CAMBRIA

June 7, 2000

Mr. Scott Seery
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Subsurface Investigation Report**
Shell-branded Service Station
9750 Golf Links Road
Oakland, California
Incident # 98995744
Cambria Project# 242-0735-013

Dear Mr. Seery:

On behalf of Equiva Services LLC (Equiva), Cambria Environmental Technology, Inc. (Cambria) is submitting the results of the subsurface investigation conducted on August 25, 1999 at the above-referenced site. The objective of this investigation was to define the extent of hydrocarbons in soil and groundwater, as requested by the Alameda County Health Care Services Agency in their July 6, 1999 letter to Equiva, and also to estimate the depth to groundwater or perched water beneath the site. The investigation was conducted in accordance with Cambria's June 29, 1999 *Additional Investigation Work Plan*. Presented below are the site background, investigation procedures, results of our sensitive receptor survey and preferential migration pathway evaluation, and our conclusions and recommendations.

BACKGROUND

Site Location: This operating Shell-branded service station is located at the intersection of Golf Links Road and Mountain Boulevard in Oakland, California (Figure 1). Residential and commercial properties surround the site. Highway 580 runs near the northern boundary of the site.

1995 Waste Oil Underground Storage Tank (UST) Removal: On March 7, 1995, Weiss Associates of Emeryville, California (WA) observed the removal of a 550-gallon, single-walled, steel waste-oil UST and collected soil samples from the tank excavation floor and sidewalls. The highest hydrocarbon concentrations were 190 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPHg) and 3,900 mg/kg total petroleum hydrocarbons as diesel (TPHd). No benzene was detected.

Oakland, CA
San Ramon, CA
Sonoma, CA
Portland, OR

Cambria Environmental Technology, Inc.

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

1995 Subsurface Investigation: On December 15, 1995, WA advanced one soil boring to 48 feet below grade (fbg) in the vicinity of the former waste oil UST. Hydrocarbons detected were 2.8 mg/kg TPHd at 30.5 fbg and 56 mg/kg petroleum oil and grease at 40.5 fbg. No groundwater was encountered.

1998 Dispenser Upgrade: On February 4, 1998, Cambria observed station upgrade activities and collected soil samples from beneath one dispenser. The highest hydrocarbon concentrations were 7,800 mg/kg TPHg and 37 mg/kg benzene beneath dispenser D-4 at 4.0 fbg (Figure 2). No field indications of hydrocarbons were observed beneath the other dispensers.

1998 Subsurface Investigation: On July 6 and 31, 1998, Cambria conducted a subsurface investigation at the site which consisted of one soil boring (SB-1) completed to a depth of 30 fbg. Hydrocarbons were detected at a maximum concentration of 14,000 mg/kg TPHg and 100 mg/kg benzene at 13 fbg. A maximum concentration of 91 mg/kg of methyl tertiary butyl ether (MTBE) was reported at 9 fbg by EPA method 8020. This detection was confirmed by EPA method 8260 at a concentration of 23 mg/kg. Low concentrations of TPHg, benzene, toluene, ethylbenzene and xylenes (BTEX) and MTBE by EPA Method 8020 were reported in the deepest sample collected at approximately 26 fbg. Cambria was unable to collect a groundwater sample, as the only water encountered was an apparent thin perched zone at approximately 12 fbg.

INVESTIGATION PROCEDURES

The procedures performed for this subsurface investigation, described in Cambria's approved work plan, are summarized below. The boring locations are shown on Figure 2. Analytical results for soil and groundwater are summarized in Tables 1 and 2 and presented as Attachment A. The boring logs and Cambria's *Standard Field Procedures for Soil Borings* are presented as Attachments B and C, respectively.

Personnel Present:	Matthew Gaffney, Staff Geologist, of Cambria.
Permits:	Alameda County Public Works Agency Drilling Permit #99WR480 (Attachment D).
Drilling Company:	Gregg Drilling of Martinez, California (C-57 License #485165).
Drilling Dates:	August 25, 1999.
Drilling Method:	Hollow-stem auger.

Number of Borings: Five (SB-1b, SB-2, SB-3, SB-4, and SB-5).

Boring Depth: Boring depths ranged from 16 (SB-2) to 30 (SB-5) fbg.

Sediment Lithology: The site subsurface lithology consists primarily of silty sand and sand of moderate to high estimated permeability to the total explored depth of approximately 30 fbg. Soil boring logs are included as Attachment B.

Groundwater Depth: A thin zone of perched water, corresponding with a silty sand layer, was encountered at approximately 12 fbg in boring SB-2, and at approximately 20 fbg in boring SB-3. Groundwater was not encountered in borings SB-1b, SB-4, and SB-5.

Chemical Analyses: The soil samples from all borings and groundwater grab samples collected from borings SB-2 and SB-3 were analyzed as follows:

- TPHg by modified EPA Method 8015;
- MTBE and BTEX by EPA Method 8020; and
- The highest MTBE concentrations reported in soil and groundwater were confirmed by EPA Method 8260.

Waste Handling Analyses: Four soil samples collected from the soil boring were composited and analyzed per Equiva's waste management procedures included as Attachment E.

Backfill Method: The soil borings were backfilled with Portland Type I/II cement grout.

Soil Disposal: The soil cuttings were transported to Forward Landfill Inc. of Manteca, California by Manley and Sons Trucking Inc. of Sacramento, California (Attachment F).

INVESTIGATION RESULTS

Hydrocarbon Distribution in Soil: Maximum concentrations of 243 mg/kg TPHg were detected in soil sample SB-2-10.5-11.0', collected at approximately 11 fbg. TPHg was also detected in soil

sample SB-4-10.5-11.0, collected at approximately 11 fbg at a concentration of 74.0 mg/kg. Maximum MTBE concentrations of 2.6 mg/kg (2.23 mg/kg by EPA Method 8260) were reported in soil sample SB-4-10.5-11.0', collected at approximately 10.5 fbg. MTBE concentrations reported by EPA Method 8020 in boring SB-5 at approximately 16.0 fbg at a concentration of 0.0726 mg/kg, and in boring SB-3 at concentrations ranging from <0.05 to 0.449 mg/kg, appears to attenuate with depth. TPHg and benzene were not detected in soil samples collected from borings SB-1, SB-3, and SB-5. EPA Method 8020 did not report MTBE in borings SB-1 and SB-2. Soil analytical data is summarized in Table 1, and the certified laboratory analytical reports are presented as Attachment A.

Hydrocarbon Distribution in Ground Water: Cambria collected groundwater samples from borings SB-2 and SB-3 at 12 fbg and 20 fbg, respectively. TPHg, benzene, and MTBE were reported in groundwater collected from boring SB-2 at concentrations of 256, 2.42, and 11,800 parts per billion (ppb), respectively by EPA Method 8020. MTBE was reported in groundwater collected from boring SB-3 at a concentration of 4,680 ppb by EPA Method 8020. The presence of MTBE in boring SB-3 was confirmed by EPA Method 8260 at a concentration of 5,250 ppb. TPHg and benzene were not detected above the laboratory detection limits in groundwater collected from boring SB-3. Groundwater analytical data is summarized in Table 2 and the certified laboratory analytical reports are presented in Attachment A.

POTENTIAL RECEPTOR SURVEY

Procedure: A well survey was performed to identify existing wells (sensitive receptors) and previously existing wells within a 1/4- mile radius of the site. In addition, surface topography maps were reviewed to identify any surface bodies of water in the vicinity of the site.

Monitoring Wells: Records from the California Department of Water Resources were reviewed to provide well logs within a 1/4-mile radius of the site. No monitoring wells were identified within this radius. The nearest monitoring wells identified were approximately 3/4 quarters of a mile to the west of the site. One cathodic protection well was identified within a 1/4-mile of the site. The total depth of the cathodic protection well was noted as 120 feet. Depth to groundwater was not noted in the boring log for the cathodic well. Well locations in the vicinity of the site are mapped on Figure 1.

Water Producing Wells: No water producing wells were identified within a 1/4-mile radius of the subject property.

Surface Water Bodies: Arroyo Viejo Creek is located above ground to the southeast of the site. Cal-Trans and City of Oakland engineering maps indicate the Arroyo Viejo Creek is diverted into a large (6 ft x 5ft) storm drain culvert which runs underground along the west portion of the site (Figure 2).

CONDUIT STUDY

Procedure: A conduit study was performed to identify potential vertical and horizontal migration pathways that may exist in the site vicinity and included identification of underground utilities. Cambria obtained storm drain and sanitary sewer maps from the City of Oakland Public Works Department and Cal-Trans "as-built" plans for the area. Storm drain and sanitary sewer line locations and flow directions are shown on Figure 2.

Results: A 72-inch diameter underground storm drain culvert is present between borings SB-3 and SB-5. The conduit is graded to flow to the northeast. Based on USGS topographic map information and elevation measurements provided on the engineering maps reviewed, it is estimated that the storm drain culvert is present at a depth of approximately 10-11 fbg. Arroyo Viejo Creek is diverted into the storm drain culvert, which runs underground along the western portion of the site.

MTBE was reported in soil and groundwater on the east side of the culvert (SB-3) and was only reported at low concentrations on the west side of the culvert in boring SB-5. Perched groundwater was not encountered in boring SB-5 at a maximum depth of 30 fbg and was encountered in SB-3 at approximately 20 fbg and in SB-2 at approximately 12 fbg. The lack of groundwater in SB-5 may indicate that the storm drain fill material may act as a preferential conduit for perched groundwater or that the apparent perched zone is deeper in the vicinity of SB-5.

PREFERENTIAL MIGRATION PATHWAY EVALUATION

To evaluate the potential for MTBE concentrations to impact Arroyo Viejo Creek, Cambria conducted an evaluation of MTBE mass transport through the storm drain fill material. This simplified process assumes that utility backfill is more permeable than the native soil surrounding the utilities and that the higher permeability backfill intercepts and then redirects groundwater downgradient to a surface water discharge point. The calculation assumes that the entire width of the plume is intercepted by the utility, that no further groundwater inflow or outflow occurs between the downgradient edge of the plume and the discharge point, and that the contaminant mass entering the utility corridor is diluted by inflow of clean water from upgradient portions of the utility. The protocol assumes that the dilution attenuation factor (DAF) is directly proportional to the distance between the downgradient edge of the plume and the discharge point, in increments of plume width.

For this DAF assessment, we have used a protocol established by the California Regional Water Quality Control Board for a similar situation at the San Francisco International Airport (staff comments dated July 16, 1998, signed by Mr. Steven Morse, Chief of the Toxics Cleanup Division,

and addressed to the SIFA Consolidated Tenant Group). Calculation of the DAF was made by dividing the distance between the downgradient edge of the plume and the discharge point by the plume width. Calculation of the final theoretical MTBE concentration discharged to the creek was made by dividing the MTBE concentration by the DAF.

For the onsite plume, the confirmed MTBE concentration by EPA Method 8260 at SB-3 is 5,250 ppb, and the plume width at this point is estimated at 65 ft. The plume width was calculated to be the distance between boring SB-4 and boring SB-2. Using CalTrans maps, City of Oakland Engineering maps, and field reconnaissance, the distance between the downgradient edge of the plume where it meets the culvert fill material and the surface exposure of the creek was measured to be approximately 635 feet. Using these plume characteristics and the distance to the surface water discharge point, the DAF is 10, producing a final theoretical discharge concentration of 525 ppb of MTBE.

Therefore: DAF = D/W
Theoretical discharge = C/DAF

Where: DAF = Dilution Attenuation Factor
D = Distance from downgradient edge of plume to outlet
W = Width of plume
C = Representative concentration of plume

The DAF evaluation for this site suggests a theoretical discharge of 525 ppb of MTBE at the culvert outlet shown on Figure 1. However, the DAF method is conservative, as it assumes no inflow or outflow into the utility corridor downgradient of the plume. Figure 2 shows an 18-inch culvert and an 84-inch culvert intersecting the main underground Arroyo Viejo culvert. These additional culverts may add to inflow into the utility corridor downgradient.

Additionally, the DAF method assumes the entire width of the plume intersects the utility corridor. However, for this site scenario it does not appear the entire width of the plume intersects the utility corridor. Based on the water levels encountered in soil borings SB-2 (12 fbg) and SB-3 (20 fbg), it appears the apparent perched layer of groundwater onsite may in fact exist below the total depth of the underground culvert which is believed to exist from 8 to 11 fbg.

CONCLUSIONS

Analytical results for samples collected from the soil boring identified TPHg concentrations in shallow soil at approximately 11 fbg in borings SB-2 and SB-4. MTBE was reported in soil samples collected from borings SB-3, SB-4, and SB-5. MTBE concentrations appear to attenuate with depth in boring SB-3, though low concentrations remained in the deepest soil sample collected at approximately 25

fbg. The vertical extent of MTBE appears to be delineated in borings SB-4 and SB-5. Benzene was not detected in soil during the investigation.

TPHg, benzene, and MTBE have impacted an apparent perched aquifer in the vicinity of boring SB-2 at approximately 12 fbg. Only MTBE has impacted perched groundwater in the vicinity of boring SB-3 at approximately 20 fbg. Groundwater was not detected beneath the site during an investigation conducted in 1995 during which WA advanced a boring to 48 fbg. In addition, no vertical conduits were identified on or near the site that may act as preferential pathways for contaminant flow to the deeper aquifer.

The fill material surrounding the near by drainage culvert may act as a conduit to a surface water receptor (Arroyo Viejo Creek) approximately 635 ft away. A theoretical discharge concentration of 525 ppb of MTBE was calculated with the DAF model. However, the DAF model is conservative in that the model assumes the entire width of the plume is intercepted by the utility conduit and that no other water inflows or outflows within the utility corridor.

In summary, hydrocarbon's originating from the subject site to not appear to pose a significant risk to human health and environment for the following reasons:

- No vertical conduits were identified on or near the site that may act as preferential pathways for contaminant flow to the deeper aquifer,
- An attenuation pattern of TPHg and MTBE exists in soil collected from the onsite borings,
- Static groundwater is believed to exist at a depth greater than 48 fbg onsite,
- It appears unlikely contaminants originating from the site pose a significant threat to Arroyo Viejo Creek.

CAMBRIA

CLOSING

We appreciate the opportunity to work with you on this project. Please call Darryk Ataide at (510) 420-3339 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.

Darryk Ataide, REA I
Project Manager

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

REGISTERED GEOLOGIST
STEPHAN A. BORK
No. HG 425
CERTIFIED
HYDROGEOLOGIST
STATE OF CALIFORNIA

Figures: 1 –Site Vicinity Map with Area Well Survey
2 –Underground Conduits and Boring Locations

Tables: 1 – Soil Sample Analytical Data
2 –Water Sample Analytical Data

Attachments: A - Analytical Report for Soil and Groundwater Samples
B - Soil Boring Logs
C - Standard Field Procedures for Soil Borings
D - Drilling Permit
E - Equiva Waste Management Procedures
F - Soil Disposal Confirmation Letter
G - Standard Field Procedures for Creek Sampling

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91510-7869

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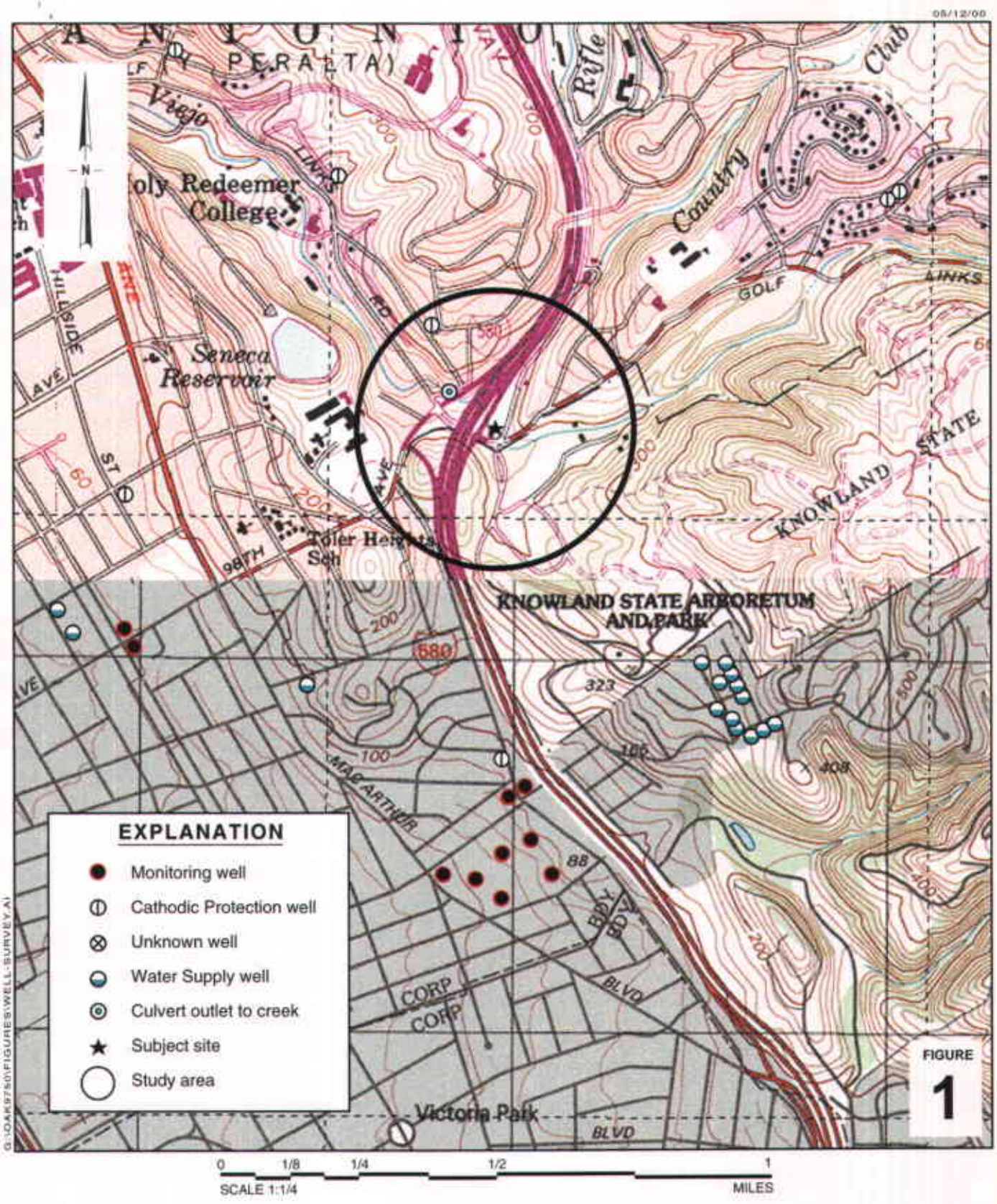

Shell-branded Service Station
9750 Golf Links Road
Oakland, California
Incident #98995744

CAMBRIA

Site Vicinity Map with Area Well Survey
(1/4-Mile Radius)

06/02/00

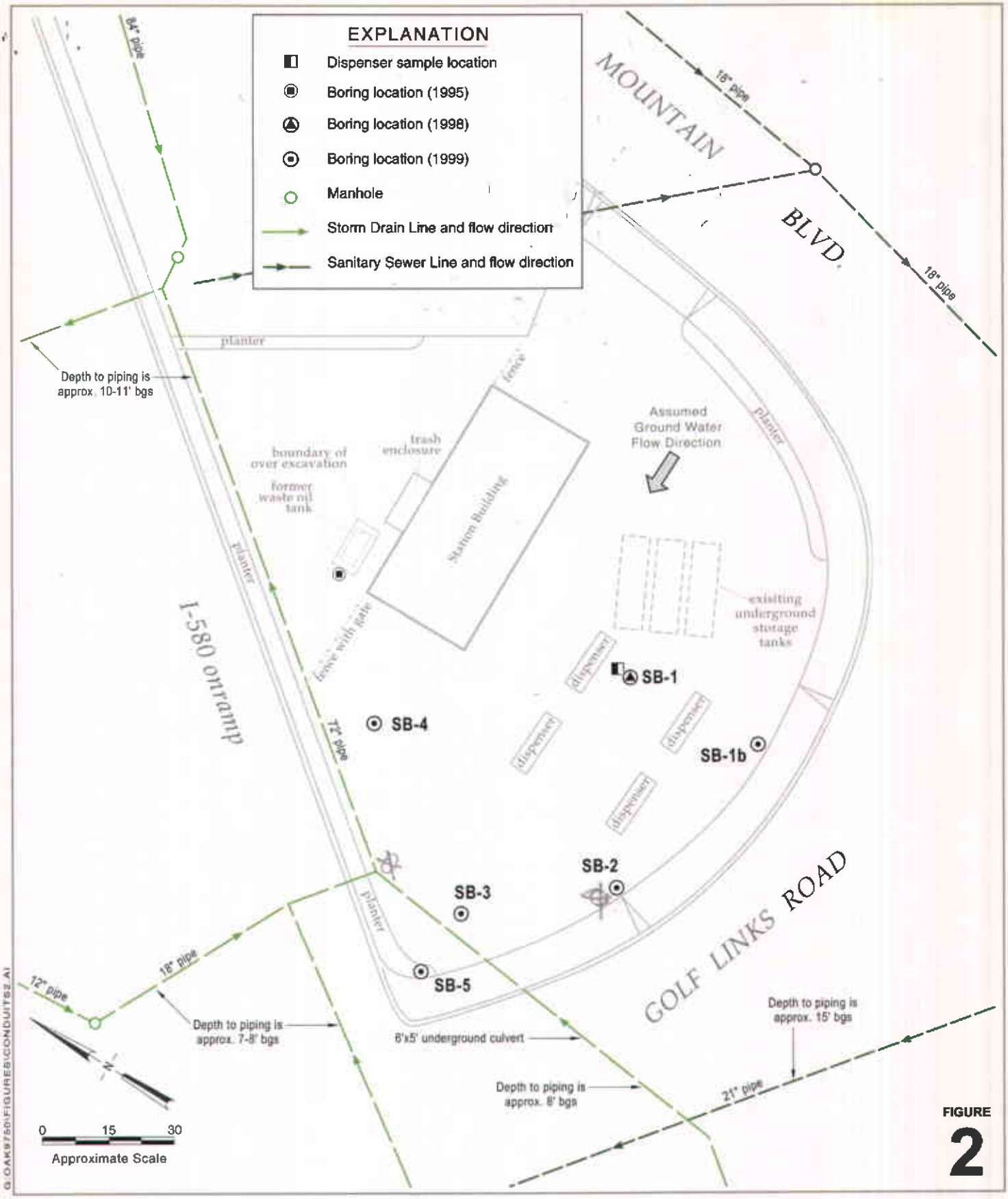

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FIGURE
2

Shell-branded Service Station
9750 Golf Links Road
Oakland, California
Incident #98995744

Underground Conduits and Boring Locations

CAMBRIA

Table 1. Soil Sample Analytic Data - Shell-branded Service Station - Incident # 98995744, 9750 Golf Links Road, Oakland, California

Sample ID	Depth (feet)	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
		← (Concentrations reported in milligrams per kilogram) →					
August 25, 1999 Samples:							
SB-1-6.0-6.5	6.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-1-11.0-11.5	11.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-1-16.0-16.5	16.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-1-20.0-21.0	20.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-1-25.5-26.0	25.5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-2-5.5-6.0	5.5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-2-10.5-11.0	10.5	243.0	<1.00	<0.100	0.248	0.664	1.08
SB-3-6.0-6.5	6.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-3-11.0-11.5	11.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-3-16.0-16.5	16.0	<1.0	0.449	<0.005	<0.005	<0.005	<0.005
SB-3-20-21.5	20.0	<1.0	0.380	<0.005	<0.005	<0.005	<0.005
SB-3-21.0-21.5	21.0	<1.0	0.418	<0.005	<0.005	<0.005	<0.005
SB-3-24-24.5	24.0	<1.0	0.257	<0.005	<0.005	<0.005	<0.005
SB-3-24.5-25.5	24.5	<1.0	0.161	<0.005	0.00520	<0.005	0.00830
SB-4-5.5-6.0	5.5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-4-10.5-11.0	10.5	74.0	2.60 (2.23)	<0.0250	0.0565	0.159	0.0915

Table 1. Soil Sample Analytic Data - Shell-branded Service Station - Incident # 98995744, 9750 Golf Links Road, Oakland, California

Sample ID	Depth (feet)	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
		← (Concentrations reported in milligrams per kilogram) →					
SB-4-15.5-16.0	15.5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-4-20.5-21.0	20.5	<1.0	<0.05	<0.005	<0.005	<0.005	0.00550
SB-4-25.5-26.0	25.5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-5-5.5-6.0	5.5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-5-10.5-11.0	10.5	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005
SB-5-16.0-16.5	16.0	<1.0	0.0726	<0.005	<0.005	<0.005	0.0107
SB-5-20.5-21.0	20.5	<1.0	<0.05	<0.005	0.00930	<0.005	0.0193
SB-5-24.0-24.5	24.0	<1.0	<0.05	<0.005	0.0241	0.00890	0.0473
SB-5-29.0-29.5	29.0	<1.0	<0.05	<0.005	0.0144	0.00590	0.0323

Abbreviations and Notes:

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

MTBE = Methyl tertiary butyl ether by EPA Method 8020; results in parentheses indicate confirmation analysis by EPA Method 8260

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

mg/kg = Milligrams per kilogram

<x = Below detection limit of x mg/kg

Table 2. Water Sample Analytic Data - Shell-branded Service Station - Incident # 98995744, 9750 Golf Links Road, Oakland, California

Sample ID	Depth (feet)	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
		←		(Concentrations reported in milligrams per kilogram)	ppb		→
August 25, 1999 Samples:							
SB-2-W	12.0	256	11800	2.42	<0.500	1.07	0.697
SB-3-W	20	<50.0	4680 (5250)	<0.500	<0.500	<0.500	<0.500

Abbreviations and Notes:

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

MTBE = Methyl tertiary butyl ether by EPA Method 8020; results in parentheses indicate confirmation analysis by EPA Method 8260

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

mg/kg = Milligrams per kilogram

<x = Below detection limit of x mg/kg

ATTACHMENT A

Analytical Reports for Soil and Groundwater Samples

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4119
(650) 232-9600
FAX (650) 232-9612

September 10, 1999

Site: 9750 Golf Links Oakland
Proj. ☑ Rem. ☐ Rpt. ☐ Bill ☐
1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☑ 6 ☐

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

RE: Shell(1)/L908204

Dear Matt Gaffney:

Enclosed are the results of analyses for sample(s) received by the laboratory on August 26, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

W. Steinsa

FOR Tim Costello
Lab Director

CA ELAP Certificate Number I-2360

Sequoia Analytical

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

Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

ANALYTICAL REPORT FOR L908204

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
SB-1-6.0-6.5	L908204-01	Soil	8/25/99
SB-1-11.0-11.5	L908204-02	Soil	8/25/99
SB-1-16.0-16.5	L908204-03	Soil	8/25/99
SB-1-20.5-21.0	L908204-04	Soil	8/25/99
SB-1-25.5-26.0	L908204-05	Soil	8/25/99
SB-2-5.5-6.0	L908204-06	Soil	8/25/99
SB-2-10.5-10.0	L908204-07	Soil	8/25/99
SB-3-6.0-6.5	L908204-08	Soil	8/25/99
SB-3-11.0-11.5	L908204-09	Soil	8/25/99
SB-3-16.0-16.5	L908204-10	Soil	8/25/99
SB-3-20-21.5	L908204-11	Soil	8/25/99
SB-3-21.0-21.5	L908204-12	Soil	8/25/99
SB-3-24-24.5	L908204-13	Soil	8/25/99
SB-3-24.5-25	L908204-14	Soil	8/25/99
SB-4-5.5-6.0	L908204-15	Soil	8/25/99
SB-4-10.5-11.0	L908204-16	Soil	8/25/99
SB-4-15.5-16.0	L908204-17	Soil	8/25/99
SB-4-20.5-21.0	L908204-18	Soil	8/25/99
SB-4-25.5-26.0	L908204-19	Soil	8/25/99
SB-5-5.5-6.0	L908204-20	Soil	8/25/99
SB-5-10.5-11.0	L908204-21	Soil	8/25/99

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4119
(650) 232-9600
FAX (650) 232-9612

Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

ANALYTICAL REPORT FOR L908204

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
SB-5-16.0-16.5	L908204-22	Soil	8/25/99
SB-5-20.5-21.0	L908204-23	Soil	8/25/99
SB-5-24.0-24.5	L908204-24	Soil	8/25/99
SB-5-29.0-29.5	L908204-25	Soil	8/25/99
SB-2-W	L908204-26	Water	8/25/99
SB-3-W	L908204-27	Water	8/25/99

Sequoia Analytical

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

Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-1-6.0-6.5**
Laboratory Sample Number: **L908204-01**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/2/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*85.0*	%	

Sequoia Analytical

1551 Industrial Road
San Carlos, CA 94070-4119
(650) 232-9600
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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-1-11.0-11.5**
Laboratory Sample Number: **L908204-02**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*78.5*	*%*	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-1-16.0-16.5**
Laboratory Sample Number: **L908204-03**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*78.0*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-1-20.5-21.0**
Laboratory Sample Number: **L908204-04**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*70.0*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-1-25.5-26.0**
Laboratory Sample Number: **L908204-05**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*71.5*	*%*	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-2-5.5-6.0**
Laboratory Sample Number: **L908204-06**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*72.0*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-2-10.5-10.0**
Laboratory Sample Number: **L908204-07**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		20.0	**243**	mg/kg	
Benzene	"	"	"		0.100	ND	"	
Toluene	"	"	"		0.100	**0.248**	"	
Ethylbenzene	"	"	"		0.100	**0.664**	"	
Xylenes (total)	"	"	"		0.100	**1.08**	"	
Methyl tert-butyl ether	"	"	"		1.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*5.45*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-3-16.0-16.5**
Laboratory Sample Number: **L908204-10**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/7/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	**0.449**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*105*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-3-20-21.5**
Laboratory Sample Number: **L908204-11**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	**0.380**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*83.0*	*%*	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-3-21.0-21.5**
Laboratory Sample Number: **L908204-12**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	**0.418**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*82.0*	%	

**Refer to end of report for text of notes and definitions.*

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-3-24-24.5**
Laboratory Sample Number: **L908204-13**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	**0.257**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*82.5*	*%*	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-3-24.5-25**
Laboratory Sample Number: **L908204-14**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	**0.00520**	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	**0.00830**	"	
Methyl tert-butyl ether	"	"	"		0.0500	**0.161**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*82.5*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-4-5.5-6.0**
Laboratory Sample Number: **L908204-15**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*80.0*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-4-10.5-11.0**
Laboratory Sample Number: **L908204-16**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
			Sequoia Analytical - San Carlos					
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/8/99		5.00	**74.0**	mg/kg	
Benzene	"	"	"		0.0250	ND	"	
Toluene	"	"	"		0.0250	**0.0565**	"	
Ethylbenzene	"	"	"		0.0250	**0.159**	"	
Xylenes (total)	"	"	"		0.0250	**0.0915**	"	
Methyl tert-butyl ether	"	"	"		0.250	**2.60**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*21.3*	*%*	
MTBE by EPA Method 8260A								1
Methyl tert-butyl ether	9090045	9/9/99	9/9/99		0.100	**2.23**	mg/kg	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	*70.0-121*		*88.0*	*%*	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-4-15.5-16.0**
Laboratory Sample Number: **L908204-17**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/8/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*101*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-4-20.5-21.0**
Laboratory Sample Number: **L908204-18**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	**0.00550**	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*81.0*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-4-25.5-26.0**
Laboratory Sample Number: **L908204-19**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*84.0*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-5-5.5-6.0**
Laboratory Sample Number: **L908204-20**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090018	9/2/99	9/3/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*80.0*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-5-10.5-11.0**
Laboratory Sample Number: **L908204-21**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090029	9/7/99	9/8/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	ND	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*71.5*	*%*	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-5-16.0-16.5**
Laboratory Sample Number: **L908204-22**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090029	9/7/99	9/8/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	ND	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	**0.0107**	"	
Methyl tert-butyl ether	"	"	"		0.0500	**0.0726**	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*74.5*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-5-20.5-21.0**
Laboratory Sample Number: **L908204-23**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090029	9/7/99	9/8/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	**0.00930**	"	
Ethylbenzene	"	"	"		0.00500	ND	"	
Xylenes (total)	"	"	"		0.00500	**0.0193**	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*74.5*	*%*	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-5-24.0-24.5**
Laboratory Sample Number: **L908204-24**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090029	9/7/99	9/8/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	**0.0241**	"	
Ethylbenzene	"	"	"		0.00500	**0.00890**	"	
Xylenes (total)	"	"	"		0.00500	**0.0473**	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*70.0*	%	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-5-29.0-29.5**
Laboratory Sample Number: **L908204-25**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090029	9/7/99	9/8/99		1.00	ND	mg/kg	
Benzene	"	"	"		0.00500	ND	"	
Toluene	"	"	"		0.00500	**0.0144**	"	
Ethylbenzene	"	"	"		0.00500	**0.00590**	"	
Xylenes (total)	"	"	"		0.00500	**0.0323**	"	
Methyl tert-butyl ether	"	"	"		0.0500	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	*60.0-140*		*73.5*	*%*	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-2-W**
Laboratory Sample Number: **L908204-26**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090020	9/3/99	9/3/99		50.0	**256**	ug/l	
Benzene	"	"	"		0.500	**2.42**	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	**1.07**	"	
Xylenes (total)	"	"	"		0.500	**0.697**	"	
Methyl tert-butyl ether	9090027	9/7/99	9/7/99		500	**11800**	"	
Surrogate: a,a,a-Trifluorotoluene	9090020	9/3/99	9/3/99	*70.0-130*		*85.8*	*%*	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Sample Description: **SB-3-W**
Laboratory Sample Number: **L908204-27**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method/ Surrogate Limits	Reporting Limit	Result	Units	Notes*
Sequoia Analytical - San Carlos								
Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT								
Purgeable Hydrocarbons as Gasoline	9090020	9/3/99	9/3/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	9090027	9/7/99	9/7/99		500	**4680**	"	
Surrogate: a,a,a-Trifluorotoluene	9090020	9/3/99	9/3/99	*70.0-130*		*89.3*	%	
MTBE by EPA Method 8260A								
Methyl tert-butyl ether	9090037	9/9/99	9/9/99		100	**5250**	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	"	"	*76.0-114*		*98.4*	%	

Sequoia Analytical

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9090018	**Date Prepared: 9/2/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9090018-BLK1**									
Purgeable Hydrocarbons as Gasoline	9/2/99			**ND**	mg/kg	**1.00**				
Benzene	"			**ND**	"	**0.00500**				
Toluene	"			**ND**	"	**0.00500**				
Ethylbenzene	"			**ND**	"	**0.00500**				
Xylenes (total)	"			**ND**	"	**0.00500**				
Methyl tert-butyl ether	"			**ND**	"	**0.0500**				
Surrogate: a,a,a-Trifluorotoluene	"	*0.200*		*0.191*	"	*60.0-140*	*95.5*			
LCS	**9090018-BS1**									
Purgeable Hydrocarbons as Gasoline	9/2/99	5.00		4.50	mg/kg	70.0-130	90.0			
Surrogate: a,a,a-Trifluorotoluene	"	*0.200*		*0.155*	"	*60.0-140*	*77.5*			
Matrix Spike	**9090018-MS1**		**L908204-01**							
Purgeable Hydrocarbons as Gasoline	9/2/99	5.00	ND	4.84	mg/kg	60.0-140	**96.8**			
Surrogate: a,a,a-Trifluorotoluene	"	*0.200*		*0.183*	"	*60.0-140*	*91.5*			
Matrix Spike Dup	**9090018-MSD1**		**L908204-01**							
Purgeable Hydrocarbons as Gasoline	9/2/99	5.00	ND	4.41	mg/kg	60.0-140	**88.2**	25.0	**9.30**	
Surrogate: a,a,a-Trifluorotoluene	"	*0.200*		*0.151*	"	*60.0-140*	*75.5*			
Batch: 9090020	**Date Prepared: 9/3/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9090020-BLK1**									
Purgeable Hydrocarbons as Gasoline	9/3/99			**ND**	ug/l	**50.0**				
Benzene	"			**ND**	"	**0.500**				
Toluene	"			**ND**	"	**0.500**				
Ethylbenzene	"			**ND**	"	**0.500**				
Xylenes (total)	"			**ND**	"	**0.500**				
Methyl tert-butyl ether	"			**ND**	"	**5.00**				
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*10.9*	"	*70.0-130*	*109*			
LCS	**9090020-BS1**									
Benzene	9/3/99	10.0		8.12	ug/l	70.0-130	81.2			
Toluene	"	10.0		8.26	"	70.0-130	82.6			
Ethylbenzene	"	10.0		8.35	"	70.0-130	83.5			
Xylenes (total)	"	30.0		25.3	"	70.0-130	84.3			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*9.33*	"	*70.0-130*	*93.3*			
LCS	**9090020-BS2**									
Purgeable Hydrocarbons as Gasoline	9/3/99	250		264	ug/l	70.0-130	106			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*7.95*	"	*70.0-130*	*79.5*			

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike	**9090020-MS1**		**L909017-02**							
Benzene	9/3/99	10.0	ND	8.45	ug/l	60.0-140	**84.5**			
Toluene	"	10.0	ND	8.48	"	60.0-140	**84.8**			
Ethylbenzene	"	10.0	ND	8.41	"	60.0-140	**84.1**			
Xylenes (total)	"	30.0	ND	25.5	"	60.0-140	**85.0**			
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*9.01*	"	*70.0-130*	*90.1*			
Matrix Spike Dup	**9090020-MSD1**		**L909017-02**							
Benzene	9/3/99	10.0	ND	8.59	ug/l	60.0-140	**85.9**	25.0	**1.64**	
Toluene	"	10.0	ND	8.49	"	60.0-140	**84.9**	25.0	**0.118**	
Ethylbenzene	"	10.0	ND	8.45	"	60.0-140	**84.5**	25.0	**0.474**	
Xylenes (total)	"	30.0	ND	25.6	"	60.0-140	**85.3**	25.0	**0.352**	
Surrogate: a,a,a-Trifluorotoluene	"	*10.0*		*8.08*	"	*70.0-130*	*80.8*			
Batch: 9090029	**Date Prepared: 9/7/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9090029-BLK1**									
Purgeable Hydrocarbons as Gasoline	9/7/99			**ND**	mg/kg	**1.00**				
Benzene	"			**ND**	"	**0.00500**				
Toluene	"			**ND**	"	**0.00500**				
Ethylbenzene	"			**ND**	"	**0.00500**				
Xylenes (total)	"			**ND**	"	**0.00500**				
Methyl tert-butyl ether	"			**ND**	"	**0.0500**				
Surrogate: a,a,a-Trifluorotoluene	"	*0.200*		*0.247*	"	*60.0-140*	*123*			
LCS	**9090029-BS1**									
Benzene	9/7/99	0.200		0.201	mg/kg	70.0-130	101			
Toluene	"	0.200		0.203	"	70.0-130	101			
Ethylbenzene	"	0.200		0.202	"	70.0-130	101			
Xylenes (total)	"	0.600		0.607	"	70.0-130	101			
Surrogate: a,a,a-Trifluorotoluene	"	*0.200*		*0.222*	"	*60.0-140*	*111*			
Matrix Spike	**9090029-MS1**		**L908204-24**							
Benzene	9/7/99	0.200	ND	0.250	mg/kg	60.0-140	**125**			
Toluene	"	0.200	0.0241	0.271	"	60.0-140	**123**			
Ethylbenzene	"	0.200	0.00890	0.255	"	60.0-140	**123**			
Xylenes (total)	"	0.600	0.0473	0.778	"	60.0-140	**122**			
Surrogate: a,a,a-Trifluorotoluene	"	*0.200*		*0.287*	"	*60.0-140*	*143*			
Matrix Spike Dup	**9090029-MSD1**		**L908204-24**							
Benzene	9/7/99	0.200	ND	0.214	mg/kg	60.0-140	**107**	25.0	**15.5**	
Toluene	"	0.200	0.0241	0.225	"	60.0-140	**100**	25.0	**20.6**	
Ethylbenzene	"	0.200	0.00890	0.216	"	60.0-140	**104**	25.0	**16.7**	

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike Dup (continued)	**9090029-MSD1**		**L908204-24**							
Xylenes (total)	9/7/99	0.600	0.0473	0.650	mg/kg	60.0-140	**100**	25.0	**19.8**	
Surrogate: a,a,a-Trifluorotoluene	"	*0.200*		*0.223*	"	*60.0-140*	*112*			

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Cambria Environmental	Project:	Shell(1)	Sampled: 8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received: 8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported: 9/10/99

MTBE by EPA Method 8260A/Quality Control
Sequoia Analytical - San Carlos

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9090037	**Date Prepared: 9/8/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9090037-BLK1**									
Methyl tert-butyl ether	9/8/99			**ND**	ug/l	**2.00**				
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*56.2*	"	*76.0-114*	*112*			
Blank	**9090037-BLK2**									
Methyl tert-butyl ether	9/9/99			**ND**	ug/l	**2.00**				
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*50.1*	"	*76.0-114*	*100*			
LCS	**9090037-BS1**									
Methyl tert-butyl ether	9/8/99	50.0		55.9	ug/l	70.0-130	112			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*56.2*	"	*76.0-114*	*112*			
LCS	**9090037-BS2**									
Methyl tert-butyl ether	9/9/99	50.0		47.0	ug/l	70.0-130	94.0			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*47.8*	"	*76.0-114*	*95.6*			
Matrix Spike	**9090037-MS1**		**L909047-01**							
Methyl tert-butyl ether	9/8/99	50.0	4.81	56.0	ug/l	60.0-140	**102**			
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*49.8*	"	*76.0-114*	*99.6*			
Matrix Spike Dup	**9090037-MSD1**		**L909047-01**							
Methyl tert-butyl ether	9/8/99	50.0	4.81	55.6	ug/l	60.0-140	**102**	25.0	**0**	
Surrogate: 1,2-Dichloroethane-d4	"	*50.0*		*50.5*	"	*76.0-114*	*101*			
Batch: 9090045	**Date Prepared: 9/9/99**					**Extraction Method: EPA 5030B [P/T]**				
Blank	**9090045-BLK1**									
Methyl tert-butyl ether	9/10/99			**ND**	mg/kg	**0.100**				
Surrogate: 1,2-Dichloroethane-d4	"	*2.50*		*2.23*	"	*70.0-121*	*89.2*			
LCS	**9090045-BS1**									
Methyl tert-butyl ether	9/9/99	2.50		3.05	mg/kg	70.0-130	122			
Surrogate: 1,2-Dichloroethane-d4	"	*2.50*		*2.32*	"	*70.0-121*	*92.8*			
Matrix Spike	**9090045-MS1**		**L908204-16**							
Methyl tert-butyl ether	9/9/99	2.50	2.23	6.25	mg/kg	60.0-140	**161**			
Surrogate: 1,2-Dichloroethane-d4	"	*2.50*		*2.38*	"	*70.0-121*	*95.2*			
Matrix Spike Dup	**9090045-MSD1**		**L908204-16**							
Methyl tert-butyl ether	9/9/99	2.50	2.23	4.96	mg/kg	60.0-140	**109**	25.0	**38.5**	
Surrogate: 1,2-Dichloroethane-d4	"	*2.50*		*1.75*	"	*70.0-121*	*70.0*			

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Cambria Environmental	Project:	Shell(1)	Sampled:	8/25/99
1144 65th St., Suite C.	Project Number:	Shell 9750 Golf Links Road, Oakland	Received:	8/26/99
Oakland, CA 94608	Project Manager:	Matt Gaffney	Reported:	9/10/99

Notes and Definitions

#	Note
1	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte already present in the sample.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

CORE LAB

CORE LABORATORIES

ANALYTICAL REPORT

JOB NUMBER: 991777

Prepared For:

Core Laboratories
3430 Unicorn Road
Bakersfield, CA 93308

Attention: Jeff Smith

Date: 09/13/1999

Paul Christ for
Signature

9/13/99
Date

Name: Tim Scott

Title: Laboratory Manager

1250 E. Gene Autry Way
Anaheim, CA 92805

PHONE: (714) 937-1094
FAX..: (714) 937-1170

CORE LABORATORIES

SAMPLE INFORMATION
Date: 09/13/1999

Job Number.: 991777
Customer...: Core Laboratories
Attn.....: Jeff Smith

Project Number.....: 97000255
Customer Project ID....: 57111-99190
Project Description....: Refer to Customer Project I.D.

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
991777-1	L908204-11B	Soil	08/25/1999	00:00	09/03/1999	10:00
991777-2	L908204-14B	Soil	08/25/1999	00:00	09/03/1999	10:00

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 991777

Date: 09/13/1999

CUSTOMER: Core Laboratories | PROJECT: 57111-99190 | ATTN: Jeff Smith

Customer Sample ID: L908204-11B
Date Sampled.....: 08/25/1999
Time Sampled.....: 00:00
Sample Matrix.....: Soil

Laboratory Sample ID: 991777-1
Date Received.....: 09/03/1999
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
Method 5	Organic Carbon, Total (TOC), Solid	<0.0010	0.0010	%	09/10/99	gwd

CORE LABORATORIES

LABORATORY TEST RESULTS

Job Number: 991777 Date: 09/13/1999

CUSTOMER: Core Laboratories PROJECT: 57111-99190 ATTN: Jeff Smith

Customer Sample ID: L908204-14B
Date Sampled.....: 08/25/1999
Time Sampled.....: 00:00
Sample Matrix.....: Soil

Laboratory Sample ID: 991777-2
Date Received.....: 09/03/1999
Time Received.....: 10:00

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	REPORTING LIMIT	UNITS	DATE	TECH
Method 5	Organic Carbon, Total (TOC), Solid	<0.0010	0.0010	%	09/10/99	gwd

CORE LABORATORIES

QUALITY CONTROL RESULTS

Job Number.: 991777

Report Date.: 09/13/1999

CUSTOMER: Core Laboratories

PROJECT: Refer to Customer Project I.D. ATTN: Jeff Smith

Test Method.....: Method 5
Method Description.: Total Carbon-Walkeley Black
Parameter.....: Organic Carbon, Total (TOC)

Batch.....: 8434
Units.....: %

Analyst...: gwd
Test Code.: TOC

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F	Date	Time
MB			0.0								09/10/1999	0000
DUP	991777-2		0.0			0.0	0.0		0.0		09/10/1999	0000

* %=% REC, R=RPD, A=ABS Diff., D=% Diff.

CORE LABORATORIES

ANALYTICAL SUMMARY REPORT

Job Number: 991777

Report Date: 09/13/19

CUSTOMER: Core Laboratories | PROJECT: 57111-99190 | ATTN: Jeff Smith

BATCH	8434	ANALYTICAL METHOD	Method 5	DESCRIPTION	Total Carbon-Walkeley Black	ANALYST	gwd

Lab Sample ID	Client Sample Identification	Sample Matrix	Test Matrix	Sample Date	Sample Time	Analysis Date	Analysis Time	Dil/Corr. Factor
991777-1	L908204-11B	Soil	Solid	08/25/99	0000	09/10/99	0000	1
991777-2	L908204-14B	Soil	Solid	08/25/99	0000	09/10/99	0000	1

CORELAB

CORE LABORATORIES

QUALITY ASSURANCE FOOTER

METHOD REFERENCES

(1) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, September 1986, and Updates I, II, IIA, IIB, and III
(2) Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992
(3) EPA 600/4-79-020, Methods of Chemical Analysis for Waters and Wastes, March 1983
(4) Federal Register, Friday, October 26, 1984 (40 CFR Part 136)
(5) American Society for Testing and Materials, Volumes 5.01, 5.02, 5.03, 1992
(6) EPA 600/4-89-001, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Fresh Water Organisms
(7) EPA 600/4-90-027, Methods for Measuring the Acute Toxicity of Effluent and Receiving Waters to Fresh Water and Marine Organisms, Fourth Edition

COMMENTS

All methods of chemical analysis have a statistical uncertainty associated with the results. Unless otherwise indicated, the data in this report are within the limits of uncertainty as specified in the referenced method. Quality control acceptance criteria are based either on limits specified in the referenced method or on actual laboratory performance. The date and time of analysis indicated on the QC report may not reflect the actual time of analysis for QC samples. Data reported in the QA report may be lower than sample data due to dilution of samples into the calibration range of the analysis. Sample concentrations for solid samples are calculated on an as received (wet) basis unless otherwise indicated. Unless otherwise indicated, volatiles by gas chromatography (GC) are reported from a single column. Volatiles analyses by GC on low level soils are conducted at room temperature. TCLP extractions are performed at sample amounts, approved by the State of California.

FLAGS, FOOTNOTES, AND ABBREVIATIONS (as needed)

NA = Not analyzed
N/A = Not applicable
ug/L = Micrograms per liter
mg/L = Milligrams per liter
ND = Not detected at a value greater than the reporting limit
NC = Not calculable due to values lower than the detection limit
N.I. = Not Ignitable
S.I. = Sustains Ignition
I(NS) = Ignites, but does not Sustain Ignition
RPD = Relative Percent Difference

(a) = Surrogate recoveries were outside acceptable ranges due to matrix effects.
(b) = Surrogate recoveries were not calculated due to dilution of the sample below the detectable range for the surrogate.
(c) = Matrix spike recoveries were outside acceptable ranges due to matrix effects.
(d) = Relative Percent Difference (RPD) for duplicate analysis outside acceptance limits due to actual differences in the sample matrix.
(e) = The limit listed for flammability indicates the upper limit for the test. Samples are not tested at temperatures above 140 Fahrenheit since only samples which will sustain ignition at temperatures below 140 are considered flammable.
(f) = Results for this hydrocarbon range did not match a typical hydrocarbon pattern. Results were quantified using a diesel standard, however, the hydrocarbon pattern did not match a diesel pattern.
(g) = Results for this hydrocarbon range did not match a typical hydrocarbon pattern. Results were quantified using a gasoline standard, however, the hydrocarbon pattern did not match a gasoline pattern.
(h) = High dilution due to matrix effects

QC SAMPLE IDENTIFICATIONS

MB = Method Blank
RB = Reagent Blank
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
CS = Calibration Standard
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
SB = Storage Blank
MS = Matrix Spike
MSD = Matrix Spike Duplicate
MD = Matrix Duplicate
BS = Blank Spike
SS = Surrogate Spike
LCS = Laboratory Control Standard
RS = Reference Standard

SUBCONTRACTED LABORATORY LOCATIONS

Core Laboratories:	Aurora, Colorado	*AU
	Casper, Wyoming	*CA
	Corpus Christi, Texas	*CC
	Edison, New Jersey	*ED
	Houston, Texas (Env)	*HE
	Houston, Texas (Pet)	*HP
	Indianapolis, Indiana	*IN
	Lake Charles, Louisiana	*LC
	Long Beach, California	*LB
	Valparaiso, Indiana	*VP
	Bakersfield, California	*BK

1250 Gene Autry Way Autry Way
Anaheim, CA 92805
(714) 937-1094 /u/matt/logs_n_forms/footer.form

CORE LABORATORIES

rpjsckl — Job Sample Receipt Checklist Report — V2
09/03/1999

Job Number.....: 991777 Location.: 57218 Customer Job ID.....: Job Check List Date.: 09/03/1999
Project Number.: 97000255 Project Description.: Refer to Customer Project I.D. Project Manager.....: tas
Customer.....: Core Laboratories Contact.: Jeff Smith

Questions ?	(Y/N)	Comments
Chain-of-Custody Present?	Y	
...If "yes", completed properly?	Y	
Custody seal on shipping container?	N	
...If "yes", custody seal intact?	N	
Custody seals on sample containers?	N	
...If "yes", custody seal intact?	N	
Samples chilled?	N	
Temperature of cooler acceptable? (4 deg C +/- 2).	N	
Temperature measured from temperature blank?	N	
Samples received intact (good condition)?	Y	
Volatile samples acceptable? (no headspace)	N/A	
Correct containers used?	Y	
Adequate sample volume provided?	Y	
Samples preserved correctly?	N/A	
Samples received within holding-time?	Y	
Agreement between COC and sample labels?	Y	
Open cooler radioactive screen at or below bkgrd?		
Additional		
Comments		
Sample Custodian Signature/Date	Y	

CL File No.: 57111-99190

Sequoia Analytical
(San Carlos)
L908204

Sample Name	Sample Date	Total Porosity %	Bulk Density Dry g/cc	Bulk Density Natural g/cc	Matrix Density g/cc	Moisture Content %	Total Org. Carbon %	Description
L908204-11	25-Aug-99	38.6	1.64	2.03	2.68	23.43	<0.001	Gray v clayey silt
L908204-14	25-Aug-99	27.8	1.96	2.23	2.71	14.19	<0.001	Gray v clayey silt

Grain and pore volumes were determined by Boyle's Law methods as per API RP-40.
Sample densities and total porosity were calculated as per API RP-40.
Moisture content was determined by ASTM D-2216.
Total Organic Carbon Content was determined using Walkley-Black titration methods

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No:

Date: 8/25/99
Page 1 of 6

Site Address: 9750 Golf Links Road, OAKLAND

INCIDENT # 98995744

Shell Engineer: Karen Petryna | Phone No.: | Fax #:

Consultant Name & Address: CAMBRIA ENVIRONMENTAL
1144 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Matt Gaffney | Phone No.: 510-420-0700 | Fax #: 510-420-9170

Comments: L906204

Sampled by: Matt Gaffney
Matt

Printed Name:

LAB: SEQ

CHECK ONE (1) BOX ONLY | CT/DT
- G.W. Monitoring [ ] 4461
- Site Investigation [X] 4441
- Soil Classify/Disposal [ ] 4442
- Water Classify/Disposal [ ] 4443
- Soil/Air Remt. or Sys. O & M [ ] 4452
- Water Remt. or Sys. O & M [ ] 4453
- Other [ ]

TURN AROUND TIME
- 24 hours [ ]
- 48 hours [ ]
- 96 days [ ] (Normal)
- Other [X] 10 day

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

UST AGENCY:

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of cont.	TPH EPA 8015 Mod. Gas	TPH EPA 8015 Mod. Diesel	BTEX EPA 8020/602	Volatile Organics EPA 8240	Test for Disposal	Combination TPH 8015 & BTEX 8020 & MTBE			Asbestos	Container Size	Preservation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1 SB-1-6.0-6.5	8/25/99	✓	X			1						X							Soil	CONFRIM
2 SB-1-11.0-11.5	8/25/99	✓	X			1						X							Soil	Highest
3 SB-1-16.0-16.5	8/25/99		X			1						X							Soil	Soil B;
4 SB-1-20.5-21	8/25/99	✓	X			1						X							Soil	Water MTBE
5 SB-1-25.5-26	8/25/99	✓	X			1						X							Soil	By EPA
6 SB-2-5.5-6	8/25/99		X			1						X							Soil	8260
7 SB-2-10.5-10	8/25/99	✓	X			1						X							Soil	Confirm highest MTBE w/ 8260

Relinquished by (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
Matt J. Gaffney	Matt J. Gaffney	8/25/99	5:00pm	Steve Ten	Steve Ten	8/26/99	3:30
Relinquished by (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
Relinquished by (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
					P. LE	08/26/99	1820

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: ______

LAB: SEQ

Site Address: 9750 Golf Links Road Oakland

INCIDENT # 98995744

Shell Engineer: Karen Petryna
Phone No.:
Fax #:

Consultant Name & Address: CAMBRIA ENVIRONMENTAL
1144 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Matt J. Gaffney
Phone No.: 510 420-0700
Fax #: 420-9170

Comments: 1908204

Sampled by: [signature]

Printed Name: Matt J. Gaffney

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring	[ ] 4461	24 hours [ ]
Site Investigation	[X] 4441	48 hours [ ]
Soil Classify/Disposal	[ ] 4442	16 days [ ] (Normal)
Water Classify/Disposal	[ ] 4443	Other [X] 10 day
Soil/Air Rem. or Sys. O & M	[ ] 4452	NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.
Water Rem. or Sys. O & M	[ ] 4453	
Other	[ ]	

UST AGENCY: ______

Analysis Required: TPH (EPA 8015 Mod. Gas); TPH (EPA 8015 Mod. Diesel); BTEX (EPA 8020/602); Volatile Organics (EPA 8240); Test for Disposal; Combination TPH 8015 & BTEX 8020 + MTBE; Physical Parameters (Bulk Density, Porosity, Moisture, FOC); Asbestos; Container Size; Preparation Used; Composite Y/N

	Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH Gas	TPH Diesel	BTEX	Volatile Organics	Test for Disposal	Combination TPH & BTEX + MTBE	Physical Parameters	Asbestos	Container Size	Preparation Used	Composite Y/N	Material Description	Sample Condition/Comments
08	SB-3-6.0-6.5	8/25/99	✓	X			1						X						Soil	Confirm Highest
09	SB-3-11.0-11.5	↓	✓	X			1						X						Soil	soil
10	SB-3-16.0-16.5		✓	X			1						X						Soil	$ MTBE
11	SB-3-20-21.5			X			1						X	X					Soil	by EPA
12	SB-3-21-21.5		✓	X			1						X						Soil	8260
13	SB-3-24-24.5			X			1						X	X					Soil	
14	SB-3-24.5-25	↓	✓	X			1						X						Soil	

Relinquished By (signature)	Printed Name	Date/Time	Received (signature)	Printed Name	Date/Time
[signature]	Matt J. Gaffney	Date: 8/25/99 Time: 5:40PM	[signature]	Steve Teu	Date: 8/26/99 Time: 3:00
[signature]		Date: 8/26/99 Time:			Date: Time:
		Date: Time:	[signature]	P. [illegible]	Date: 082699 Time: 1820

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No:

Date: 8/25/99

Site Address: 9750 Golf Links Road, Oakland

INCIDENT #: 98995744

Shell Engineer: Karen Petryna
Phone No.:
Fax #:

Consultant Name & Address: CAMBRIA ENVIRONMENTAL
1144 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Matt Gaffney
Phone No.: 510-420-0700
Fax #: 510-420-9170

Comments: L909204

Sampled by: Matt J. Gaffney

Printed Name: Matt J. Gaffney

LAB: SEQ

CHECK ONE (1) BOX ONLY	CT/DH	TURN AROUND TIME
G.W. Monitoring	4461	24 hours
Site Investigation	4441	48 hours
Soil Classify/Disposal	4442	10 days (Normal)
Water Classify/Disposal	4443	Other 3 day
Soil/Air Remt. or Sys. O & M	4452	NOTE: Notify Lab as soon as Possible of 24/48 hr. TAT.
Water Remt. or Sys. O & M	4453	
Other		

UST AGENCY:

	Sample ID	Date	Sludge	Soil	Water	Air	No. of cont.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020, MTBE			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
15	SB-4-5.5-6	8/25/99	✓	X			1						X							Soil	Confirm
16	SB-4-10.5-11	8/25/99	✓	X			1						X							Soil	Highest Soil
17	SB-4-15.5-16	8/25/99		X			1						X							Soil	BH, O MTBE
18	SB-4-20.5-21	8/25/99		X			1						X							Soil	by
19	SB-4-25.5-26	8/25/99	✓	X			1						X							Soil	EPA 8260
20	SB-5-5.5-6.0	8/25/99	✓	X			1						X							Soil	
21	SB-5-10.5-11	8/25/99	✓	X			1						X							Soil	
22	SB-5-16-16.5	8/25/99		X			1						X							Soil	

Relinquished by (signature): Matt J. Gaffney
Printed Name: Matt J. Gaffney
Date: 8/25/99
Time: 5:00pm

Relinquished by (signature):
Printed Name:
Date: 8/26
Time:

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

Received (signature):
Received (signature):
Received (signature):

Printed Name: S. Tew
Printed Name:
Printed Name: P. Le

Date: 8/26/99
Time: 9:30
Date:
Time:
Date: 08/26/99
Time: 1020

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No:

LAB: SEQ

Site Address: 9750 Golf Links Road: Oakland

INCIDENT# 98995744

Shell Engineer: Karen Petryna
Phone No.:
Fax #:

Consultant Name & Address: CAMBRIA ENVIRONMENTAL 1144 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Matt J. Gaffney
Phone No.: 510 420-0700
Fax #: 420-9170

Comments: 1909204

Sampled by: Matt J. Gaffney (signature)

Printed Name: Matt J. Gaffney

CHECK ONE (1) BOX ONLY — CT/DT
- [ ] G.W. Monitoring 4461
- [x] Site Investigation 4441
- [ ] Soil Classify/Disposal 4442
- [ ] Water Classify/Disposal 4443
- [ ] Soil/Air Rem. or Sys. O & M 4452
- [ ] Water Rem. or Sys. O & M 4453
- [ ] Other

TURN AROUND TIME
- [ ] 24 hours
- [ ] 48 hours
- [ ] 16 days (Normal)
- [x] Other 4/10 day

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

UST AGENCY:

Analysis Required: TPH (EPA 8015 Mod. Gas); TPH (EPA 8015 Mod. Diesel); BTEX (EPA 8020/602) + MTBE; Volatile Organics (EPA 8240); Test for Disposal; Combination TPH 8015 & BTEX 8020, MTBE; Asbestos; Container Size; Preparation Used; Composite Y/N

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602) + MTBE	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020, MTBE			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
SB-5-20.5-21	8/25/99		X			1						X							Confirm Highest Soil	
SB-5-24-24.5	|		X			1						X							+ Highest H_2O	
SB-5-29-29.5	|		X			1						X							MTBE by EPA 8260	

Relinquished By (signature)	Printed Name	Date / Time	Received (signature)	Printed Name	Date / Time
Matt J. Gaffney	Matt J. Gaffney	Date: 8/25/99 Time: 5:00pm	S. Teu	S. Teu	Date: 8/26/99 Time: 8:00
S. Teu		Date: 8/26 Time:			Date: Time:
		Date: Time:	[illegible]	P. LE	Date: 082699 Time: 1820

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 8/25/99
Page 5 of 6

Site Address: 9750 Golf Links Road Oakland

INCIDENT #: 98995744

Shell Engineer: Karen Petryna | Phone No.: | Fax #:

Consultant Name & Address: CAMBRIA ENVIRONMENTAL 1144 65th St. Suite C, Oakland, CA 94608

Consultant Contact: Matt J. Gaffney | Phone No.: 510-420-0700 | Fax #: 510-420-9170

Comments: L908209

Sampled by: Matt J. Gaffney

Printed Name: Matt J. Gaffney

LAB: SEQ

CHECK ONE (1) BOX ONLY	C/I/H	TURN AROUND TIME
G.W. Monitoring	4441	24 hours
Site Investigation	4441	48 hours
Soil Classify/Disposal	4442	15 days (Normal)
Water Classify/Disposal	4443	Other Holiday
Soil/Air Remed. or Sys. O & M	4452	
Water Remed. or Sys. O & M	4453	NOTE: Please call as soon as Possible of 24/48 hr. TAT.
Other		

UST AGENCY: _____

Sample ID	Date	Sludge	Soil	Water	Air	No. of cont.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 + MTBE			Asbestos	Container Size	Preservation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
6 SB-2-W	8/25/99			X		3						X							Confirm MTBE in water.	
7 SB-3-W	8/25/99			X		3						X							~~Soil~~ ~~MTBE~~ By EPA 8260	

Relinquished by (signature): Matt J. Gaffney	Printed Name: Matt J. Gaffney	Date: 8/25 Time: 5:00pm	Received (signature):	Printed Name: S. Tu	Date: 8/26/99 Time: 3:00
Relinquished by (signature):	Printed Name:	Date: 8/26 Time:	Received (signature):	Printed Name:	Date: Time:
Relinquished by (signature):	Printed Name:	Date: Time:	Received (signature):	Printed Name: P. K	Date: 08/26/99 Time: 1520

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

ATTACHMENT B

Soil Boring Logs

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

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	**BORING/WELL NAME**	SB-1b
JOB/SITE NAME	OAK9750	**DRILLING STARTED**	25-Aug-99
LOCATION	9750 Golf Links Road, Oakland	**DRILLING COMPLETED**	25-Aug-99
PROJECT NUMBER	241-0735	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hollow-stem auger, Rhino	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	5.25"	**SCREENED INTERVAL**	NA
LOGGED BY	M. Gaffney	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	A. Le May, RG	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHALT	0.5	
							FILL; (FILL); brown; stiff; dry; 60% sand, 40% gravel; high estimated permeability.	2.5	
				5	SW		**Gravelly SAND**; (SW); brownish orange; stiff; dry; 10% silt, 60% sand, 30% gravel; high estimated permeability.		
	N/A N/A	SB-1 -6.0-6.5						7.5	
				10			**Silty SAND**; (SM); brownish orange; stiff; dry; 30% silt, 60% sand, 10% gravel; medium estimated permeability.		
	N/A N/A	SB-1 -11.0-11.5							Portland Type I/II
				15			@ 15.0'- reddish brown; 25% silt, 70% sand, 5% gravel; high estimated permeability.		
	N/A N/A	SB-1 -16.0-16.5			SM				
				20			@ 20.0'- orange brown; 20% silt, 80% sand.		
	N/A N/A	SB-1 -20.5-21.0							
				25			@ 24.5'- brown gray with green spots; 5% clay, 15% silt, 80% sand.		
	N/A N/A	SB-1 -25.5-26.0						26.5	Bottom of Boring @ 26 ft

WELL LOG SONOMA (PID) G:\OA71C9~1\GINT2400\OAK9750.GPJ DEFAULT.GDT 4/11/00

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

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	**BORING/WELL NAME**	SB-2
JOB/SITE NAME	OAK9750	**DRILLING STARTED**	25-Aug-99
LOCATION	9750 Golf Links Road, Oakland	**DRILLING COMPLETED**	25-Aug-99
PROJECT NUMBER	241-0735	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hollow-stem auger, Rhino	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	5.25"	**SCREENED INTERVAL**	NA
LOGGED BY	M. Gaffney	**DEPTH TO WATER (First Encountered)**	12.0 ft (25-Aug-99)
REVIEWED BY	A. Le May, RG	**DEPTH TO WATER (Static)**	NA

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHALT	0.5	
							FILL; (FILL); gray green; stiff; dry; 10% clay, 40% sand, 50% gravel; medium plasticity; low estimated permeability.	2.5	
							Silty SAND; (SM); gray green; stiff; dry; 10% clay, 40% silt, 50% sand; low estimated permeability.		
243	N/A N/A	SB-2 -5.5-6.0		5	SM				
							Silty SAND; (SM); brownish orange; stiff; dry; 30% silt, 60% sand, 10% gravel; medium estimated permeability.	7.5	Portland Type I/II
<1.0	N/A N/A	SB-2 -10.5-11.0		10	SM		▽		
							Chert; (Bedrock); green to white; wet.	13.5	
				15				16.0	Bottom of Boring @ 16 ft

WELL LOG SONOMA (PID) G:\OA71C9~1\GINT240\OAK9750.GPJ DEFAULT.GDT 4/11/00

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

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	**BORING/WELL NAME**	SB-3
JOB/SITE NAME	OAK9750	**DRILLING STARTED**	25-Aug-99
LOCATION	9750 Golf Links Road, Oakland	**DRILLING COMPLETED**	25-Aug-99
PROJECT NUMBER	241-0735	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hollow-stem auger, Rhino	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	5.25"	**SCREENED INTERVAL**	NA
LOGGED BY	M. Gaffney	**DEPTH TO WATER (First Encountered)**	20.0 ft (25-Aug-99) ▽
REVIEWED BY	A. Le May, RG	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHALT	0.5	
							FILL; (FILL); brown; stiff; dry; 60% sand, 40% gravel; high estimated permeability.	1.5	
				5	SM		**Silty SAND**; (SM); brown; stiff; dry; 20% silt, 75% sand, 5% gravel; high estimated permeability.		
	N/A	SB-3 -6.0-6.5						7.5	
				10	SP		**Silty Gravely SAND**; (SP); brown; stiff; dry; 20% silt, 55% sand, 25% gravel; high estimated permeability.		
	N/A	SB-3 -11.0-11.5						12.5	◄ Portland Type I/II
				15			**Silty SAND**; (SM); brown gray; stiff; dry; 20% silt, 75% sand, 5% gravel; high estimated permeability.		
	N/A	SB-3 -16.0-16.5			SM				
				20			@ 20.0' -green; moist. ▽		
	N/A N/A	SB-3 -20.5-21.0							
		SB-3 -21.0-21.5							
	N/A N/A N/A	SB-3 -24.0-24.5		25			@ 25.0' -green gray; wet.	25.0	Bottom of Boring @ 25 ft
		SB-3 -24.5-25.0							

WELL LOG SONOMA (PID) G:\OA71C9~1\GINT240\OAK9750.GPJ DEFAULT.GDT 4/11/00

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

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME	SB-4
JOB/SITE NAME	OAK9750	DRILLING STARTED	25-Aug-99
LOCATION	9750 Golf Links Road, Oakland	DRILLING COMPLETED	25-Aug-99
PROJECT NUMBER	241-0735	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Hollow-stem auger, Rhino	TOP OF CASING ELEVATION	NA
BORING DIAMETER	5.25"	SCREENED INTERVAL	NA
LOGGED BY	M. Gaffney	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	A. Le May, RG	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHALT	0.5	
							FILL; (FILL); brown; stiff; dry; 60% sand, 40% gravel; high estimated permeability.	2.5	
							Silty SAND; (SM); brown; stiff; dry; 25% silt, 75% sand; medium estimated permeability.		
	N/A N/A	SB-4 -5.5-6.0		5					
	N/A N/A	SB-4 -10.5-11.0		10			@ 10.0' -gray green; moist; 25% silt, 70% sand, 5% gravel; medium estimated permeability.		Portland Type I/II
	N/A N/A	SB-4 -15.5-16.0		15	SM		@ 15.0' -dark brown with white spots; dry; 20% silt, 80% sand; medium estimated permeability.		
	N/A N/A	SB-4 -20.5-21.0		20			@ 20.0' -gray brown with black spots; 25% silt, 75% sand; medium estimated permeability.		
	N/A N/A	SB-4 -25.5-26.0		25				26.5	Bottom of Boring @ 25 ft

WELL LOG SONOMA (PID) G:\OA7\C9-1\GINT240\OAK9750.GPJ DEFAULT.GDT 4/11/00

Cambria Environmental Technology, Inc.
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Sonoma, CA 95476
Telephone: (707) 935-4850
Fax: (707) 935-6649

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	**BORING/WELL NAME**	SB-5
JOB/SITE NAME	OAK9750	**DRILLING STARTED**	25-Aug-99
LOCATION	9750 Golf Links Road, Oakland	**DRILLING COMPLETED**	25-Aug-99
PROJECT NUMBER	241-0735	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hollow-stem auger, Rhino	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	5.25"	**SCREENED INTERVAL**	NA
LOGGED BY	M. Gaffney	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	A. Le May, RG	**DEPTH TO WATER (Static)**	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							TOP SOIL	0.5	
							FILL; (FILL); brown; stiff; dry; 60% sand, 40% gravel; high estimated permeability.	2.5	
							Silty SAND; (SM); brown; stiff; moist; 5% clay, 20% silt, 75% sand; medium plasticity; medium estimated permeability.		
	N/A N/A	SB-5 -5.5-6.0		5	SM		@ 5.0' -organic matter present.		
	N/A N/A	SB-5 -10.5-11.0		10			@ 10.0' -brown orange with red spots; dry.		
	N/A N/A	SB-5 -16.0-16.5		15	SW		**Gravelly SAND**; (SW); light brown; dry; 10% silt, 75% sand, 15% gravel.	15.0	Portland Type I/II
								17.5	
	N/A N/A	SB-5 -20.5-21.0		20	SM		@ 20.0' -gray; moist; 10% silt, 90% sand; low plasticity; high estimated permeability.		
	N/A N/A	SB-5 -24.0-24.5		25			@ 25.0' -dark gray; dry; 10% silt, 90% sand.		
	N/A N/A	SB-5 -29.0-29.5		30				30.0	Bottom of Boring @ 30 ft

WELL LOG SONOMA (PID) G:\OA71C9~1\GINT240\OAK9750.GPJ DEFAULT.GDT 4/11/00

ATTACHMENT C

Standard Field Procedures for Soil Borings

CAMBRIA

STANDARD FIELD PROCEDURES FOR SOIL BORINGS

This document describes Cambria Environmental Technology's standard field methods for drilling and sampling soil borings. 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 Registered Geologist (RG) 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

Soil borings are typically drilled using hollow-stem augers or hydraulic push technologies. At least one and one half ft of the soil column is collected for every five ft of drilled depth. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments beyond the bottom of the borehole. The vertical location of each soil sample is determined by measuring the distance from the middle of the soil sample tube to the end of the drive rod used to advance the split barrel sampler. 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.

Drilling 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 either collected using a driven Hydropunch type sampler or 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

If the borings are not completed as wells, 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 licenced waste haulers and disposed in secure, licenced 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 licenced 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.

ATTACHMENT D

Drilling Permit

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-6548 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 9750 Golf Links Road OAKLAND, CA 94605

California Coordinates Source _____ ft. Accuracy ± ___ ft.
CCN _____ ft. CCE _____ ft.
APN 48A-4754-14-3

CLIENT
Name Equiva Enterprises LLC
Address P.O. Box 6295 Phone 925-813-3643
City CARSON CA Zip 90747

APPLICANT
Name Cambria Envr. - Matt Greffey Fax 510-420-9170
Address 1144 65th St. Phone 510-420-3336
City OAKLAND Zip 94608

TYPE OF PROJECT

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

PROPOSED WATER SUPPLY WELL USE

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

DRILLING METHOD:

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

DRILLER'S LICENSE NO. C57 #485165 Gregg Drilling

WELL PROJECTS
Drill Hole Diameter 5¼ in. Maximum
Casing Diameter _____ in. Depth 25 ft.
Surface Seal Depth _____ ft. Number _____

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

ESTIMATED STARTING DATE 8/24/99
ESTIMATED COMPLETION DATE 8/25/99

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

APPLICANT'S SIGNATURE _____ DATE 8/2/99

FOR OFFICE USE

PERMIT NUMBER 99WR480
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A) GENERAL
1. A permit application should be submitted so as to arrive at the ACFWA office five days prior to proposed starting date.
2. Submit to ACFWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
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
Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

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

F. WELL DESTRUCTION
See attached.

(G) SPECIAL CONDITIONS SEE ATTACHED INFORMATION

APPROVED _____ DATE 8-2-99

ATTACHMENT E

Equiva Waste Management Procedures

ISSUED DATE: 05/23/97
CANCELS ISSUE: 03/05/97
ISSUED BY: RLG

MATERIAL: MINIMUM SOIL ANALYSIS FOR UST SOIL WITH GASOLINE OR DIESEL CONTAMINATION

USE FOR ARIZONA , CALIFORNIA AND NEVADA WASTE ONLY!!!

NOTE: ANALYSES ARE BASED ON CHARACTERIZATION MINIMUM. YOU MUST BE SURE THAT THE FACILITY WILL TAKE THE FOLLOWING AS ACCEPTANCE. FURTHER ANALYSIS MAY BE REQUIRED FOR CHARACTERIZATION UPON REVIEW BY THE WASTE TEAM MEMBER OR TO MEET DISPOSAL SITE REQUIREMENTS. IF THE MATERIAL IS RETURNED TO CONSULTANT, COPIES OF ALL TRANSPORTATION DOCUMENTS MUST BE SENT TO THE WASTE DISPOSAL COORDINATOR FOR RECORDING WHEN PROJECT IS COMPLETE.

MINIMUM REQUIRED TESTING

Note: If material is to be sent to a BFI facility EPA METHOD 8010 must be run IN ADDITION to the following analysis prior to requesting profile approval:

TPH = TOTAL PETROLEUM HYDROCARBONS, DHS GC-FID MOD 8015
GASOLINE OR DIESEL AS REQUIRED.
BTXE = EPA 8020 + MTBE
CAM METALS = TTLC LEAD, STLC LEAD IF TTLC => 50 MG/KG AND/OR
ORGANIC LEAD IF TTLC => 13 MG/KG

AQUATIC BIOASSAY (FISH TOX) IS ONLY TO BE RUN ON SAMPLES WITH GREATER THAN 5000 PPM TPH. COMPOSITE A MAXIMUM OF 4 SAMPLES.

AQUATIC BIOASSAY (FISH TOX) = PART 800 OF "STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER (15TH EDITION)"

LABORATORY INSTRUCTIONS (MINIMUM GUIDELINES ONLY)

- 8015/8020 TO BE BILLED AS "COMBO" WITHOUT EXCEPTION
- TPH REQUIRED FOR ALL SAMPLES.
- ALL OTHER TESTS REQUIRED TO BE RUN ON COMPOSITE(S). MAXIMUM 4 SAMPLES PER COMPOSITE.
- STLC REQUIRED FOR METALS WITH TTLC VALUE 10 X STLC MAXIMUM.
- ORGANIC ANALYSIS REQUIRED FOR TTLC LEAD OF 13 MG/KG OR GREATER.
- LABORATORY IS TO SUPPLY QA/QC INFORMATION WITH ALL ANALYTICAL REPORTS.
- MAIL OR FAX ALL ANALYSIS TO PERSON REQUESTING ANALYSIS.

ATTACHMENT F

Soil Disposal Confirmation Letter

DISPOSAL CONFIRMATION

Consultant:	CAMBRIA ENVIRONMENTAL
Contact:	MATT GAFFNEY
Phone/Fax:	(510) 420-3336 (510) 420-9170
Client:	EQUIVA SERVICES - BRETT HOVLAND
Station #/Wic #:	WIC# N\A SAP 135683 IND 98995744
Site Address:	9750 GOLF LINKS RD.
City/State:	OAKLAND, CA
Estimated YD/Ton:	10 TONS
Actual YD/Ton:	1.19 TONS
Disposal Facility:	FORWARD LANDFILL
Disposal Date:	OCTOBER 2, 1999
Contact:	BRAD BONNER
Phone #:	(800) 204-4242
Hauler:	MANLEY & SONS TRUCKING, INC.
Contact:	TIM A. MANLEY
Phone #:	(916) 381-6864
Fax #:	(916) 381-1573

Date & Time Faxed

9467

ATTACHMENT G

Standard Operating Procedures for Creek Sampling

STANDARD FIELD PROCEDURES FOR STREAM SAMPLING

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

Objectives

Stream samples are collected and analyzed to characterize constituent distribution in water and to assess whether water contaminants pose a threat to human health or the environment.

Stream Sampling

A stream sample is collected by inserting a container under or down current of a discharge with the container opening facing upstream. Generally, simplified equipment and procedures can be used. In most cases, the sample container itself may be used to collect the sample. To ensure that the stream samples are representative of the flow in the channel, the following procedures are followed.

- Label sample containers before sampling event,
- Take a cooler with ice to the sampling point,
- Take the sample from the horizontal center and two-thirds of the depth of the channel when possible,
- Take the sample from a relatively straight section of the stream channel,
- Avoid stirring up bottom sediments in the channel,
- Hold the container so the opening faces downstream,
- Avoid touching the inside of the container to prevent contamination,
- Keep the sample free from uncharacteristic floating debris,
- Wash sampling equipment before, during, and after sampling activities with an EPA-approved detergent,
- If taking numerous samples, keep the samples separate and labeled clearly, and
- Use safety precautions.

Sample Storage, Handling and Transport

Samples are stored out of direct sunlight in coolers at or below 4° C on either crushed or dry ice, and transported under chain-of-custody to a state-certified analytic laboratory.