHg did not resemble their gasoline standard.

Benzene was detected at boring HP-9 only, at a concentration of 480 ppb.

MTBE was reported in water from HP-7, HP-8, and HP-9 at concentrations of 89, 6.2, and 730 ppb, respectively. The water sample from HP-10 did not contain MTBE at, or above, the detection limit of 0.50 ppb.

The groundwater chemical analytical data are summarized on Table 3. The TPHg, benzene, and MTBE concentrations are presented on Figure 3. The laboratory analytical report is included in Appendix D.

DISCUSSION

The purpose of this work was to assess the lateral extent of hydrocarbons in the soil and groundwater downgradient of the current dispensers, the USTs and in the vicinity of utility lines. Based on these efforts, it appears that the elevated contaminant concentrations observed near well S-2 and HP-4 are not laterally extensive to the east (as demonstrated by data from HP-5, HP-7, and HP-8); to the south (as demonstrated by well S-4 and boring HP-3); to the southwest (as demonstrated by well S-5); to the west (as demonstrated by boring HP-2 and HP-6); or to the north (as demonstrated by HP-10 and S-3).

Based on the data from this and previous investigative activities, it appears that the petroleum impacted groundwater is limited in its' lateral extent to a relatively short distance from the source area. The borings installed near the subsurface utilities do not suggest that preferential contaminant migration is occurring via the water, electrical or sanitary sewer lines. The groundwater near the two storm drain lines located in Perkins Street, across from boring HP-3 has not yet been assessed.

Based on historical shallow soil data near the on-site commercial building (kiosk), soil gas samples would be needed to assess the potential threat to onsite commercial workers. However, during construction of the onsite building, it is often standard practice to install a layer of plastic

as a moisture barrier. If present, the moisture barrier (plastic) would also act as a vapor barrier, prohibiting direct migration of vapors from soil through any cracks in the foundation and into the building. Further, given that the commercial business is a gasoline service station, there are likely concentrations of petroleum constituents in ambient air that are migrating into the kiosk, making soil-gas migration relatively insignificant.

RECOMMENDATIONS

Since the nearest sensitive receptor to this site is Lake Merritt, located approximately 660 feet south of the site along Perkins Street, and since the storm drains that lie in Perkins Street intersect the water table and discharge into Lake Merritt, Cambria recommends additional groundwater assessment near the storm drains in Perkins Street, South of Grand Avenue.

In order to complete a site conceptual model and proceed towards closure, vertical delineation of soil impact in the are of the dispenser islands (refer to Table 2 – samples from 1996) is needed, and vertical delineation of groundwater impact in the vicinity of well S-2 is also needed. Thus, Cambria recommends onsite borings for collection and analyses of soil and grab-groundwater samples.

In order to determine whether migration of impacted soil vapors into the kiosk is a complete pathway, Cambria recommends investigating the construction methods used when the kiosk was built, to determine if a possible vapor barrier is present beneath the structure. Also, additional information regarding background concentrations of petroleum constituents in air at an operating service station will be researched.

And, to confirm whether groundwater in the vicinity of the site is potable, select monitoring wells should be sampled and analyzed for salinity and total dissolved solids.

Once this additional information is obtained, a site conceptual model and risk assessment can be prepared that will identify whether the current conditions at this site pose a threat to human health or the environment, and whether additional investigation, remediation, monitoring, or case closure is warranted.

SCHEDULE

Cambria will prepare a work plan detailing the scope of work to meet the above objectives for submittal to the ACHCSA during the fourth quarter of 2004.

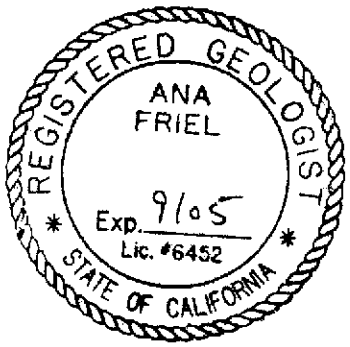
CLOSING

If you have any questions regarding the contents of this document, please call Ana Friel at (707) 442-2700.

Sincerely,
Cambria Environmental Technology, Inc.

for Scott Lewis
Senior Staff Geologist

Ana Friel, RG
Senior Project Geologist
RG 6452



Attachments:

Table 1.	Well/Boring Data
Table 2.	Soil Analytical Data
Table 3.	Grab Groundwater Analytical Data
Figure 1.	Site Vicinity Map
Figure 2.	Soil/Groundwater Chemical Concentration Map
Appendix A.	Permits
Appendix B.	Boring Logs
Appendix C.	Disposal Documentation and Profile Analytical Report
Appendix D.	Certified Analytical Report

cc: Karen Petryna, Shell
Gursharnjeet Cheema, 1060 St. Raphael Drive, Bay Point, CA 94565

Table 1. Well/Boring Data, Shell-branded Service Station, 350 Grand Avenue, Oakland, California

Name	Type	Date Installed	TOC Elev (ft msl)	Total Depth (ft)	Soil Sample (ft) Incr. or	Depth(s)	First Encountered GW Depth (ft)	Elev (ft msl)	Screen Diam. (In)	Screen Depth (ft) Top	Bottom	Comments
S-1	Well (HSA)	07-Jan-91	23.36	19.5	5	-	9.5	-	3	7	16	
S-2	Well (HSA)	07-Jan-91	23.73	17.5	5	-	8.5	-	3	7	15	
S-3	Well (HSA)	07-Jan-91	25.14	15	5	-	9	-	3	7	15	
S-4	Well (HSA)	16-Apr-98	22.34	15	5	-	7	-	0.75	4	14	
S-5	Well (HSA)	16-Apr-98	23.55	15	5	-	13.5	-	0.75	4	15	
S-A	Boring (Geoprobe)	1-May-90	-	13.5	5	-	8.0	-	-	-	-	
S-B	Boring (Geoprobe)	1-May-90	-	15	5	-	8.5	-	-	-	-	
S-C	Boring (Geoprobe)	1-May-90	-	13.5	5	-	9.5	-	-	-	-	
S-D	Boring (Geoprobe)	1-May-90	-	15	5	-	8.5	-	-	-	-	
HP-1	Boring (HSA)	27-Jan-93	-	10	5	-	NA	-	-	-	-	
HP-2	Boring (HSA)	27-Jan-93	-	13	5	-	NA	-	-	-	-	
HP-3	Boring (HSA)	27-Jan-93	-	14	5	-	13	-	-	-	-	
HP-4	Boring (Geoprobe)	17-Mar-99	-	15.5	C	-	8	-	-	-	-	
HP-5	Boring (Geoprobe)	17-Mar-99	-	15	C	-	8	-	-	-	-	
HP-6	Boring (Geoprobe)	17-Mar-99	-	20	C	-	10	-	-	-	-	
HP-7	**Boring (Geoprobe)**	**13-Apr-04**	**-**	**20**	**C**	**-**	**19.5**	**-**	**-**	**-**	**-**	
HP-8	**Boring (Geoprobe)**	**13-Apr-04**	**-**	**16**	**C**	**-**	**11**	**-**	**-**	**-**	**-**	
HP-9	**Boring (Hand auger)**	**13-Apr-04**	**-**	**10**	**C**	**-**	**10**	**-**	**-**	**-**	**-**	
HP-10	**Boring (Hand auger)**	**13-Apr-04**	**-**	**10**	**C**	**-**	**10**	**-**	**-**	**-**	**-**	

Abbreviations:

C = Continuous

TOC = Top of Casing referenced to mean sea level

HSA = Hollow-stem auger

Table 3. Grab Groundwater Analytical Data, Shell-branded Service Station, 350 Grand Avenue, Oakland, California

Sample ID	Date Sampled	TPHg µg/L	TPHd µg/L	B µg/L	T µg/L	E µg/L	X µg/L	MTBE µg/L
HP-7-W	13-Apr-04	**1,300**	NA	<1.0	<1.0	**25**	**17**	**89**
HP-8-W	13-Apr-04	**57***	NA	<0.50	<0.50	<0.50	<1.0	**6.2**
HP-9-W	13-Apr-04	**89,000**	NA	**480**	**68**	**280**	**<100**	**730**
HP-10-W	13-Apr-04	**67***	NA	<0.50	<0.50	<0.50	<1.0	<0.50
HP-4	17-Mar-99	**83,000**	**100,000**	**1,000**	**420**	**590**	**280**	**2,000**
HP-5	17-Mar-99	**160**	<50	<0.50	<0.50	<0.50	<0.50	<2.5
HP-6	17-Mar-99	<50	<50	<0.50	<0.50	<0.50	<0.50	<2.5 (<2.0)
SB-1	16-Apr-98	<50	**140***	<0.50	<0.50	<0.50	<0.50	<2.5 (<2.0)
SB-2	16-Apr-98	<50	NA	<0.50	<0.50	<0.50	<0.50	NA
HP-1	06-Jan-93	**22,000**	**14,000**	**2,500**	**130**	**1,400**	**140**	NA
HP-2	06-Jan-93	<50	NA	<0.5	**4.4**	<0.5	<0.5	NA
HP-3	06-Jan-93	<50	NA	<0.5	<0.5	<0.5	<0.5	NA

Abbreviations:

The following constituents analyzed by EPA Method 8260B:

TPHg = Total petroleum hydrocarbons as gasoline

BTEX = Benzene, toluene, ethylbenzene, and xylenes

MTBE = Methyl tertiary butyl ether

µg/L = Micrograms per liter

<x = Not detected at reporting limit x

NA = Not analyzed

* = TPHg does not match laboratory standard

Table 2. Soil Analytical Data, Shell-branded Service Station, 350 Grand Avenue, Oakland, California

Sample ID	Date Sampled	Depth fbg	TPHg mg/kg	TPHd mg/kg	B mg/kg	T mg/kg	E mg/kg	X mg/kg	MTBE mg/kg	Lead mg/kg	Comments Work performed by
HP-7-5'	13-Apr-04	5.0	**4.0**	NA	<0.0050	<0.0050	**0.013**	**0.019**	**0.045**	NA	Cambria
HP-7-10'	13-Apr-04	10.0	**85**	NA	<0.50	<0.50	**0.53**	**0.68**	<0.50	NA	Cambria
HP-7-15'	13-Apr-04	15.0	**3.3**	NA	<0.0050	<0.0050	**0.036**	**0.025**	**0.023**	NA	Cambria
HP-7-19.5'	13-Apr-04	19.5	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	Cambria
HP-8-5'	13-Apr-04	5.0	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	Cambria
HP-8-10'	13-Apr-04	10.0	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	Cambria
HP-8-11'	13-Apr-04	11.0	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	Cambria
HP-8-14.5'	13-Apr-04	14.5	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	Cambria
HP-9-5'	13-Apr-04	5.0	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	Cambria
HP-9-10'	13-Apr-04	10.0	**4,300**	NA	<5.0	<5.0	<5.0	<5.0	<5.0	NA	Cambria
HP-10-5'	13-Apr-04	5.0	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	Cambria
HP-10-9.5'	13-Apr-04	9.5	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA	Cambria
HP-4-5.5'	17-Mar-99	5.5	<1.00	<1.0	<0.00500	<0.00500	<0.00500	<0.00500	<0.0500	NA	Cambria
HP-4-10'	17-Mar-99	10.0	**408**	**140**	**2.22**	**2.57**	<0.250	**0.35**	**2.52**	NA	Cambria
HP-4-15'	17-Mar-99	15.0	**1.91**	<1.0	<0.00500	<0.00500	**0.0151**	**0.00510**	**0.132**	NA	Cambria
HP-4-15.5'	17-Mar-99	15.5	<1.00	**5.1**	**0.00560**	<0.00500	<0.00500	<0.00500	**0.110**	NA	Cambria
HP-5-5'	17-Mar-99	5.0	<1.00	**1.1**	<0.00500	<0.00500	<0.00500	<0.00500	<0.0500	NA	Cambria
HP-5-7'	17-Mar-99	7.0	<1.00	**4.8**	<0.00500	<0.00500	<0.00500	<0.00500	<0.0500	NA	Cambria
HP-5-10.5'	17-Mar-99	10.5	<1.00	**1.8**	<0.00500	<0.00500	<0.00500	<0.00500	<0.0500	NA	Cambria
HP-5-14.5'	17-Mar-99	14.5	<1.00	**5.6**	<0.00500	<0.00500	<0.00500	<0.00500	<0.0500	NA	Cambria
HP-5-15'	17-Mar-99	15.0	<1.00	<1.0	<0.00500	<0.00500	<0.00500	<0.00500	<0.0500	NA	Cambria

Table 2. Soil Analytical Data, Shell-branded Service Station, 350 Grand Avenue, Oakland, California

Sample ID	Date Sampled	Depth fbg	TPHg mg/kg	TPHd mg/kg	B mg/kg	T mg/kg	E mg/kg	X mg/kg	MTBE mg/kg	Lead mg/kg	Comments Work performed by
HP-6-5'	17-Mar-99	5.0	<1.00	<1.0	<0.00500	<0.00500	<0.00500	<0.00500	<0.0500	NA	Cambria
HP-6-8'	17-Mar-99	8.0	<1.00	**5.2**	<0.00500	<0.00500	<0.00500	<0.00500	<0.0500	NA	Cambria
HP-6-10'	17-Mar-99	10.0	<1.00	**3.1**	<0.00500	<0.00500	<0.00500	<0.00500	<0.0500	NA	Cambria
HP-6-15'	17-Mar-99	15.0	<1.00	**3.8**	<0.00500	<0.00500	<0.00500	<0.00500	<0.0500	NA	Cambria
HP-6-19.5'	17-Mar-99	19.5	<1.00	**5.8**	<0.00500	<0.00500	<0.00500	<0.00500	<0.0500	NA	Cambria
HP-6-20'	17-Mar-99	20.0	<1.00	**1.4**	<0.00500	<0.00500	<0.00500	<0.00500	<0.0500	NA	Cambria
SB-1-7.5' (S-5)	16-Apr-98	7.5	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	NA	Cambria
SB-2-6.0' (S-4)	16-Apr-98	6.0	<1.0	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	NA	Cambria
G-1	22-Apr-96	7.0	**840**	**430**	<1.5	<1.5	**7.0**	**5.0**	NA	NA	Weiss Associates
G-2	22-Apr-96	7.0	**9.1**	**17**	**0.025**	**0.34**	**0.072**	**0.93**	NA	NA	Weiss Associates
G-3	22-Apr-96	7.0	**4.4**	**11**	**0.0087**	**0.020**	<0.005	**0.014**	NA	NA	Weiss Associates
G-4	22-Apr-96	7.0	**830**	**420**	<1.5	<1.5	**10**	**5.5**	NA	NA	Weiss Associates
G-5	22-Apr-96	7.0	**130**	**100**	<0.10	<0.10	**0.17**	**0.74**	NA	NA	Weiss Associates
G-6	22-Apr-96	7.0	**4,100**	**1,600**	<10	<10	**17**	**12**	NA	NA	Weiss Associates
G-7	22-Apr-96	7.0	**2,700**	**1,900**	<3.0	<3.0	**8.8**	**14**	NA	NA	Weiss Associates
G-8	22-Apr-96	7.0	**340**	**210**	<0.25	<0.25	**0.77**	**0.94**	NA	NA	Weiss Associates
D-1	22-Apr-96	8.5	**250**	**59**	<0.25	<0.25	**0.89**	**2.7**	NA	NA	Weiss Associates
D-2	22-Apr-96	8.5	**230**	**230**	<0.12	<0.12	**0.46**	**1.3**	NA	NA	Weiss Associates
DISP-1	22-Apr-96	2.0	**0.57**	**2.0**	<0.005	<0.005	<0.005	<0.005	NA	NA	Weiss Associates
DISP-2	22-Apr-96	2.0	**420**	**64**	<0.5	**1.4**	**5.1**	**22**	NA	NA	Weiss Associates
DISP-3	22-Apr-96	2.0	**9.2**	**49**	<0.012	**0.018**	**0.059**	**0.29**	NA	NA	Weiss Associates
DISP-4	22-Apr-96	2.0	**2.6**	**14**	**0.065**	<0.005	**0.053**	**0.095**	NA	NA	Weiss Associates
DISP-5	22-Apr-96	2.0	**1.4**	**3.3**	<0.005	**0.0056**	<0.005	**0.0085**	NA	NA	Weiss Associates
DISP-6	22-Apr-96	2.0	**7.2**	**4.6**	**0.0072**	**0.012**	**0.012**	**0.0075**	NA	NA	Weiss Associates
DISP-7	22-Apr-96	2.0	**4,800**	**2,800**	<10	**85**	**35**	**280**	NA	NA	Weiss Associates
DISP-8	22-Apr-96	2.0	**4,000**	**1,400**	<5.0	**120**	**49**	**420**	NA	NA	Weiss Associates

Table 2. Soil Analytical Data, Shell-branded Service Station, 350 Grand Avenue, Oakland, California

Sample ID	Date Sampled	Depth fbg	TPHg mg/kg	TPHd mg/kg	B mg/kg	T mg/kg	E mg/kg	X mg/kg	MTBE mg/kg	Lead mg/kg	Comments Work performed by
DISP-9	22-Apr-96	2.0	**770**	**2,800**	**3.6**	**11**	**8**	**61**	NA	NA	Weiss Associates

Table 2. Soil Analytical Data, Shell-branded Service Station, 350 Grand Avenue, Oakland, California

Sample ID	Date Sampled	Depth fbg	TPHg mg/kg	TPHd mg/kg	B mg/kg	T mg/kg	E mg/kg	X mg/kg	MTBE mg/kg	Lead mg/kg	Comments Work performed by
P-1	22-Apr-96	4.0	1,300	820	5.5	57	24	140	NA	NA	Weiss Associates
P-1	23-Apr-96	7.0	68	6.2	0.80	<0.05	0.32	0.28	NA	NA	Weiss Associates
P-2	22-Apr-96	3.0	3,200	1,000	22	130	48	290	NA	NA	Weiss Associates
P-3	22-Apr-96	3.0	12	5.8	0.31	0.032	0.37	1.0	NA	NA	Weiss Associates
P-4	22-Apr-96	3.0	11	10	0.23	0.085	0.26	0.83	NA	NA	Weiss Associates
P-5	22-Apr-96	2.5	1.5	2.1	<0.005	<0.005	<0.005	0.0077	NA	NA	Weiss Associates
P-6	22-Apr-96	2.0	1.1	1.6	<0.005	<0.005	<0.005	0.0055	NA	NA	Weiss Associates
P-7	22-Apr-96	2.0	21	3.7	<0.010	<0.010	0.075	0.20	NA	NA	Weiss Associates
P-8	22-Apr-96	2.0	1,400	650	<2.5	17	11	83	NA	NA	Weiss Associates
P-9	22-Apr-96	2.0	4,200	610	6.8	210	74	490	NA	NA	Weiss Associates
P-10	22-Apr-96	2.0	2.3	3.7	<0.005	0.017	0.010	0.055	NA	NA	Weiss Associates
P-11	22-Apr-96	2.5	360	13	1.9	17	6.5	45	NA	NA	Weiss Associates
P-12	22-Apr-96	2.5	240	460	4.7	<0.5	4.8	2.1	NA	NA	Weiss Associates
P-13	23-Apr-96	5.5	3.8	1.6	0.053	0.0083	0.0098	0.020	NA	NA	Weiss Associates
DSW-1	23-Apr-96	2.5	510	130	<0.5	<0.5	1.2	3.0	NA	NA	Weiss Associates
DSW-2	23-Apr-96	2.5	87	13	0.34	2.2	0.94	7.1	NA	NA	Weiss Associates
DSW-3	23-Apr-96	2.5	<1.0	1.6	<0.005	<0.005	<0.005	<0.005	NA	NA	Weiss Associates
DSW-4	23-Apr-96	2.5	3.8	2.5	<0.005	0.014	0.028	0.077	NA	NA	Weiss Associates
DSW-5	23-Apr-96	2.0	270	31	<0.25	<0.25	0.68	1.6	NA	NA	Weiss Associates
DB-1	23-Apr-96	4.0	46	5.2	0.091	0.13	0.66	1.7	NA	NA	Weiss Associates
DB-2	23-Apr-96	4.0	8.1	4.5	0.081	0.078	0.11	0.34	NA	NA	Weiss Associates
DB-3	23-Apr-96	3.5	33	3.6	0.34	0.077	0.20	0.14	NA	NA	Weiss Associates
HP-1-6.5	27-Jan-93	6.5	1,500	18.0	0.11	0.81	0.86	1.2	NA	NA	GeoStrategies
HP-2-6.5	27-Jan-93	6.5	<1.0	<1	<0.0025	<0.0025	<0.0025	<0.0025	NA	NA	GeoStrategies
HP-3-6.5	27-Jan-93	6.5	<1.0	<1	<0.0025	<0.0025	<0.0025	<0.0025	NA	NA	GeoStrategies

Table 2. Soil Analytical Data, Shell-branded Service Station, 350 Grand Avenue, Oakland, California

Sample ID	Date Sampled	Depth fbg	TPHg mg/kg	TPHd mg/kg	B mg/kg	T mg/kg	E mg/kg	X mg/kg	MTBE mg/kg	Lead mg/kg	Comments Work performed by
S-1-4.5	07-Jan-91	4.5	<1.0	<1.0	<0.005	**0.005**	<0.005	<0.005	NA	NA	GeoStrategies
S-1-9.5	07-Jan-91	9.5	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	GeoStrategies
S-2-4.5	07-Jan-91	4.5	<1.0	**2.9***	**0.031**	**0.006**	<0.005	**0.007**	NA	NA	GeoStrategies
S-2-8.5	07-Jan-91	8.5	**440**	**360***	**4.5**	**1.6**	**11**	**12**	NA	NA	GeoStrategies
S-2-14.5	07-Jan-91	14.5	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	GeoStrategies
S-2-17.5	07-Jan-91	17.5	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	GeoStrategies
S-3-4.5	07-Jan-91	4.5	**20**	**23***	**0.33**	**0.17**	**0.50**	**2.0**	NA	NA	GeoStrategies
S-3-9.0	07-Jan-91	9.0	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	GeoStrategies
S-A-4.5	11-May-90	4.5	<2.5	<5	**0.045**	<0.025	<0.025	<0.05	NA	**5.3**	GeoStrategies
S-A-9.5	11-May-90	9.5	**2,900**	**2400***	**13**	**7**	**44**	**210**	NA	**8.7**	GeoStrategies
S-A-13.5	11-May-90	13.5	<2.5	<5	<0.025	<0.025	<0.025	<0.05	NA	**5.7**	GeoStrategies
S-B-6.5	11-May-90	6.5	**21**	**42***	**0.082**	<0.025	**0.24**	**0.91**	NA	**38**	GeoStrategies
S-B-9.0	11-May-90	9.0	**1,400**	**1300***	**7**	**3**	**31**	**130**	NA	**6.3**	GeoStrategies
S-B-13.5	11-May-90	13.5	**2.5**	<5	0.30	<0.025	**0.027**	**0.09**	NA	**9.3**	GeoStrategies
S-C-9.5	11-May-90	9.5	**22**	**20***	**0.30**	**0.052**	**0.57**	**1.3**	NA	**3.5**	GeoStrategies

Table 2. Soil Analytical Data, Shell-branded Service Station, 350 Grand Avenue, Oakland, California

Sample ID	Date Sampled	Depth fbg	TPHg mg/kg	TPHd mg/kg	B mg/kg	T mg/kg	E mg/kg	X mg/kg	MTBE mg/kg	Lead mg/kg	Comments Work performed by
S-D-4.5	11-May-90	4.5	<2.5	<5	<0.025	<0.025	<0.025	<0.05	NA	**7.6**	GeoStrategies
S-D-9.0	11-May-90	9.0	<2.5	**36***	<0.025	<0.025	<0.025	<0.05	NA	**9.2**	GeoStrategies
S-D-15.0	11-May-90	15.0	<2.5	<5	<0.025	<0.025	<0.025	<0.05	NA	**6.8**	GeoStrategies
S-E-9.5	11-May-90	9.5	<2.5	<5	**0.10**	<0.025	<0.025	**0.21**	NA	**2.6**	GeoStrategies
S-E-13.5	11-May-90	13.5	<2.5	<5	<0.025	<0.025	<0.025	<0.05	NA	**8.1**	GeoStrategies

Abbreviations:

Lead by EPA Method 7421

The following constituents analyzed by EPA Method 8015M, 8020, or 8260B:

TPHg = Total petroleum hydrocarbons as gasoline

TPHd = Total petroleum hydrocarbons as diesel

BTEX = Benzene, toluene, ethylbenzene, and xylenes

MTBE = Methyl tertiary butyl ether

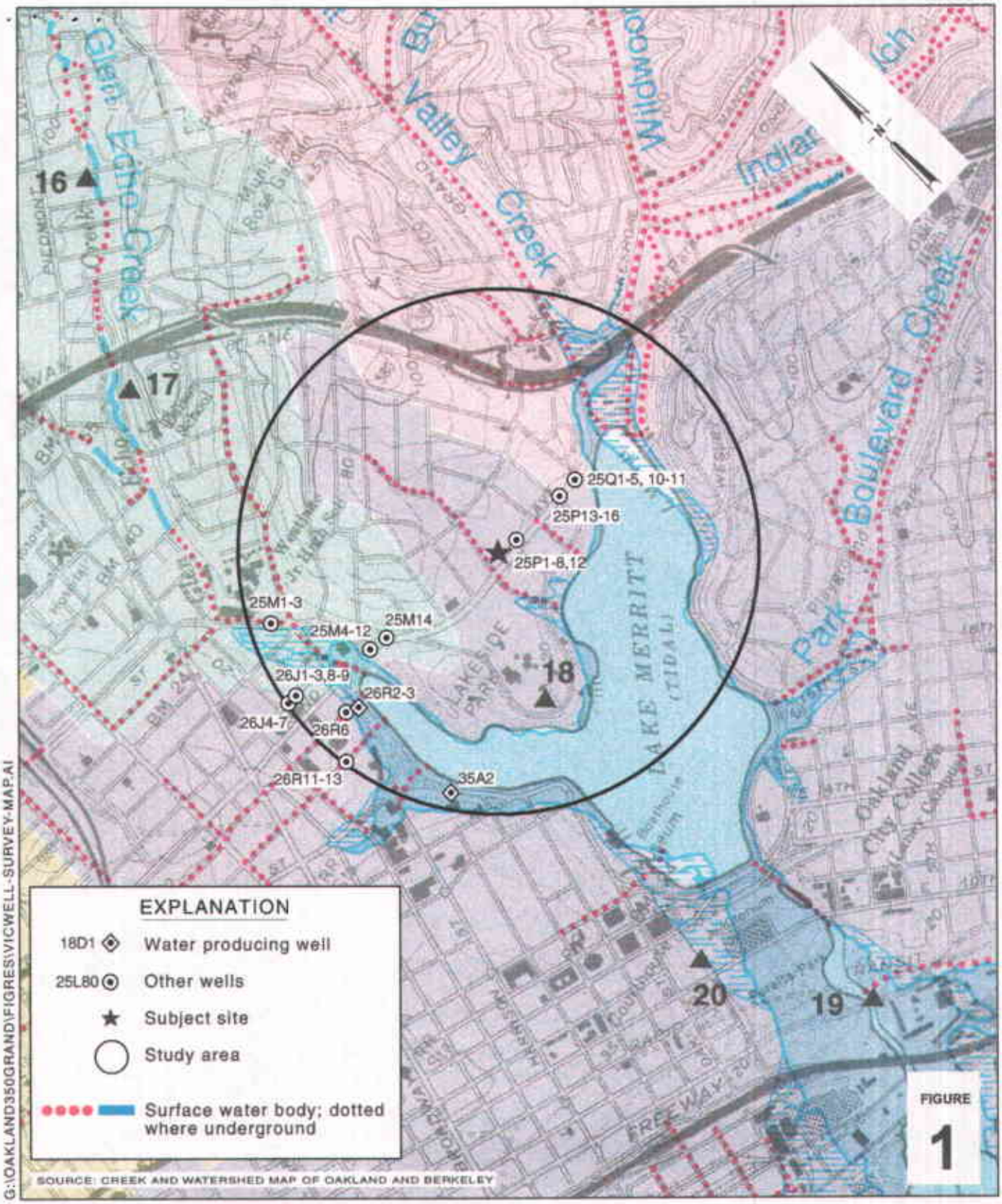
mg/kg = Milligrams per kilogram

NA = Not analyzed

* = Does not match typical diesel chromatograph pattern

<x = Not detected at reporting limit x

04/02/03



G:\OAKLAND350GRAND\FIGRES\VICWELL-SURVEY-MAP.AI

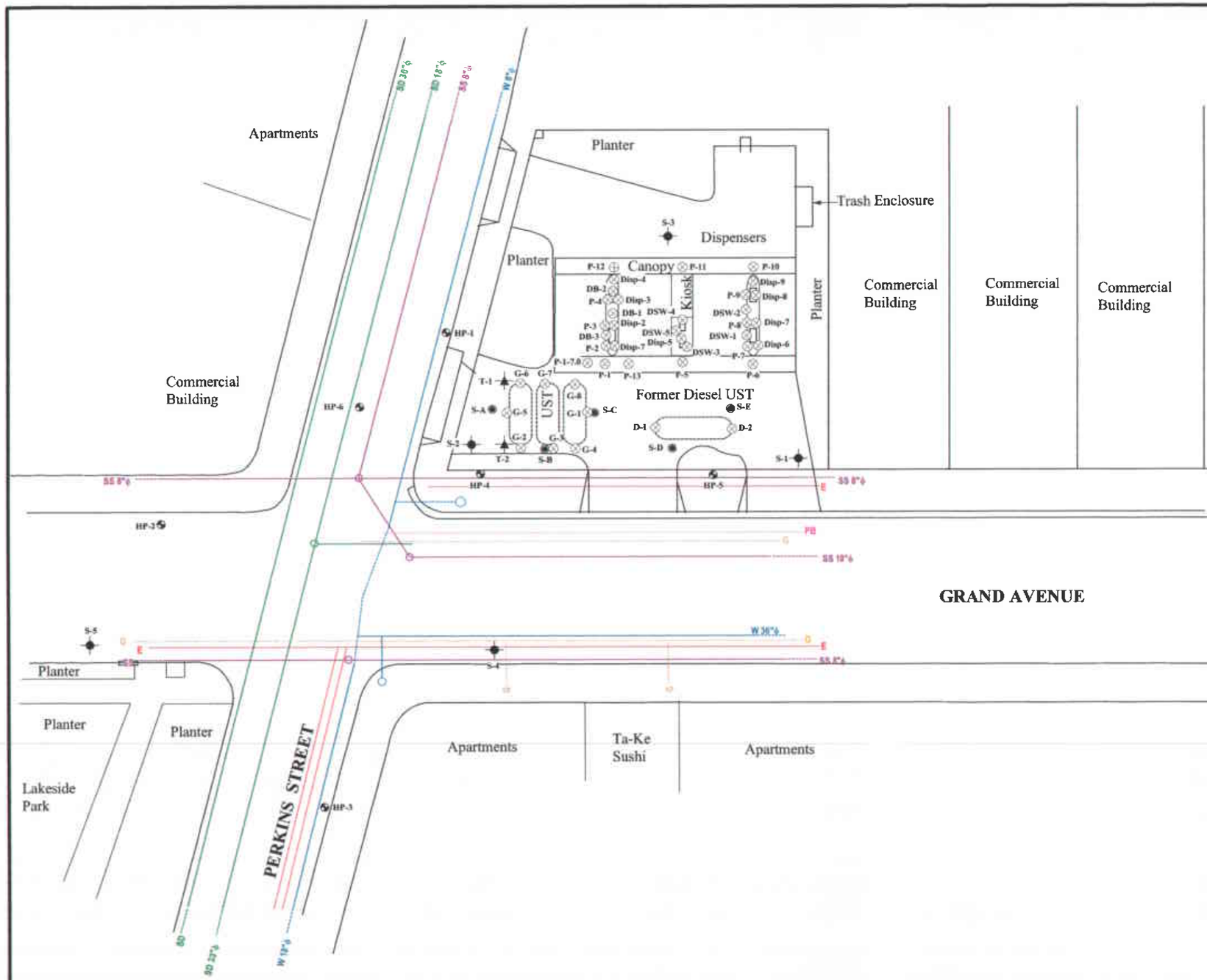
Shell-branded Service Station
350 Grand Avenue
Oakland, California
Incident #98995755

CAMBRIA

Vicinity/Area Well Survey Map

19-Jul-04

Site Plan/Historical Sample and Conduit Location Map



EXPLANATION

- Groundwater monitoring well
- Soil boring location
- Tank backfill well location
- Soil sample location
- Hydropunch sample location
- Electric utility line
- Water main utility line
- Gas utility line
- Sanitary sewer utility line
- Storm drain utility line
- Pacific Bell utility line
- Manhole

N

Scale (ft)

0 25 50 100

FIGURE **2**

Shell-branded Service Station
350 Grand Avenue
Oakland, California

CAMBRIA

0715

7-Sep-04

Soil/Groundwater Chemical Concentration Map

April 13, 2004

Apartments

HP-10
<1.0/<0.0050/<0.0050/5'
<1.0/<0.0050/<0.0050/9.5'
67/<0.50/<0.50*

Planter

Trash Enclosure

S-3

Dispensers (typ)

Canopy

Kiosk

Planter

Commercial Building

Commercial Building

Commercial Building

Commercial Building

HP-1

HP-7
4.0/<0.0050/**0.045**/5'
8.5/<0.50/<0.50/10'
3.3/<0.0050/**0.023**/15'
<1.0/<0.0050/<0.0050/19.5'
1,300/*<1.0*/***89***

T-1

HP-9
<1.0/<0.0050/<0.0050/5'
4,300/<5.0/<5.0/10'
89,000/480/730

HP-6

UST

Former Diesel UST

S-2

T-2 Planter

HP-5

S-1

HP-4

HP-8
<1.0/<0.0050/<0.0050/5'
<1.0/<0.0050/<0.0050/10'
<1.0/<0.0050/<0.0050/11'
<1.0/<0.0050/<0.0050/14.5'
57/<0.50/6.2*

HP-2

GRAND AVENUE

S-5

Planter

S-4

Planter

Planter

Lakeside Park

PERKINS STREET

HP-3

Apartments

Ta-Ke Sushi

Apartments

EXPLANATION

- Groundwater monitoring well
- Soil boring location
- Tank backfill well location
- Electric utility line
- Water main utility line
- Gas utility line
- Sanitary sewer utility line
- Storm drain utility line
- Pacific Bell utility line
- Manhole
- <1.0/<0.0050/<0.0050/5' — TPHg/benzene/MTBE concentrations in parts per million by EPA Method 8260B and depth in feet for soil
- *<50/<0.50/<0.50* — TPHg/benzene/MTBE concentrations in parts per billion by EPA Method 8260B for groundwater
- <x — Not detected at reporting limit x
- * — Laboratory noted that hydrocarbon reported in the gasoline range does not match the laboratory gasoline standard.

Scale (ft)
0 25 50 100

FIGURE
3

Shell-branded Service Station
350 Grand Avenue
Oakland, California

CAMBRIA

0715

COPY

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-6633 James Yoo
FAX (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 350 Grand Avenue, Oakland, CA

CLIENT
Name Shell Oil Products US
Address 20945 S. Wilmington Ave Phone 559-645-9306
City Carson, CA Zip 90810

APPLICANT
Name Scott Lewis Cambria Environmental Technology, Inc
Fax 707-935-6649
Address 270 Perkins Street Phone 707-933-2369
City Sonoma Zip 95476

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☒
Monitoring	☐	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other _____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary ☐	Auger ☐
Cable	☐	Other ☒ Direct Push	

DRILLER'S NAME Gregg Drilling and Testing Inc

DRILLER'S LICENSE NO. 485165

WELL PROJECTS
Drill Hole Diameter _____ in. Maximum
Casing Diameter _____ in. Depth _____ ft.
Surface Seal Depth _____ ft. Owner's Well Number _____

GEOTECHNICAL PROJECTS
Number of Borings 4 Maximum
Hole Diameter 2" in. Depth 15 ft.

STARTING DATE 4-13-04

COMPLETION DATE 4-13-04

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

APPLICANT'S SIGNATURE Scott Lewis DATE 3-12-04

PLEASE PRINT NAME Scott Lewis

Rev.9-18-02

FOR OFFICE USE

PERMIT NUMBER W04-0367
WELL NUMBER _____
APN _____

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

(D) **GEOTECHNICAL / Contamination**
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

E. CATHODIC
Fill hole anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
Send a map of work site A separate permit is required for wells deeper than 45 feet.

(G) **SPECIAL CONDITIONS** - BH1

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED _____ DATE 4-6-04

CITY O AKLAND • Community and Economic Dev ment Agency
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • FAX (510) 238-2263

Job Site 350 GRAND AV Parcel# 010 -0776-013-00 Appl# X0400778

Descr soil boring on Perkins St Permit Issued 03/29/04

Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:
Util Fund #:

		Applcnt	Phone#	Lic#	--License Classes--
Owner	MAJOR BRAND GAS INC				
Contractor	GREGG DRILLING & TESTING, INC.	X	(510)313-5800	485165	C57
Arch/Engr					
Agent					

Applic Addr 950 HOWE RD, MARTINEZ, CA., 94553

JOB SITE

$291.84 TOTAL FEES PAID AT ISSUANCE

$51.00	Applic	$205.00	Permit
$.00	Process	$23.04	Rec Mgmt
$.00	Gen Plan	$.00	Invstg
$.00	Other	$12.80	Tech Enh

ADDRESS:

CITY OF OAKLAND

DIST:

Appendix B

Boring Logs

Cambria Environmental Technology, Inc.
270 Perkins Street
Sonoma, California 95476
Telephone: (707) 935-4850
Fax: (707) 935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	HP-7
JOB/SITE NAME	Shell-branded Service Station	**DRILLING STARTED**	13-Apr-04
LOCATION	350 Grand Avenue, Oakland, California	**DRILLING COMPLETED**	13-Apr-04
PROJECT NUMBER	0715	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	4"	**SCREENED INTERVAL**	NA
LOGGED BY	S. Lewis	**DEPTH TO WATER (First Encountered)**	19.5 ft (13-Apr-04)
REVIEWED BY	A. Friel, RG 6452	**DEPTH TO WATER (Static)**	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					GW		**CONCRETE**	0.6	
					SM		**Sandy GRAVEL (GW)**; brown (10YR 5/3); moist; 40% fine to coarse sand, 60% fine to coarse gravel.	1.0	
							Silty SAND (SM); brown (10YR 5/3); moist; 40% silt, 60% fine sand.	2.0	
							Clayey SILT (ML); gray (10YR 5/1); moist; 20% clay, 80% silt; low to medium plasticity.		
63		HP-7- 5		5					
							@ 8' - **Clayey Sandy SILT (ML)**; brown (10YR 5/3); moist; 15% clay, 50% silt, 35% fine to coarse sand; low plasticity.		
59		HP-7- 10		10	ML				Portland Type I/II
							@ 12' - **Clayey SILT (ML)**; brown (10YR 5/3); moist; 20% clay, 80% silt; low plasticity.		
8		HP-7- 15		15					
0		HP-7- 19.5		20			@ 19' - light brownish gray (10YR 6/2); moist to wet.	20.0	Bottom of Boring @ 20 ft

WELL LOG (PID) I:\OAKLAN~2\GINT\0715.GPJ DEFAULT.GDT 5/3/04

Cambria Environmental Technology, Inc.
270 Perkins Street
Sonoma, California 95476
Telephone: (707) 935-4850
Fax: (707) 935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	HP-8
JOB/SITE NAME	Shell-branded Service Station	**DRILLING STARTED**	13-Apr-04
LOCATION	350 Grand Avenue, Oakland, California	**DRILLING COMPLETED**	13-Apr-04
PROJECT NUMBER	0715	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	4"	**SCREENED INTERVAL**	NA
LOGGED BY	S. Lewis	**DEPTH TO WATER (First Encountered)**	11.0 ft (13-Apr-04) ▽
REVIEWED BY	A. Friel, RG 6452	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					GW		**CONCRETE**	0.6	
							Sandy GRAVEL (GW); very dark grayish brown (10YR 3/2); moist; 40% fine to coarse sand, 60% fine to coarse gravel.	1.0	
							Clayey SILT (ML); very dark grayish brown (10YR 3/2); moist; 20% clay, 80% silt; low plasticity.		
0		HP-8- 5		5	ML		@ 5' - low to medium plasticity.		
							@ 7' - **Clayey Sandy SILT (ML)**; light yellowish brown (10YR 6/4); moist; 15% clay, 60% silt, 25% fine to coarse sand; low plasticity.		Portland Type I/II
0		HP-8- 10		10			@ 10' - black (10YR 2/1); 20% clay, 50% silt, 30% fine sand; low plasticity. ▽	11.0	
0		HP-8- 11			GW		**Sandy GRAVEL (GW)**; black (10YR 2/1); moist to wet; 40% fine to coarse sand, 60% fine to coarse gravel.	13.0	
					ML		**Clayey Sandy SILT (ML)**; black (10YR 2/1); moist 20% clay, 50% silt, 30% fine sand; low plasticity.		
0		HP-8- 14.5		15			@ 15' - wet.	16.0	Bottom of Boring @ 16 ft

WELL LOG (PID) I:\OAKLAN~2\GINT\0715.GPJ DEFAULT.GDT 5/3/04

Cambria Environmental Technology, Inc.
270 Perkins Street
Sonoma, California 95476
Telephone: (707) 935-4850
Fax: (707) 935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	HP-9
JOB/SITE NAME	Shell-branded Service Station	**DRILLING STARTED**	13-Apr-04
LOCATION	350 Grand Avenue, Oakland, California	**DRILLING COMPLETED**	13-Apr-04
PROJECT NUMBER	0715	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	4"	**SCREENED INTERVAL**	NA
LOGGED BY	S. Lewis	**DEPTH TO WATER (First Encountered)**	9.5 ft (13-Apr-04)
REVIEWED BY	A. Friel, RG 6452	**DEPTH TO WATER (Static)**	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					GW		**CONCRETE**	0.6	
							Sandy GRAVEL (GW); very dark grayish brown (10YR 3/2); moist; 40% fine to coarse sand, 60% fine to coarse gravel.	1.0	
							Clayey SILT (ML); very dark grayish brown (10YR 3/2); moist; 20% clay, 80% silt; low plasticity.		
0		HP-9- 5		5	ML		@ 5' - low to medium plasticity.		Portland Type I/II
470		HP-9- 10		10			@ 9' - black (10YR 2/1). @ 9.5' - wet.	10.0	Bottom of Boring @ 10 ft

WELL LOG (PID) I:\OAKLAN~2\GINT\0715.GPJ DEFAULT.GDT 5/3/04

Cambria Environmental Technology, Inc.
270 Perkins Street
Sonoma, California 95476
Telephone: (707) 935-4850
Fax: (707) 935-6649

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	HP-10
JOB/SITE NAME	Shell-branded Service Station	**DRILLING STARTED**	13-Apr-04
LOCATION	350 Grand Avenue, Oakland, California	**DRILLING COMPLETED**	13-Apr-04
PROJECT NUMBER	0715	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	4"	**SCREENED INTERVAL**	NA
LOGGED BY	S. Lewis	**DEPTH TO WATER (First Encountered)**	9.5 ft (13-Apr-04)
REVIEWED BY	A. Friel, RG 6452	**DEPTH TO WATER (Static)**	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					GW		**CONCRETE**	0.6	
							Sandy GRAVEL (GW); yellowish brown (10YR 5/4); moist; 40% fine to coarse sand, 60% fine to coarse gravel.	1.0	
							Clayey Sandy SILT (ML); yellowish brown (10YR 5/4); moist; 20% clay, 75% silt, 15% fine sand; low to medium plasticity.		
							@ 4' - gray (10YR 5/1)		
0		HP-10 -5		5	ML				Portland Type I/II
0		HP-10 -9.5		10			@ 9.5' - wet. ▽	10.0	Bottom of Boring @ 10 ft

WELL LOG (PID) I:\OAKLAN~2\GINT\0715.GPJ DEFAULT.GDT 5/3/04

Appendix C

Disposal Confirmation and Profile Analytical Report

FAXED 5.404

(916) 381-6864

Hazardous Waste Hauler (Registration #2843)

8896 Elder Creek Rd. • Sacramento, CA 95828 • FAX (916) 381-1573

Disposal Confirmation

Request for Transportation Received: 04/26/04

Consultant Information

Company:	Cambria Environmental
Contact:	Geno Mammini
Phone:	707 933-2371
Fax:	707 935-6649

Site Information

Station #:	N/A
Street Address:	350 Grand Ave
City, State, ZIP:	Oakland, CA

Customer:	Shell Oil Company RESA-0023-LDC
RIPR #:	34163
SAP # / Location:	N/A
Incident #:	98995755
Location / WIC #:	N/A
Environmental Engineer:	Karen Petryna

Material Description:	Contaminated Soil
Estimated Quantity:	.5 yards
Service Requested Date:	

Disposal Facility:	Forward Landfill
Contact:	Joe Griffith
Phone:	800 204-4242
Approval #:	4415
Date of Disposal:	04/29/04
Actual Tonnage	.26

Transporter:	Manley & Sons Trucking, Inc.
Contact:	Glenell Manley
Phone:	916 381-6864
Fax:	916 381-1573
Invoice:	52142
Date of Invoice:	

SEVERN TRENT STL

Submission#: 2004-04-0450

Cambria Environmental Sonoma

April 21, 2004

270 Perkins Street
Sonoma, CA 95476

Attn.: Ana Friel

Project#: 246-0715
Project: 98995755
Site: 350 Grand Avenue, Oakland, CA

Attached is our report for your samples received on 04/14/2004 15:45
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 05/29/2004 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: vvancil@stl-inc.com

Sincerely,

Vincent Vancil
Project Manager

Total Lead

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 15:45

Site: 350 Grand Avenue, Oakland, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SP-1	04/13/2004 13:00	Soil	1

Total Lead

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 15:45

Site: 350 Grand Avenue, Oakland, CA

Prep(s):	3050B	Test(s):	6010B
Sample ID:	SP-1	Lab ID:	2004-04-0450-1
Sampled:	04/13/2004 13:00	Extracted:	04/15/2004 13:58
Matrix:	Soil	QC Batch#:	2004/04/15-07.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	11	1.0	mg/Kg	1.00	04/15/2004 22:25	

Total Lead

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 15:45

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

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

Method Blank | QC Batch #: 2004/04/15-07.15

MB: 2004/04/15-07.15-042 | Date Extracted: 04/15/2004 10:50

Compound	Conc.	RL	Unit	Analyzed	Flag
Lead	ND	1.0	mg/Kg	04/15/2004 22:09	

Total Lead

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 15:45

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

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

Laboratory Control Spike Soil QC Batch #: 2004/04/15-07.15

LCS: 2004/04/15-07.15-043 Extracted: 04/15/2004 Analyzed: 04/15/2004 22:14

LCSD: 2004/04/15-07.15-044 Extracted: 04/15/2004 Analyzed: 04/15/2004 22:17

Compound	Conc.	mg/Kg	Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Lead	92.8	94.1	100.0	92.8	94.1	1.4	80-120	20		

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 15:45

Site: 350 Grand Avenue, Oakland, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SP-1	04/13/2004 13:00	Soil	1

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 15:45

Site: 350 Grand Avenue, Oakland, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	SP-1	Lab ID:	2004-04-0450-11
Sampled:	04/13/2004 13:00	Extracted:	04/20/2004 13:00
Matrix:	Soil	QC Batch #:	2004/04/20-3A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	170	50	mg/Kg	1.00	04/21/2004 14:51	g
Benzene	ND	0.50	mg/Kg	1.00	04/21/2004 14:51	
Toluene	ND	0.50	mg/Kg	1.00	04/21/2004 14:51	
Ethyl benzene	ND	0.50	mg/Kg	1.00	04/21/2004 14:51	
Total xylenes	ND	0.50	mg/Kg	1.00	04/21/2004 14:51	
Surrogate(s)						
1,2-Dichloroethane-d4	76.9	70-121	%	1.00	04/21/2004 14:51	
Toluene-d8	88.9	81-117	%	1.00	04/21/2004 14:51	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 15:45

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — Soil — QC Batch #: 2004/04/20-3A_69

MB: 2004/04/20-3A69_030 — Date Extracted: 04/20/2004 22:30

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	mg/Kg	04/20/2004 22:30	
Benzene	ND	0.50	mg/Kg	04/20/2004 22:30	
Toluene	ND	0.50	mg/Kg	04/20/2004 22:30	
Ethyl benzene	ND	0.50	mg/Kg	04/20/2004 22:30	
Total xylenes	ND	0.50	mg/Kg	04/20/2004 22:30	
Surrogates(s)					
1,2-Dichloroethane-d4	93.9	70-121	%	04/20/2004 22:30	
Toluene-d8	93.0	81-117	%	04/20/2004 22:30	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Sonoma
Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 15:45

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

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

Laboratory Control Spike Soil QC Batch #: 2004/04/20-3A.69

LCS: 2004/04/20-3A.69,063 Extracted: 04/20/2004 Analyzed: 04/20/2004 21:53

LCSD: 2004/04/20-3A.69,011 Extracted: 04/20/2004 Analyzed: 04/20/2004 22:11

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	11.2	11.4	10	112.0	114.0	1.8	69-129	20		
Toluene	10.5	10.4	10	105.0	104.0	1.0	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	219	217	250	87.6	86.8		70-121			
Toluene-d8	245	249	250	98.0	99.6		81-117			

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 15:45

Site: 350 Grand Avenue, Oakland, CA

Legend and Notes

Result Flag

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

STL-San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

(925) 484-1919 (925) 484-1096 fax

SHELL Chain Of Custody Record

84818

Shell Project Manager to be Invoiced: Karen Petryna

2004-04-0450

SITE ID: 9 8 9 9 5 7 5 5

DATE: 4-13-04

PAGE: 1 of 1

SAMPLING COMPANY:	Cambria Environmental Technology, Inc.
LOG CODE:	CETS
ADDRESS:	270 Perkins Street, Sonoma, CA 95476
PROJECT CONTACT:	Ana Friel
TELEPHONE:	707-442-2700
FAX:	707-442-2700
EMAIL:	afriel@cambria-env.com
SITE ADDRESS (Street and City):	350 Grand Avenue Oakland, CA
GLOBAL ID NO.:	T0600101255
EDF DELIVERABLE TO:	Ana Friel
PHONE NO.:	707-442-2700
E-MAIL:	sonomaedf@cambria-env.com
CONSULTANT PROJECT NO.:	246-0715
SAMPLER NAME(S) (Print):	Scott Lewis

TURNAROUND TIME (BUSINESS DAYS): ☐ 10 DAYS ☒ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: ____

GC/MS MTBE CONFIRMATION: HIGHEST ____ HIGHEST per BORING ____ ALL ____

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED ☐

call composite Sample SP-1

cc: Laura Mampini at gmampini@cambria-env.com

REQUESTED ANALYSIS

Field Sample Identification	Sampling Date	Sampling Time	Matrix	No. of Cont.	TPH - Purgeable	TPH - Extractable (8015M)	BTEX	MTBE	TBA	5 Oxygenates	1,2 DCA and EDB	Ethanol	Methanol	VOCs by 8260B	Semi-Volatiles by 8270C	Lead ☐ Total ☐ STLC ☐ TCLP	LUFT5 ☐ Total ☐ STLC ☐ TCLP	CAM17 ☐ Total ☐ STLC ☐ TCLP	Test for Disposal (per attached Sheet)							FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
SP-1A through SP-1D	4/13	1500	Soil	4															X							

TEMPERATURE ON RECEIPT C°: 3.0°

Relinquished by (Signature)	Received by (Signature)	Date	Time
Scott Lewis		4-13-04	1600
Relinquished by (Signature)	Received by (Signature)	Date	Time
	[signature]	4/14/04	1035
Relinquished by (Signature): [signature] 4/14/04 1545	Received by (Signature): [signature]	04/14/04	1545

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

10/16/00 Revision

RESIDUAL MANAGEMENT PROCEDURE

ISSUED DATE: 08/01/01
CANCELS ISSUE:
ISSUED BY: LRR

ESIDUAL STREAM: SOIL WITH UNLEADED GASOLINE
ENDOR: ALLIED-BFI
OCATION: ALLIED WASTE - MANTECA
9999 SOUTH AUSTIN ROAD
MANTECA, CA 95336

LIFORNIA - TRANSPORTATION AND RETAIL

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

M 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

OTAL PETROLEUM HYDROCARBONS, METHOD 418.1 OR 8015 - GASOLINE

~~DE METHOD 02606 (GC/MS)~~

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

ABORATORY INSTRUCTIONS (MINIMUM GUIDELINES ONLY)
LTERNATE APPROVED TEST METHODS PER SW846 ARE ALSO ACCEPTABLE
LL REQUIRED TESTS ON COMPOSITE (MAX 4:1)
ABORATORY IS TO SUPPLY QA/QC INFORMATION WITH ALL ANALYTICAL REPORTS
~~AIL OR FAX ALL ANALYSIS TO THE CENTRALIZED RESIDUAL MANAGEMENT TEAM~~

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

2004-04-0460

Appendix D

Certified Analytical Report

SEVERN TRENT STL

Submission#: 2004-04-0458

Cambria Environmental Sonoma

April 28, 2004

270 Perkins Street
Sonoma, CA 95476

Attn.: Ana Friel

Project#: 246-0715
Project: 98995755
Site: 350 Grand Avenue, Oakland, CA

Attached is our report for your samples received on 04/14/2004 10:35
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 05/29/2004 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: vvancil@stl-inc.com

Sincerely,

Vincent Vancil
Project Manager

SEVERN TRENT STL

Submission #: 2004-04-0458

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma
Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
HP-7-W	04/13/2004 12:20	Water	5
HP-8-W	04/13/2004 12:06	Water	10
HP-9-W	04/13/2004 13:35	Water	13
HP-10-W	04/13/2004 13:06	Water	16

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

[redacted]

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1300	100	ug/L	2.00	04/27/2004 12:30	
Benzene	ND	1.0	ug/L	2.00	04/27/2004 12:30	
Toluene	ND	1.0	ug/L	2.00	04/27/2004 12:30	
Ethylbenzene	25	1.0	ug/L	2.00	04/27/2004 12:30	
Total xylenes	17	2.0	ug/L	2.00	04/27/2004 12:30	
Methyl tert-butyl ether (MTBE)	89	1.0	ug/L	2.00	04/27/2004 12:30	
Surrogate(s)						
1,2-Dichloroethane-d4	102.1	76-130	%	2.00	04/27/2004 12:30	
Toluene-d8	95.4	78-115	%	2.00	04/27/2004 12:30	

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

[redacted]

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	57	50	ug/L	1.00	04/27/2004 02:40	g
Benzene	ND	0.50	ug/L	1.00	04/27/2004 02:40	
Toluene	ND	0.50	ug/L	1.00	04/27/2004 02:40	
Ethylbenzene	ND	0.50	ug/L	1.00	04/27/2004 02:40	
Total xylenes	ND	1.0	ug/L	1.00	04/27/2004 02:40	
Methyl tert-butyl ether (MTBE)	6.2	0.50	ug/L	1.00	04/27/2004 02:40	
Surrogate(s)						
1,2-Dichloroethane-d4	124.6	76-130	%	1.00	04/27/2004 02:40	
Toluene-d8	108.6	78-115	%	1.00	04/27/2004 02:40	

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Prep: 5030B
Sample ID: HP-3-W
Sampled: 04/13/2004 16:38
Matrix: Water
Analysis Flag: (See Legend and Note Section)

Test: 8260B
Lab ID:
Extracted:
QC Batch:

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	89000	5000	ug/L	100.00	04/24/2004 16:11	
Benzene	480	50	ug/L	100.00	04/24/2004 16:11	
Toluene	68	50	ug/L	100.00	04/24/2004 16:11	
Ethylbenzene	280	50	ug/L	100.00	04/24/2004 16:11	
Total xylenes	ND	100	ug/L	100.00	04/24/2004 16:11	
Methyl tert-butyl ether (MTBE)	730	50	ug/L	100.00	04/24/2004 16:11	
Surrogate(s)						
1,2-Dichloroethane-d4	87.4	76-130	%	100.00	04/24/2004 16:11	
Toluene-d8	80.1	78-115	%	100.00	04/24/2004 16:11	

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

Prep(S): 5030B
Method Blank
MB 2004/04/26 Acq 008

Water

Test: 8260B
QC Batch: 2004/04/26-1A_69
Date Prepared: 04/26/2004 20:03

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/26/2004 20:03	
Benzene	ND	0.5	ug/L	04/26/2004 20:03	
Toluene	ND	0.5	ug/L	04/26/2004 20:03	
Ethylbenzene	ND	0.5	ug/L	04/26/2004 20:03	
Total xylenes	ND	1.0	ug/L	04/26/2004 20:03	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/26/2004 20:03	
Surrogates(s)					
1,2-Dichloroethane-d4	108.5	76-130	%	04/26/2004 20:03	
Toluene-d8	112.4	78-115	%	04/26/2004 20:03	

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

Prep(s): 5030B
Method Blank
MB 2004/04/27-A6-026

Water

Tests: 8260B
QC Batch: 2004/04/27-A6
Date Extracted: 04/27/2004 08:26

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	04/27/2004 08:26	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	04/27/2004 08:26	
Benzene	ND	0.5	ug/L	04/27/2004 08:26	
Toluene	ND	0.5	ug/L	04/27/2004 08:26	
Ethylbenzene	ND	0.5	ug/L	04/27/2004 08:26	
Total xylenes	ND	1.0	ug/L	04/27/2004 08:26	
Surrogates(s)					
1,2-Dichloroethane-d4	98.8	76-130	%	04/27/2004 08:26	
Toluene-d8	100.8	78-115	%	04/27/2004 08:26	

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike / Water / QC Batch#: 2004/04/24-16.68

LCS: 2004/04/24-16.68/024 Extracted: 04/24/2004 Analyzed: 04/24/2004 12:24

LCSD: 2004/04/24-16.68/006 Extracted: 04/24/2004 Analyzed: 04/24/2004 13:06

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	23.8	22.3	25	95.2	89.2	6.5	65-165	20		
Benzene	24.1	21.5	25	96.4	86.0	11.4	69-129	20		
Toluene	23.3	20.8	25	93.2	83.2	11.3	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	399	393	500	79.8	78.6		76-130			
Toluene-d8	424	428	500	84.8	85.6		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

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Batch QC Report

Prep'd: 5030B | Test: 8260B

Laboratory Control Spike | Water | QC Batch #: 2004/04/26-1A.69

LCS: 2004/04/26-1A.69-058 | Extracted: 04/26/2004 | Analyzed: 04/26/2004 17:48

LCSD: 2004/04/26-1A.69-020 | Extracted: 04/26/2004 | Analyzed: 04/26/2004 17:20

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	30.1	30.0	25	120.4	120.0	0.3	69-129	20		
Toluene	29.4	29.8	25	117.6	119.2	1.4	70-130	20		
Methyl tert-butyl ether (MTBE)	29.8	34.6	25	119.2	138.4	14.9	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	543	535	500	108.6	107.0		76-130			
Toluene-d8	561	574	500	112.2	114.8		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

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Project: 246-0715
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Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

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

Laboratory Control Spike Water QC Batch #: 2004/04/27-1A.66

LCS Lot-Sample#: 2004/04/27-1A.66-028 Extracted: 04/27/2004 Analyzed: 04/27/2004 07:38

LCSD Lot-Sample#: 2004/04/27-1A.66-029 Extracted: 04/27/2004 Analyzed: 04/27/2004 08:02

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	22.9	21.3	25	91.6	85.2	7.2	65-165	20		
Benzene	23.7	23.3	25	94.8	93.2	1.7	69-129	20		
Toluene	23.2	23.1	25	92.8	92.4	0.4	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	457	444	500	91.4	88.8		76-130			
Toluene-d8	488	507	500	97.6	101.4		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

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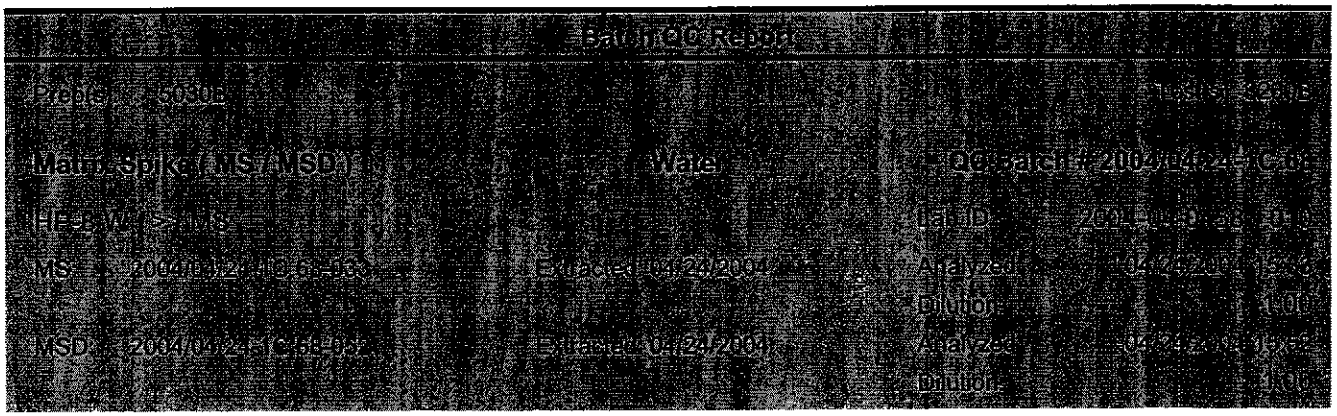

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	24.2	24.4	ND	25	96.8	97.6	0.8	69-129	20		
Toluene	24.9	23.1	ND	25	99.6	92.4	7.5	70-130	20		
Methyl tert-butyl ether	31.3	32.5	6.42	25	99.5	104.3	4.7	65-165	20		
Surrogate(s)											
1,2-Dichloroethane-d4	391	409		500	78.2	81.8		76-130			
Toluene-d8	433	445		500	86.6	89.0		78-115			

Gas/BTEX/MTBE by 8260B (C6-C12)

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Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Legend and Notes

Analysis Flag

o

Reporting limits were raised due to high level of analyte present in the sample.

Result Flag

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

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Project: 246-0715
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Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab No.
HP-7-5`	04/13/2004 11:16	Soil	1
HP-7-15`	04/13/2004 11:46	Soil	3
HP-7-19.5`	04/13/2004 11:48	Soil	4
HP-8-5`	04/13/2004 09:49	Soil	6
HP-8-10`	04/13/2004 10:02	Soil	7
HP-8-11`	04/13/2004 10:25	Soil	8
HP-8-14.5`	04/13/2004 10:58	Soil	9
HP-9-5`	04/13/2004 11:10	Soil	11
HP-10-5`	04/13/2004 12:41	Soil	14
HP-10-9.5`	04/13/2004 12:52	Soil	15

Gas/BTEX/MTBE by 8260B (C6-C12)

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Project: 246-0715
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Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Prep(s):	5030B	Test(s):	8260B
Sample ID:	HP-7-5	Lab ID:	2004-04-0458-1
Sampled:	04/13/2004 11:16	Extracted:	04/27/2004 14:39
Matrix:	Soil	QC Batch #:	2004/04-27-2.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	4.0	1.0	mg/Kg	1.00	04/27/2004 14:39	
Benzene	ND	0.0050	mg/Kg	1.00	04/27/2004 14:39	
Toluene	ND	0.0050	mg/Kg	1.00	04/27/2004 14:39	
Ethyl benzene	0.013	0.0050	mg/Kg	1.00	04/27/2004 14:39	
Total xylenes	0.019	0.0050	mg/Kg	1.00	04/27/2004 14:39	
Methyl tert-butyl ether (MTBE)	0.045	0.0050	mg/Kg	1.00	04/27/2004 14:39	
Surrogate(s)						
1,2-Dichloroethane-d4	129.8	70-121	%	1.00	04/27/2004 14:39	sh
Toluene-d8	97.8	81-117	%	1.00	04/27/2004 14:39	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Prep(S): 5030B — Test(S): 8260B

Sample ID: HP-7-15 — Lab ID: 2004-04-0458-3

Sampled: 04/13/2004 11:45 — Extracted: 04/27/2004 14:16

Matrix: Soil — QC Batch#: 2004/04/27-2B.03

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	3.3	1.0	mg/Kg	1.00	04/27/2004 14:16	
Benzene	ND	0.0050	mg/Kg	1.00	04/27/2004 14:16	
Toluene	ND	0.0050	mg/Kg	1.00	04/27/2004 14:16	
Ethyl benzene	0.036	0.0050	mg/Kg	1.00	04/27/2004 14:16	
Total xylenes	0.025	0.0050	mg/Kg	1.00	04/27/2004 14:16	
Methyl tert-butyl ether (MTBE)	0.023	0.0050	mg/Kg	1.00	04/27/2004 14:16	
Surrogate(s)						
1,2-Dichloroethane-d4	108.6	70-121	%	1.00	04/27/2004 14:16	
Toluene-d8	90.9	81-117	%	1.00	04/27/2004 14:16	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

[redacted]

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	04/26/2004 19:17	
Benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 19:17	
Toluene	ND	0.0050	mg/Kg	1.00	04/26/2004 19:17	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 19:17	
Total xylenes	ND	0.0050	mg/Kg	1.00	04/26/2004 19:17	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	04/26/2004 19:17	
Surrogate(s)						
1,2-Dichloroethane-d4	99.2	70-121	%	1.00	04/26/2004 19:17	
Toluene-d8	98.0	81-117	%	1.00	04/26/2004 19:17	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Project: 246-0715
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Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

[redacted]

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	04/26/2004 19:42	
Benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 19:42	
Toluene	ND	0.0050	mg/Kg	1.00	04/26/2004 19:42	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 19:42	
Total xylenes	ND	0.0050	mg/Kg	1.00	04/26/2004 19:42	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	04/26/2004 19:42	
Surrogate(s)						
1,2-Dichloroethane-d4	97.0	70-121	%	1.00	04/26/2004 19:42	
Toluene-d8	91.1	81-117	%	1.00	04/26/2004 19:42	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Project: 246-0715
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Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Prep(s): 5030B		Test(s): 8260B	
Sample ID: HP-8-10		Lab ID: 2004-04-0458-7	
Sampled: 04/13/2004 00:00		Extracted: 04/26/2004 21:00	
Matrix: Soil		Batch#: 2004/04/26-2A3	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	04/26/2004 20:06	
Benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 20:06	
Toluene	ND	0.0050	mg/Kg	1.00	04/26/2004 20:06	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 20:06	
Total xylenes	ND	0.0050	mg/Kg	1.00	04/26/2004 20:06	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	04/26/2004 20:06	
Surrogate(s)						
1,2-Dichloroethane-d4	101.0	70-121	%	1.00	04/26/2004 20:06	
Toluene-d8	103.6	81-117	%	1.00	04/26/2004 20:06	

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

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Project: 246-0715
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Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Prep(s): 5030B
Sample ID: [illegible]
Sampled: 04/13/2004 10:25
Matrix: Soil

Test(s): 8260B
Lab ID: [illegible]
Extracted: [illegible]
QC Batch#: [illegible]

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	04/26/2004 21:18	
Benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 21:18	
Toluene	ND	0.0050	mg/Kg	1.00	04/26/2004 21:18	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 21:18	
Total xylenes	ND	0.0050	mg/Kg	1.00	04/26/2004 21:18	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	04/26/2004 21:18	
Surrogate(s)						
1,2-Dichloroethane-d4	98.2	70-121	%	1.00	04/26/2004 21:18	
Toluene-d8	97.3	81-117	%	1.00	04/26/2004 21:18	

Gas/BTEX/MTBE by 8260B (C6-C12)

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[redacted]

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	04/26/2004 21:42	
Benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 21:42	
Toluene	ND	0.0050	mg/Kg	1.00	04/26/2004 21:42	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 21:42	
Total xylenes	ND	0.0050	mg/Kg	1.00	04/26/2004 21:42	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	04/26/2004 21:42	
Surrogate(s)						
1,2-Dichloroethane-d4	97.9	70-121	%	1.00	04/26/2004 21:42	
Toluene-d8	98.1	81-117	%	1.00	04/26/2004 21:42	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	04/26/2004 22:04	
Benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 22:04	
Toluene	ND	0.0050	mg/Kg	1.00	04/26/2004 22:04	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 22:04	
Total xylenes	ND	0.0050	mg/Kg	1.00	04/26/2004 22:04	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	04/26/2004 22:04	
Surrogate(s)						
1,2-Dichloroethane-d4	102.9	70-121	%	1.00	04/26/2004 22:04	
Toluene-d8	101.1	81-117	%	1.00	04/26/2004 22:04	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

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

Sample ID: HP-10.5

Sampled: 04/13/2004 12:41

Matrix: Soil

Lab ID: 2004-04-0458-14

Extracted: 04/26/2004 22:28

QC Batch#: 2004/04/26-2A.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	04/26/2004 22:28	
Benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 22:28	
Toluene	ND	0.0050	mg/Kg	1.00	04/26/2004 22:28	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 22:28	
Total xylenes	ND	0.0050	mg/Kg	1.00	04/26/2004 22:28	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	04/26/2004 22:28	
Surrogate(s)						
1,2-Dichloroethane-d4	99.1	70-121	%	1.00	04/26/2004 22:28	
Toluene-d8	91.8	81-117	%	1.00	04/26/2004 22:28	

Gas/BTEX/MTBE by 8260B (C6-C12)

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Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

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

Sample ID: HP-10-9.5 Lab ID: 2004-04-0458-1

Sampled: 04/13/2004 12:52 Extracted: 04/26/2004 22:52

Matrix: Soil % Solids: 92.6 Batch#: 2004/04/26-2A.03

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1.0	mg/Kg	1.00	04/26/2004 22:52	
Benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 22:52	
Toluene	ND	0.0050	mg/Kg	1.00	04/26/2004 22:52	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	04/26/2004 22:52	
Total xylenes	ND	0.0050	mg/Kg	1.00	04/26/2004 22:52	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	04/26/2004 22:52	
Surrogate(s)						
1,2-Dichloroethane-d4	94.7	70-121	%	1.00	04/26/2004 22:52	
Toluene-d8	100.7	81-117	%	1.00	04/26/2004 22:52	

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

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Batch QC Report

Prep-EPA 5030B
Method Blank
MB 2004/04/26-2A_66_019

Soil

Test: 8260B
GC Batch: 2004/04/26-2A_66
Date Extracted: 04/26/2004 18:19

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1.000	mg/Kg	04/26/2004 18:19	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	04/26/2004 18:19	
Benzene	ND	0.0050	mg/Kg	04/26/2004 18:19	
Toluene	ND	0.0050	mg/Kg	04/26/2004 18:19	
Ethyl benzene	ND	0.0050	mg/Kg	04/26/2004 18:19	
Total xylenes	ND	0.0050	mg/Kg	04/26/2004 18:19	
Surrogates(s)					
1,2-Dichloroethane-d4	96.8	70-121	%	04/26/2004 18:19	
Toluene-d8	93.1	81-117	%	04/26/2004 18:19	

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

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Project: 246-0715
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Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

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

Method Blank Soil QC Batch #: 2004/04/27-2B.62

MB: 2004/04/27-2B.62-011 Date Analyzed: 04/27/2004 10:10

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1.000	mg/Kg	04/27/2004 10:10	
Benzene	ND	0.0050	mg/Kg	04/27/2004 10:10	
Toluene	ND	0.0050	mg/Kg	04/27/2004 10:10	
Ethyl benzene	ND	0.0050	mg/Kg	04/27/2004 10:10	
Total xylenes	ND	0.0050	mg/Kg	04/27/2004 10:10	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	04/27/2004 10:10	
Surrogates(s)					
1,2-Dichloroethane-d4	99.3	70-121	%	04/27/2004 10:10	
Toluene-d8	93.3	81-117	%	04/27/2004 10:10	

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

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Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

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

Laboratory Control Spike Soil QC Batch #: 2004/04/26-2A.65

LCS: 2004/04/26-2A.65-034 Extracted: 04/26/2004 Analyzed: 04/26/2004 17:34

LCSD: 2004/04/26-2A.65-056 Extracted: 04/26/2004 Analyzed: 04/26/2004 17:56

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	0.0510	0.0616	0.05	102.0	123.2	18.8	65-165	20		
Benzene	0.0479	0.0509	0.05	95.8	101.8	6.1	69-129	20		
Toluene	0.0458	0.0470	0.05	91.6	94.0	2.6	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	473	520	500	94.6	104.0		70-121			
Toluene-d8	456	466	500	91.2	93.2		81-117			

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

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

Laboratory Control Spike Soil QC Batch #: 2004/04/27-2B.02

LCS: 2004/04/27-2B.02-010 Extracted: 04/27/2004 Analyzed: 04/27/2004 08:10

LCSD: 2004/04/27-2B.02-003 Extracted: 04/27/2004 Analyzed: 04/27/2004 09:31

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	0.0470	0.0471	0.05	94.0	94.2	0.2	69-129	20		
Toluene	0.0513	0.0505	0.05	102.6	101.0	1.6	70-130	20		
Methyl tert-butyl ether (MTBE)	0.0498	0.0540	0.05	99.6	108.0	8.1	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	497	549	500	99.4	109.8		70-121			
Toluene-d8	511	502	500	102.2	100.4		81-117			

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma
Attn.: Ana Friel

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Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

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

Matrix Spike / MS/MSD

MS: Extracted: Analyzed:

MSD: Extracted: Analyzed:

Compound	Conc. mg/Kg			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	0.0514	0.0406	ND	0.047619	108.0	84.4	24.5	65-165	20		rpd
Benzene	0.0548	0.0465	ND	0.047619	115.1	96.7	17.4	69-129	20		
Toluene	0.0497	0.0424	ND	0.047619	104.4	88.1	16.9	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	513	503		500	102.6	100.6		70-121			
Toluene-d8	499	509		500	99.7	101.7		81-117			

Gas/BTEX/MTBE by 8260B (C6-C12)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Legend and Notes

Result Flag

rpd

Analyte RPD was out of QC limits due to sample heterogeneity.

sh

Surrogate recovery was higher than QC limit due to matrix interference.

SEVERN TRENT STL

Submission #: 2004-04-0458

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Sonoma
Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
HP-7-10`	04/13/2004 11:39	Soil	2
HP-9-10`	04/13/2004 11:22	Soil	12

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Prep(S)	5030B	Anal(S)	8260B
Sample	H2 7-10	Lab ID	2004-04-0458-2
Sampled	04/13/2004 11:30	Extracted	04/27/2004 11:00
Matrix	Soil	QC Batch	20040427-34-69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	85	50	mg/Kg	1.00	04/27/2004 13:31	
Benzene	ND	0.50	mg/Kg	1.00	04/27/2004 13:31	
Toluene	ND	0.50	mg/Kg	1.00	04/27/2004 13:31	
Ethyl benzene	0.53	0.50	mg/Kg	1.00	04/27/2004 13:31	
Total xylenes	0.68	0.50	mg/Kg	1.00	04/27/2004 13:31	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	1.00	04/27/2004 13:31	
Surrogate(s)						
1,2-Dichloroethane-d4	93.0	70-121	%	1.00	04/27/2004 13:31	
Toluene-d8	87.0	81-117	%	1.00	04/27/2004 13:31	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Prep(S): 5030B — Test(S): 8260B

Sample ID: HP-9 (10) — Lab ID: 2004-04-0458-010

Sampled: 04/13/2004 11:22 — Extracted: 4/27/2004 14:00

Matrix: Soil — QC Batch#: 2004/04/27-3A.01

Analysis Flag: ok (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	4300	500	mg/Kg	10.00	04/27/2004 14:43	
Benzene	ND	5.0	mg/Kg	10.00	04/27/2004 14:43	
Toluene	ND	5.0	mg/Kg	10.00	04/27/2004 14:43	
Ethyl benzene	ND	5.0	mg/Kg	10.00	04/27/2004 14:43	
Total xylenes	ND	5.0	mg/Kg	10.00	04/27/2004 14:43	
Methyl tert-butyl ether (MTBE)	ND	5.0	mg/Kg	10.00	04/27/2004 14:43	
Surrogate(s)						
1,2-Dichloroethane-d4	NA	70-121	%	10.00	04/27/2004 14:43	sd
Toluene-d8	NA	81-117	%	10.00	04/27/2004 14:43	sd

SEVERN TRENT STL

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Sonoma
Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

Prep(s): [illegible] Test(s): 8260B
Method Blank Soil QC Batch # 2004/04/27-3A.69
MB: [illegible] Date Extracted: 04/27/2004 13:13

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	mg/Kg	04/27/2004 13:13	
Benzene	ND	0.50	mg/Kg	04/27/2004 13:13	
Toluene	ND	0.50	mg/Kg	04/27/2004 13:13	
Ethyl benzene	ND	0.50	mg/Kg	04/27/2004 13:13	
Total xylenes	ND	0.50	mg/Kg	04/27/2004 13:13	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	04/27/2004 13:13	
Surrogates(s)					
1,2-Dichloroethane-d4	108.5	70-121	%	04/27/2004 13:13	
Toluene-d8	111.0	81-117	%	04/27/2004 13:13	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Batch QC Report

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

Laboratory Control Spike Soil QC Batch #: 2004/04/27-3A.69

LCS: 2004/04/27-3A.69-007 Extracted: 04/27/2004 Analyzed: 04/27/2004 12:37

LCSD: 2004/04/27-3A.69-056 Extracted: 04/27/2004 Analyzed: 04/27/2004 12:55

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	10.5	11.0	10.00	105.0	110.0	4.7	69-129	20		
Toluene	10.3	10.4	10.00	103.0	104.0	1.0	70-130	20		
Methyl tert-butyl ether (MTBE)	9.85	10.4	10.00	98.5	104.0	5.4	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	225	240	250	90.0	96.0		70-121			
Toluene-d8	243	249	250	97.2	99.6		81-117			

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Sonoma

Attn.: Ana Friel

270 Perkins Street
Sonoma, CA 95476
Phone: (707) 442-2700 Fax: (707) 442-2700

Project: 246-0715
98995755

Received: 04/14/2004 10:35

Site: 350 Grand Avenue, Oakland, CA

Legend and Notes

Analysis Flag

o

Reporting limits were raised due to high level of analyte present in the sample.

Result Flag

sd

Surrogate recovery not reportable due to required dilution.

STL-San Francisco

1220 Quarry Lane
Pleasanton, CA 94566
(925) 484-1919 (925) 484-1096 fax

SHELL Chain Of Custody Record

84819

Shell Project Manager to be Invoiced:

☒ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☐ CRMT HOUSTON

Karen Petryna

2004-04-0458

[illegible]: 9 8 9 9 5 7 5 5

DATE: 4-13-04
PAGE: 1 of 2

SAMPLING COMPANY: Cambria Environmental Technology, Inc.
LOG CODE: CETS
ADDRESS: 270 Perkins Street, Sonoma, CA 95476
PROJECT CONTACT (Hardcopy or PDF Report to): Ana Friel
TELEPHONE: 707-442-2700
FAX: 707-442-2700
EMAIL: afriel@cambria-env.com

SITE ADDRESS (Street and City): 350 Grand Avenue, Oakland, CA
GLOBAL ID NO.: T0600101255
EDF DELIVERABLE TO (Responsible Party or Designee): Ana Friel
PHONE NO.: 707-442-2700
E-MAIL: sonomaedf@cambria-env.com
CONSULTANT PROJECT NO.: 246-0715
SAMPLER NAME(S) (Print): Scott Lewis

TURNAROUND TIME (BUSINESS DAYS): ☒ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: ____

GC/MS MTBE CONFIRMATION: HIGHEST ____ HIGHEST per BORING ____ ALL ____

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED ☐

REQUESTED ANALYSIS

Field Sample Identification	Sampling Date	Sampling Time	Matrix	No. of Cont.	TPH - Purgeable	TPH - Extractable (8015m)	BTEX	MTBE	TBA	5 Oxygenates	1,2 DCA and EDB	Ethanol	Methanol	VOCs by 8260B	Semi-Volatiles by 8270C	Lead ☐ Total ☐ STLC ☐ TCLP	LUFTS ☐ Total ☐ STLC ☐ TCLP	CAM17 ☐ Total ☐ STLC ☐ TCLP	Test for Disposal	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
HP-7-5'	4/13	1116	SO	1	x		x	x												
HP-7-10'	4/13	1132	SO	1	x		x	x												
HP-7-15'	4/13	1146	SO	1	x		x	x												
HP-7-19.5'	4/13	1148	SO	1	x		x	x												
HP-7-W	4/13	1220	GW	3	x		x	x												
HP-8-5'	4/13	0945	SO	1	x		x	x												
HP-8-10'	4/13	1002	SO	1	x		x	x												
HP-8-11'	4/13	1025	SO	1	x		x	x												
HP-8-14.5'	4/13	1053	SO	1	x		x	x												
HP-8-W	4/13	1206	GW	3	x		x	x												

TEMPERATURE ON RECEIPT C°: 3.6°C

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
Scott Lewis		4-14-04	0700
Relinquished by: (Signature)	Received by: (Signature): Steve	4/14/04	1035
Relinquished by: (Signature): Steve 4/14/04 1545	Received by: (Signature): [signature]	04/14/04	1545

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

10/10/00 Revision

SHELL Chain Of Custody Record

STL-San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
(925) 484-1919 (925) 484-1096 fax

Shell Project Manager to be invoiced: Karen Petryna

2004-04-0458

9 8 9 9 5 7 5 5

DATE: 4-13-04

PAGE: 2 of 2

Consultant Company: Cambria Environmental Technology, Inc.	Job Code: CETS	Site Address (Street and City): 350 Grand Avenue Oakland, CA	Global ID No.: T0600106255
Address: 270 Perkins Street, Sonoma, CA 95476		EDF Deliverable To (Responsible Party or Designate): Ana Friel	Phone No.: 707.996.2740
Project Contact (Hardcopy or PDF Report): Ana Friel		E-mail:	Consultant Project No.: 246-0715
Telephone: 707-996-2700	Fax: (707) 996-2700	E-mail: afriel@cambria-env.com	Sampler Name(s) Print: Scott Lewis

Turnaround Time (Business Days): ☐ 10 Days ☐ 5 Days ☐ 72 Hours ☐ 48 Hours ☐ 24 Hours ☐ Less than 24 Hours

☐ EA - RWQCB Report Format ☐ List Agency:

GOMS MTBE Confirmation: Highest _____ Highest per Boring _____ All: _____

Special Instructions or Notes: Check box if EDD is NOT needed ☐

Requested Analysis

Field Sample Identification	Sampling Date	Sampling Time	Matrix	No. of Cont.	TPH - Purgeable	TPH - Extractable (8015m)	BTEX	MTBE	TBA	5 Oxygenates	1,2 DCA and EDB	Ethanol	Methanol	VOCs by 8260B	Semi-Volatiles by 8270C	Lead ☐ Total ☐ STLC ☐ TCLP	LUFTS ☐ Total ☐ STLC ☐ TCLP	CAM17 ☐ Total ☐ STLC ☐ TCLP	Test for Disposal
HP-9-5'	4/13	1110	SO	1	X		X	X											
HP-9-10'	4/13	1122	SO	1	X		X	X											
HP-9-W	4/13	1335	GW	3	X		X	X											
HP-10-5'	4/13	1241	SO	1	X		X	X											
HP-10-9.5	4/13	1252	SO	1	X		X	X											
HP-10-W	4/13	1306	GW	3	X		X	X											

FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes

Temperature on Receipt C°

Relinquished by: (Signature) Scott Lewis	Received by: (Signature)	Date: 4-14-04	Time: 0700
Relinquished by: (Signature)	Received by: (Signature) Steve	Date: 4/14/04	Time: 1055
Relinquished by: (Signature) Steve 4/14/04 1545	Received by: (Signature)	Date: 04/14/04	Time: 1545

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

10/19/00 Revision