RO 486

Denis L. Brown

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December 14, 2005

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

Re: Subsurface Investigation Report
Former Shell Service Station
4255 MacArthur Blvd.
Oakland, California
SAP Code 135701
Incident No. 98995758
ACHCSA # 3769

Dear Mr. Wickham:

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

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

Sincerely,

Denis L. Brown
Sr. Environmental Engineer

CAMBRIA

December 14, 2005

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

Re: **Subsurface Investigation Report**
Former Shell-branded Service Station
4255 MacArthur Boulevard
Oakland, California
Incident # 98995758
Cambria Project #247-0524-007
ACEH Case #3769

Dear Mr. Wickham:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), Cambria Environmental Technology, Inc. (Cambria) prepared this report to document recent subsurface investigation activities at the referenced site. The purpose of the investigation was to resolve uncertainties about the subsurface lithology and vertical extent of hydrocarbon impacts to soil and groundwater. Cambria preformed a discrete-depth investigation with the intention of vertically profiling the site's lithology and impacted media. Cambria attempted to follow the scope of work outlined in the July 27, 2005 *Subsurface Investigation Work Plan* approved by the Alameda County Health Care Services (ACHCS) in a letter dated August 8, 2005. However, due to unexpected subsurface conditions, Cambria was unable to collect all of the lithologic information proposed in the scope of work, and no groundwater samples were collected due to insufficient available water.

SITE LOCATION AND DESCRIPTION

Site Location: The site is a former Shell service station located at the MacArthur Boulevard and High Street intersection in a mixed commercial and residential area of Oakland, California (Figures 1 and 2). An active Unocal service station and a former Chevron service station are located east of the site. A trailer park and adjacent California Department of Transportation (Caltrans) access to Interstate 580 are located immediately southwest of the site. Topography slopes toward the west, with a 5-foot (ft) elevation difference between grade at the site and the trailer park property, and an additional 5-ft elevation difference between grade at the trailer park property and the Caltrans property.

Cambria Environmental Technology, Inc.

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Soil Lithology: Soils encountered during drilling activities consisted primarily of dense silty sands and sandy silts with clay. A 1- to 2-foot-thick, non-water-bearing gravel layer was observed at or below 18 feet below grade (fbg) in most borings.

Groundwater Depth and Flow Direction: Quarterly groundwater monitoring has been conducted at the site since November 1993. The historical depth to groundwater on site has ranged from approximately 4 to 17 fbg, and currently (fourth quarter 2005) ranges from 7.64 to 14.76 fbg. Groundwater typically flows in a west-southwesterly direction.

PREVIOUS INVESTIGATIONS

June 1985 Subsurface Investigation: In June 1985, Emcon Associates of San Jose, California drilled three soil borings and installed one groundwater monitoring well adjacent to the underground storage tanks (USTs). Up to 15,800 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg) were detected in the shallow soil samples from inside the UST area. Investigation details are presented in Emcon's July 26, 1985 letter report. Cumulative soil sampling results are included as Table 1.

December 1985 UST Replacement: In December 1985, the USTs were replaced, and approximately 810 cubic yards of hydrocarbon-bearing soil were transported to a disposal facility. Up to 22,000 ppm total volatile hydrocarbons and 500 ppm benzene were detected in the soil samples from the excavation. The report detailing the UST replacement is not available.

November 1993 Subsurface Investigation: In November 1993, Weiss Associates (WA) of Emeryville, California drilled soil borings BH-A, BH-B and BH-C, which were converted into monitoring wells MW-1, MW-2 and MW-3, respectively. Up to 1,700 ppm TPHg and 3.3 ppm benzene were detected in soil boring BH-C (MW-3) between the 11-fbg and 16-fbg depths. Up to 66 ppm TPHg and 0.07 ppm benzene were detected in soil boring BH-B (MW-2) between the 9-fbg and 14-fbg depths. Weiss' March 15, 1994 *Subsurface Investigation* letter report presents investigation details.

November 1994 Subsurface Investigation: In November 1994, WA drilled on-site soil borings BH-D and BH-E, located on the northeastern end of the lot, and off-site boring BH-F (MW-4), located near the Highway 580 on-ramp. Up to 5,900 ppm TPHg and 23 ppm benzene were detected at 5 fbg in soil boring BH-E, located adjacent to the central eastern pump island. Trace hydrocarbon concentrations were detected in the capillary fringe soil samples collected from each boring. Weiss' January 26, 1995 *Subsurface Investigation* letter report presents investigation details.

November 1995 Dispenser and Piping Removal and Sampling: In November 1995, WA collected 15 soil samples during dispenser and piping replacement activities. Up to 7,800 ppm TPHg were detected in samples collected from beneath the former middle dispenser, and 2,800 ppm TPHg were detected in the sample collected from beneath the adjacent product piping. Up to 7,300 ppm TPHg were detected in the sample collected from beneath the northeast dispenser island. No benzene above 1 ppm was detected in any of the 15 samples. During the dispenser replacements, horizontal wells HW-1 through HW-4 were installed in the vadose zone about 5 ft below ground surface and adjacent to the former piping and dispensers to facilitate future removal of petroleum hydrocarbons from the impacted soil. Details of the investigation are presented in Weiss' April 1, 1996 *Dispenser Replacement Sampling* report.

August 1997 Soil Vapor Extraction (SVE) Test: In August 1997, Cambria performed short-term SVE tests using a VR Systems Model V3 internal combustion engine on horizontal vapor extraction wells HW-1 through HW-4 and on monitoring wells MW-2 and MW-3. Cambria measured vapor extraction flow rates, the vacuum applied to the wellheads, and the vacuum influence in nearby wells. Cambria calculated an effective radius of influence of 35 to 50 ft during testing of wells MW-3 and MW-2. The relatively high TPHg removal rates measured in horizontal wells HW-1 through HW-4 were likely temporary, and are not believed to be representative of site conditions due to extensive well screen in permeable fill material. The short-term testing results indicated that SVE achieved only low hydrocarbon removal rates in wells MW-2 and MW-3, which are more representative of native soil conditions. Cambria's February 23, 1998 *Soil Vapor Extraction Test Report* presents test details.

February 1998 Subsurface Investigation: In February 1998, Cambria drilled two off-site borings (SB-1 and SB-2) in the trailer park adjacent to the Shell site. No TPHg or benzene was detected in the soil samples collected from the two borings. The highest methyl-tert-butyl ether (MTBE) concentration detected in soil was 1.4 ppm detected in soil boring SB-2 at a depth of 7 fbg. Up to 7,700 parts per billion (ppb) TPHg, 210 ppb benzene, and 46,000 ppb MTBE were detected in the grab groundwater sample collected from soil boring SB-2. In sample analysis of soil physical parameters, total organic carbon was detected at 2,140 ppm and 7,210 ppm at a depth of 5.5 fbg in borings SB-1 and SB-2, respectively, and total porosity was measured as 35.2% and 37.4%, respectively. Specific permeability values were 181 millidarcies (md) for SB-1-5.5 and 71 md for SB-2-5.5, but the lab noted that due to fine fractures developed in the samples upon drying, the measured values were an order or more of magnitude too high. Permeability measurements confirmed the low permeability of the shallow soils beneath the site. Cumulative grab groundwater sampling results are included as Table 2. Details of the investigation are presented in Cambria's March 19, 1998 *Subsurface Investigation Report.*

2001 Off-Site Monitoring Well Installation: In November 2001, Cambria advanced one soil boring approximately 200 ft southwest of the site, on the Caltrans right-of-way adjacent to the I-580 on-ramp. One soil sample was collected at the approximate capillary fringe directly above the saturated zone and submitted to the laboratory for chemical analysis. No TPHg, benzene, toluene, ethylbenzene and xylenes (BTEX), or MTBE was detected in the soil sample collected during this investigation. The boring was converted to groundwater monitoring well MW-5. Details of the sampling and well installation are presented in Cambria's January 10, 2002 *Off-Site Monitoring Well Installation Report.*

2001 Sensitive Receptor Survey (SRS), Conduit Study and Site Conceptual Model (SCM): Cambria included an SRS, conduit study results, and an SCM in the *First Quarter 2001 Monitoring Report.* The SRS identified 25 monitoring wells, 4 cathodic protection wells, and 1 domestic well within ½ mile of the site. Given the conduit study results, Cambria concluded that nearby upgradient and cross-gradient sewer, storm drain, and water lines located between 8 to 13 fbg could serve as preferential pathways for the migration of petroleum hydrocarbons and MTBE. However, Cambria did not identify any conduits in the nearby downgradient direction.

2003 Tank Closure and Soil Excavation: Between January 27 and February 7, 2003, all surface features, USTs, fuel dispensers, and associated product piping were removed from the site as part of station closure and demolition. Cambria conducted soil and groundwater sampling, and supervised over-excavation to remove hydrocarbon-impacted soils to the practical extents. Approximately 875 cubic yards of soil were removed from the site during the tank-pull and over-excavation activities. Approximately 4,600 gallons of groundwater were pumped to dewater the UST excavation prior to removing the tanks. The highest chemical concentrations in soil in the former UST area were 380 ppm TPHg, 1.7 ppm benzene and 1.2 ppm MTBE, detected in the southeast corner of the tank pit in sample TP-5. The grab groundwater sample from the former tank pit area (TP-1-Water) contained 11,000 ppb TPHg, 410 ppb benzene and 5,200 ppb MTBE. The highest hydrocarbon concentrations remaining in soil in any of the former dispenser areas were 980 ppm TPHg and 1.2 ppm benzene, detected in sample P-2-8 at 8 fbg. The highest detected MTBE concentration remaining in soil in any of the former dispenser areas was 0.9 ppm, detected in sample D-5-S10. Following over excavation, approximately 720 pounds of oxygen-releasing compound were mixed in the excavation base before backfilling with 1.5-inch drain rock to 4 fbg. The remainder of the tank pit and the over-excavation was backfilled and compacted with Class II road base material. In the April 28, 2003 *Tank Closure and Soil Excavation Report,* Cambria recommended installing one additional groundwater monitoring well in the southern corner of the former tank pit. Cambria submitted a September 22, 2003, *Subsurface Investigation Work Plan* detailing the proposed monitoring well installation activities. In our May 17, 2004 *Subsurface Investigation Work Plan Addendum,* Cambria modified the

proposed scope of work to include the separate-phase hydrocarbons (SPH) investigation (detailed below) prior to determining new monitoring well locations.

Details of the tank, dispenser, and piping removal, excavations, and sampling are included in Cambria's April 28, 2003 *Tank Closure and Soil Excavation Report.*

2005 Cone Penetration Testing (CPT) Investigation: In June 2005, Cambria advanced 11 CPT soil borings and 2 direct-push Geoprobe® soil borings on the site and on the adjacent trailer park. The purpose of this investigation was to determine the source and extent of the SPH plume beneath the site. At each CPT location, an Ultraviolet Induced Fluorescence Information module was used to identify hydrocarbons in the subsurface. No evidence of an SPH plume was found during this investigation. However, two zones of hydrocarbon contamination were identified in most CPT borings completed during the investigation. No soil or groundwater samples were collected for analysis. Cambria's June 6, 2005 *Subsurface Investigation Report* presents investigation details.

Remediation and Groundwater Monitoring

Groundwater Extraction (GWE): Monthly GWE using a vacuum truck was conducted intermittently at the site from April 1999 until September 2003. Mobile GWE vacuum operations consist of lowering dedicated stingers into selected monitoring wells and extracting fluids using a vacuum truck. The volume of extracted fluid is recorded and used to calculate the quantity of aqueous-phase hydrocarbon removed from the subsurface. To date, an estimated 15.1 pounds of liquid-phase hydrocarbons and 26.8 pounds of liquid-phase MTBE have been removed from the site. GWE was discontinued at the site after September 2003 due to low pumping volumes.

Dual Phase Vapor Extraction (DVE): DVE is the process of applying high vacuum through an airtight well seal to simultaneously extract soil vapors from the vadose zone and enhance GWE from the saturated zone. For mobile DVE, a vacuum truck is used to create the vacuum and to contain extracted fluids. Mobile DVE augmented hydrocarbon removal efforts from November 2000 to June 2001, from April 2002 through September 2003, and from July 2003 through September 2003. DVE was discontinued after September 2003 due to decreased mass removal. To date, DVE has removed an estimated 26.4 pounds of vapor-phase hydrocarbons.

SPH: SPH was observed periodically in wells MW-2 and MW-3 between 1994 and 1997. During that time, an estimated total of 21.8 pounds of SPH was removed from monitoring wells by manual bailing. SPH was again observed in well MW-3 in the third quarter of 2002. During the fourth quarter of 2003 and the first and third quarters of 2004, SPH was observed in wells MW-2 and MW-3. During the fourth quarter 2005 sampling event, SPH was observed in well MW-2.

Potential Off-Site Source: MTBE concentrations in upgradient COP wells MW-2 and MW-7 and in Shell's well MW-2 are depicted graphically in Figure 3 of Cambria's *First Quarter 2005 Monitoring Report* dated April 11, 2005.

An elevated MTBE concentration was observed in Shell well MW-2 in the second quarter of 2000; however, the MTBE concentration declined steadily until the second quarter of 2002. The rebound in MTBE concentrations in Shell well MW-2 during the first three quarters of 2003 might be attributed to the observed upgradient COP MTBE plume. Increasing MTBE concentrations were detected in COP well MW-2 in the third quarter of 2000. Elevated concentrations were subsequently detected downgradient in COP well MW-7 in the fourth quarter of 2001. Cambria believes, from the concentrations observed in COP wells MW-2 and MW-7, that the COP plume has migrated in the direction of the former Shell station and affected Shell well MW-2 beginning in the third quarter of 2002. In response to prior inquiry, COP has informed Shell that they intend to conduct periodic GWE from some of their monitoring wells. Concentrations in all three wells have been either relatively stable or exhibited a general decrease since first quarter 2003.

INVESTIGATION SUMMARY

Cambria directed the advancement of four soil borings (SB-5, SB-6, SB-7, and SB-8) to assess current subsurface conditions at the site. Cambria's standard field procedures for soil borings are presented in Attachment A.

Following hand-auger utility clearances to 5 fbg, borings SB-5, SB-6, SB-7, and SB-8 were advanced by a direct-push drill rig using a 'dual-tube' sampling system. Dual-tube sampling systems use two sets of probe rods to collect continuous soil cores. One set of rods is driven into the ground as an outer casing. These rods receive the driving force from the hammer and provide a sealed hole from which soil samples may be recovered without the threat of cross contamination. Samples are collected using samplers lined with polyethylene and driven into undisturbed sediments at the bottom of the borehole.

All borings were intended to be continuously logged for lithology to a maximum of 35 fbg, with soil samples collected every 5 ft until first encountered water. At SB-7, expanding silty clay was encountered at shallow depths which caused the polyethylene sample liners to fracture, disturbing soil samples and compromising their integrity. This dense clay made boring advancement and sampling using the dual-tube boring system impractical, and a single-wall macro-core sampling system was implemented for the remainder of the boring. Dual-tube sampling was again implemented in the remaining three borings, though the presence of the dense clay limited the

total explored depths of each boring. No zones of significant saturation were observed in borings SB-5, SB-6, or SB-7. Soil samples were collected for chemical analysis at approximate 5-foot intervals from 5 fbg to approximately 23 fbg at SB-5, to 27 fbg at SB-6, to 40 fbg at SB-7, and to 20 fbg at SB-8.

A second boring was advanced adjacent to each initial boring in attempt to collect discrete-depth grab groundwater samples. Due to the difficulty encountered in advancing the dual-tube system, a hydropunch water sampling system was utilized. The hydropunch sampler is advanced from the surface to the desired sampling depth using hollow-push rods with the filter tip closed. Once the desired sample depth is reached, the push rods are retracted, exposing the encased filter screen, and samples are collected through poly tubing. Though an attempt at sample collection was made in each boring, including depths at which groundwater was encountered during previous investigations and those intervals with the greatest observed moisture content, insufficient quantities of groundwater were encountered and no groundwater samples were collected. At each location, a minimum of 1 hour was allotted for water to infiltrate the screen. Two independent screen intervals were attempted in borings SB-5 and SB-7, but neither produced sufficient amounts of groundwater. Screened intervals in borings SB-5 and SB-7 were exposed for approximately 9 hours each, and SB-8 was exposed for approximately 3 hours. Screened intervals can be seen on the soil boring logs included as Attachment B.

Personnel Present	Bill DeBoer, Staff Geologist, Cambria.
Permit:	Alameda County Public Works Agency Permit # W2005-0863 (Attachment C).
Drilling Company:	Vironex, San Leandro, California (C-57 License # 705927).
Drilling Dates:	October 26 and 27, 2005.
Drilling Methods:	Hand-auger, dual-tube direct-push, and hydropunch.
Number of Borings:	Four borings (SB-5, SB-6, SB-7, and SB-8). Boring details are provided in Table 3.
Boring Depths:	Maximum depths for SB-5, SB-6, SB-7, and SB-8 are 23 fbg, 27 fbg, 40 fbg, 34 fbg, respectively.
Groundwater Depths:	Groundwater was observed in SB-8 at an initial depth of 10 fbg, though at an insufficient volume for sample collection. The 12- to 14-fbg interval in SB-8 was the only interval described as wet in any boring advanced during this investigation.

Soil Sampling: Soil samples were collected continuously for soil description, and possible chemical analysis. Soil samples were screened for the presence of organic vapors using a photo-ionization detector.

Groundwater Sampling: Insufficient quantities of groundwater for sample collection were encountered during these field activities.

Soil Classification: Soils encountered during drilling activities consisted primarily of dense, silty sands and sandy silts with clay. A 1- to 2-foot-thick, non-water-bearing gravel interval was observed at or below 18 fbg in borings SB-5, SB-6, and SB-8. Due to encountered refusal, lithologic information for SB-6 was not collected beneath 23 fbg for SB-5 and 27 fbg. Boring logs are presented as Attachment B.

Backfill Method: All borings were backfilled with neat cement grout to match the existing grade.

Chemical Analyses: State-certified Severn Trent Laboratories of Pleasanton, California analyzed all soil and groundwater samples for TPHg, BTEX, MTBE, di-isopropyl ether (DIPE), ethyl tert butyl ether (ETBE), tert-amyl methyl ether (TAME), and tert-butyl alcohol (TBA) by EPA Method 8260B. Analytical results are summarized in Table 1, and the laboratory reports are presented as Attachment D.

Soil Disposal: Investigation activities generated approximately 2 cubic yards of soil. Stockpiled soil was pre-profiled with stockpile sample data collected during the investigations in June, 2005. Manley & Sons Trucking, Inc. transported the stockpile from the site to Forward Landfill in Manteca, California for disposal on November 3, 2005. The soil disposal confirmation is included as Attachment E.

INVESTIGATION RESULTS

Lithology: Soil lithology observed during this investigation was relatively consistent with that of previous investigations, and consisted primarily of silts and sands, clay, and some gravel.

Soil Analytical Results: TPHg was detected in nine soil samples, with concentrations ranging from 1.2 ppm in sample SB-7-30 to 2,600 ppm in sample SB-7-10. Benzene was detected in seven soil samples from SB-7, with a maximum concentration of 13 ppm at 10 fbg. Toluene was detected in six soil samples from SB-7, with a maximum concentration of 17 ppm at 10 fbg. Ethylbenzene was detected in nine soil samples, with concentrations ranging from 0.0078 ppm in sample SB-7-40 to 45 ppm in sample SB-7-10. Xylenes were detected in 11 soil samples with concentrations ranging from 0.011 ppm in sample SB-6-5 to 270 ppm in sample SB-7-10. MTBE was detected in 12 soil samples, with concentrations ranging from 0.0073 ppm in sample SB-6-25 to 1.2 ppm in SB-7-5. TBA was detected in nine soil samples, with concentrations ranging from 0.020 ppm in sample SB-8-20 to 1.6 ppm in sample SB-6-15. Concentrations of DIPE, ETBE, and TAME were not detected above laboratory reporting limits in any soil sample.

Table 1 summarizes the cumulative analytical soil data. The laboratory analytical reports are included as Attachment D.

CONCLUSIONS

The observed soil lithology was relatively consistent with that of previous investigations.

Despite targeting depths at which groundwater had been encountered during previous investigations and intervals in which moisture was observed during lithologic logging and soil sampling, and allowing up to 9 hours before sampling was attempted, insufficient water was encountered for collecting groundwater samples during this investigation. Based on the lithology observed during advancement of the borings, it is likely that this is attributable to the low and seasonally variable moisture content and the low permeability of the site's soils. Monitoring wells at the site are screened from between 5 fbg and 11 fbg to between 19.5 fbg and 30.5 fbg and likely cross more than one water bearing unit. During this investigation, none of these units contained sufficient groundwater for sample collection when isolated.

During this investigation, hydrocarbon-impacted soil was encountered primarily between 5 and 15 fbg. This latter depth is consistent with that at which groundwater was first encountered during well installations, and the soil impacts observed at these depths are likely indicative of impacted groundwater and the 'smear zone' resulting from its seasonal rise and fall. At SB-7, where samples were collected to 40 fbg, impacted soil was encountered to the total depth of the boring, with concentrations generally decreasing with depth. At this location, dense sandy clay was encountered from approximately 20 fbg, to 27 fbg. Soil impacts at the top of this unit were minimal, with concentrations increasing near its base. This interval is likely acting as a localized barrier to groundwater flow, dividing the water column. These deeper impacts, then, are also

likely indicative of impacted groundwater. A similar, thinner unit was encountered between approximately 11 and 14 fbg at SB-5, but was not encountered in SB-6 or SB-8.

Impacted soil was not encountered in boring SB-8. However, during the fourth quarter 2005 groundwater monitoring event, wells MW-4 and MW-5 contained measurable MTBE and TBA concentrations. These wells are downgradient of SB-8, indicating that impacted groundwater has migrated in this direction, possibly at greater depth than that to which SB-8 was advanced.

RECOMMENDATIONS

The purpose of the investigation was to resolve uncertainties about the subsurface lithology and vertical extent of hydrocarbon impacts to soil and groundwater. Difficulties with soil sampler refusal during boring advancement limited the amount of lithologic information that could be collected, and insufficient groundwater was encountered for sampling. However, the results of soil sampling and analysis of the distribution of impact indicate that additional on-site monitoring wells should be installed to complete the site's monitoring network. Therefore, Cambria recommends the following:

- Installing two groundwater monitoring wells at the locations of borings SB-5 and SB-6 to monitor groundwater immediately downgradient of the former USTs and northern dispenser islands, the suspected sources of hydrocarbon impacts to the site's groundwater.
- Installing one groundwater monitoring well at the location of boring SB-7 to monitor the hydrocarbon plume from the upgradient ConocoPhillips service station.
- Installing one off-site groundwater monitoring well at the location of boring SB-8 to monitor groundwater downgradient of the site.

A work plan proposing the additional monitoring wells will be submitted under separate cover. Proposed well installation locations are included on Figure 2.

CLOSING

We appreciate your continued assistance with this project. Please call David Gibbs at (510) 420-3363 if you have any questions or comments regarding the contents of this report.

Sincerely,
Cambria Environmental Technology, Inc.

David M. Gibbs, P.G.
Project Geologist

Matthew W. Derby, P.E.
Senior Project Engineer

Figures:
1 - Vicinity/Area Well Survey Map
2 - Site Plan

Tables:
1 - Cumulative Soil Analytical Data
2 - Cumulative Grab Groundwater Analytical Results
3 - Boring Data

Attachments:
A - Standard Field Procedures for Soil Borings
B - Soil Boring Logs
C - Drilling Permit
D - Laboratory Analytical Reports
E - Disposal Confirmation

cc: Denis Brown, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810
Roland C. Malone, Jr., PO Box 2744, Castro Valley, CA 94546
Kenneth Williams, Mac Arthur/High Trailer Park, c/o Bookkeeping, 332 Peyton Dr., Hayward, CA 94544
Thomas H. Kosel, Conoco-Phillips Company, 76 Broadway, Sacramento, CA 95818

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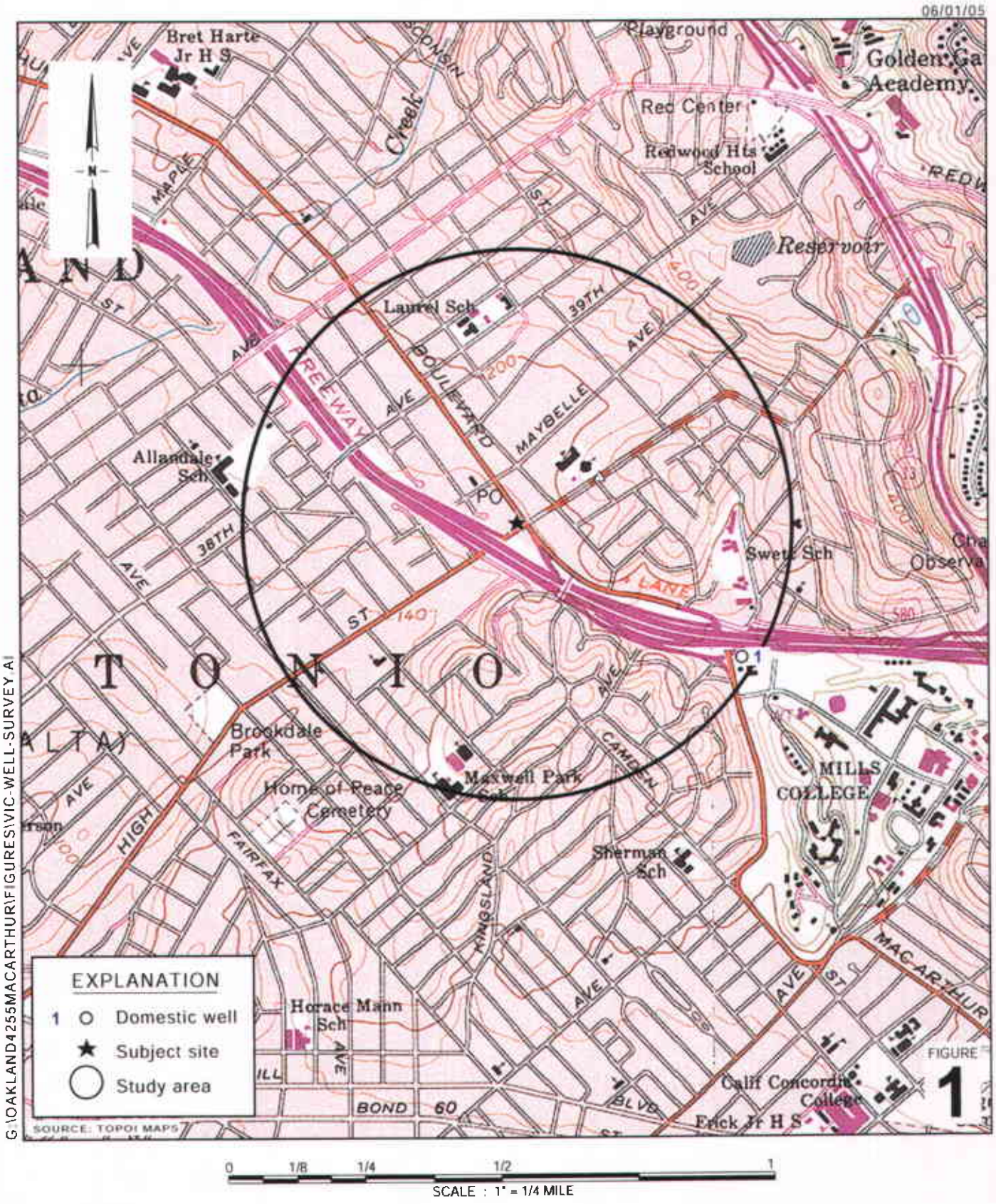

Former Shell Service Station
4255 MacArthur Boulevard
Oakland, California
Incident No.98995758

CAMBRIA

Vicinity/Area Well Survey Map

(1/2 Mile Radius)

12/12/05

Site Plan

HIGHWAY 580

580 on-ramp

steep embankment

foot clinic

trailer park

church structures

parking

pharmacy

MW-5

MW-6

MW-1

MW-2

MW-3

MW-4

MW-7

MW-3 (BH-C)

MW-2 (BH-B)

MW-4 (BH-F)

MW-1 (BH-A)

SB-1

SB-2

SB-3

SB-4

SB-5

SB-6

SB-7

SB-8

CPT-1

CPT-2

CPT-3

CPT-4

CPT-5

CPT-6

CPT-7

CPT-8

CPT-9

CPT-10

CPT-11

former storage building

approximate excavation boundary

former dispenser island (removed 1/03)

former USTs

former dispenser island (removed 11/93)

Tosco Station #1156
4276 MacArthur

Former Shell Station
4255 MacArthur

USTs

dispenser

driveway

HIGH STREET

MACARTHUR BOULEVARD

former Chevron service station

residential/ offices

SS

SD

W

EXPLANATION

- Proposed monitoring well location
- SB-5 — Soil boring location (Cambria, 10/26-27/05)
- CPT-1 — CPT location (Cambria, 4/5-6/05)
- SB-3 — Soil boring location (Cambria, 4/5-6/05)
- MW-1 — Shell monitoring well location
- TB-1 — Destroyed Shell tank backfill well location
- MW-1 — Tosco monitoring well location
- D-1 — Dispenser soil sampling location (01/03)
- P-1 — Product piping soil sampling location (01/03)
- TP-1 — Tank pit soil sampling location (01/03)
- Excavation area
- SB-1 — Cambria soil boring location (12/98)
- BH-D — Weiss Associates soil boring location (11/93, 11/94)
- S-A — EMCON soil boring location (6/85)
- Water line (W)
- Storm drain line (SD)
- Sanitary sewer line (SS)

N

0 20 40 80

SCALE : 1" = 40'

Groundwater Gradient Direction
(07/99 - 10/05)

CAMBRIA

Former Shell Service Station
4255 MacArthur Boulevard
Oakland, California
Incident No.98995758

FIGURE
2

G:\OAKLAND 4255 MACARTHUR\FIGURES\SITE PLAN 12-05.AI

Table 1. Cumulative Soil Analytical Data - Shell-branded Service Station, 4255 MacArthur Boulevard, Oakland, California - Incident #98995758

Boring/Well ID	Date	Depth (fbg)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	TBA	DIPE	ETBE	TAME
			←				(ppm)						→
1985 Subsurface Investigation													
S-1	6/10/1985	13.5-15	ND*	---	---	---	---	---	---	---	---	---	---
	6/10/1985	18.5-20	ND*	---	---	---	---	---	---	---	---	---	---
S-A	6/10/1985	4-5.5	**15,800***	---	---	---	---	---	---	---	---	---	---
	6/10/1985	8.5-10	**2***	---	---	---	---	---	---	---	---	---	---
	6/10/1985	10-11.5	ND*	---	---	---	---	---	---	---	---	---	---
S-B	6/10/1985	13.5-15	**2***	---	---	---	---	---	---	---	---	---	---
1993 Subsurface Investigation													
BH-A (MW-1)	11/3/1993	6.0	<1	<0.0025	<0.0025	<0.0025	<0.0025	---	---	---	---	---	---
	11/3/1993	10.5	**24**	**0.4**	0.028	0.12	1	---	---	---	---	---	---
	11/3/1993	14.0	**26**	**0.028**	0.02	0.062	0	---	---	---	---	---	---
	11/3/1993	18.0	<1	<0.0025	<0.0025	<0.0025	<0.0025	---	---	---	---	---	---
	11/3/1993	22.0	<1	**0.0063**	0.0094	0.0097	0.057	---	---	---	---	---	---
BH-B (MW-2)	11/3/1993	6.0	<1	<0.0025	<0.0025	<0.0025	<0.0025	---	---	---	---	---	---
	11/3/1993	9.0	**7.6**	**0.069**	<0.0025	0.044	0.11	---	---	---	---	---	---
	11/3/1993	14.0	**66**	**0.07**	0.44	0.53	2.6	---	---	---	---	---	---
	11/3/1993	18.5	<1	**0.032**	0.012	0.0042	0.02	---	---	---	---	---	---
	11/3/1993	24.0	<1	**0.021**	0.023	0.0037	0.021	---	---	---	---	---	---
BH-C (MW-3)	11/4/1993	6.5	<1	<0.0025	<0.0025	<0.0025	<0.0025	---	---	---	---	---	---
	11/4/1993	11.3	**1,700**	**1.1**	2.5	33	44	---	---	---	---	---	---
	11/4/1993	16.0	**610**	**3.3**	5.7	6.9	33	---	---	---	---	---	---
	11/4/1993	22.5	<1	<0.0025	<0.0025	<0.0025	<0.0025	---	---	---	---	---	---
SB-1	2/12/1994	5.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.10**	---	---	---	---
	2/12/1994	7.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.10**	---	---	---	---
SB-2	2/12/1994	5.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.10	<0.10**	---	---	---	---
	2/12/1994	7.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	**1.4**	**0.88****	---	---	---	---
1994 Subsurface Investigation													
BH-D	11/3/1994	5.0	<1	<0.0025	<0.0025	<0.0025	<0.0025	---	---	---	---	---	---
	11/3/1994	10.0	<1	**0.13**	<0.0025	0.011	0.01	---	---	---	---	---	---

Table 1. Cumulative Soil Analytical Data - Shell-branded Service Station, 4255 MacArthur Boulevard, Oakland, California - Incident #98995758

Boring/Well ID	Date	Depth (fbg)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	TBA	DIPE	ETBE	TAME
			←				(ppm)						→
	11/3/1994	15.0	<1	<0.0025	<0.0025	<0.0025	<0.0025	---	---	---	---	---	---
	11/3/1994	20.0	<1	<0.0025	<0.0025	<0.0025	0.015	---	---	---	---	---	---
BH-E	11/3/1994	5.0	**5,900**	**23**	160	120	430	---	---	---	---	---	---
	11/3/1994	10.0	<1	**0.031**	<0.0025	<0.0025	<0.0025	---	---	---	---	---	---
	11/3/1994	15.0	<1	**0.0053**	0.0033	<0.0025	0.007	---	---	---	---	---	---
	11/3/1994	20.0	<1	<0.0025	0.0077	<0.0025	0.015	---	---	---	---	---	---
BH-F (MW-4)	11/3/1994	5.0	<1	<0.0025	<0.0025	<0.0025	<0.0025	---	---	---	---	---	---
	11/3/1994	10.0	**13**	**0.029**	0.14	0.17	0.54	---	---	---	---	---	---
	11/3/1994	15.0	<1	**0.044**	0.0033	0.017	0.032	---	---	---	---	---	---
	11/3/1994	20.0	<1	<0.0025	<0.0025	<0.0025	<0.0025	---	---	---	---	---	---
1995 Dispenser and Piping Removal and Sampling													
S-1	11/17/1995	3.0	**3,200**	<5.0	27	39	250	---	---	---	---	---	---
S-2	11/17/1995	2.0	**7,800**	<15	51	71	540	---	---	---	---	---	---
S-3	11/17/1995	2.0	**7,300**	<12	14	42	500	---	---	---	---	---	---
S-4	11/17/1995	2.5	**1.5**	**0.052**	<0.005	0.021	0.0069	---	---	---	---	---	---
S-5	11/17/1995	3.0	**1.1**	<0.005	<0.005	<0.005	0.013	---	---	---	---	---	---
S-6	11/17/1995	2.5	**1.1**	**0.19**	<0.005	0.046	0.020	---	---	---	---	---	---
S-7	11/17/1995	3.0	**10**	**0.12**	0.030	0.24	0.98	---	---	---	---	---	---
S-8	11/17/1995	3.0	**2,800**	<5.0	5.1	25	140	---	---	---	---	---	---
S-9	11/17/1995	3.5	**6.5**	<0.005	<0.005	<0.005	0.021	---	---	---	---	---	---
S-10	11/17/1995	3.5	**44**	<0.05	<0.05	0.051	0.22	---	---	---	---	---	---
S-11	11/17/1995	3.5	**2.6**	**0.026**	<0.005	0.011	0.014	---	---	---	---	---	---
S-12	11/17/1995	4.0	**39**	**0.26**	<0.05	0.42	1.7	---	---	---	---	---	---
S-13	11/17/1995	4.0	**12**	**0.85**	0.46	0.31	1.5	---	---	---	---	---	---
S-14	11/17/1995	4.0	**300**	<0.5	<0.5	3.8	10	---	---	---	---	---	---
S-15	11/17/1995	5.0	**210**	**0.28**	<0.25	1.9	6.4	---	---	---	---	---	---
1998 Subsurface Investigation													
SB-1 - 5.0	2/13/1998	5.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.10	---	---	---	---
SB-1 - 7.0	2/13/1998	7.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.10	---	---	---	---
SB-2 - 5.0	2/13/1998	5.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	<0.10	---	---	---	---

Table 1. Cumulative Soil Analytical Data - Shell-branded Service Station, 4255 MacArthur Boulevard, Oakland, California - Incident #98995758

Boring/Well ID	Date	Depth (fbg)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	TBA	DIPE	ETBE	TAME
			← (ppm) →										
SB-2 - 7.0	2/13/1998	7.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	1.4	0.88	---	---	---	---
2001 Off-Site Monitoring Well Installation													
MW-5	11/12/2001	5.5	<1.0	<0.005	<0.005	<0.005	<0.005	---	<0.5	---	---	---	---
2003 Tank Closure and Soil Excavation													
TP-1	1/27/2003	10.5	91	<0.5	0.31	0.074	1.3	---	5.9	---	---	---	---
TP-2	1/27/2003	10.0	2.0	<0.5	<0.005	<0.005	<0.005	---	<0.005	---	---	---	---
TP-3	1/27/2003	11.0	<1.0	<0.5	0.048	<0.005	0.010	---	0.0089	---	---	---	---
TP-4	1/27/2003	10.0	1.6	<0.5	<0.005	<0.005	<0.005	---	0.0086	---	---	---	---
TP-5	1/27/2003	10.0	380	1.2	1.7	0.45	3.7	---	15	---	---	---	---
TP-6	1/27/2003	10.0	2.1	1.2	<0.005	<0.005	<0.005	---	<0.005	---	---	---	---
D-1	1/30/2003	3.0	260	0.64	<0.005	3.9	5.0	---	1.2	---	---	---	---
D-2	1/30/2003	4.0	<1.0	<0.5	0.0080	<0.005	0.0052	---	0.0081	---	---	---	---
D-3	1/30/2003	3.0	130	<0.5	<0.025	0.030	1.2	---	8.8	---	---	---	---
D-4	1/30/2003	3.0	51	<0.5	0.11	<0.025	0.59	---	0.12	---	---	---	---
P-1	1/30/2003	3.0	130	<0.5	0.058	<0.025	1.5	---	1.4	---	---	---	---
P-2	1/30/2003	3.0	420	<0.5	1.5	0.36	8.6	---	21	---	---	---	---
P-3	1/30/2003	3.0	<1.0	<0.5	0.0079	<0.005	0.0084	---	0.0050	---	---	---	---
D-1-6.5	1/31/2003	6.5	87	<0.5	0.11	<0.025	0.58	---	0.51	---	---	---	---
D-2-5.5	1/31/2003	5.5	3.7	0.6	0.22	<0.005	0.064	---	0.073	---	---	---	---
D-3-8	1/31/2003	8.0	53	<0.5	0.27	<0.025	0.13	---	0.38	---	---	---	---
D-4-8	1/31/2003	8.0	1,100	<0.5	2.2	<0.050	10	---	9.9	---	---	---	---
D-5-6.0	1/31/2003	6.0	2,200	<0.5	2.0	6.5	28	---	110	---	---	---	---
P-1-5.5	1/31/2003	5.5	<1.0	<0.5	<0.005	<0.005	<0.005	---	<0.005	---	---	---	---
P-2-8	1/31/2003	8.0	910	<0.5	1.2	<0.050	16	---	32	---	---	---	---
P-3-8	1/31/2003	8.0	420	<0.5	0.46	<0.050	5.2	---	13	---	---	---	---
D-4-12	2/4/2003	12.0	2.9	<0.5	0.19	<0.005	0.036	---	0.17	---	---	---	---
D-4-N6	2/4/2003	6.0	5.5	<0.5	0.024	0.10	0.025	---	0.11	---	---	---	---
D-5-14	2/4/2003	14.0	<1.0	<0.5	<0.005	<0.005	<0.005	---	<0.005	---	---	---	---
D-5-S10	2/4/2003	10.0	<1.0	0.9	<0.005	<0.005	<0.005	---	<0.005	---	---	---	---
D-5-W10	2/4/2003	10.0	160	<0.5	0.40	<0.025	0.035	---	<0.050	---	---	---	---

Table 1. Cumulative Soil Analytical Data - Shell-branded Service Station, 4255 MacArthur Boulevard, Oakland, California - Incident #98995758

Boring/Well ID	Date	Depth (fbg)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	TBA	DIPE	ETBE	TAME
			← (ppm) →										
D-5-E10	2/4/2003	10.0	**35**	<0.5	**0.035**	<0.005	**0.051**	---	**0.017**	---	---	---	---
P-2-12	2/4/2003	12.0	<1.0	<0.5	<0.005	<0.005	<0.005	---	<0.005	---	---	---	---
P-2-N6	2/4/2003	6.0	**42**	<0.5	**0.12**	**0.063**	**0.45**	---	**3.6**	---	---	---	---
E-6	2/4/2003	6.0	**1.9**	<0.5	**0.030**	**0.076**	**0.069**	---	**0.33**	---	---	---	---
E-12	2/4/2003	12.0	**21**	<0.5	<0.005	<0.005	**0.062**	---	**0.42**	---	---	---	---
2005 Subsurface Investigation													
SB-5	10/28/05	5	**19**	<0.023	<0.023	**0.11**	**0.030**	---	**0.064**	**0.083**	<0.046	<0.023	<0.023
	10/28/05	10	**58**	<0.55	<0.55	<0.55	<0.55	---	<0.55	<2.8	<1.1	<0.55	<0.55
	10/28/05	15	**220**	<0.50	<0.50	**1.9**	**2.1**	---	<0.50	<2.5	<1.0	<0.50	<0.50
	10/28/05	20	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.035**	<0.010	<0.010	<0.0050	<0.0050
SB-6	10/28/05	5	<1.0	<0.0050	<0.0050	<0.0050	**0.011**	---	<0.0050	<0.010	<0.010	<0.0050	<0.0050
	10/28/05	10.5	**160**	<0.50	<0.50	<0.50	<0.50	---	<0.50	<2.5	<1.0	<0.50	<0.50
	10/28/05	15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.067**	**1.6**	<0.010	<0.0050	<0.0050
	10/28/05	20	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.19**	**0.19**	<0.010	<0.0050	<0.0050
	10/28/05	25	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.0073**	<0.010	<0.010	<0.0050	<0.0050
SB-7	10/28/05	5	**220**	**0.59**	<0.50	**2.9**	**10**	---	**1.2**	<2.5	<1.0	<0.50	<0.50
	10/28/05	10	**2,600**	**13**	**17**	**45**	**270**	---	**0.95**	<2.5	<1.0	<0.50	<0.50
	10/28/05	15	**260**	**1.4**	**3.7**	**2.6**	**13**	---	<0.50	<2.5	<1.0	<0.50	<0.50
	10/28/05	20.5	<4.6	<0.023	<0.023	<0.023	**0.069**	---	**0.097**	**0.12**	<0.046	<0.023	<0.023
	10/28/05	25	**9.0**	**0.087**	**0.087**	**0.14**	**0.82**	---	**0.27**	**0.088**	<0.010	<0.0050	<0.0050
	10/28/05	30	**1.2**	**0.023**	**0.038**	**0.031**	**0.15**	---	**0.077**	**0.030**	<0.010	<0.0050	<0.0050
	10/28/05	35	<1.0	**0.031**	**0.028**	**0.020**	**0.089**	---	**0.10**	**0.024**	<0.010	<0.0050	<0.0050
	10/28/05	40	<1.0	**0.017**	**0.015**	**0.0078**	**0.033**	---	**0.019**	<0.010	<0.010	<0.0050	<0.0050
SB-8	10/28/05	5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.010	<0.010	<0.0050	<0.0050
	10/28/05	10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.010	<0.010	<0.0050	<0.0050
	10/28/05	15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	**0.081**	<0.010	<0.0050	<0.0050
	10/28/05	20	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.014**	**0.020**	<0.010	<0.0050	<0.0050

Table 1. Cumulative Soil Analytical Data - Shell-branded Service Station, 4255 MacArthur Boulevard, Oakland, California - Incident #98995758

Boring/Well ID	Date	Depth (fbg)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	TBA	DIPE	ETBE	TAME
			← (ppm) →										

Abbreviations and Notes:

ppm = parts per million (milligrams per kilogram).

TPHg = Total Petroleum Hydrocarbons as gasoline, analyzed by EPA Method 8015 except MW-5-5.5 analyzed by 8260B.

Benzene, toluene, ethylbenzene, and xylene analyzed by EPA Method 8020 except MW-5-5.5 analyzed by 8260B.

MTBE (8020) = Methyl tertiary butyl ether, analyzed by EPA Method 8020.

MTBE (8260) = Methyl tertiary butyl ether, analyzed by EPA Method 8260B.

--- = not analyzed for this constituent.

<n = below detection limit of n ppm.

*Sample analysis method unknown.

**Results reported after sample hold time had expired.

Referenced documents:

Cambria, Offsite Monitoring Well Installation Report, 1/02 (MW-5)

Cambria, Subsurface Investigation, 3/19/98 (S-1, S-2)

Weiss, Subsurface Investigation, 1/26/95 (BH-D through BH-F)

Weiss, Subsurface Investigation, 3/15/94 (BH-A through BH-C)

Weiss, Dispenser Replacement Sampling, 4/1/96 (S-1 through S-15)

Emcon, Shell Service Station, 7/26/85 (S-A, S-B, and S-1)

Table 2. Cumulative Grab Groundwater Analytical Results - Shell-branded Service Station, 611 East Third Avenue, San Mateo, California. Incident #97425599

Sample ID	Sample Date	TPHg	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	DIPE	ETBE	TAME	TBA
		← (ppb) →									
1998 Subsurface Investigation											
SB-1	2/12/1994	**1,400**	**22**	**3.3**	<2.5	<2.5	**390**	---	---	---	---
SB-2	2/12/1994	**7,700**	**210**	**410**	<200	**750**	**46,000**	---	---	---	---
2003 Tank Closure and Soil Excavation											
TP-1-Water	1/27/2003	**11,000**	**410**	**1,500**	**230**	**2,000**	**5,200**	---	---	---	---

Notes and Abbreviations:

ppb = parts per billion

--- = not analyzed for this constituent.

TPHg = Total petroleum hydrocarbons as gasoline, analyzed by EPA Method 8260B.

BTEX = Benzene, toluene, ethylbenzene, xylenes, analyzed by EPA Method 8260B.

MTBE = Methyl tertiary butyl ether, analyzed by EPA Method 8260B.

DIPE = Di-isopropyl ether, analyzed by EPA Method 8260B.

ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B.

TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B.

TBA = Tertiary butyl alcohol (tert-butanol), analyzed by EPA Method 8260B.

<X = Below laboratory detection limit of X

Table 3. Boring Data - Former Shell-branded Service Station, 4255 MacArthur Blvd., Oakland, California

Name	Type	Boring Date	Surface Elev (ft)	Total Depth (fbg)	Soil Sample Interval (ft)	First Encountered GW Depth (fbg)	First Encountered GW Elev (ft)	Screen Diam. (in)	Screen Depth (fbg) Top	Screen Depth (fbg) Bottom	Comments
SB-5	Soil Boring	27-Oct-05	--	24	C	--	--	--	--	--	
SB-6	Soil Boring	26-Oct-05	--	27	C	--	--	--	--	--	
SB-7	Soil Boring	26-Oct-05	--	40	C	--	--	--	--	--	
SB-8	Soil Boring	27-Oct-05	--	34	C	10	--	--	--	--	

Abbreviations and Notes:

fbg = Feet below grade

C = Continuous sampling

HSA = Hollow-stem auger

ATTACHMENT A

Standard Field Procedures for Soil Borings

CAMBRIA

STANDARD FIELD PROCEDURES FOR SOIL BORINGS

This document describes Cambria Environmental Technology, Inc.'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 Professional Geologist (PG) or a Certified Engineering Geologist (CEG). The following soil properties are noted for each soil sample:

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

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 licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

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

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ATTACHMENT B

Soil Boring Logs

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

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	SB-5
JOB/SITE NAME	Former Shell-branded service station	**DRILLING STARTED**	27-Oct-05
LOCATION	4255 MacArthur Boulevard, Oakland, California	**DRILLING COMPLETED**	27-Oct-05
PROJECT NUMBER	247-0524-007	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	
DRILLING METHOD	Dual-Tube	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3"	**SCREENED INTERVAL**	NA
LOGGED BY	B. DeBoer	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	Aubrey Cool, PG 7659	**DEPTH TO WATER (Static)**	NA
REMARKS	Hand augered to 5 fbg.		

PID (ppm)	TPHg (ppm)	BLOW COUNTS	SAMPLE ID	U.S.C.S.	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)
				GW	**Well Graded GRAVEL** (CL); gray; loose; dry; 10% sand, 90% gravel.	1.5
				SM	**Silty SAND** (SM); light brown; moderate density; dry; 20% silt, 70% sand, 10% gravel.	3.0
				MH	**SILT** (MH); blue green; dense; dry; 20% clay, 70% silt, 10% sand.	6.0
84	9		SB-5-5'	SM	**Silty SAND** (SM); blue green; dense; dry; 10% clay, 30% silt, 60% sand.	8.0
				MH	**SILT with Sand** (MH); gray; dense; dry; 25% clay, 55% silt, 20% sand.	11.0
12	58		SB-5-10'	CL	**CLAY with Sand** (CL); light brown; dense; dry; 55% clay, 30% silt, 15% sand.	14.0
290	220		SB-5-15'	SM	**Silty SAND** (SM); light green/gray; dense; dry; 10% clay, 40% silt, 50% sand.	17.0
				SM	**Silty SAND** (SM); brown; moderate density; moist; 10% clay, 35% silt, 45% sand, 10% gravel.	22.0
0	ND		SB-5-20'	GP GM	**Poorly Graded GRAVELwith Silt and Sand** (GP-GM); brown; low density; dry; 10% silt, 30% sand; 60% gravel.	24.0

Note: No groundwater recovery from hydropunch interval.

WELL DIAGRAM: Portland Type I/II; Bottom of Boring @ 24 ft

WELL LOG (PID/TPHG) G:\OAKLAND 4255 MACARTHUR\4255.GPJ DEFAULT.GDT 12/14/05

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

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	SB-6
JOB/SITE NAME	Former Shell-branded service station	**DRILLING STARTED**	26-Oct-05
LOCATION	4255 MacArthur Boulevard, Oakland, California	**DRILLING COMPLETED**	26-Oct-05
PROJECT NUMBER	247-0524-007	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	
DRILLING METHOD	Dual-Tube	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3"	**SCREENED INTERVAL**	NA
LOGGED BY	B. DeBoer	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	Aubrey Cool, PG 7659	**DEPTH TO WATER (Static)**	NA
REMARKS	Hand augered to 5 fbg.		

PID (ppm)	TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
								FILL; gray; loose; dry; 100% gravel.	2.0	
						SM		**Silty SAND** (SM); brown; moderate density; dry; 30% silt, 70% sand.	3.0	
						MH		**SILT** (MH); brownish gray; moderate density; moist; 15% clay, 85% silt.		
3	ND		SB-6-5'		5			@ 6 feet: 15% clay, 75% silt, 10% sand.	8.0	
						SM		**Silty SAND with Gravel** (SM); light brown; moderate density; dry; 35% silt, 45% sand, 20% gravel.	9.0	
					10	MH		**SILT** (MH); brown; dense; dry; 15% clay, 85% silt.		
540	160		SB-6-10.5'						13.0	
						SM		**SAND with Silt and Gravel** (SM); light brown; moderate density; dry; 10% silt, 70% sand, 20% gravel.	14.0	Portland Type I/II
6	ND		SB-6-15'		15	SM		**Silty SAND** (SM) ; light brown; moderate density; dry; 30% silt, 70% sand.	16.0	
						SM		**Silty SAND with Gravel** (SM); gray; moderate density; dry; 15% silt, 45% sand, 40% gravel.	19.0	
						GP GM		**Poorly Graded GRAVEL with Silt and Sand** (GP-GM); gray; moderate density; moist; 10% silt, 30% sand, 60% gravel.	20.0	
6	ND		SB-6-20'		20	SM		**Silty SAND with Gravel** (SM); gray; moderate density; moist; 15% silt, 45% sand, 40% gravel.	23.0	
						SM		**Silty SAND** (SM); light brown; moderate density; moist; 30% silt, 70% sand.	27.0	Bottom of Boring @ 27 ft
3.7	ND		SB-6-25'		25					

Note: No groundwater recovery from hydropunch interval.

WELL LOG (PID/TPHG) G:\OAKLAND 4255 MACARTHUR\4255.GPJ DEFAULT.GDT 12/14/05

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

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	SB-7
JOB/SITE NAME	Former Shell-branded service station	**DRILLING STARTED**	26-Oct-05
LOCATION	4255 MacArthur Boulevard, Oakland, California	**DRILLING COMPLETED**	26-Oct-05
PROJECT NUMBER	247-0524-007	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	
DRILLING METHOD	Dual-Tube	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3"	**SCREENED INTERVAL**	NA
LOGGED BY	B. DeBoer	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	Aubrey Cool, PG 7659	**DEPTH TO WATER (Static)**	NA
REMARKS	Hand augered to 5 fbg.		

PID (ppm)	TPHg (ppm)	BLOW COUNTS	SAMPLE ID	DEPTH (ft bgs)	U.S.C.S.	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)
					GW	**Well Graded GRAVEL** (FILL); gray; loose; dry; 10% sand, 90% gravel.	1.5
					SM	**Silty SAND** (SM); brown; moderate density; dry; 20% silt, 70% sand, 10% gravel.	2.5
650	220		SB-7-5'	5	SM	**Silty SAND** (SM); light brown; dense; dry; 35% clay, 50% silt, 15% sand.	5.5
					ML	**SANDY Silt** (ML); blue green; moderate density; dry; 15% clay, 50% silt, 35% sand.	10.0
120	2,600		SB-7-10'	10	GC	**CLAY with Gravel** (GC); light brown; density; moist; 45% clay, 35% silt, 20% gravel.	16.0
20	260		SB-7-15'	15	SM	**Silty SAND** (SM); brown; moderate density; moist; 10% clay, 35% silt, 45% sand, 10% gravel.	20.0
8	ND		SB-7-21'	20	CH	**Sandy CLAY** (CH); light brown; dense; moist; 50% clay, 30% silt, 20% sand.	27.0
52	9.0		SB-7-25'	25			
25	1.2		SB-7-30'	30	MH	**SILT with Sand** (MH); light brown; dense; moist; 30% clay, 50% silt, 20% sand.	33.0
				35		**CLAY with Sand** (CL); Light Brown; dense; moist; 60% clay, 15% silt, 25% sand.	

WELL DIAGRAM: Portland Type I/II

WELL LOG (PID/TPHG) G:\OAKLAND 4255 MACARTHUR\4255.GPJ DEFAULT.GDT 12/14/05

Continued Next Page

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

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	SB-7
JOB/SITE NAME	Former Shell-branded service station	**DRILLING STARTED**	26-Oct-05
LOCATION	4255 MacArthur Boulevard, Oakland, California	**DRILLING COMPLETED**	26-Oct-05

Continued from Previous Page

PID (ppm)	TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
12	ND		SB-7-35'			CL				
									37.0	
						MH		**SILT with Sand** (MH); light brown; dense; moist; 30% clay, 55% silt, 15% sand.		
ND	ND		SB-7-40'		40				40.0	Bottom of Boring @ 40 ft
								Note: No groundwater recovery from hydropunch intervals.		

WELL LOG (PID/TPHG) G:\OAKLAND 4255 MACARTHUR\4255.GPJ DEFAULT.GDT 12/14/05

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

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	SB-8
JOB/SITE NAME	Former Shell-branded service station	**DRILLING STARTED**	27-Oct-05
LOCATION	4255 MacArthur Boulevard, Oakland, California	**DRILLING COMPLETED**	27-Oct-05
PROJECT NUMBER	247-0524-007	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	
DRILLING METHOD	Dual-Tube	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3"	**SCREENED INTERVAL**	NA
LOGGED BY	B. DeBoer	**DEPTH TO WATER (First Encountered)**	10.0 ft (27-Oct-05) ▽
REVIEWED BY	Aubrey Cool, PG 7659	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Hand augered to 5 fbg.		

PID (ppm)	TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
						ML		**Asphalt** **SILT** (ML); gray; dense; moist; 90% silt, 10% sand.	0.3 4.0	
8.7	ND		SB-8-5'		5	SM		**Silty SAND with Gravel** (SM); dark brown; dense; moist; 15% silt, 70% sand, 15% gravel.	5.5	
						GP		**Poorly Graded GRAVEL** (GP); dark brown; loose to medium stiffness; dry; 10% sand, 90% gravel.	6.0	
						SM		**Silty SAND** (SM); dark brown; dense; moist; 15% silt, 80% sand, 5% gravel.	8.0	
6.0	ND		SB-8-10'		10	ML		**Sandy SILT** (ML); dark brown; medium density; moist; 70% silt, 20% sand, 10% gravel. ▽ @10 feet; 85% silt, 15% sand	12.0	
						SP		**Poorly Graded Sand** (SP); dark brown; medium density; wet; 90% sand, 10% gravel.	14.0	
						ML		**Sandy SILT** (ML); dark brown; dense; moist; 70% silt, 20% sand, 10% gravel.	15.0	
4.3	ND		SB-8-15'		15	SM		**Silty SAND with Gravel** (SM); brown; medium density; moist; 15% silt, 60% sand, 25% gravel.	18.0	◄ Portland Type I/II
						GP		**Poorly Graded GRAVEL with Sand** (GP); brown; medium density; moist; 35% sand, 65% gravel.	20.0	
6.0	ND		SB-8-20'		20	ML		**SILT with Sand** (ML); brown; medium density; moist; 75% silt, 25% sand.	23.0	
					25	SM		**Silty SAND with Gravel** (SM); brown; medium density; moist; 15% silt, 80% sand, 5% gravel.	33.0	
					30	ML		**SILT with Sand** (ML); light brown; dense; moist; 80% silt, 20% sand. Note: No groundwater recovery from hydropunch interval.	34.0	Bottom of

WELL LOG (PID/TPHG) G:\OAKLAND 4255 MACARTHUR\4255.GPJ DEFAULT.GDT 12/14/05

Continued Next Page

ATTACHMENT C

Drilling Permit

Alameda County Public Works Agency - Water Resources Well Permit

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

Application Approved on: 09/01/2005 By jamesy
Permits Issued: W2005-0863

Receipt Number: WR2005-2091
Permits Valid from 10/26/2005 to 10/27/2005

Application Id: 1125618256854
Site Location: 4255 MacArthur Blvd. Oakland, CA 94619
Project Start Date: 10/26/2005

City of Project Site: Oakland

Completion Date: 10/27/2005

Applicant: Cambria Environmental - Stewart Dalie
5900 Hollis St #A, Emeryville, CA 94608
Phone: 510-420-3339

Property Owner: Shell Oil Products Co.
20945 Wilmington, Carson, CA 90810
Phone: 707-865-0251

Client: ** same as Property Owner **

Total Due: $200.00
Total Amount Paid: $200.00
Paid By: CHECK **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 4 Boreholes
Driller: Vironex - Lic #: 705927 - Method: other

Work Total: $200.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2005-0863	09/01/2005	01/24/2006	4	3.00 in.	35.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Applicant shall contact Johnson Tang for a inspection time at 510-670-6450 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

4. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

ATTACHMENT D

Laboratory Analytical Reports

SEVERN TRENT STL

Submission#: 2005-10-0617

Cambria Environmental Emeryville

November 11, 2005

5900 Hollis Street, Ste. A
Emeryville, CA 94608

Attn.: David Gibbs

Project#: 247-0524
Project: 98995758
Site: 4255 MacAurther Blvd.

Attached is our report for your samples received on 10/28/2005 13:10
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/12/2005 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions,

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

Sincerely,

Melissa Brewer

Melissa Brewer
Project Manager

SEVERN TRENT STL

Submission: 2005-10-0617

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

Cambria Environmental Emeryville
Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SB-7-20.5`	10/26/2005 09:29	Soil	4
SB-7-25`	10/26/2005 10:28	Soil	5
SB-7-30`	10/26/2005 10:43	Soil	6
SB-7-35`	10/26/2005 11:02	Soil	7
SB-7-40`	10/26/2005 11:25	Soil	8
SB-5-5`	10/26/2005 14:00	Soil	9
SB-5-20`	10/26/2005 14:39	Soil	12

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

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-7-20.5`**
Sampled: 10/26/2005 09:29
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0617 - 4
Extracted: 11/9/2005 16:18
QC Batch#: 2005/11/09-1A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	4.6	mg/Kg	4.63	11/09/2005 16:18	
Benzene	ND	0.023	mg/Kg	4.63	11/09/2005 16:18	
Toluene	ND	0.023	mg/Kg	4.63	11/09/2005 16:18	
Ethyl benzene	ND	0.023	mg/Kg	4.63	11/09/2005 16:18	
Total xylenes	0.069	0.023	mg/Kg	4.63	11/09/2005 16:18	
tert-Butyl alcohol (TBA)	0.12	0.046	mg/Kg	4.63	11/09/2005 16:18	
Methyl tert-butyl ether (MTBE)	0.097	0.023	mg/Kg	4.63	11/09/2005 16:18	
Di-isopropyl Ether (DIPE)	ND	0.046	mg/Kg	4.63	11/09/2005 16:18	
Ethyl tert-butyl ether (ETBE)	ND	0.023	mg/Kg	4.63	11/09/2005 16:18	
tert-Amyl methyl ether (TAME)	ND	0.023	mg/Kg	4.63	11/09/2005 16:18	
Surrogate(s)						
1,2-Dichloroethane-d4	101.5	76-124	%	4.63	11/09/2005 16:18	
Toluene-d8	93.9	75-116	%	4.63	11/09/2005 16:18	

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

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-7-25**
Sampled: 10/26/2005 10:28
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0617 - 5
Extracted: 11/1/2005 23:48
QC Batch#: 2005/11/01-2B.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	9.0	1.0	mg/Kg	1.00	11/01/2005 23:48	
Benzene	0.087	0.0050	mg/Kg	1.00	11/01/2005 23:48	
Toluene	0.087	0.0050	mg/Kg	1.00	11/01/2005 23:48	
Ethyl benzene	0.14	0.0050	mg/Kg	1.00	11/01/2005 23:48	
Total xylenes	0.82	0.0050	mg/Kg	1.00	11/01/2005 23:48	
tert-Butyl alcohol (TBA)	0.088	0.010	mg/Kg	1.00	11/01/2005 23:48	
Methyl tert-butyl ether (MTBE)	0.27	0.0050	mg/Kg	1.00	11/01/2005 23:48	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/01/2005 23:48	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/01/2005 23:48	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/01/2005 23:48	
Surrogate(s)						
1,2-Dichloroethane-d4	103.7	76-124	%	1.00	11/01/2005 23:48	
Toluene-d8	91.7	75-116	%	1.00	11/01/2005 23:48	

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

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-7-30`**
Sampled: 10/26/2005 10:43
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0617 - 6
Extracted: 11/2/2005 11:59
QC Batch#: 2005/11/02-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	1.2	1.0	mg/Kg	1.00	11/02/2005 11:59	
Benzene	0.023	0.0050	mg/Kg	1.00	11/02/2005 11:59	
Toluene	0.038	0.0050	mg/Kg	1.00	11/02/2005 11:59	
Ethyl benzene	0.031	0.0050	mg/Kg	1.00	11/02/2005 11:59	
Total xylenes	0.15	0.0050	mg/Kg	1.00	11/02/2005 11:59	
tert-Butyl alcohol (TBA)	0.030	0.010	mg/Kg	1.00	11/02/2005 11:59	
Methyl tert-butyl ether (MTBE)	0.077	0.0050	mg/Kg	1.00	11/02/2005 11:59	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/02/2005 11:59	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/02/2005 11:59	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/02/2005 11:59	
Surrogate(s)						
1,2-Dichloroethane-d4	88.4	76-124	%	1.00	11/02/2005 11:59	
Toluene-d8	101.1	75-116	%	1.00	11/02/2005 11:59	

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

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-7-35**
Sampled: 10/26/2005 11:02
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0617 - 7
Extracted: 11/1/2005 09:34
QC Batch#: 2005/11/01-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/01/2005 09:34	
Benzene	0.031	0.0050	mg/Kg	1.00	11/01/2005 09:34	
Toluene	0.028	0.0050	mg/Kg	1.00	11/01/2005 09:34	
Ethyl benzene	0.020	0.0050	mg/Kg	1.00	11/01/2005 09:34	
Total xylenes	0.089	0.0050	mg/Kg	1.00	11/01/2005 09:34	
tert-Butyl alcohol (TBA)	0.024	0.010	mg/Kg	1.00	11/01/2005 09:34	
Methyl tert-butyl ether (MTBE)	0.10	0.0050	mg/Kg	1.00	11/01/2005 09:34	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/01/2005 09:34	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/01/2005 09:34	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/01/2005 09:34	
Surrogate(s)						
1,2-Dichloroethane-d4	93.2	76-124	%	1.00	11/01/2005 09:34	
Toluene-d8	99.6	75-116	%	1.00	11/01/2005 09:34	

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

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-7-40`**
Sampled: 10/26/2005 11:25
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0617 - 8
Extracted: 11/1/2005 12:37
QC Batch#: 2005/11/01-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/01/2005 12:37	
Benzene	0.017	0.0050	mg/Kg	1.00	11/01/2005 12:37	
Toluene	0.015	0.0050	mg/Kg	1.00	11/01/2005 12:37	
Ethyl benzene	0.0078	0.0050	mg/Kg	1.00	11/01/2005 12:37	
Total xylenes	0.033	0.0050	mg/Kg	1.00	11/01/2005 12:37	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/01/2005 12:37	
Methyl tert-butyl ether (MTBE)	0.019	0.0050	mg/Kg	1.00	11/01/2005 12:37	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/01/2005 12:37	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/01/2005 12:37	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/01/2005 12:37	
Surrogate(s)						
1,2-Dichloroethane-d4	95.8	76-124	%	1.00	11/01/2005 12:37	
Toluene-d8	101.0	75-116	%	1.00	11/01/2005 12:37	

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

Cambria Environmental Emeryville

Attn.: David Gibbs

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Emeryville, CA 94608
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Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

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

Sample ID: **SB-5-5'**
Lab ID: 2005-10-0617 - 9

Sampled: 10/26/2005 14:00
Extracted: 11/1/2005 14:23

Matrix: Soil
QC Batch#: 2005/11/01-1A.62

Analysis Flag: L2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	19	4.6	mg/Kg	4.60	11/01/2005 14:23	
Benzene	ND	0.023	mg/Kg	4.60	11/01/2005 14:23	
Toluene	ND	0.023	mg/Kg	4.60	11/01/2005 14:23	
Ethyl benzene	0.11	0.023	mg/Kg	4.60	11/01/2005 14:23	
Total xylenes	0.030	0.023	mg/Kg	4.60	11/01/2005 14:23	
tert-Butyl alcohol (TBA)	0.083	0.046	mg/Kg	4.60	11/01/2005 14:23	
Methyl tert-butyl ether (MTBE)	0.064	0.023	mg/Kg	4.60	11/01/2005 14:23	
Di-isopropyl Ether (DIPE)	ND	0.046	mg/Kg	4.60	11/01/2005 14:23	
Ethyl tert-butyl ether (ETBE)	ND	0.023	mg/Kg	4.60	11/01/2005 14:23	
tert-Amyl methyl ether (TAME)	ND	0.023	mg/Kg	4.60	11/01/2005 14:23	
Surrogate(s)						
1,2-Dichloroethane-d4	97.6	76-124	%	4.60	11/01/2005 14:23	
Toluene-d8	100.0	75-116	%	4.60	11/01/2005 14:23	

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

Cambria Environmental Emeryville

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Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-5-20`**
Sampled: 10/26/2005 14:39
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0617 - 12
Extracted: 11/1/2005 12:11
QC Batch#: 2005/11/01-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/01/2005 12:11	
Benzene	ND	0.0050	mg/Kg	1.00	11/01/2005 12:11	
Toluene	ND	0.0050	mg/Kg	1.00	11/01/2005 12:11	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/01/2005 12:11	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/01/2005 12:11	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/01/2005 12:11	
Methyl tert-butyl ether (MTBE)	0.035	0.0050	mg/Kg	1.00	11/01/2005 12:11	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/01/2005 12:11	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/01/2005 12:11	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/01/2005 12:11	
Surrogate(s)						
1,2-Dichloroethane-d4	97.3	76-124	%	1.00	11/01/2005 12:11	
Toluene-d8	99.1	75-116	%	1.00	11/01/2005 12:11	

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

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Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Soil** — **QC Batch # 2005/11/01-1A.62**

MB: 2005/11/01-1A.62-001 — Date Extracted: 11/01/2005 09:01

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	11/01/2005 09:01	
Gasoline [Shell]	ND	1.0	mg/Kg	11/01/2005 09:01	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	11/01/2005 09:01	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	11/01/2005 09:01	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	11/01/2005 09:01	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	11/01/2005 09:01	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	11/01/2005 09:01	
Benzene	ND	0.0050	mg/Kg	11/01/2005 09:01	
Toluene	ND	0.0050	mg/Kg	11/01/2005 09:01	
Ethyl benzene	ND	0.0050	mg/Kg	11/01/2005 09:01	
Total xylenes	ND	0.0050	mg/Kg	11/01/2005 09:01	
Surrogates(s)					
1,2-Dichloroethane-d4	98.0	76-124	%	11/01/2005 09:01	
Toluene-d8	100.0	75-116	%	11/01/2005 09:01	

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

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Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank

Soil

QC Batch # 2005/11/01-2B.69

MB: 2005/11/01-2B.69-050

Date Extracted: 11/01/2005 18:50

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	11/01/2005 18:50	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	11/01/2005 18:50	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	11/01/2005 18:50	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	11/01/2005 18:50	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	11/01/2005 18:50	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	11/01/2005 18:50	
Benzene	ND	0.0050	mg/Kg	11/01/2005 18:50	
Toluene	ND	0.0050	mg/Kg	11/01/2005 18:50	
Ethyl benzene	ND	0.0050	mg/Kg	11/01/2005 18:50	
Total xylenes	ND	0.0050	mg/Kg	11/01/2005 18:50	
Surrogates(s)					
1,2-Dichloroethane-d4	103.8	76-124	%	11/01/2005 18:50	
Toluene-d8	91.2	75-116	%	11/01/2005 18:50	

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

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Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2005/11/02-1A.62-045

Soil

Test(s): 8260B
QC Batch # 2005/11/02-1A.62
Date Extracted: 11/02/2005 08:45

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	11/02/2005 08:45	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	11/02/2005 08:45	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	11/02/2005 08:45	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	11/02/2005 08:45	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	11/02/2005 08:45	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	11/02/2005 08:45	
Benzene	ND	0.0050	mg/Kg	11/02/2005 08:45	
Toluene	ND	0.0050	mg/Kg	11/02/2005 08:45	
Ethyl benzene	ND	0.0050	mg/Kg	11/02/2005 08:45	
Total xylenes	ND	0.0050	mg/Kg	11/02/2005 08:45	
Surrogates(s)					
1,2-Dichloroethane-d4	95.0	76-124	%	11/02/2005 08:45	
Toluene-d8	101.6	75-116	%	11/02/2005 08:45	

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

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Project: 247-0524
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Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank

Soil

QC Batch # 2005/11/09-1A.69

MB: 2005/11/09-1A.69-034

Date Extracted: 11/09/2005 07:34

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	11/09/2005 07:34	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	11/09/2005 07:34	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	11/09/2005 07:34	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	11/09/2005 07:34	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	11/09/2005 07:34	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	11/09/2005 07:34	
Benzene	ND	0.0050	mg/Kg	11/09/2005 07:34	
Toluene	ND	0.0050	mg/Kg	11/09/2005 07:34	
Ethyl benzene	ND	0.0050	mg/Kg	11/09/2005 07:34	
Total xylenes	ND	0.0050	mg/Kg	11/09/2005 07:34	
Surrogates(s)					
1,2-Dichloroethane-d4	104.6	76-124	%	11/09/2005 07:34	
Toluene-d8	96.6	75-116	%	11/09/2005 07:34	

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

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Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Soil** **QC Batch # 2005/11/01-1A.62**

LCS 2005/11/01-1A.62-009 Extracted: 11/01/2005 Analyzed: 11/01/2005 08:09

LCSD 2005/11/01-1A.62-035 Extracted: 11/01/2005 Analyzed: 11/01/2005 08:35

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	0.0466	0.0482	0.05	93.2	96.4	3.4	65-165	20		
Benzene	0.0543	0.0573	0.05	108.6	114.6	5.4	69-129	20		
Toluene	0.0497	0.0523	0.05	99.4	104.6	5.1	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	435	429	500	87.0	85.8		76-124			
Toluene-d8	494	497	500	98.8	99.4		75-116			

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

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98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Soil** **QC Batch # 2005/11/01-2B.69**

LCS 2005/11/01-2B.69-029 Extracted: 11/01/2005 Analyzed: 11/01/2005 18:29
LCSD

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	0.0562		0.05	112.4			65-165	20		
Benzene	0.0410		0.05	82.0			69-129	20		
Toluene	0.0437		0.05	87.4			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	493		500	98.6			76-124			
Toluene-d8	455		500	91.0			75-116			

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

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Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Soil** **QC Batch # 2005/11/02-1A.62**

LCS 2005/11/02-1A.62-053 Extracted: 11/02/2005 Analyzed: 11/02/2005 07:53
LCSD 2005/11/02-1A.62-019 Extracted: 11/02/2005 Analyzed: 11/02/2005 08:19

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	0.0434	0.0459	0.05	86.8	91.8	5.6	65-165	20		
Benzene	0.0539	0.0544	0.05	107.8	108.8	0.9	69-129	20		
Toluene	0.0512	0.0501	0.05	102.4	100.2	2.2	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	427	458	500	85.4	91.6		76-124			
Toluene-d8	492	507	500	98.4	101.4		75-116			

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

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98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Soil** **QC Batch # 2005/11/09-1A.69**

LCS 2005/11/09-1A.69-052 Extracted: 11/09/2005 Analyzed: 11/09/2005 06:52

LCSD 2005/11/09-1A.69-013 Extracted: 11/09/2005 Analyzed: 11/09/2005 07:13

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	0.0611	0.0616	0.05	122.2	123.2	0.8	65-165	20		
Benzene	0.0502	0.0525	0.05	100.4	105.0	4.5	69-129	20		
Toluene	0.0522	0.0510	0.05	104.4	102.0	2.3	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	489	490	500	97.8	98.0		76-124			
Toluene-d8	480	479	500	96.0	95.8		75-116			

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

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Received: 10/28/2005 13:10

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Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2005/11/01-1A.62**

SB-7-35` >> MS

Lab ID: 2005-10-0617 - 007

MS: 2005/11/01-1A.62-021 Extracted: 11/01/2005 Analyzed: 11/01/2005 10:00
Dilution: 1.00

MSD: 2005/11/01-1A.62-026 Extracted: 11/01/2005 Analyzed: 11/01/2005 10:26
Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	0.115	0.116	0.102	0.047892	27.1	28.7	5.7	65-165	20	M5	M5
Benzene	0.0603	0.0641	0.0307	0.047892	61.8	68.5	10.3	69-129	20	M5	M5
Toluene	0.0552	0.0608	0.0277	0.047892	57.4	67.9	16.8	70-130	20	M5	M5
Surrogate(s)											
1,2-Dichloroethane-d4	452	456		500	90.4	91.2		76-124			
Toluene-d8	500	497		500	100.0	99.4		75-116			

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

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Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2005/11/01-2B.69**

SB-7-25` >> MS

Lab ID: 2005-10-0617 - 005

MS: 2005/11/01-2B.69-005 Extracted: 11/01/2005 Analyzed: 11/01/2005 23:05

Dilution: 1.00

MSD: 2005/11/01-2B.69-027 Extracted: 11/01/2005 Analyzed: 11/01/2005 23:27

Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	0.166	0.257	0.267	0.045620	-221.4	-20.5	-166	65-165	20	M5	M5
Benzene	0.0718	0.0772	0.0867	0.045620	-32.7	-19.5	-50.	69-129	20	M5	M5
Toluene	0.0843	0.0969	0.0872	0.045620	-6.4	19.9	389.	70-130	20	M5	M5
Surrogate(s)											
1,2-Dichloroethane-d4	469	488		500	93.8	97.6		76-124			
Toluene-d8	474	455		500	94.8	91.0		75-116			

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

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Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2005/11/02-1A.62**

MS/MSD

Lab ID: 2005-11-0005 - 001

MS: 2005/11/02-1A.62-048 Extracted: 11/02/2005 Analyzed: 11/02/2005 09:48
Dilution: 1.00

MSD: 2005/11/02-1A.62-015 Extracted: 11/02/2005 Analyzed: 11/02/2005 10:15
Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	0.233	0.173	0.19	0.049603	86.7	350.2	120.	65-165	20		R1,M4
Benzene	0.0512	0.0524	ND	0.049603	103.2	106.1	2.8	69-129	20		
Toluene	0.0487	0.0481	ND	0.049603	98.2	97.4	0.8	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	449	445		500	89.8	89.0		76-124			
Toluene-d8	498	510		500	99.6	102.0		75-116			

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

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98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2005/11/09-1A.69**

MS/MSD

Lab ID: 2005-11-0135 - 003

MS: 2005/11/09-1A.69-022 Extracted: 11/09/2005 Analyzed: 11/09/2005 10:22

Dilution: 1.00

MSD: 2005/11/09-1A.69-043 Extracted: 11/09/2005 Analyzed: 11/09/2005 10:43

Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	0.0451	0.0493	ND	0.049800	90.6	99.0	8.9	65-165	20		
Benzene	0.0396	0.0428	ND	0.049800	79.5	85.9	7.7	69-129	20		
Toluene	0.0429	0.0449	ND	0.049800	86.1	90.2	4.7	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	464	487		500	92.8	97.4		76-124			
Toluene-d8	494	498		500	98.8	99.6		75-116			

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

Cambria Environmental Emeryville

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98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Legend and Notes

Analysis Flag

L2

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

Result Flag

M4

MS/MSD spike recoveries were above acceptance limits. See blank spike (LCS).

M5

MS/MSD spike recoveries were below acceptance limits. See blank spike (LCS).

R1

Analyte RPD was out of QC limits.

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville
Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SB-7-5`	10/26/2005 12:30	Soil	1
SB-7-10`	10/26/2005 12:38	Soil	2
SB-7-15`	10/26/2005 09:00	Soil	3
SB-5-10`	10/26/2005 14:12	Soil	10
SB-5-15`	10/26/2005 14:32	Soil	11

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-7-5`**
Sampled: 10/26/2005 12:30
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0617 - 1
Extracted: 11/2/2005 04:24
QC Batch#: 2005/11/01-3A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	220	50	mg/Kg	1.00	11/02/2005 04:24	
Benzene	0.59	0.50	mg/Kg	1.00	11/02/2005 04:24	
Toluene	ND	0.50	mg/Kg	1.00	11/02/2005 04:24	
Ethyl benzene	2.9	0.50	mg/Kg	1.00	11/02/2005 04:24	
Total xylenes	10	0.50	mg/Kg	1.00	11/02/2005 04:24	
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	1.00	11/02/2005 04:24	
Methyl tert-butyl ether (MTBE)	1.2	0.50	mg/Kg	1.00	11/02/2005 04:24	
Di-isopropyl Ether (DIPE)	ND	1.0	mg/Kg	1.00	11/02/2005 04:24	
Ethyl tert-butyl ether (ETBE)	ND	0.50	mg/Kg	1.00	11/02/2005 04:24	
tert-Amyl methyl ether (TAME)	ND	0.50	mg/Kg	1.00	11/02/2005 04:24	
Surrogate(s)						
1,2-Dichloroethane-d4	89.5	53-129	%	1.00	11/02/2005 04:24	
Toluene-d8	87.8	47-136	%	1.00	11/02/2005 04:24	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

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

Sample ID: **SB-7-10'**
Lab ID: 2005-10-0617 - 2

Sampled: 10/26/2005 12:38
Extracted: 11/2/2005 04:45

Matrix: Soil
QC Batch#: 2005/11/01-3A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	2600	50	mg/Kg	1.00	11/02/2005 04:45	
Benzene	13	0.50	mg/Kg	1.00	11/02/2005 04:45	
Toluene	17	0.50	mg/Kg	1.00	11/02/2005 04:45	
Ethyl benzene	45	0.50	mg/Kg	1.00	11/02/2005 04:45	
Total xylenes	270	0.50	mg/Kg	1.00	11/02/2005 04:45	
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	1.00	11/02/2005 04:45	
Methyl tert-butyl ether (MTBE)	0.95	0.50	mg/Kg	1.00	11/02/2005 04:45	
Di-isopropyl Ether (DIPE)	ND	1.0	mg/Kg	1.00	11/02/2005 04:45	
Ethyl tert-butyl ether (ETBE)	ND	0.50	mg/Kg	1.00	11/02/2005 04:45	
tert-Amyl methyl ether (TAME)	ND	0.50	mg/Kg	1.00	11/02/2005 04:45	
Surrogate(s)						
1,2-Dichloroethane-d4	97.4	53-129	%	1.00	11/02/2005 04:45	
Toluene-d8	84.1	47-136	%	1.00	11/02/2005 04:45	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-7-15**
Sampled: 10/26/2005 09:00
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0617 - 3
Extracted: 11/4/2005 09:17
QC Batch#: 2005/11/04-3A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	260	50	mg/Kg	1.00	11/04/2005 09:17	
Benzene	1.4	0.50	mg/Kg	1.00	11/04/2005 09:17	
Toluene	3.7	0.50	mg/Kg	1.00	11/04/2005 09:17	
Ethyl benzene	2.6	0.50	mg/Kg	1.00	11/04/2005 09:17	
Total xylenes	13	0.50	mg/Kg	1.00	11/04/2005 09:17	
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	1.00	11/04/2005 09:17	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	1.00	11/04/2005 09:17	
Di-isopropyl Ether (DIPE)	ND	1.0	mg/Kg	1.00	11/04/2005 09:17	
Ethyl tert-butyl ether (ETBE)	ND	0.50	mg/Kg	1.00	11/04/2005 09:17	
tert-Amyl methyl ether (TAME)	ND	0.50	mg/Kg	1.00	11/04/2005 09:17	
Surrogate(s)						
1,2-Dichloroethane-d4	108.2	53-129	%	1.00	11/04/2005 09:17	
Toluene-d8	93.8	47-136	%	1.00	11/04/2005 09:17	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

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

Sample ID: **SB-5-10`**
Lab ID: 2005-10-0617 - 10

Sampled: 10/26/2005 14:12
Extracted: 11/4/2005 09:38

Matrix: Soil
QC Batch#: 2005/11/04-3A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	58	55	mg/Kg	1.10	11/04/2005 09:38	
Benzene	ND	0.55	mg/Kg	1.10	11/04/2005 09:38	
Toluene	ND	0.55	mg/Kg	1.10	11/04/2005 09:38	
Ethyl benzene	ND	0.55	mg/Kg	1.10	11/04/2005 09:38	
Total xylenes	ND	0.55	mg/Kg	1.10	11/04/2005 09:38	
tert-Butyl alcohol (TBA)	ND	2.8	mg/Kg	1.10	11/04/2005 09:38	
Methyl tert-butyl ether (MTBE)	ND	0.55	mg/Kg	1.10	11/04/2005 09:38	
Di-isopropyl Ether (DIPE)	ND	1.1	mg/Kg	1.10	11/04/2005 09:38	
Ethyl tert-butyl ether (ETBE)	ND	0.55	mg/Kg	1.10	11/04/2005 09:38	
tert-Amyl methyl ether (TAME)	ND	0.55	mg/Kg	1.10	11/04/2005 09:38	
Surrogate(s)						
1,2-Dichloroethane-d4	114.9	53-129	%	1.10	11/04/2005 09:38	
Toluene-d8	100.0	47-136	%	1.10	11/04/2005 09:38	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville
Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-5-15`**
Sampled: 10/26/2005 14:32
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0617 - 11
Extracted: 11/4/2005 23:26
QC Batch#: 2005/11/04-3A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	220	50	mg/Kg	1.00	11/04/2005 23:26	
Benzene	ND	0.50	mg/Kg	1.00	11/04/2005 23:26	
Toluene	ND	0.50	mg/Kg	1.00	11/04/2005 23:26	
Ethyl benzene	1.9	0.50	mg/Kg	1.00	11/04/2005 23:26	
Total xylenes	2.1	0.50	mg/Kg	1.00	11/04/2005 23:26	
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	1.00	11/04/2005 23:26	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	1.00	11/04/2005 23:26	
Di-isopropyl Ether (DIPE)	ND	1.0	mg/Kg	1.00	11/04/2005 23:26	
Ethyl tert-butyl ether (ETBE)	ND	0.50	mg/Kg	1.00	11/04/2005 23:26	
tert-Amyl methyl ether (TAME)	ND	0.50	mg/Kg	1.00	11/04/2005 23:26	
Surrogate(s)						
1,2-Dichloroethane-d4	82.6	53-129	%	1.00	11/04/2005 23:26	
Toluene-d8	95.8	47-136	%	1.00	11/04/2005 23:26	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

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5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2005/11/01-3A.69-020

Soil

Test(s): 8260B
QC Batch # 2005/11/01-3A.69
Date Extracted: 11/02/2005 03:20

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	mg/Kg	11/02/2005 03:20	
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	11/02/2005 03:20	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	11/02/2005 03:20	
Di-isopropyl Ether (DIPE)	ND	1.0	mg/Kg	11/02/2005 03:20	
Ethyl tert-butyl ether (ETBE)	ND	0.50	mg/Kg	11/02/2005 03:20	
tert-Amyl methyl ether (TAME)	ND	0.50	mg/Kg	11/02/2005 03:20	
Benzene	ND	0.50	mg/Kg	11/02/2005 03:20	
Toluene	ND	0.50	mg/Kg	11/02/2005 03:20	
Ethyl benzene	ND	0.50	mg/Kg	11/02/2005 03:20	
Total xylenes	ND	0.50	mg/Kg	11/02/2005 03:20	
Surrogates(s)					
1,2-Dichloroethane-d4	90.8	53-129	%	11/02/2005 03:20	
Toluene-d8	84.8	47-136	%	11/02/2005 03:20	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville
Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

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

Method Blank
Soil
QC Batch # 2005/11/04-3A.62

MB: 2005/11/04-3A.62-000
Date Extracted: 11/04/2005 23:00

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	mg/Kg	11/04/2005 23:00	
Benzene	ND	0.50	mg/Kg	11/04/2005 23:00	
Toluene	ND	0.50	mg/Kg	11/04/2005 23:00	
Ethyl benzene	ND	0.50	mg/Kg	11/04/2005 23:00	
Total xylenes	ND	0.50	mg/Kg	11/04/2005 23:00	
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	11/04/2005 23:00	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	11/04/2005 23:00	
Di-isopropyl Ether (DIPE)	ND	1.0	mg/Kg	11/04/2005 23:00	
Ethyl tert-butyl ether (ETBE)	ND	0.50	mg/Kg	11/04/2005 23:00	
tert-Amyl methyl ether (TAME)	ND	0.50	mg/Kg	11/04/2005 23:00	
Surrogates(s)					
1,2-Dichloroethane-d4	81.2	53-129	%	11/04/2005 23:00	
Toluene-d8	99.2	47-136	%	11/04/2005 23:00	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Soil** **QC Batch # 2005/11/01-3A.69**

LCS 2005/11/01-3A.69-038 Extracted: 11/02/2005 Analyzed: 11/02/2005 02:38

LCSD 2005/11/01-3A.69-059 Extracted: 11/02/2005 Analyzed: 11/02/2005 02:59

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	9.81	10.1	10	98.1	101.0	2.9	65-165	20		
Benzene	8.28	8.70	10	82.8	87.0	4.9	69-129	20		
Toluene	8.57	8.90	10	85.7	89.0	3.8	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	212	223	250	84.8	89.2		53-129			
Toluene-d8	214	225	250	85.6	90.0		47-136			

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville
Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Soil** **QC Batch # 2005/11/04-3A.62**

LCS 2005/11/04-3A.62-007 Extracted: 11/04/2005 Analyzed: 11/04/2005 22:07

LCSD 2005/11/04-3A.62-033 Extracted: 11/04/2005 Analyzed: 11/04/2005 22:33

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Toluene	0.0506	0.0460	0.049603	102.0	92.9	9.3	70-130			
Benzene	0.0518	0.0509	0.049603	104.4	102.8	1.5	69-129	20		
Methyl tert-butyl ether (MTBE)	0.0501	0.0501	0.049603	101.0	101.2	0.2	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	186	189	250	74.4	75.6		53-129			
Toluene-d8	240	239	250	96.0	95.6		47-136			

98672

SHELL Chain Of Custody Record

STL-San Francisco

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

Shell Project Manager to be invoiced: 2005-10-0617

- [x] SCIENCE & ENGINEERING
- [ ] TECHNICAL SERVICES
- [ ] CRMT HOUSTON

Denis Brown

INCIDENT NUMBER (S&E ONLY): 9 8 9 9 5 7 5 8

SAP or CRMT NUMBER (TS/CRMT):

DATE: 10/26/05

PAGE: 1 of 2

SAMPLING COMPANY: CAMBRIA ENVIRONMENTAL TECHNOLOGY INC

LOG CODE:

SITE ADDRESS (Street and City): 4255 MacAurther Blvd.

GLOBAL ID NO.: T0600101261

ADDRESS: 5900 HOLLIS ST, Suite A, Emeryville, CA 94608

EDF DELIVERABLE TO (Responsible Party or Designee): N/A

PHONE NO.: N/A

E-MAIL: N/A

CONSULTANT PROJECT NO.: 247-0524

PROJECT CONTACT (Hardcopy or PDF Report to): David Gibbs

SAMPLER NAME(S) (Print): Bill DeBoer

LAB USE ONLY

TELEPHONE: 510-420-3363

FAX: 510-420-9170

E-MAIL: dgibbs@cambria-env.com

TURNAROUND TIME (BUSINESS DAYS): [x] 10 DAYS [ ] 5 DAYS [ ] 72 HOURS [ ] 48 HOURS [ ] 24 HOURS [ ] LESS THAN 24 HOURS

[ ] LA - RWQCB REPORT FORMAT [ ] UST AGENCY: ____

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

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NOT NEEDED [x]

CC RESULTS TO
BDEBOER@CAMBRIA-ENV.COM

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Purgeable	TPH - Extractable (8015m)	BTEX	MTBE	TBA	5 Oxygenates	1,2 DCA and EDB	Ethanol	Methanol	VOCs by 8260B	Semi-Volatiles by 8270C	Lead ☐ Total ☐ STLC ☐ TCLP	LUFTS ☐ Total ☐ STLC ☐ TCLP	CAM17 ☐ Total ☐ STLC ☐ TCLP	Test for Disposal					FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	SB-7-5'	10/26	1230	So	1	X		X			X														
	SB-7-10'		1238		1																				
	SB-7-15'		0900		1																				
	SB-7-20.5'		0929		1																				
	SB-7-25'		1028		1																				
	SB-7-30'		1043		1																				
	SB-7-35'		1102		1																				
	SB-7-40'		1125		1																				

TEMPERATURE ON RECEIPT C°: 3°

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature]	10/28/05	1810
Relinquished by: (Signature)	Received by: (Signature)	Date: 10-28-05	Time: 1947
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

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

SHELL Chain Of Custody Record

STL-San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

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

Shell Project Manager to be invoiced:

☑ SCIENCE & ENGINEERING ☐ TECHNICAL SERVICES ☐ CRMT-HOUSTON

2005-10-0617

Denis Brown

INCIDENT NUMBER (S&E ONLY): 98995758

SAP or CRMT NUMBER (TS/CRMT):

DATE: 10/27/05

PAGE: 2 of 2

CONSULTING COMPANY: CAMBRIA ENVIRONMENTAL TECHNOLOGY INC	PROJECT #:
ADDRESS: 5900 HOLLIS ST, Suite A, Emeryville, CA 94608	
REPORT TO (Consultant Manager to receive Report): David Gibbs	
TELEPHONE: 510-420-3303	FAX: 510-420-9170
E-MAIL: dgibbs@cambria-env.com	

SITE ADDRESS (Street and City): 4255 MacAurther Blvd.	SHELL ENGINEER: T0600101261
CONSULTANT PROJECT NO. (Incorporate Task/Phase Designation): N/A	PHASE NO.: N/A
P.O. #: N/A	CONSULTANT PHONE NO.: 247-0553
SAMPLER NAME(S) (Print): Bill DeBoer	LAB USE ONLY

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

GEOTRACKER EDF REQUIRED? ☐ YES ☐ NO

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

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

CC RESULTS TO BDEBOER@CAMBRIA-ENV.COM

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Purgeable	TPH - Extractable (8015m)	BTEX	MTBE	TBA	5 Oxygenates	1,2 DCA and EDB	Ethanol	Methanol	VOCs by 8260B	Semi-Volatiles by 8270C	Lead ☐ Total ☐ STLC ☐ TCLP	LUFT5 ☐ Total ☐ STLC ☐ TCLP	CAM17 ☐ Total ☐ STLC ☐ TCLP	Test for Disposal
	SB-5-5'	10/26	1400	So	1	X		X			X									
	SB-5-10'		1412		1															
	SB-5-15'		1432		1															
	SB-5-20'		1439		1															

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

TEMPERATURE ON RECEIPT: 30°

Relinquished by: (Signature)	Received by: (Signature)	Date: 10-28-05	Time: 13:10
Relinquished by: (Signature)	Received by: (Signature)	Date: 10-28-05	Time: 1447
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

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

10 Point Revised

SEVERN TRENT STL

Submission#: 2005-10-0618

Cambria Environmental Emeryville

November 11, 2005

5900 Hollis Street, Ste. A
Emeryville, CA 94608

Attn.: David Gibbs

Project#: 247-0524
Project: 98995758
Site: 4255 MacAurther Blvd.

Attached is our report for your samples received on 10/28/2005 13:10
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/12/2005 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions,

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

Sincerely,

Melissa Brewer

Melissa Brewer
Project Manager

SEVERN TRENT STL

Submission: 2005-10-0618

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

Cambria Environmental Emeryville
Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SB-6-5`	10/27/2005 09:14	Soil	1
SB-6-15`	10/27/2005 09:40	Soil	3
SB-6-20`	10/27/2005 09:50	Soil	4
SB-6-25`	10/27/2005 11:15	Soil	5
SB-8-5`	10/27/2005 12:24	Soil	6
SB-8-10`	10/27/2005 12:35	Soil	7
SB-8-15`	10/27/2005 12:38	Soil	8
SB-8-20`	10/27/2005 12:48	Soil	9

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

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

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

Sample ID: **SB-6-5'**
Lab ID: 2005-10-0618 - **1**

Sampled: 10/27/2005 09:14
Extracted: 11/1/2005 20:37

Matrix: Soil
QC Batch#: 2005/11/01-2B.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/01/2005 20:37	
Benzene	ND	0.0050	mg/Kg	1.00	11/01/2005 20:37	
Toluene	ND	0.0050	mg/Kg	1.00	11/01/2005 20:37	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/01/2005 20:37	
Total xylenes	0.011	0.0050	mg/Kg	1.00	11/01/2005 20:37	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/01/2005 20:37	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/01/2005 20:37	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/01/2005 20:37	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/01/2005 20:37	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/01/2005 20:37	
Surrogate(s)						
1,2-Dichloroethane-d4	119.6	76-124	%	1.00	11/01/2005 20:37	
Toluene-d8	89.0	75-116	%	1.00	11/01/2005 20:37	

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

Cambria Environmental Emeryville

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Project: 247-0524
98995758

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Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-6-15`**
Sampled: 10/27/2005 09:40
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0618 - 3
Extracted: 11/1/2005 21:19
QC Batch#: 2005/11/01-2B.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/01/2005 21:19	
Benzene	ND	0.0050	mg/Kg	1.00	11/01/2005 21:19	
Toluene	ND	0.0050	mg/Kg	1.00	11/01/2005 21:19	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/01/2005 21:19	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/01/2005 21:19	
tert-Butyl alcohol (TBA)	1.6	0.010	mg/Kg	1.00	11/01/2005 21:19	
Methyl tert-butyl ether (MTBE)	0.067	0.0050	mg/Kg	1.00	11/01/2005 21:19	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/01/2005 21:19	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/01/2005 21:19	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/01/2005 21:19	
Surrogate(s)						
1,2-Dichloroethane-d4	110.8	76-124	%	1.00	11/01/2005 21:19	
Toluene-d8	94.5	75-116	%	1.00	11/01/2005 21:19	

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

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Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Test(s): 8260B
Sample ID: **SB-6-20`**
Lab ID: 2005-10-0618 - 4
Sampled: 10/27/2005 09:50
Extracted: 11/1/2005 21:40
Matrix: Soil
QC Batch#: 2005/11/01-2B.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/01/2005 21:40	
Benzene	ND	0.0050	mg/Kg	1.00	11/01/2005 21:40	
Toluene	ND	0.0050	mg/Kg	1.00	11/01/2005 21:40	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/01/2005 21:40	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/01/2005 21:40	
tert-Butyl alcohol (TBA)	0.19	0.010	mg/Kg	1.00	11/01/2005 21:40	
Methyl tert-butyl ether (MTBE)	0.19	0.0050	mg/Kg	1.00	11/01/2005 21:40	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/01/2005 21:40	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/01/2005 21:40	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/01/2005 21:40	
Surrogate(s)						
1,2-Dichloroethane-d4	106.5	76-124	%	1.00	11/01/2005 21:40	
Toluene-d8	92.9	75-116	%	1.00	11/01/2005 21:40	

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

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Project: 247-0524
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Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-6-25**
Sampled: 10/27/2005 11:15
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0618 - 5
Extracted: 11/2/2005 11:07
QC Batch#: 2005/11/02-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/02/2005 11:07	
Benzene	ND	0.0050	mg/Kg	1.00	11/02/2005 11:07	
Toluene	ND	0.0050	mg/Kg	1.00	11/02/2005 11:07	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/02/2005 11:07	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/02/2005 11:07	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/02/2005 11:07	
Methyl tert-butyl ether (MTBE)	0.0073	0.0050	mg/Kg	1.00	11/02/2005 11:07	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/02/2005 11:07	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/02/2005 11:07	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/02/2005 11:07	
Surrogate(s)						
1,2-Dichloroethane-d4	93.2	76-124	%	1.00	11/02/2005 11:07	
Toluene-d8	98.9	75-116	%	1.00	11/02/2005 11:07	

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

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Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Test(s): 8260B
Sample ID: **SB-8-5'**
Lab ID: 2005-10-0618 - 6
Sampled: 10/27/2005 12:24
Extracted: 11/2/2005 11:33
Matrix: Soil
QC Batch#: 2005/11/02-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/02/2005 11:33	
Benzene	ND	0.0050	mg/Kg	1.00	11/02/2005 11:33	
Toluene	ND	0.0050	mg/Kg	1.00	11/02/2005 11:33	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/02/2005 11:33	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/02/2005 11:33	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/02/2005 11:33	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/02/2005 11:33	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/02/2005 11:33	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/02/2005 11:33	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/02/2005 11:33	
Surrogate(s)						
1,2-Dichloroethane-d4	98.3	76-124	%	1.00	11/02/2005 11:33	
Toluene-d8	94.7	75-116	%	1.00	11/02/2005 11:33	

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

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Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-8-10`**
Sampled: 10/27/2005 12:35
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0618 - 7
Extracted: 11/2/2005 12:26
QC Batch#: 2005/11/02-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/02/2005 12:26	
Benzene	ND	0.0050	mg/Kg	1.00	11/02/2005 12:26	
Toluene	ND	0.0050	mg/Kg	1.00	11/02/2005 12:26	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/02/2005 12:26	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/02/2005 12:26	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	11/02/2005 12:26	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/02/2005 12:26	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/02/2005 12:26	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/02/2005 12:26	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/02/2005 12:26	
Surrogate(s)						
1,2-Dichloroethane-d4	92.4	76-124	%	1.00	11/02/2005 12:26	
Toluene-d8	96.8	75-116	%	1.00	11/02/2005 12:26	

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

Cambria Environmental Emeryville

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Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-8-15'**
Sampled: 10/27/2005 12:38
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0618 - 8
Extracted: 11/2/2005 12:52
QC Batch#: 2005/11/02-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/02/2005 12:52	
Benzene	ND	0.0050	mg/Kg	1.00	11/02/2005 12:52	
Toluene	ND	0.0050	mg/Kg	1.00	11/02/2005 12:52	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/02/2005 12:52	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/02/2005 12:52	
tert-Butyl alcohol (TBA)	0.081	0.010	mg/Kg	1.00	11/02/2005 12:52	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	11/02/2005 12:52	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/02/2005 12:52	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/02/2005 12:52	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/02/2005 12:52	
Surrogate(s)						
1,2-Dichloroethane-d4	91.3	76-124	%	1.00	11/02/2005 12:52	
Toluene-d8	101.2	75-116	%	1.00	11/02/2005 12:52	

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

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Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-8-20`**
Sampled: 10/27/2005 12:48
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0618 - 9
Extracted: 11/2/2005 13:18
QC Batch#: 2005/11/02-1A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	11/02/2005 13:18	
Benzene	ND	0.0050	mg/Kg	1.00	11/02/2005 13:18	
Toluene	ND	0.0050	mg/Kg	1.00	11/02/2005 13:18	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	11/02/2005 13:18	
Total xylenes	ND	0.0050	mg/Kg	1.00	11/02/2005 13:18	
tert-Butyl alcohol (TBA)	0.020	0.010	mg/Kg	1.00	11/02/2005 13:18	
Methyl tert-butyl ether (MTBE)	0.014	0.0050	mg/Kg	1.00	11/02/2005 13:18	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	1.00	11/02/2005 13:18	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	1.00	11/02/2005 13:18	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	1.00	11/02/2005 13:18	
Surrogate(s)						
1,2-Dichloroethane-d4	92.6	76-124	%	1.00	11/02/2005 13:18	
Toluene-d8	98.2	75-116	%	1.00	11/02/2005 13:18	

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

Cambria Environmental Emeryville

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Project: 247-0524
98995758

Received: 10/28/2005 13:10

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Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2005/11/01-2B.69-050

Soil

Test(s): 8260B
QC Batch # 2005/11/01-2B.69
Date Extracted: 11/01/2005 18:50

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	11/01/2005 18:50	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	11/01/2005 18:50	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	11/01/2005 18:50	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	11/01/2005 18:50	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	11/01/2005 18:50	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	11/01/2005 18:50	
Benzene	ND	0.0050	mg/Kg	11/01/2005 18:50	
Toluene	ND	0.0050	mg/Kg	11/01/2005 18:50	
Ethyl benzene	ND	0.0050	mg/Kg	11/01/2005 18:50	
Total xylenes	ND	0.0050	mg/Kg	11/01/2005 18:50	
Surrogates(s)					
1,2-Dichloroethane-d4	103.8	76-124	%	11/01/2005 18:50	
Toluene-d8	91.2	75-116	%	11/01/2005 18:50	

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

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Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Soil** — **QC Batch # 2005/11/02-1A.62**

MB: 2005/11/02-1A.62-045 — Date Extracted: 11/02/2005 08:45

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	11/02/2005 08:45	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	11/02/2005 08:45	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	11/02/2005 08:45	
Di-isopropyl Ether (DIPE)	ND	0.010	mg/Kg	11/02/2005 08:45	
Ethyl tert-butyl ether (ETBE)	ND	0.0050	mg/Kg	11/02/2005 08:45	
tert-Amyl methyl ether (TAME)	ND	0.0050	mg/Kg	11/02/2005 08:45	
Benzene	ND	0.0050	mg/Kg	11/02/2005 08:45	
Toluene	ND	0.0050	mg/Kg	11/02/2005 08:45	
Ethyl benzene	ND	0.0050	mg/Kg	11/02/2005 08:45	
Total xylenes	ND	0.0050	mg/Kg	11/02/2005 08:45	
Surrogates(s)					
1,2-Dichloroethane-d4	95.0	76-124	%	11/02/2005 08:45	
Toluene-d8	101.6	75-116	%	11/02/2005 08:45	

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

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Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Soil** **QC Batch # 2005/11/01-2B.69**

LCS 2005/11/01-2B.69-029 Extracted: 11/01/2005 Analyzed: 11/01/2005 18:29

LCSD

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	0.0562		0.05	112.4			65-165	20		
Benzene	0.0410		0.05	82.0			69-129	20		
Toluene	0.0437		0.05	87.4			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	493		500	98.6			76-124			
Toluene-d8	455		500	91.0			75-116			

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

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Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Soil** **QC Batch # 2005/11/02-1A.62**

LCS 2005/11/02-1A.62-053 Extracted: 11/02/2005 Analyzed: 11/02/2005 07:53
LCSD 2005/11/02-1A.62-019 Extracted: 11/02/2005 Analyzed: 11/02/2005 08:19

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	0.0434	0.0459	0.05	86.8	91.8	5.6	65-165	20		
Benzene	0.0539	0.0544	0.05	107.8	108.8	0.9	69-129	20		
Toluene	0.0512	0.0501	0.05	102.4	100.2	2.2	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	427	458	500	85.4	91.6		76-124			
Toluene-d8	492	507	500	98.4	101.4		75-116			

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

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Project: 247-0524
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Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2005/11/01-2B.69**

MS/MSD

Lab ID: 2005-10-0617 - 005

MS: 2005/11/01-2B.69-005 Extracted: 11/01/2005 Analyzed: 11/01/2005 23:05

Dilution: 1.00

MSD: 2005/11/01-2B.69-027 Extracted: 11/01/2005 Analyzed: 11/01/2005 23:27

Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	0.166	0.257	0.267	0.045620	-221.4	-20.5	-166	65-165	20	M5	M5
Benzene	0.0718	0.0772	0.0867	0.045620	-32.7	-19.5	-50.	69-129	20	M5	M5
Toluene	0.0843	0.0969	0.0872	0.045620	-6.4	19.9	389.	70-130	20	M5	M5
Surrogate(s)											
1,2-Dichloroethane-d4	469	488		500	93.8	97.6		76-124			
Toluene-d8	474	455		500	94.8	91.0		75-116			

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

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Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2005/11/02-1A.62**

MS/MSD

Lab ID: 2005-11-0005 - 001

MS: 2005/11/02-1A.62-048 Extracted: 11/02/2005 Analyzed: 11/02/2005 09:48

Dilution: 1.00

MSD: 2005/11/02-1A.62-015 Extracted: 11/02/2005 Analyzed: 11/02/2005 10:15

Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	0.233	0.173	0.19	0.049603	86.7	350.2	120.	65-165	20		R1,M4
Benzene	0.0512	0.0524	ND	0.049603	103.2	106.1	2.8	69-129	20		
Toluene	0.0487	0.0481	ND	0.049603	98.2	97.4	0.8	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	449	445		500	89.8	89.0		76-124			
Toluene-d8	498	510		500	99.6	102.0		75-116			

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

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Legend and Notes

Result Flag

-

M4

MS/MSD spike recoveries were above acceptance limits.
See blank spike (LCS).

M5

MS/MSD spike recoveries were below acceptance limits.
See blank spike (LCS).

R1

Analyte RPD was out of QC limits.

SEVERN TRENT STL

Submission: 2005-10-0618

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville
Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SB-6-10.5`	10/27/2005 09:24	Soil	2

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Prep(s): 5030B
Sample ID: **SB-6-10.5`**
Sampled: 10/27/2005 09:24
Matrix: Soil

Test(s): 8260B
Lab ID: 2005-10-0618 - 2
Extracted: 11/4/2005 23:52
QC Batch#: 2005/11/04-3A.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	160	50	mg/Kg	1.00	11/04/2005 23:52	
Benzene	ND	0.50	mg/Kg	1.00	11/04/2005 23:52	
Toluene	ND	0.50	mg/Kg	1.00	11/04/2005 23:52	
Ethyl benzene	ND	0.50	mg/Kg	1.00	11/04/2005 23:52	
Total xylenes	ND	0.50	mg/Kg	1.00	11/04/2005 23:52	
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	1.00	11/04/2005 23:52	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	1.00	11/04/2005 23:52	
Di-isopropyl Ether (DIPE)	ND	1.0	mg/Kg	1.00	11/04/2005 23:52	
Ethyl tert-butyl ether (ETBE)	ND	0.50	mg/Kg	1.00	11/04/2005 23:52	
tert-Amyl methyl ether (TAME)	ND	0.50	mg/Kg	1.00	11/04/2005 23:52	
Surrogate(s)						
1,2-Dichloroethane-d4	80.5	53-129	%	1.00	11/04/2005 23:52	
Toluene-d8	94.3	47-136	%	1.00	11/04/2005 23:52	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville
Attn.: David Gibbs

5900 Hollis Street, Ste. A
Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2005/11/04-3A.62-000

Soil

Test(s): 8260B
QC Batch # 2005/11/04-3A.62
Date Extracted: 11/04/2005 23:00

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	mg/Kg	11/04/2005 23:00	
Benzene	ND	0.50	mg/Kg	11/04/2005 23:00	
Toluene	ND	0.50	mg/Kg	11/04/2005 23:00	
Ethyl benzene	ND	0.50	mg/Kg	11/04/2005 23:00	
Total xylenes	ND	0.50	mg/Kg	11/04/2005 23:00	
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	11/04/2005 23:00	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	11/04/2005 23:00	
Di-isopropyl Ether (DIPE)	ND	1.0	mg/Kg	11/04/2005 23:00	
Ethyl tert-butyl ether (ETBE)	ND	0.50	mg/Kg	11/04/2005 23:00	
tert-Amyl methyl ether (TAME)	ND	0.50	mg/Kg	11/04/2005 23:00	
Surrogates(s)					
1,2-Dichloroethane-d4	81.2	53-129	%	11/04/2005 23:00	
Toluene-d8	99.2	47-136	%	11/04/2005 23:00	

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Cambria Environmental Emeryville

Attn.: David Gibbs

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Emeryville, CA 94608
Phone: (510) 420-3363 Fax: (510) 420-9170

Project: 247-0524
98995758

Received: 10/28/2005 13:10

Site: 4255 MacAurther Blvd.

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Soil** **QC Batch # 2005/11/04-3A.62**

LCS 2005/11/04-3A.62-007 Extracted: 11/04/2005 Analyzed: 11/04/2005 22:07

LCSD 2005/11/04-3A.62-033 Extracted: 11/04/2005 Analyzed: 11/04/2005 22:33

Compound	Conc. mg/Kg		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Toluene	0.0506	0.0460	0.049603	102.0	92.9	9.3	70-130	20		
Benzene	0.0518	0.0509	0.049603	104.4	102.8	1.5	69-129	20		
Methyl tert-butyl ether (MTBE)	0.0501	0.0501	0.049603	101.0	101.2	0.2	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	186	189	250	74.4	75.6		53-129			
Toluene-d8	240	239	250	96.0	95.6		47-136			

STL-San Francisco

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

SHELL Chain Of Custody Record

98669

Shell Project Manager to be Invoiced:

- ☑ SCIENCE & ENGINEERING
- ☐ TECHNICAL SERVICES
- ☐ CRMT HOUSTON

2005-10-0618

Denis Brown

INCIDENT NUMBER (S&E ONLY): 9 8 9 9 5 7 5 8

SAP or CRMT NUMBER (TS/CRMT):

DATE: 10/27/05

PAGE: 1 of 1

SAMPLING COMPANY: CAMBRIA ENVIRONMENTAL TECHNOLOGY INC	LOG CODE:
ADDRESS: 5900 HOLLIS ST, Suite A, Emeryville, CA 94608	
PROJECT CONTACT (Hardcopy or PDF Report to): David Gibbs	
TELEPHONE: 510-420-3363	FAX: 510-420-9170
E-MAIL: dgibbs@cambria-env.com	

SITE ADDRESS (Street and City): 4255 MacAurther Blvd.		GLOBAL ID NO.: T0600101261	
EDF DELIVERABLE TO (Responsible Party or Designee): N/A	PHONE NO.: N/A	E-MAIL: N/A	CONSULTANT PROJECT NO.: 247-0524
SAMPLER NAME(S) (Print): Bill DeBoer			LAB USE ONLY

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: ______

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

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

CC RESULTS TO
BDEBOER@CAMBRIA-ENV.COM

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Purgeable	TPH - Extractable (8015m)	BTEX	MTBE	TBA	5 Oxygenates	1,2 DCA and EDB	Ethanol	Methanol	VOCs by 8260B	Semi-Volatiles by 8270C	Lead ☐ Total ☐ STLC ☐ TCLP	LUFT5 ☐ Total ☐ STLC ☐ TCLP	CAM17 ☐ Total ☐ STLC ☐ TCLP	Test for Disposal						FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
																										TEMPERATURE ON RECEIPT C°: 3° ✓
✓	SB-6-5'	10/27	914	SO	1	X		X			X															
✓	SB-6-10.5'		924		1																					
✓	SB-6-15'		940		1																					
✓	SB-6-20'		952		1																					
✓	SB-6-25'		1015		1																					
✓	SB-8-5'		1224		1																					
✓	SB-8-10'		1235		1																					
✓	SB-8-15'		1238		1																					
✓	SB-8-20'		1248		1																					

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature]	10/27/05	13:10
Relinquished by: (Signature)	Received by: (Signature)	Date: 10-28-05	Time: 14:47
[signature]	[signature]		
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

ATTACHMENT E

Disposal Confirmation

MANLEY & SONS TRUCKING, INC.
SACRAMENTO, CA
DEMO
LOW BED - LOADERS
HAZARDOUS WASTE HAULING
AGGREGATES
SAND - GRAVEL
FILL DIRT
CA 0009430
(916) 381-6864

Hazardous Waste Hauler (Registration # 2843)
P.O. Box 292547 * Sacramento, CA 95829 * FAX 916-381-1573

Disposal Confirmation

Request for Transportation Received: 10/28/2005

Consultant Information

Company:	Cambria
Contact:	Ron Barone
Phone:	510-420-3308
Fax:	510-420-9170

Site Information

PO #	
Street Address:	4255 MacAuthur Blvd
City, State, ZIP:	Oakland, CA
Customer:	Shell Oil Company RESA-0023-LDC
RIPR #:	48882
SAP # / Location:	NA
Incident #:	98995758
Location / WIC #:	NA
Environmental Engineer:	Denis Brown
Material Description:	Soil
Estimated Quantity:	2 small stockpiles ~2 cy
Service Requested Date:	ASAP
Disposal Facility:	Forward Landfill
Contact:	Scott
Phone:	800 204-4242
Approval #:	5922
Date of Disposal:	11/03/05
Actual Tonnage	.55 tons
Transporter:	Manley & Sons Trucking, Inc.
Contact:	Jennifer Rogers
Phone:	916 381-6864
Fax:	916 381-1573
Invoice:	200511-4
Date of Invoice:	11/07/05