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HWANG

MILLER BROOKS
Environmental, Inc.

October 21, 2002

Alameda County
OCT 30 2002
Environmental Health

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

Re: **Subsurface Investigation Report**
Shell-branded Service Station
5755 Broadway Avenue, Oakland, California
Incident #98995756

Dear Ms. Drogos:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), Miller Brooks Environmental, Inc. (Miller Brooks) is submitting this Subsurface Investigation Report. The work was performed in order to define the on- and off-site extent of hydrocarbons and fuel oxygenates in soil and groundwater and to assess to preferential migration of contaminants along the utility corridor. The site background, investigative methodology and results of the subsurface investigation are presented below.

SITE BACKGROUND

Site Description

This Shell-branded service station is located on the northern corner of the Broadway and Taft Street intersection in Oakland, California (Figures 1 and 2). The area surrounding the site is mixed commercial and residential. The background information is referenced from Cambria Environmental Technology's (Cambria) August 2002 *Site Summary Report.*

1985 Soil and Groundwater Investigation

In July 1985, EMCON Associates (EMCON) conducted a subsurface investigation. The investigation consisted of advancing two onsite soil borings and converting one boring into groundwater monitoring well S-1. The maximum detection of total petroleum hydrocarbons as gasoline (TPH-G) was 3 milligrams per kilogram (mg/kg) in soil boring S-A at 4.0 feet below ground surface (bgs). Details of the EMCON investigation are presented in the EMCON report dated August 1, 1985.

1992 Product Release and Tank Backfill Well Purging

In December 1992, Gettler-Ryan of Hayward, California replaced an unleaded pipe fitting reported to have released about 200 gallons of gasoline. Tank backfill well purging was conducted on a daily basis from December 24, 1992 through January 7, 1993, at which point the free product that was originally observed in the well was reduced to a sheen. According to Shell records, a total of about 40,000 gallons of mixed water and gasoline were purged from the tank backfill well.

1993 Soil Sample and Sanitary Sewer Upgrade

Concurrent with purging free product from tank backfill wells, three trenches at the southeast corner of the site were excavated to identify hydrocarbon-impacted areas near sewer piping. Soil samples collected within the trench excavations were collected from 4 to 12 feet bgs. The highest concentration of TPH-G from the sewer trench excavations was 1,300 mg/kg in sample S-J at 4 feet bgs (Figure 2).

The onsite sanitary sewer piping and portions of the offsite sewer piping were replaced with piping resistant to hydrocarbon penetration. Additionally, a horizontal groundwater extraction well was installed within the excavated sewer trench below a section of sewer piping. A grout barrier was also installed in the sewer trench to prevent further offsite migration of residual hydrocarbons. Approximately 126 cubic yards of soil were excavated during sewer upgrade activities. Details of the soil investigation, sewer replacement, grout barrier installation, and horizontal well installation are presented in Weiss Associates' June 18, 1993 report.

1998 Dispenser Upgrade

In March, 1998, Paradiso Mechanical of San Leandro, California performed station upgrades by adding secondary containment to the existing dispensers and the turbine pumps. Soil samples, collected below each dispenser at approximately 2 feet bgs, indicated the presence of hydrocarbons in the subsurface. The highest detected TPH-G concentration was 990 mg/kg in sample D-4. The highest detected concentration of methyl tertiary butyl ether (MTBE) by EPA Method 8020 was 9.8 mg/kg in sample D-3. The highest detected benzene concentration was 1.8 mg/kg in sample D-4 (Figure 2). Details of the dispenser upgrades activities were presented in Cambria's April 9, 1998 *Dispenser Sampling Report.*

On-site Groundwater Characteristics

Depth to groundwater measured on-site has ranged from 0.5 to 4.8 feet bgs since groundwater monitoring was initiated in January of 1991. The groundwater flow is generally towards the south at a gradient of 0.03 ft/ft. Groundwater field data is collected on a quarterly basis by Blaine Tech Services as part of the quarterly groundwater monitoring program for this site. Groundwater quality data collected during the second quarter 2002 indicate low to moderate benzene concentrations and elevated MTBE concentrations at the down gradient portion of the service station. Recent groundwater flow and on-site quality data are shown on Figure 3.

SUBSURFACE INVESTIGATION - OBJECTIVE

The objective of the employed subsurface investigation work was to define the lateral and vertical extent of hydrocarbons and fuel oxygenates in soil and groundwater. In addition, the work performed westerly on Taft Street along the utility corridor served to determine if the utility trench served as a preferential migration pathway for fuel-related contamination. The tasks proposed were submitted to the Alameda County Health Care Services Agency in Cambria's January 24, 2002 "*On/Offsite Subsurface Investigation Workplan*".

The tasks conducted to meet the project objective included the advancement of eleven (11) direct-push soil borings down gradient and adjacent to the dispenser islands and underground storage

tanks, along the down gradient edge of the site, and along the center utility trench on Taft Street. The locations of these borings were based on the analytical results from previous soil and groundwater investigations performed at the site and the concern for contaminant migration along the utility trench. The soil boring locations are indicated on Figure 3. The field work was competed by Cambria.

Prior to drilling Cambria obtained the required agency permits. Permits were acquired from Alameda County Public Works Agency (Permit No W2-0767) and from the City of Oakland to drill in Taft St. Traffic safety plans were also submitted to the City for the soil borings drilled in the street. The site was also marked out for underground utility clearance by Cambria prior to the start of work.

SUBSURFACE INVESTIGATION – METHODOLOGY

Eleven (11) soil borings were drilled and associated soil samples collected for the purpose of additional delineation as noted above. The work was performed on August 6 – 7, 2002 by Cambria.

Soil Borings and Groundwater Sampling

As proposed in the project workplan, Cambria supervised the drilling of eleven (11) soil borings. The borings were drilled using a direct-push drill rig operated by Gregg Drilling of Martinez, California. Four of the borings (B-1 through B-4) were located in Taft Street and the remaining seven borings (B-5 through B-11) were located on-site in areas immediately down gradient of the existing UST bed and each dispenser island. The boring locations are shown on Figure 4. Borings B-1 through B-6 were advanced to a depth of 15 feet bgs and due to refusal, borings B-7 through B-11 were advanced to depths ranging from 10 to 11 feet bgs. The work was conducted in accordance with Cambria's field procedures (Attachment A).

Soil Sampling

Soil samples were collected at five-foot intervals from each boring advanced using direct-push sampling methods and selected soil samples were prepared for chemical analysis. The soil was logged on-site by James Loetterle of Cambria. The soils were also screened on-site for visual and olfactory indications of fuel-type contamination. The soil samples were submitted to the project laboratory, Kiff Analytical of Davis, California, an ELAP DHS certified laboratory in a chilled container and under the project chain of custody form. The samples were analyzed by Kiff for TPH-G, BTEX and MtBE by USEPA method 8260B.

Groundwater Sampling

Upon completion of the soil sampling the borings were allowed to remain open to facilitate recharge of groundwater into the borings. Grab groundwater samples were collected from each boring advanced. The samples from borings, B-1 through B-5 were collected on August 6, 2002 and groundwater samples from B-6 through B-10 were collected on August 7, 2002. The groundwater sample from B-11 had to be collected on August 8, 2002 to allow ample time for recharge. The groundwater samples were submitted to Kiff Analytical in a chilled container and under the project chain of custody form. The samples were analyzed by Kiff for TPH-G, BTEX and MtBE by USEPA method 8260B.

Soil Boring Abandonment

Upon completion of sample collection the borings were abandoned by Cambria and Gregg Drilling. The borings were grouted to grade using a Portland cement slurry. The surface was finished in-kind with the existing grade.

SUBSURFACE INVESTIGATION - RESULTS

Soil Sampling

Soil samples were logged by Cambria at five-foot intervals from each boring drilled by Gregg. According to Cambria's boring logs the soil is composed predominantly of fine-grained sands (clayey and silty sands). Previous investigations confirm the presence of silty sands and clayey sands in subsurface soils to a maximum explored depth of 22-feet bgs. Petroleum odors were noted in shallow (<5 feet bgs) samples collected from borings B-9, B-10 and B-11. The boring logs are available in Attachment B for your reference.

Analytical results of the soil sampling event indicated soils free of, or very low in, detectable quantities of chemical constituents analyzed for. Soil samples collected from all of the off-site borings (B-1, B-2, B-3 and B-) and on-site boring, B-7, were free of measurable amounts all chemicals tested for. The soil samples (B-2, B-3 and B-4) collected in order to determine impacts to the utility trench located on Taft Street indicated soils free of detectable concentrations of contaminants. The analytical results have been compiled onto Table 1 and are also shown on the attached Hydrocarbon Distribution in Soil Map (Figure 4). The laboratory data from Kiff are presented in Attachment C.

The remaining soil samples, collected from borings located on-site, showing detectable quantities of TPH-G concentrations, ranged from 1.9 mg/l (B-11) to 260 mg/l (B-5). Detectable benzene concentrations were less than 0.096 mg/l in all samples analyzed for. Concentrations of toluene were detected in one sample, B-9-5.0, which was found in boring B-9 at five feet bgs at a concentration of 0.028 mg/l. Concentrations of ethylbenzene were not measured in any sample exceeding 1.6 mg/l and concentrations of total xylenes were below 6.7 mg/l for all samples. Fuel oxygenate MTBE was only found in one sample (B-9-5.0) from boring B-9 at a depth of 5 feet bgs at 0.9 mg/l.

Grab Groundwater Sample Results

At the time of drilling, Cambria noted the depth to first encountered groundwater for each boring. As documented on the attached boring logs (Attachment B) groundwater was measured between 4.5 bgs in B-5 to 13.5 bgs in B-6.

The analytical results from the grab groundwater samples collected from off-site borings (B-1 through B-4) indicate the absence of detectable levels of all constituents analyzed for with the exception of boring B-1. Boring B-1 showed detectable levels of MTBE with a reported measurement of 3,500 µg/l, whereas all other constituents were below the laboratory detection limits. The groundwater samples from boring B-2, B-3 and B-4, collected in order to determine impacts to the utility trench located on Taft Street, indicated groundwater free of detectable concentrations of contaminants analyzed for. The grab groundwater results were compiled on Table 2 and are also shown in the attached Dissolved-Phase Hydrocarbon Distribution Map (Figure 5). The analytical data from Kiff is presented in Attachment C.

The groundwater samples collected from on-site borings (B-5 through B-11) indicated elevated concentrations of chemicals tested for. The highest concentration of TPH-G was detected from boring B-8 at 66,000 µg/l. Concentrations of benzene ranged from less than 5.0 µg/l (B-7) to 1,800 µg/l (B-10). Toluene concentrations ranged from less than 5.0 µg/l (B-5, B-6, B-7) to 78 µg/l (B-8) and ethylbenzene concentrations ranged from 3.4 µg/l (B-7) to 2,600 µg/l (B-8). Concentrations of total xylenes ranged from 11 µg/l (B-7) to 12,000 µg/l (B-8). The fuel oxygenate MTBE was detected in all on-site groundwater samples. The maximum MTBE concentration detected was 9,100 µg/l from boring B-10 and the minimum detected was 30 µg/l from boring B-6.

CONCLUSIONS

Off-site soils collected from the sample areas do not indicate impacts originating from the Shell service station;

Soil samples from the on-site investigation demonstrate only negligible impacts to the areas sampled, indicating that the contamination exists primarily in the dissolved phase;

Results from the off-site investigation indicate that the utility conduits traveling west along Taft Street have not been impacted by fuel-related hydrocarbons nor act as a preferential pathway for contaminant migration;

The down gradient boring B-1 located off-site does indicate MTBE impacts, thereby leaving the down gradient edge of the fuel oxygenate plume undefined;

Concentrations of MTBE are highest in the areas proximal to the dispenser islands and eastern side of the tank bed.

Concentrations measured from the grab groundwater samples do not correspond to the samples collected regularly from well S-1, indicating that well S-1 may be immediately on the edge of the on-site contaminant plume or is not functioning correctly (i.e. screen is silted-up, screen is submerged etc.).

RECOMMENDATIONS

Based on the results of this investigation it is recommended that the competence of Well S-1 be evaluated. Well S-1 is located in a strategic position to monitor the detected contaminants in the dissolved-phase plume surrounding the dispenser islands. Monitoring well S-1 is sampled biannually during the first and third quarters, and as such will be redeveloped during the next scheduled event in February 2003.

As discussed above MTBE was detected off-site leaving the down gradient edge of the MTBE plume undefined. Based on this finding, it is recommended that additional down gradient delineation of the MTBE plume be performed through the advancement of off-site direct push borings down gradient of Boring B-1.

To address the dissolved-phase contaminant plume and to mitigate further off-site impacts, Shell has directed Miller Brooks to install an interim remediation system to remediate fuel hydrocarbon impacted groundwater. The system is currently in the development and design phase and an Interim Remediation Workplan is now being prepared by Miller Brooks. We will forward this workplan to you for review and comment upon its completion.

CLOSING

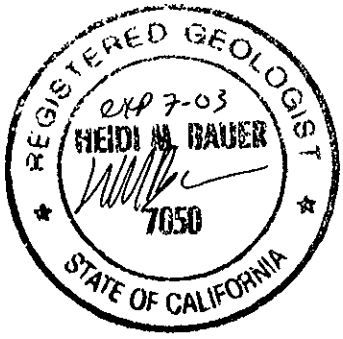
The conclusions presented herein are based solely upon the agreed upon scope of work outlined in this report. Miller Brooks makes no warranties or guarantees as to the accuracy or completeness of information provided or compiled by others. It is possible that information exists beyond the scope of this investigation. Additional information, which was not found or available to Miller Brooks at the time of writing this report, may result in modification of the conclusions presented. This report is not a legal opinion. The services performed by Miller Brooks have been conducted in a manner consistent with the level of care ordinarily exercised by members of our profession currently practicing under similar conditions. No other warranty, expressed or implied, is made. This investigation was supervised or personally conducted by the licensed professional whose signature and license number appear below.

If you have any questions regarding this report please do not hesitate to call us at (510) 891-0092.

Thank you.

Sincerely,

Miller Brooks Environmental, Inc.



Heidi M. Bauer, R.G. 7050
Senior Geologist

Darren Butler
Senior Staff Geologist

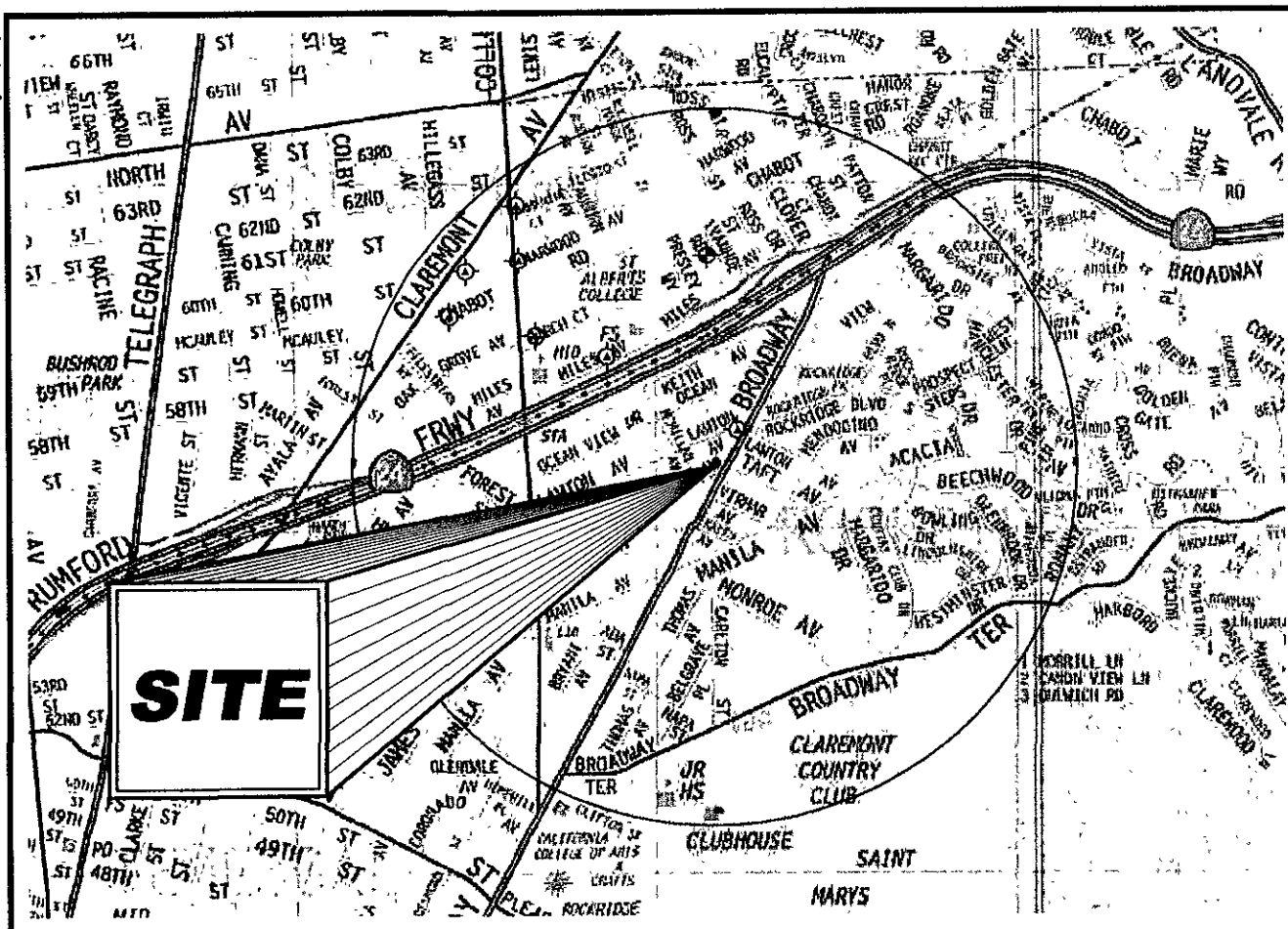
Figures:
1 - Vicinity/Well Survey Map
2 – Site Plan
3 - Groundwater Contour Map and Well Concentration Map
4 – Hydrocarbon Distribution in Soil Map
5 – Hydrocarbon Distribution in Groundwater Map

Tables:
1 - Soil Samples - Analytical Data
2 – Grab Groundwater Samples – Analytical Data

Attachments:
A – Cambria's Standard Field Procedures for Geoprobe Sampling
B – Borings Logs (B-1 through B-11)
C – Kiff Analytical Laboratory Data report

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

FIGURES



LEGEND

- WATER PRODUCING WELL
- OTHER WELLS
- STUDY AREA (1/2 MILE RADIUS)

FROM: U.S. GEOLOGICAL SURVEY, 1967
QUADRANGLE: OAKLAND
COUNTY: ALAMEDA
SERIES: 7.5-MINUTE QUAD

NOTE: ALL BOUNDARIES AND LOCATIONS ARE APPROXIMATE

N
W E
S

0 2000 Feet
SCALE

MILLER BROOKS Environmental, Inc.
2425 W. 14TH STREET, D-2
OAKLAND, CA.
(510) 891-0092

PROJECT NO. 06-155-0303-01

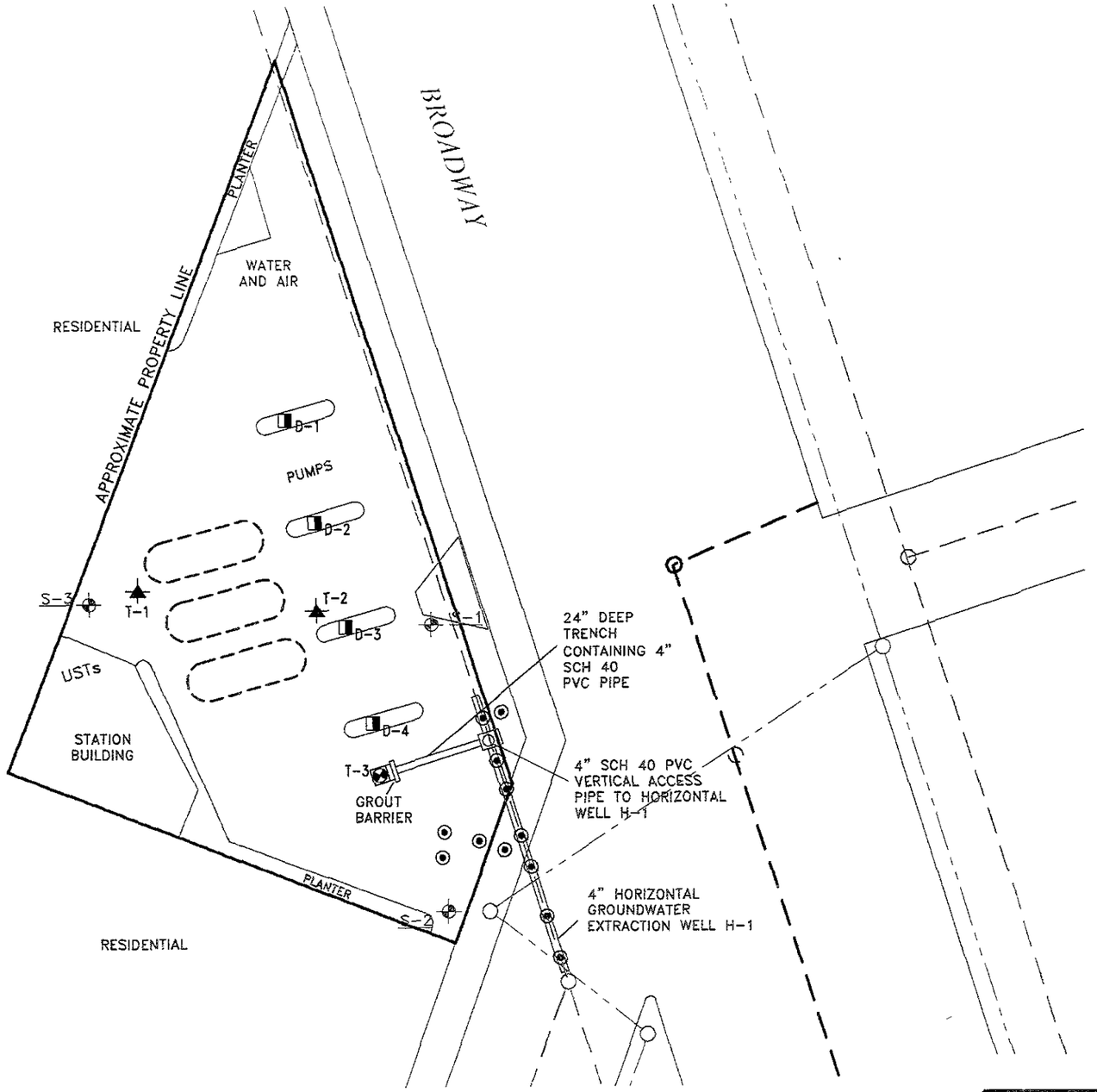
DRAWN BY:	PEL
DATE:	02/05/01
REVISED BY:	DWB
REVISED:	10/3/02
APPROVED BY:	DWB
DATE:	10/3/02

VICINITY/WELL SURVEY MAP

SHELL SERVICE STATION
5755 BROADWAY AVE.
OAKLAND, CA.

FIGURE 1

FILE: K:\DWGS\EQUILON\OAKLAND (105 5TH ST.)\HYD. IN SOIL MAP
DATE PLOTTED: 09/26/02



LEGEND

- S-3 — GROUNDWATER MONITORING WELL
- D-2 — DISPENSER SAMPLE LOCATION
- T-1 — TANK BACK FILL
- SOIL SAMPLE LOCATION (2/93)
- SANITARY SEWER LINE
- STORM DRAIN
- OVERHEAD POWERLINE
- UNDERGROUND STORAGE TANK (UST)
- DISPENSER ISLAND (PUMP)

N E S W

0 30 FEET
SCALE

	DRAWN BY: AIL	SITE PLAN	FIGURE 2
	DATE: 10/01/02		
	REVISED BY: AIL		
2425 W. 14TH STREET, D-2 OAKLAND, CA. (510) 891-0092	REVISED: 10/01/02	SHELL SERVICE STATION 5755 BROADWAY AVE. OAKLAND, CA.	
	APPROVED BY: DWB		
PROJECT NO. 06-155-0303-01	DATE: 10/01/02	FILE K:\DWGS\EQUILON\ANAHEIM\(5755 BROADWAY)\SITE PLAN DATE PLOTTED: 10/01/02	

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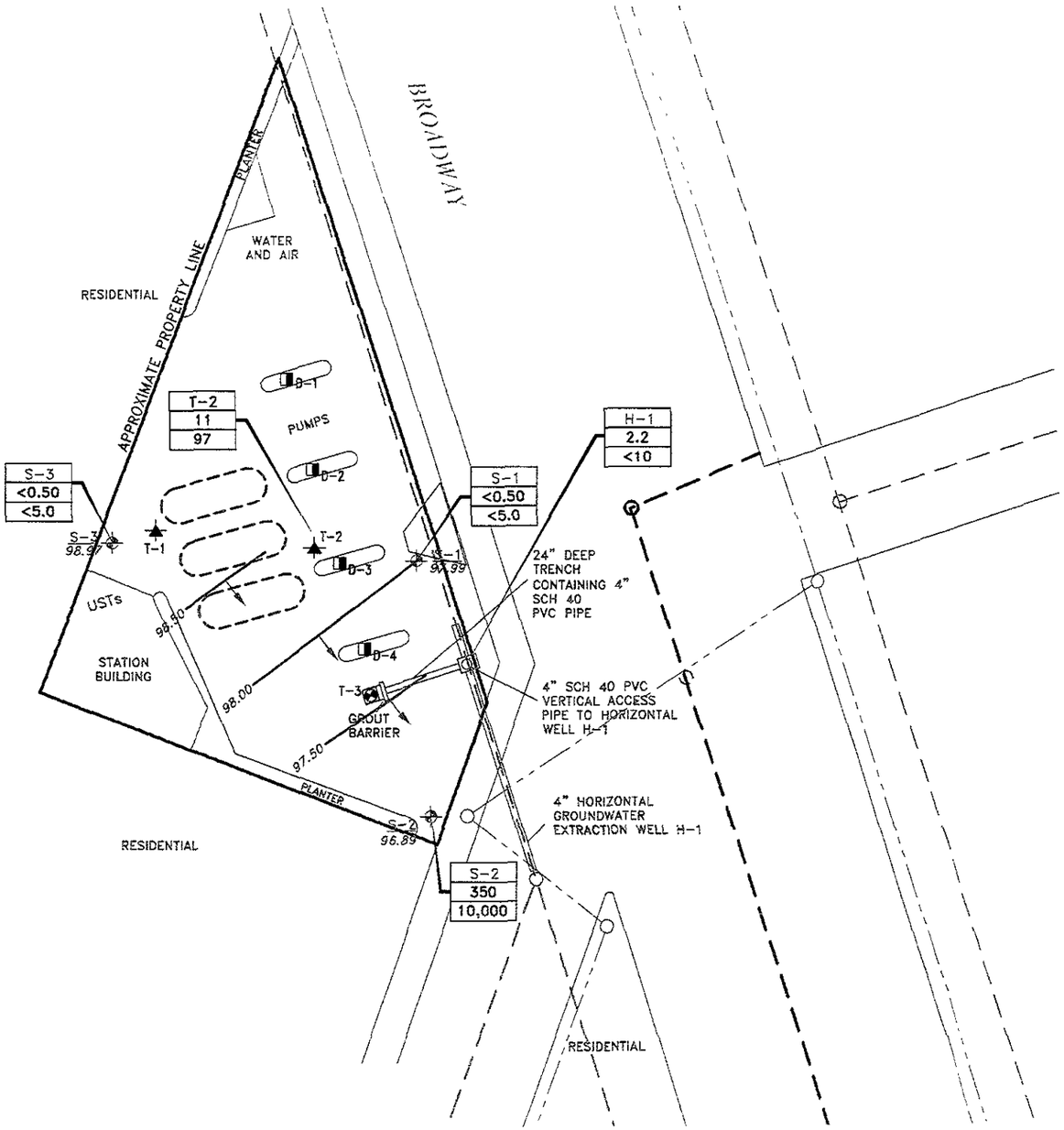

LEGEND

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- SOIL SAMPLE LOCATION (2/93)
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- STORM DRAIN
- OVERHEAD POWERLINE
- UNDERGROUND STORAGE TANK (UST)
- DISPENSER ISLAND (PUMP)
- ID / BENZ / MTBE — DISSOLVED-PHASE HYDROCARBON CONCENTRATIONS (ug/L)

NOTES:

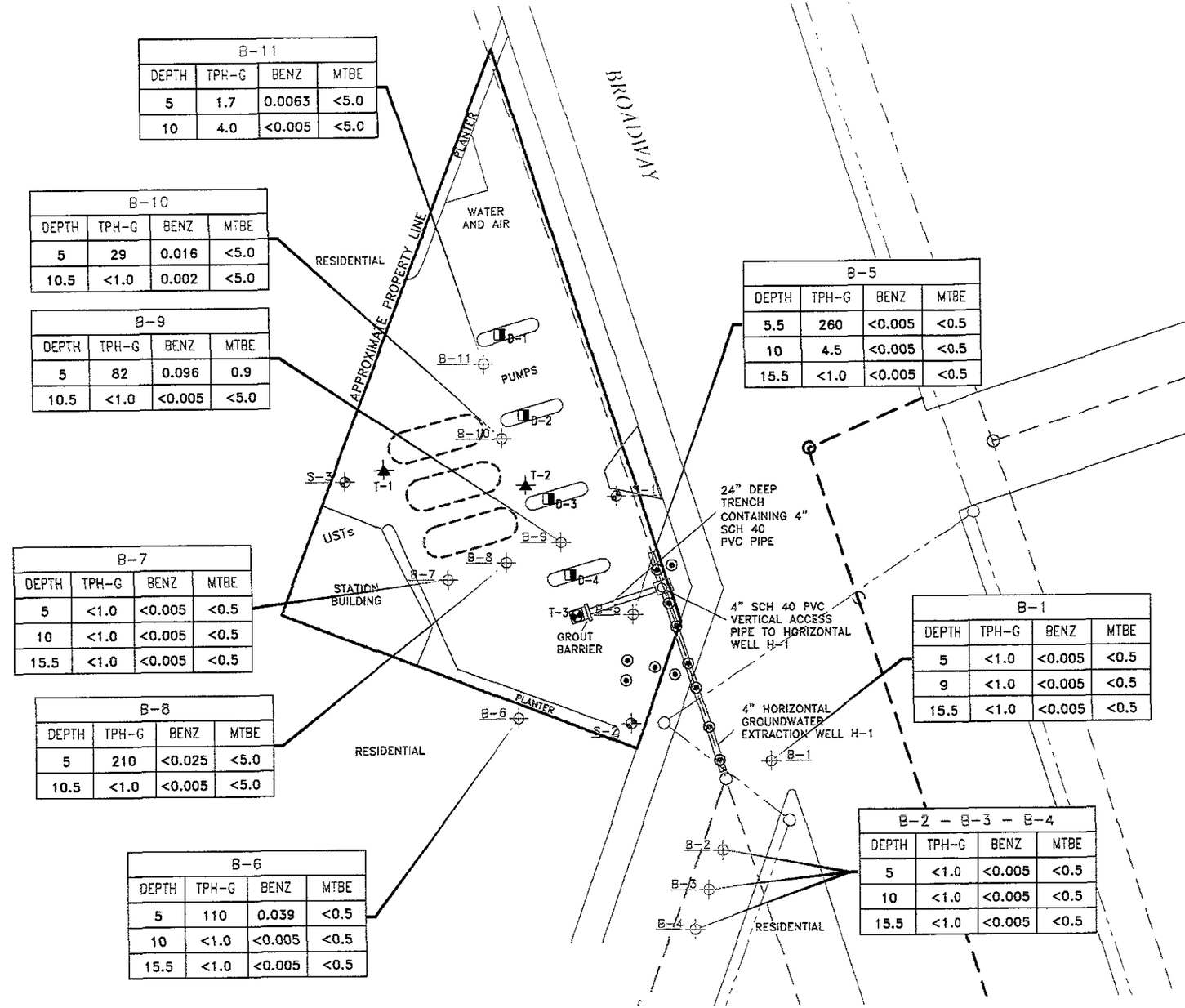
1) DISSOLVED-PHASE DATA ARE BASED ON GROUNDWATER SAMPLING CONDUCTED ON JULY 25, 2002.
2) B = BENZENE, MTBE = METHYL TERTIARY BUTYL ETHER, ANALYZED USING EPA METHOD 8260B, ug/L = MICROGRAMS PER LITER, ND = NOT DETECTED AT LIMIT INDICATED ON OFFICIAL LABORATORY REPORT.

N E W S

0 30 FEET
SCALE

	DRAWN BY: AIL DATE: 10/01/02 REVISED BY: AIL	GROUNDWATER GRADIENT AND CONCENTRATION MAP (JULY 25, 2002)	FIGURE 3
2425 W. 14TH STREET, D-2 OAKLAND, CA. (510) 891-0092	REVISED: 10/02/02 APPROVED BY: DWB	SHELL SERVICE STATION 5755 BROADWAY AVE. OAKLAND, CA.	
PROJECT NO. 06-155-0303-01	DATE: 10/08/02	FILE K:\DWGS\EQUILON\ANAHEIM\(2100 S HARBOR BLVD)\SITE PLAN DATE PLOTTED:	

lb-b1.dwg-09/21/00



B-11			
DEPTH	TPH-G	BENZ	MTBE
5	1.7	0.0063	<5.0
10	4.0	<0.005	<5.0

B-10			
DEPTH	TPH-G	BENZ	MTBE
5	29	0.016	<5.0
10.5	<1.0	0.002	<5.0

B-9			
DEPTH	TPH-G	BENZ	MTBE
5	82	0.096	0.9
10.5	<1.0	<0.005	<5.0

B-7			
DEPTH	TPH-G	BENZ	MTBE
5	<1.0	<0.005	<0.5
10	<1.0	<0.005	<0.5
15.5	<1.0	<0.005	<0.5

B-8			
DEPTH	TPH-G	BENZ	MTBE
5	210	<0.025	<5.0
10.5	<1.0	<0.005	<5.0

B-6			
DEPTH	TPH-G	BENZ	MTBE
5	110	0.039	<0.5
10	<1.0	<0.005	<0.5
15.5	<1.0	<0.005	<0.5

B-5			
DEPTH	TPH-G	BENZ	MTBE
5.5	260	<0.005	<0.5
10	4.5	<0.005	<0.5
15.5	<1.0	<0.005	<0.5

B-1			
DEPTH	TPH-G	BENZ	MTBE
5	<1.0	<0.005	<0.5
9	<1.0	<0.005	<0.5
15.5	<1.0	<0.005	<0.5

B-2 - B-3 - B-4			
DEPTH	TPH-G	BENZ	MTBE
5	<1.0	<0.005	<0.5
10	<1.0	<0.005	<0.5
15.5	<1.0	<0.005	<0.5

LEGEND

- S-3 — GROUNDWATER MONITORING WELL
- D-2 — DISPENSER SAMPLE LOCATION
- T-1 — TANK BACK FILL
- B-11 — SOIL BORING LOCATION
- SOIL SAMPLE LOCATION (2/93)
- SANITARY SEWER LINE
- STORM DRAIN
- OVERHEAD POWERLINE
- UNDERGROUND STORAGE TANK (UST)
- DISPENSER ISLAND (PUMP)

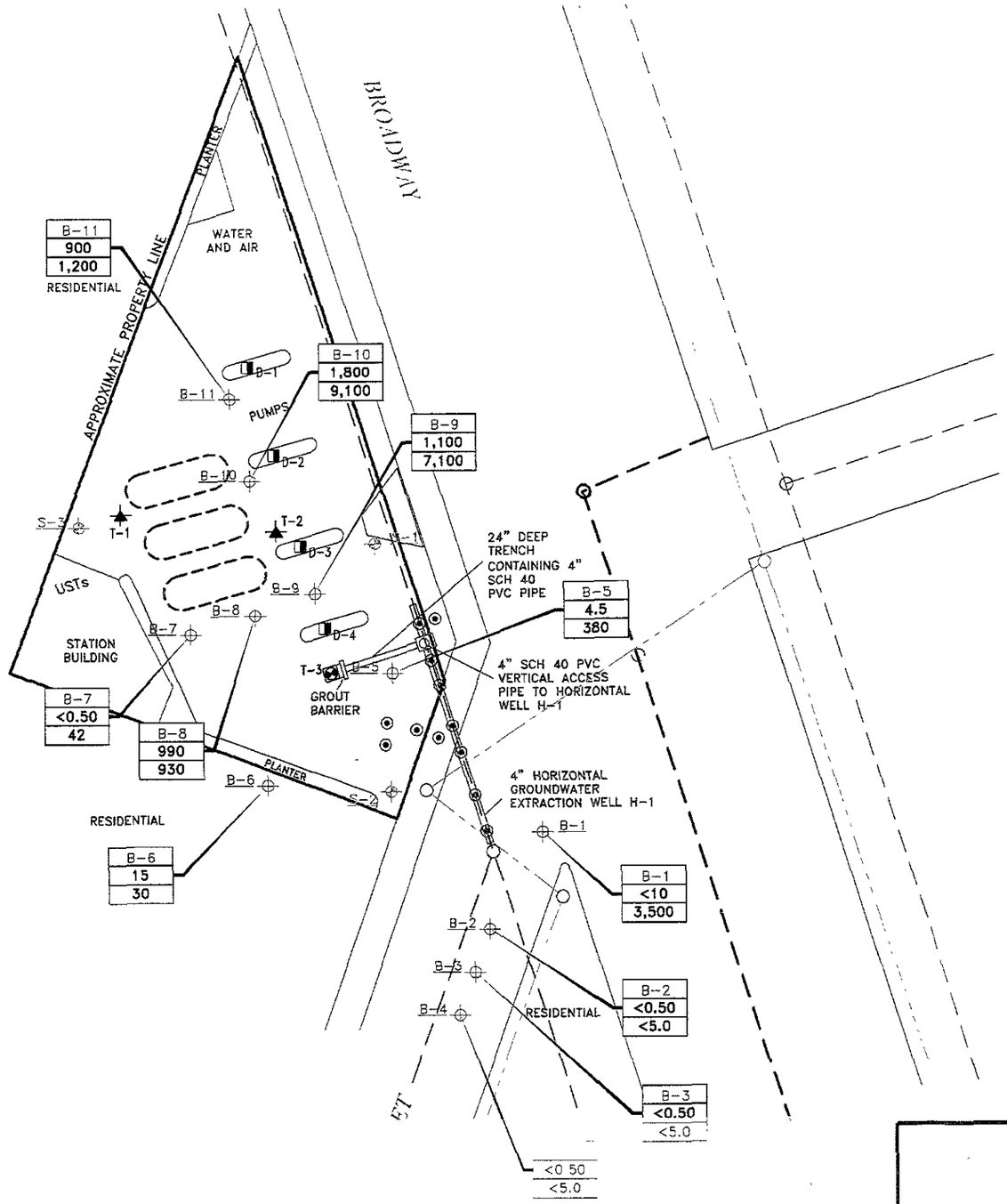
B-11			
DEPTH	TPH-G	BENZ	MTBE
5	1.7	0.0063	<5.0
10	4.0	<0.005	<5.0

SOIL HYDROCARBON CONCENTRATIONS (mg/kg)

N E W S

0 30 FEET
SCALE

	DRAWN BY: AIL	SOIL HYDROCARBON CONCENTRATION DISTRIBUTION MAP	FIGURE 4
	DATE: 10/01/02		
	REVISED BY: AIL		
2425 W. 14TH STREET, D-2 OAKLAND CA. (510) 891-0092	REVISED: 10/02/02	SHELL SERVICE STATION 5755 BROADWAY AVE. OAKLAND, CA.	
	APPROVED BY: DWB		
PROJECT NO. 06-155-0303-01	DATE 10/08/02	FILE K:\DWGS\EQUILON\ANAHEIM\(2100 S HARBOR BLVD)\SITE PLAN DATE PLOTTED:	



LEGEND

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- SANITARY SEWER LINE
- STORM DRAIN
- OVERHEAD POWERLINE
- UNDERGROUND STORAGE TANK (UST)
- DISPENSER ISLAND (PUMP)

ID
BENZ
MTBE

DISSOLVED-PHASE HYDROCARBON CONCENTRATIONS (ug/L) COLLECTED FROM DIRECT-PUSH SOIL BORINGS (AUGUST 2002)

NA NOT ANALYZED

N E W S

0 30 FEET
SCALE

	DRAWN BY: AIL	DISSOLVED-PHASE HYDROCARBON DISTRIBUTION MAP (AUGUST 2002)	FIGURE 5
	DATE: 10/01/02		
	REVISED BY AIL		
2425 W. 14TH STREET, D-2 OAKLAND, CA. (510) 891-0092	REVISED 10/01/02	SHELL SERVICE STATION 5755 BROADWAY AVE. OAKLAND, CA.	
	APPROVED BY: DWB		
PROJECT NO. 06-155-0303-01	DATE 10/08/02	FILE: K:\DWGS\EQUILON\ANAHEIM\(2100 S HARBOR BLVD)\SITE PLAN DATE PLOTTED	

TABLES

Table 1. Soil Analytical Data - Shell-branded Service Station - 5755 Broadway, Oakland, California - Incident # 98995756

Sample ID	Depth (feet)	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes
		← (Concentrations reported in mg/Kg) →					
August 6 and 7, 2002 Samples:							
B-1-5.0	5.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.010
B-1-9.0	9.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-1-15.5	15.5	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-2-5.0	5.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.010
B-2-10.0	10.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-2-15.5	15.5	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-3-5.0	5.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-3-10.0	10.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-3-15.5	15.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-4-5.0	5.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-4-10.0	10.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-4-15.5	15.5	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-5-5.5	5.5	**260**	<0.5	<0.005	<0.005	**1.6**	**6.7**
B-5-10.0	10.0	**4.5**	<0.5	<0.005	<0.005	**0.018**	**0.021**
B-5-15.5	15.5	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-6-5.0	5.0	**110**	<0.5	**0.039**	<0.025	**1.5**	**0.3**
B-6-10.0	10.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-6-15.5	15.5	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-7-5.0	5.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-7-10.5	10.5	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-8-5.0	5.0	**210**	<0.5	<0.025	<0.025	**2.2**	**3.8**
B-8-10.5	10.5	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-9-5.0	5.0	**82**	**0.9**	**0.096**	**0.028**	**0.85**	**4.3**
B-9-10.5	10.5	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005

Table 1. Soil Analytical Data - Shell-branded Service Station - 5755 Broadway, Oakland, California - Incident # 98995756

Sample ID	Depth (feet)	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes
		← (Concentrations reported in mg/Kg) →					
B-10-5.0	5.0	**29**	<0.5	**0.016**	<0.005	**0.060**	**0.018**
B-10-10.5	10.5	<1.0	<0.5	<0.005	<0.005	<0.005	**0.014**
B-11-5.0	5.0	**1.7**	<0.5	**0.0063**	<0.005	**0.019**	**0.018**
B-11-10.5	10.5	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8260B.
MTBE = Methyl tert-butyl ether by EPA Method 8260B.
Benzene, ethylbenzene, toluene, total xylenes by EPA Method 8260B.
mg/Kg = milligrams per kilogram = parts per million
<n = Below detection limit of n ppm.

Table 2. Grab Groundwater Analytical Data - Shell-branded Service Station - 5755 Broadway, Oakland, California - Incident # 98995756

Sample ID	Depth (feet)	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes
		←	←	(Concentrations reported in µ/L)		→	→
August 6 and 7, 2002 Samples:							
B-1-W	NM	<1000	**3,500**	<10	<10	<10	<10
B-2-W	NM	<50	<5.0	<0.50	<0.50	<0.50	<0.50
B-3-W	NM	<50	<5.0	<0.50	<0.50	<0.50	<0.50
B-4-W	NM	<50	<5.0	<0.50	<0.50	<0.50	<0.50
B-5-W	NM	**12,000**	**380**	**4.5**	<2.0	**350**	**340**
B-6-W	NM	**680**	**30**	**15**	<0.50	**49**	**18**
B-7-W	NM	**370**	**42**	<0.50	<0.50	**3.4**	**11**
B-8-W	NM	**66,000**	**930**	**990**	**78**	**2,600**	**12,000**
B-9-W	NM	**21,000**	**7,100**	**1,100**	**47**	**650**	**3,300**
B-10-W	NM	**31,000**	**9,100**	**1,800**	**66**	**1,300**	**4,200**
B-11-W	NM	**28,000**	**1,200**	**900**	<10	**980**	**2,500**

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B.
MTBE = Methyl tertiary butyl ether, analyzed by EPA Method 8260B
Benzene, ethylbenzene, toluene, total xylenes analyzed by EPA Method 8260B.
µg/L = micrograms per liter = parts per billion
<n = Below detection limit of n parts per billion.
NM = not measured

ATTACHMENT A

CAMBRIA

STANDARD FIELD PROCEDURES FOR MONITORING WELL INSTALLATION

This document presents standard field methods for drilling and sampling soil borings and installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

SOIL BORINGS

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Registered Geologist (RG).

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. 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 at the bottom of the borehole.

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 Analysis

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 volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and groundwater 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 groundwater 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. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

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.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

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

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

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

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

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

Groundwater Sampling

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

Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite and covered by plastic sheeting. At least three individual soil samples are collected from the stockpiles and composited at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples in addition to any analytes required by the receiving disposal facility. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Groundwater removed during development and sampling is typically 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. Upon receipt of analytic results, 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.

ATTACHMENT B

FIELD LOCATION OF BORINGS/ MONITORING WELLS:	CLIENT/LOCATION:	DRILL RIG TYPE:	PLANNED USE:	BORING/WELL NO.
6 feet from Taft Street curb and 36 feet from line of Broadway curb.	Shell Oil Products US	Direct Push	NA	B-1
	DRILLING CONTRACTOR	DRILL RIG OPERATOR:	BORING DEPTH: 16 ft	WELL/BOREHOLE SEAL:
	Gregg Drilling	Don Pearson	DIAMETER: 2 in	
	DRILL DATE & START TIME:	SAMPLING METHOD:	WELL MATERIAL:	FILTER PACK:
	8/6/2002 @ 8:40 am	Direct Push	NA	NA

					MONITORING INSTRUMENT	WELL DEPTH
					NONE	NA
				DEPTH (FEET)	FIRST ENCOUNTERED WATER DEPTH	DIAMETER
					8.0 ft	NA
					STATIC WATER DEPTH - DATE:	SCREEN SLOT SIZE
					NA	NA

BLOWS/ 6" INTERVAL	INTERVAL/ LAB (A)	H_2O LEVEL	OVM READING	DEPTH (FEET)	
					3-inch concrete surface; hand augered to 5 feet below ground surface.
					SM - SILTY SAND: Olive gray, damp, fine medium sand, (20% clay, 30% silt, 50% sand), low plasticity.
			NM	5	
		▽			
					SC - CLAYEY SAND: Light brown/orange, damp, fine-coarse angular sand, (30% clay, 5% silt, 60% sand, 5% gravel), no plasticity.
			NM	10	
					Moist.
					Fine sand, (30% clay, 10% silt, 60% sand).
			NM	15	
					Boring terminated at 16 feet below ground surface.
				20	
				25	
				30	
				35	
				40	

NOTES:

= laboratory sample

▽ = groundwater observed

NM = Not Measured

NA = Not Applicable

ppm = parts per million

LOGGED BY: JAMES LOETTERLE OF CAMBRIA ENVIRONMENTAL, INC.

FIELD LOCATION OF BORINGS/ MONITORING WELLS:	CLIENT/LOCATION:	DRILL RIG TYPE	PLANNED USE	BORING/WELL NO:
6 feet from Taft Street curb and 64 feet from line of Broadway curb.	Shell Oil Products US	Direct Push	NA	B-2
	DRILLING CONTRACTOR:	DRILL RIG OPERATOR	BORING DEPTH: 16 ft	WELL/BOREHOLE SEAL:
	Gregg Drilling	Don Pearson	DIAMETER: 2 in	
	DRILL DATE & START TIME:	SAMPLING METHOD	WELL MATERIAL:	FILTER PACK:
	8/6/2002 @ 10:51 am	Direct Push	NA	NA
	MONITORING INSTRUMENT		WELL DEPTH	
	NONE		NA	
	FIRST ENCOUNTERED WATER DEPTH:		DIAMETER	
	12.5 ft		NA	
	STATIC WATER DEPTH - DATE:		SCREEN SLOT SIZE:	
	NA		NA	

BLOWS/ 6" INTERVAL	INTERVAL/ LAB (A)	H_2O LEVEL	OVM READING	DEPTH (FEET)	
					3-inch concrete surface; hand augered to 5 feet below ground surface.
					FILL
					SC - CLAYEY SAND: Olive brown, moist, fine sand, (20% clay, 30% silt, 50% sand), low plasticity.
			NM	5	Damp, fine-coarse angular sand, (20% clay, 10% silt, 70% sand), rust stains.
					Orange-brown.
					Fine sand, (30% clay, 20% silt, 50% sand), medium plasticity.
			NM	10	Fine-coarse subangular sand, (20% clay, 10% silt, 70% sand), low plasticity.
		▽			
					Orange/gray, moist, fine sand, (30% clay, 10% silt, 50% sand), medium plasticity.
			NM	15	
					Boring terminated at 16 feet below ground surface.
				20	
				25	
				30	
				35	
				40	

NOTES:

▬ = laboratory sample

▽ = groundwater observed

NM = Not Measured

NA = Not Applicable

ppm = parts per million

LOGGED BY: JAMES LOETTERLE OF CAMBRIA ENVIRONMENTAL, INC.

FIELD LOCATION OF BORINGS/ MONITORING WELLS:	CLIENT/LOCATION:	DRILL RIG TYPE:	PLANNED USE:	BORING/WELL NO
6 feet from Taft Street curb and 96 feet from line of Broadway curb.	Shell Oil Products US	Direct Push	NA	B-3
	DRILLING CONTRACTOR:	DRILL RIG OPERATOR:	BORING DEPTH: 16 ft	WELL/BOREHOLE SEAL:
	Gregg Drilling	Don Pearson	DIAMETER: 2 in	
	DRILL DATE & START TIME:	SAMPLING METHOD	WELL MATERIAL	FILTER PACK:
	8/6/2002 @ 9:53 am	Direct Push	NA	NA
	MONITORING INSTRUMENT:		WELL DEPTH:	
	NONE		NA	
	FIRST ENCOUNTERED WATER DEPTH:		DIAMETER:	
	12.0 ft		NA	
	STATIC WATER DEPTH - DATE		SCREEN SLOT SIZE:	
	NA		NA	

BLOWS/ 6" INTERVAL	INTERVAL/ LAB (A)	H_2O LEVEL	OVM READING	DEPTH (FEET)	
					3-inch concrete surface; hand augered to 5 feet below ground surface.
					FILL
					SC - CLAYEY SAND: Orange/light brown, damp, fine-coarse subangular sand, (20% clay, 10% silt, 70% sand), low plasticity.
			NM	5	Fine gravel, (20% clay, 10% silt, 65% sand, 5% gravel).
				10	
			NM		Orange/gray, moist, fine sand, (20% clay, 10% silt, 70% sand), medium plasticity.
		▽			
					SM - SILTY SAND: Gray/orange/brown, fine-med sand, (20% clay, 30% silt, 50% sand), low plasticity.
				15	SC - CLAYEY SAND:
			NM		
					Boring terminated at 16 feet below ground surface.
				20	
				25	
				30	
				35	
				40	

NOTES:

= laboratory sample

▽ = groundwater observed

NM = Not Measured

NA = Not Applicable

ppm = parts per million

LOGGED BY: JAMES LOETTERLE OF CAMBRIA ENVIRONMENTAL, INC.

PROJECT NUMBER 06-155-0303-01

FIELD LOCATION OF BORINGS/ MONITORING WELLS:	CLIENT/LOCATION:	DRILL RIG TYPE:	PLANNED USE:	BORING/WELL NO
6 feet from Taft Street curb and 134 feet from line of Broadway curb.	Shell Oil Products US	Direct Push	NA	B-4
	DRILLING CONTRACTOR:	DRILL RIG OPERATOR:	BORING DEPTH 16 ft	WELL/BOREHOLE SEAL:
	Gregg Drilling	Don Pearson	DIAMETER 2 in	
	DRILL DATE & START TIME	SAMPLING METHOD:	WELL MATERIAL:	FILTER PACK:
	8/6/2002 @ 11:53 am	Direct Push	NA	NA

MONITORING INSTRUMENT:	WELL DEPTH
NONE	NA
FIRST ENCOUNTERED WATER DEPTH	DIAMETER:
10.5 ft	NA
STATIC WATER DEPTH - DATE.	SCREEN SLOT SIZE:
NA	NA

BLOWS/ 6" INTERVAL	INTERVAL/ LAB (A)	H_2O LEVEL	OVM READING	DEPTH (FEET)	
					3-inch concrete surface; hand augered to 5 feet below ground surface.
					FILL
					ML - FINE SAND: Dark brown, damp, fine sand, (15% silt, 50% sand, 35% gravel), low plasticity, rootlets.
				5	SC - CLAYEY SAND: Orange/brown, damp, fine-coarse angular sand, (20% clay, 10% silt, 70% sand), rust stains, rootlets.
	■		NM		
					Fine sand, (30% clay, 20% silt, 50% sand), medium plasticity, rust stains.
	■	▽	NM	10	
					Orange/qray/brown, fine-coarse angular sand, (20% clay, 10% silt, 70% sand), no plasticity.
					Moist, orange/brown, fine sand, (30% clay, 10% silt, 50% sand), medium plasticity.
	■		NM	15	
					Boring terminated at 16 feet below ground surface.
				20	
				25	
				30	
				35	
				40	

NOTES:

■ = laboratory sample

▽ = groundwater observed

NM = Not Measured

NA = Not Applicable

ppm = parts per million

LOGGED BY: JAMES LOETTERLE OF CAMBRIA ENVIRONMENTAL, INC.

PROJECT NUMBER 06-155-0303-01

FIELD LOCATION OF BORINGS/ MONITORING WELLS:	CLIENT/LOCATION:	DRILL RIG TYPE:	PLANNED USE	BORING/WELL NO:
39 feet from Broadway curb and 12 feet from southern dispenser.	Shell Oil Products US	Direct Push	NA	B-5
	DRILLING CONTRACTOR	DRILL RIG OPERATOR	BORING DEPTH: 16 ft	WELL/BOREHOLE SEAL
	Gregg Drilling	Don Pearson	DIAMETER: 2 in	
	DRILL DATE & START TIME:	SAMPLING METHOD	WELL MATERIAL:	FILTER PACK:
	8/5/2002 @ 3:41 pm	Direct Push	NA	NA
	MONITORING INSTRUMENT:		WELL DEPTH:	
	NONE		NA	
	FIRST ENCOUNTERED WATER DEPTH		DIAMETER:	
	4.6 ft		NA	
	STATIC WATER DEPTH - DATE:		SCREEN SLOT SIZE:	
	NA		NA	

BLOWS/ 6" INTERVAL	INTERVAL/ LAB (A)	H_2O LEVEL	OVM READING	DEPTH (FEET)	
					3-inch concrete surface; hand augered to 5 feet below ground surface.
					FILL
		▽			Strong MTBE odor at 3 feet.
			NM	5	SC - CLAYEY SAND: Olive brown, fine-coarse subangular sand, (20% clay, 10% silt, 70% sand), low plasticity.
					Orange/brown, fine sand, (30% clay, 20% silt, 50% sand), medium plasticity.
			NM	10	Orange/gray/brown, fine-coarse subangular sand, (20% clay, 10% silt, 65% sand, 5% gravel), no plasticity, fine subangular gravel.
					Olive gray.
			NM	15	Orange/brown.
					Boring terminated at 16 feet below ground surface.
				20	
				25	
				30	
				35	
				40	

NOTES:

▬ = laboratory sample

▽ = groundwater observed

NM = Not Measured

NA = Not Applicable

ppm = parts per million

LOGGED BY: JAMES LOETTERLE OF CAMBRIA ENVIRONMENTAL, INC.

PROJECT NUMBER 06-155-0303-01

FIELD LOCATION OF BORINGS/ MONITORING WELLS.	CLIENT/LOCATION:	DRILL RIG TYPE:	PLANNED USE:	BORING/WELL NO.
5 feet from southeast of the corner wall of site and 51 feet from Taft Avenue curb.	Shell Oil Products US	Direct Push	NA	B-6
	DRILLING CONTRACTOR:	DRILL RIG OPERATOR:	BORING DEPTH: 16 ft	WELL/BOREHOLE SEAL:
	Gregg Drilling	Don Pearson	DIAMETER: 2 in	
	DRILL DATE & START TIME:	SAMPLING METHOD	WELL MATERIAL:	FILTER PACK:
	8/7/2002 @ 8:33 am	Direct Push	NA	NA

BLOWS/ 6" INTERVAL	INTERVAL/ LAB (A)	H_2O LEVEL	OVM READING	DEPTH (FEET)	MONITORING INSTRUMENT: NONE	WELL DEPTH: NA
					FIRST ENCOUNTERED WATER DEPTH: 13.8 ft	DIAMETER: NA
					STATIC WATER DEPTH - DATE: NA	SCREEN SLOT SIZE: NA

					3-inch concrete surface; hand augered to 5 feet below ground surface.
					FILL
				5	SC - CLAYEY SAND: Olive brown, damp, fine sand, (30% clay, 20% silt, 50% sand), low plasticity
			NM		green stains, MTBE odor.
					Orange/brown/olive, fine-coarse subrounded sand, (20% clay, 10% silt, 70% sand), no plasticity.
				10	Orange/brown, fine medium sand, (30% clay, 20% silt, 50% sand), low plasticity.
			NM		
		▽			
				15	
			NM		Dark brown, (20% clay, 10% silt, 70% sand), oxidation.
					Boring terminated at 16 feet below ground surface.
				20	
				25	
				30	
				35	
				40	

NOTES:

▬ = laboratory sample

▽ = groundwater observed

NM = Not Measured

NA = Not Applicable

ppm = parts per million

LOGGED BY: JAMES LOETTERLE OF CAMBRIA ENVIRONMENTAL, INC.

PROJECT NUMBER 06-155-0303-01

FIELD LOCATION OF BORINGS/ MONITORING WELLS	CLIENT/LOCATION.	DRILL RIG TYPE:	PLANNED USE:	BORING/WELL NO
NM	Shell Oil Products US	Direct Push	NA	B-7
	DRILLING CONTRACTOR	DRILL RIG OPERATOR	BORING DEPTH: 11 ft	WELL/BOREHOLE SEAL
	Gregg Drilling	Don Pearson	DIAMETER: 2 in	
	DRILL DATE & START TIME.	SAMPLING METHOD:	WELL MATERIAL	FILTER PACK
	8/7/2002 @ 9:56 am	Direct Push	NA	NA

					MONITORING INSTRUMENT.	WELL DEPTH
					NONE	NA
					FIRST ENCOUNTERED WATER DEPTH:	DIAMETER.
					10.8 ft	NA
					STATIC WATER DEPTH - DATE:	SCREEN SLOT SIZE.
					NA	NA

BLOWS/ 6" INTERVAL	INTERVAL/ LAB (A)	H_2O LEVEL	OVM READING	DEPTH (FEET)	
					3-inch concrete surface; hand augered to 5 feet below ground surface.
					FILL
			NM	5	SC - CLAYEY SAND: Light brown/olive, damp, fine-medium sand, (30% clay, 20% silt, 50% sand), low plasticity sheen.
					Orange brown/olive, fine-coarse subrounded sand, (20% clay, 10% silt, 70% sand), no plasticity.
		▽	NM	10	
					Boring terminated at 11 feet due to refusal.
				15	
				20	
				25	
				30	
				35	
				40	

NOTES:

= laboratory sample

▽ = groundwater observed

NM = Not Measured

NA = Not Applicable

ppm = parts per million

LOGGED BY: JAMES LOETTERLE OF CAMBRIA ENVIRONMENTAL, INC.

PROJECT NUMBER 06-155-0303-01

FIELD LOCATION OF BORINGS/ MONITORING WELLS:	CLIENT/LOCATION:	DRILL RIG TYPE:	PLANNED USE:	BORING/WELL NO.
NM	Shell Oil Products US	Direct Push	NA	B-8
	DRILLING CONTRACTOR:	DRILL RIG OPERATOR:	BORING DEPTH: 11 ft	WELL/BOREHOLE SEAL:
	Gregg Drilling	Don Pearson	DIAMETER: 2 in	
	DRILL DATE & START TIME:	SAMPLING METHOD	WELL MATERIAL:	FILTER PACK:
	8/7/2002 @ 10:49 am	Direct Push	NA	NA

					MONITORING INSTRUMENT:	WELL DEPTH:
					NONE	NA
BLOWS/ 6" INTERVAL	INTERVAL/ LAB (A)	H_2O LEVEL	OVM READING	DEPTH (FEET)	FIRST ENCOUNTERED WATER DEPTH: 8.1 ft	DIAMETER: NA
					STATIC WATER DEPTH - DATE: NA	SCREEN SLOT SIZE: NA

DEPTH (FEET)	OVM READING	H_2O LEVEL	INTERVAL/ LAB (A)	BLOWS/ 6" INTERVAL	
					3-inch concrete surface; hand augered to 5 feet below ground surface.
					FILL
					SC - CLAYEY SAND: Olive brown, damp, fine-coarse sand, (25% clay, 20% silt, 55% sand), low plasticity, HC odor present.
5	NM		■		
		▽			Reddish olive/brown, coarse angular sand, (20% clay, 15% silt, 65% sand), no plasticity.
10	NM		■		
					Boring terminated at 11 feet due to refusal.
15					
20					
25					
30					
35					
40					

NOTES:

■ = laboratory sample

▽ = groundwater observed

NM = Not Measured

NA = Not Applicable

ppm = parts per million

LOGGED BY: JAMES LOETTERLE OF CAMBRIA ENVIRONMENTAL, INC.

PROJECT NUMBER 06-155-0303-01

FIELD LOCATION OF BORINGS/ MONITORING WELLS.	CLIENT/LOCATION	DRILL RIG TYPE:	PLANNED USE:	BORING/WELL NO:
NM	Shell Oil Products US	Direct Push	NA	B-9
	DRILLING CONTRACTOR:	DRILL RIG OPERATOR:	BORING DEPTH: 11 ft	WELL/BOREHOLE SEAL.
	Gregg Drilling	Don Pearson	DIAMETER 2 in	
	DRILL DATE & START TIME.	SAMPLING METHOD:	WELL MATERIAL:	FILTER PACK
	8/7/2002 @ 11:58 am	Direct Push	NA	NA

BLOWS/ 6" INTERVAL	INTERVAL/ LAB (A)	H_2O LEVEL	OVM READING	DEPTH (FEET)	MONITORING INSTRUMENT.	WELL DEPTH
					NONE	NA
					FIRST ENCOUNTERED WATER DEPTH	DIAMETER:
					10.7 ft	NA
					STATIC WATER DEPTH - DATE	SCREEN SLOT SIZE:
					NA	NA

					FILL 3-inch concrete surface; hand augered to 5 feet below ground surface.
					SC - CLAYEY SAND: Reddish brown, damp, fine-coarse sand, (30% clay, 20% silt, 50% sand), low plasticity.
					Some olive staining, slight MTBE odor.
			NM	5	Olive brown, (20% clay, 10% silt, 65% sand, 5% gravel), fine subrounded gravel, strong gas & MTBE odor.
					Reddish brown, moist, fine-coarse angular sand, (10% clay, 5% silt, 80% sand, 5% gravel), fine angular gravel, no plasticity.
		▽	NM	10	SP - POORLY GRADED SAND w/ GRAVEL: Light brown, damp, silty sand, (5% clay, 5% silt, 70% sand, 20% gravel), fine angular gravel, no plasticity.
					Boring terminated at 11 feet due to refusal.
				15	
				20	
				25	
				30	
				35	
				40	

NOTES:

= laboratory sample

▽ = groundwater observed

NM = Not Measured

NA = Not Applicable

ppm = parts per million

LOGGED BY: JAMES LOETTERLE OF CAMBRIA ENVIRONMENTAL, INC.

PROJECT NUMBER 06-155-0303-01

FIELD LOCATION OF BORINGS/ MONITORING WELLS:	CLIENT/LOCATION:	DRILL RIG TYPE:	PLANNED USE	BORING/WELL NO.
8 feet from dispenser island and 36 feet from Broadway curb.	Shell Oil Products US	Direct Push	NA	B-10
	DRILLING CONTRACTOR	DRILL RIG OPERATOR:	BORING DEPTH: 11 ft	WELL/BOREHOLE SEAL:
	Gregg Drilling	Don Pearson	DIAMETER 2 in	
	DRILL DATE & START TIME:	SAMPLING METHOD	WELL MATERIAL:	FILTER PACK:
	8/7/2002 @ 2:09 pm	Direct Push	NA	NA

MONITORING INSTRUMENT:	WELL DEPTH:
NONE	NA
FIRST ENCOUNTERED WATER DEPTH	DIAMETER
8.2 ft	NA
STATIC WATER DEPTH - DATE	SCREEN SLOT SIZE:
NA	NA

BLOWS/ 6" INTERVAL	INTERVAL/ LAB (A)	H_2O LEVEL	OVM READING	DEPTH (FEET)	
					FILL 3-inch concrete surface; hand augered to 5 feet below ground surface
					SC - CLAYEY SAND: Olive/gray/brown, damp, fine-medium sand, (25% clay, 20% silt, 55% sand), low plasticity, slight MTBE odor.
					Olive brown, fine-coarse sand, (20% clay, 10% silt, 65% sand, 5% gravel), fine gravel, low plasticity.
				5	Strong MTBE & gas odor.
	■		NM		
		▽			Reddish brown, damp, fine-coarse angular sand, (10% clay, 5% silt, 80% sand, 5% gravel), fine angular gravel, no plasticity.
				10	SP - POORLY GRADED SAND w/ GRAVEL: Light brown, damp, silty sand, (5% clay, 5% silt, 70% sand, 20% gravel), fine angular gravel, no plasticity.
	■		NM		
					Boring terminated at 11 feet due to refusal.
				15	
				20	
				25	
				30	
				35	
				40	

NOTES:

■ = laboratory sample

▽ = groundwater observed

NM = Not Measured

NA = Not Applicable

ppm = parts per million

LOGGED BY: JAMES LOETTERLE OF CAMBRIA ENVIRONMENTAL, INC.

PROJECT NUMBER 06-155-0303-01

FIELD LOCATION OF BORINGS/ MONITORING WELLS.	CLIENT/LOCATION.	DRILL RIG TYPE.	PLANNED USE:	BORING/WELL NO:
8 feet from dispenser island and 37 feet from Broadway curb.	Shell Oil Products US	Direct Push	NA	B-11
	DRILLING CONTRACTOR	DRILL RIG OPERATOR	BORING DEPTH: 11 ft	WELL/BOREHOLE SEAL:
	Gregg Drilling	Don Pearson	DIAMETER: 2 in	
	DRILL DATE & START TIME:	SAMPLING METHOD:	WELL MATERIAL:	FILTER PACK:
	8/7/2002 @ 2:59 pm	Direct Push	NA	NA
	MONITORING INSTRUMENT:		WELL DEPTH:	
	NONE		NA	
	FIRST ENCOUNTERED WATER DEPTH		DIAMETER	
	NM		NA	
	STATIC WATER DEPTH - DATE:		SCREEN SLOT SIZE:	
	NA		NA	

BLOWS/ 6" INTERVAL	INTERVAL/ LAB (A)	H_2O LEVEL	OVM READING	DEPTH (FEET)	
					FILL 3-inch concrete surface; hand augered to 5 feet below ground surface.
					SC - CLAYEY SAND: Dark brown, fine-coarse subrounded sand, (30% clay, 15% silt, 50% sand, 5%), low plasticity.
				5	Olive brown, moist, fine-medium sand, (15% clay, 5% silt, 80% sand), medium plasticity, gas odor.
	■		NM		Reddish brown, damp, fine-coarse sand, (10% clay, 5% silt, 80% sand, 5% gravel), fine gravel, no plasticity.
					Moist
	■		NM	10	SP - POORLY GRADED SAND w/ GRAVEL: Light brown, damp, fine-coarse sand, (5% clay, 5% silt, 70% sand, 20% gravel), fine gravel, no plasticity.
					Boring terminated at 11 feet due to refusal.
				15	
				20	
				25	
				30	
				35	
				40	

NOTES:

■ = laboratory sample

▽ = groundwater observed

NM = Not Measured

NA = Not Applicable

ppm = parts per million

LOGGED BY: JAMES LOETTERLE OF CAMBRIA ENVIRONMENTAL, INC.

ATTACHMENT C

KIFF ANALYTICAL LLC

Report Number : 27921
Date : 8/14/2002

Max Shahbazian
Cambria Environmental Technology INC.
1144 65th Street, Suite B
Oakland, CA 94808

Subject : 10 Water Samples
Project Name : 5755 Broadway, Oakland, CA
Project Number : 244-0483-006
P.O. Number : 98995756

Dear Mr. Shahbazian,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 27921
Date : 8/14/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-1-W** Matrix : Water Lab Number : 27921-01
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 10**	10	ug/L	EPA 8260B	8/13/2002
Toluene	**< 10**	10	ug/L	EPA 8260B	8/13/2002
Ethylbenzene	**< 10**	10	ug/L	EPA 8260B	8/13/2002
Total Xylenes	**< 10**	10	ug/L	EPA 8260B	8/13/2002
Methyl-t-butyl ether (MTBE)	**3500**	100	ug/L	EPA 8260B	8/13/2002
TPH as Gasoline	**< 1000**	1000	ug/L	EPA 8260B	8/13/2002
Toluene - d8 (Surr)	98.6		% Recovery	EPA 8260B	8/13/2002
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	8/13/2002

Sample : **B-2-W** Matrix : Water Lab Number : 27921-02
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	8/11/2002
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	8/11/2002
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	8/11/2002
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	8/11/2002
Methyl-t-butyl ether (MTBE)	**< 5.0**	5.0	ug/L	EPA 8260B	8/11/2002
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	8/11/2002
Toluene - d8 (Surr)	98.8		% Recovery	EPA 8260B	8/11/2002
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	8/11/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 27921
Date : 8/14/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-3-W** Matrix : Water Lab Number : 27921-03

Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	8/11/2002
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	8/11/2002
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	8/11/2002
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	8/11/2002
Methyl-t-butyl ether (MTBE)	**< 5.0**	5.0	ug/L	EPA 8260B	8/11/2002
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	8/11/2002
Toluene - d8 (Surr)	98.1		% Recovery	EPA 8260B	8/11/2002
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	8/11/2002

Sample : **B-4-W** Matrix : Water Lab Number : 27921-04

Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	8/13/2002
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	8/13/2002
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	8/13/2002
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	8/13/2002
Methyl-t-butyl ether (MTBE)	**< 5.0**	5.0	ug/L	EPA 8260B	8/13/2002
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	8/13/2002
Toluene - d8 (Surr)	98.0		% Recovery	EPA 8260B	8/13/2002
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	8/13/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 27921
Date : 8/14/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-5-W** Matrix : Water Lab Number : 27921-05
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**4.5**	2.0	ug/L	EPA 8260B	8/11/2002
Toluene	**< 2.0**	2.0	ug/L	EPA 8260B	8/11/2002
Ethylbenzene	**350**	2.0	ug/L	EPA 8260B	8/11/2002
Total Xylenes	**340**	2.0	ug/L	EPA 8260B	8/11/2002
Methyl-t-butyl ether (MTBE)	**380**	20	ug/L	EPA 8260B	8/11/2002
TPH as Gasoline	**12000**	200	ug/L	EPA 8260B	8/11/2002
Toluene - d8 (Surr)	85.5		% Recovery	EPA 8260B	8/11/2002
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	8/11/2002

Sample : **B-6-W** Matrix : Water Lab Number : 27921-06
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**15**	0.50	ug/L	EPA 8260B	8/11/2002
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	8/11/2002
Ethylbenzene	**49**	0.50	ug/L	EPA 8260B	8/11/2002
Total Xylenes	**18**	0.50	ug/L	EPA 8260B	8/11/2002
Methyl-t-butyl ether (MTBE)	**30**	5.0	ug/L	EPA 8260B	8/11/2002
TPH as Gasoline	**680**	50	ug/L	EPA 8260B	8/11/2002
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	8/11/2002
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	8/11/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 27921
Date : 8/14/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-7-W** Matrix : Water Lab Number : 27921-07
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	8/11/2002
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	8/11/2002
Ethylbenzene	**3.4**	0.50	ug/L	EPA 8260B	8/11/2002
Total Xylenes	**11**	0.50	ug/L	EPA 8260B	8/11/2002
Methyl-t-butyl ether (MTBE)	**42**	5.0	ug/L	EPA 8260B	8/11/2002
TPH as Gasoline	**370**	50	ug/L	EPA 8260B	8/11/2002
Toluene - d8 (Surr)	98.5		% Recovery	EPA 8260B	8/11/2002
4-Bromofluorobenzene (Surr)	93.6		% Recovery	EPA 8260B	8/11/2002

Sample : **B-8-W** Matrix : Water Lab Number : 27921-08
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**990**	25	ug/L	EPA 8260B	8/11/2002
Toluene	**78**	25	ug/L	EPA 8260B	8/11/2002
Ethylbenzene	**2600**	25	ug/L	EPA 8260B	8/11/2002
Total Xylenes	**12000**	25	ug/L	EPA 8260B	8/11/2002
Methyl-t-butyl ether (MTBE)	**930**	250	ug/L	EPA 8260B	8/11/2002
TPH as Gasoline	**66000**	2500	ug/L	EPA 8260B	8/11/2002
Toluene - d8 (Surr)	98.7		% Recovery	EPA 8260B	8/11/2002
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	8/11/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 27921
Date : 8/14/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-9-W** Matrix : Water Lab Number : 27921-09

Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**1100**	20	ug/L	EPA 8260B	8/11/2002
Toluene	**47**	20	ug/L	EPA 8260B	8/11/2002
Ethylbenzene	**650**	20	ug/L	EPA 8260B	8/11/2002
Total Xylenes	**3300**	20	ug/L	EPA 8260B	8/11/2002
Methyl-t-butyl ether (MTBE)	**7100**	200	ug/L	EPA 8260B	8/11/2002
TPH as Gasoline	**21000**	2000	ug/L	EPA 8260B	8/11/2002
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	8/11/2002
4-Bromofluorobenzene (Surr)	99.6		% Recovery	EPA 8260B	8/11/2002

Sample : **B-10-W** Matrix : Water Lab Number : 27921-10

Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**1800**	20	ug/L	EPA 8260B	8/11/2002
Toluene	**66**	20	ug/L	EPA 8260B	8/11/2002
Ethylbenzene	**1300**	20	ug/L	EPA 8260B	8/11/2002
Total Xylenes	**4200**	20	ug/L	EPA 8260B	8/11/2002
Methyl-t-butyl ether (MTBE)	**9100**	200	ug/L	EPA 8260B	8/11/2002
TPH as Gasoline	**31000**	2000	ug/L	EPA 8260B	8/11/2002
Toluene - d8 (Surr)	99.2		% Recovery	EPA 8260B	8/11/2002
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	8/11/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 27921

Date : 8/14/2002

QC Report : Method Blank Data

Project Name : **5755 Broadway, Oakland, CA**

Project Number : **244-0483-006**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	8/12/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	8/12/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	8/12/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	8/12/2002
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	8/12/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	8/12/2002
Toluene - d8 (Surr)	103		%	EPA 8260B	8/12/2002
4-Bromofluorobenzene (Surr)	97 1		%	EPA 8260B	8/12/2002
Benzene	< 0.50	0.50	ug/L	EPA 8260B	8/11/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	8/11/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	8/11/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	8/11/2002
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	8/11/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	8/11/2002
Toluene - d8 (Surr)	99.6		%	EPA 8260B	8/11/2002
4-Bromofluorobenzene (Surr)	92.0		%	EPA 8260B	8/11/2002
Benzene	< 0.50	0.50	ug/L	EPA 8260B	8/13/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	8/13/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	8/13/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	8/13/2002
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	8/13/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	8/13/2002
Toluene - d8 (Surr)	99.2		%	EPA 8260B	8/13/2002
4-Bromofluorobenzene (Surr)	99.1		%	EPA 8260B	8/13/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 27921

Date : 8/14/2002

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **5755 Broadway, Oakland,**

Project Number : **244-0483-006**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	27912-01	100	39.0	39.5	143	142	ug/L	EPA 8260B	8/12/02	109	103	4.99	70-130	25
Toluene	27912-01	2.6	39.0	39.5	47.7	48.1	ug/L	EPA 8260B	8/12/02	116	115	0.528	70-130	25
Tert-Butanol	27912-01	<5.0	195	198	195	191	ug/L	EPA 8260B	8/12/02	100	96.5	3.66	70-130	25
Methyl-t-Butyl Ether	27912-01	16	39.0	39.5	60.0	57.8	ug/L	EPA 8260B	8/12/02	113	106	6.54	70-130	25
Benzene	27921-02	<0.50	19.9	20.0	22.1	21.9	ug/L	EPA 8260B	8/11/02	111	110	1.06	70-130	25
Toluene	27921-02	<0.50	19.9	20.0	20.5	20.3	ug/L	EPA 8260B	8/11/02	103	102	1.24	70-130	25
Tert-Butanol	27921-02	<5.0	99.6	99.9	104	101	ug/L	EPA 8260B	8/11/02	105	101	3.24	70-130	25
Methyl-t-Butyl Ether	27921-02	<0.50	19.9	20.0	21.2	21.2	ug/L	EPA 8260B	8/11/02	106	106	0.282	70-130	25
Benzene	27984-04	<0.50	40.0	40.0	41.2	39.8	ug/L	EPA 8260B	8/13/02	103	99.5	3.41	70-130	25
Toluene	27984-04	<0.50	40.0	40.0	40.4	39.5	ug/L	EPA 8260B	8/13/02	101	98.7	2.28	70-130	25
Tert-Butanol	27984-04	10000	200	200	10200	10500	ug/L	EPA 8260B	8/13/02	0.00	0.00	0.00	70-130	25
Methyl-t-Butyl Ether	27984-04	<0.50	40.0	40.0	41.4	39.7	ug/L	EPA 8260B	8/13/02	104	99.2	4.32	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 27921

Date : 8/14/2002

QC Report : Laboratory Control Sample (LCS)

Project Name : **5755 Broadway, Oakland,**

Project Number : **244-0483-006**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	8/12/02	116	70-130
Toluene	40.0	ug/L	EPA 8260B	8/12/02	113	70-130
Tert-Butanol	200	ug/L	EPA 8260B	8/12/02	95.4	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	8/12/02	104	70-130
Benzene	20.0	ug/L	EPA 8260B	8/11/02	80.4	70-130
Toluene	20.0	ug/L	EPA 8260B	8/11/02	74.5	70-130
Tert-Butanol	100	ug/L	EPA 8260B	8/11/02	101	70-130
Methyl-t-Butyl Ether	20.0	ug/L	EPA 8260B	8/11/02	84.0	70-130
Benzene	40.0	ug/L	EPA 8260B	8/13/02	95.3	70-130
Toluene	40.0	ug/L	EPA 8260B	8/13/02	94.4	70-130
Tert-Butanol	200	ug/L	EPA 8260B	8/13/02	88.6	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	8/13/02	88.1	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL

720 Olive Drive, Suite D

Davis, CA 95616

(530) 297-4800 (530) 297-4803 fax

SHELL Chain Of Custody Record

Shell Project Manager to be Invoiced:

☑ SCIENCE & ENGINEERING Karen Petryna
☐ TECHNICAL SERVICES
☐ CRMT HOUSTON

27921

9 8 9 9 5 7 5 6

DATE: 8/6/02 -8/7/02 1 of 1 8/7/0

PAGE: 1 of ~~X~~ 8

SAMPLING COMPANY: Cambria Environmental Technology Inc.	LOG CODE: CETO	SITE ADDRESS (Street and City): 5755 Broadway, Oakland, CA	GLOBAL ID NO.: T0600101270
ADDRESS: 1144 65th Street, Suite B, Oakland, CA, 94608		EDF DELIVERABLE TO (Responsible Party or Designee): ShellOaklandEDF@cambria-env.com; PHONE NO.: 510-420-3344	E-MAIL: ShellOaklandEDF@cambria-env.com; CONSULTANT PROJECT NO.: 244-0483-006
PROJECT CONTACT (Hardcopy or PDF Report to): Max Shahbazian		SAMPLER NAME(S) (Print): James Loetterle	
TELEPHONE: 510-420-3344	FAX: 510-420-9170	E-MAIL: mshahbazian@cambria-env.com	

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: ____________

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

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

REQUESTED ANALYSIS

Field Sample Identification	Sampling Date	Sampling Time	Matrix	No. of Cont.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (4B-____)		TPH - Diesel, Extractable (8015m)		MTBE (8260B) Confirmation, See Note	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes / TEMPERATURE ON RECEIPT C°
B-1-W	8/6/02	11:28	water	3	X	X	X																		-01
B-2-W	↓	12:37	↓	4	↓	↓	↓																		HCl -02
B-3-W	↓	10:37	↓	↓	↓	↓	↓																		HCl -03
B-4-W	↓	12:43	↓	↓	↓	↓	↓																		-04
B-5-W	↓	4:19	↓	↓	↓	↓	↓																		HCl -05
~~B-7-5~~ B-6-W	8/7/02	9:13	↓	4	↓	↓	↓																		HCl -06
B-7-W	↓	11:24	↓	↓	↓	↓	↓																		HCl -07
B-8-W	↓	1:27	↓	↓	↓	↓	↓																		HCl -08
B-9-W	↓	1:37	↓	↓	↓	↓	↓																		HCl -09
B-10-W	↓	3:33	↓	↓	↓	↓	↓																		HCl -10

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]			
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) John Cattle / Kiff Analytical	Date: 680802	Time: 1238

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

10/16/00 Revision

Q&Q Graphic (714) 858-9702

KIFF ANALYTICAL LLC

Report Number : 27955
Date : 08/29/2002

Max Shahbazian
Cambria Environmental Technology INC.
1144 65th Street, Suite B
Oakland, CA 94808

Subject : 1 Water Sample
Project Name : 5755 Broadway, Oakland, CA
Project Number : 244-0483-006
P.O. Number : 98995756

Dear Mr. Shahbazian,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 27955
Date : 08/29/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-11-W** Matrix : Water Lab Number : 27955-01
Sample Date :08/08/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**900**	10	ug/L	EPA 8260B	08/16/2002
Toluene	**< 10**	10	ug/L	EPA 8260B	08/16/2002
Ethylbenzene	**980**	10	ug/L	EPA 8260B	08/16/2002
Total Xylenes	**2500**	10	ug/L	EPA 8260B	08/16/2002
Methyl-t-butyl ether (MTBE)	**1200**	100	ug/L	EPA 8260B	08/16/2002
TPH as Gasoline	**28000**	1000	ug/L	EPA 8260B	08/16/2002
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	08/16/2002
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	08/16/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 27955

Date : 08/29/2002

QC Report : Method Blank Data

Project Name : **5755 Broadway, Oakland, CA**

Project Number : **244-0483-006**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	08/15/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	08/15/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	08/15/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	08/15/2002
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	08/15/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	08/15/2002
Toluene - d8 (Surr)	98.6		%	EPA 8260B	08/15/2002
4-Bromofluorobenzene (Surr)	100		%	EPA 8260B	08/15/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 27955

Date : 08/29/2002

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **5755 Broadway, Oakland,**

Project Number : **244-0483-006**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	27960-01	260	99.5	99.0	327	331	ug/L	EPA 8260B	8/15/02	71.6	75.4	5.20	70-130	25
Toluene	27960-01	160	99.5	99.0	250	253	ug/L	EPA 8260B	8/15/02	84.2	88.1	4.52	70-130	25
Tert-Butanol	27960-01	7.8	498	495	490	500	ug/L	EPA 8260B	8/15/02	96.9	99.3	2.44	70-130	25
Methyl-t-Butyl Ether	27960-01	230	99.5	99.0	353	346	ug/L	EPA 8260B	8/15/02	123	118	4.81	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 27955

Date : 08/29/2002

QC Report : Laboratory Control Sample (LCS)

Project Name : **5755 Broadway, Oakland,**

Project Number : **244-0483-006**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	8/15/02	106	70-130
Toluene	40.0	ug/L	EPA 8260B	8/15/02	103	70-130
Tert-Butanol	200	ug/L	EPA 8260B	8/15/02	101	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	8/15/02	100	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL

720 Olive Drive, Suite D

Davis, CA 95616

(530) 297-4800 (530) 297-4803 fax

SHELL Chain Of [redacted]stody Record

Shell Project Manager to be invoiced:

☑ SCIENCE & ENGINEERING Karen Petryna

☐ TECHNICAL SERVICES

☐ DMT HOUSTON

27955

9	8	9	9	5	7	5	6

DATE: 8/6/02 - 8/7/02

PAGE: 1 of 1

SAMPLING COMPANY:	LOG CODE:	SITE ADDRESS (Street and City):	GLOBAL ID NO.:
Cambria Environmental Technology Inc.	CETO	5755 Broadway, Oakland, CA	T0600101270

ADDRESS:	EDF DELIVERABLE TO (Responsible Party or Designee):	PHONE NO.:	E-MAIL:	CONSULTANT PROJECT NO.:
1144 65th Street, Suite B, Oakland, CA, 94608	ShellOaklandEDF@cambria-env.com	510-420-3344	ShellOaklandEDF@cambria-env.com	244-0483-006

PROJECT CONTACT (Hardcopy or PDF Report to):	TELEPHONE:	FAX:	E-MAIL:	SAMPLER NAME(S) (Print):
Max Shahbazian	510-420-3344	510-420-9170	mshahbazian@cambria-env.com	James Lonfatto

TURNAROUND TIME (BUSINESS DAYS):

☑ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

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

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

REQUESTED ANALYSIS

Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX S, L, W	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1945)	Test for Disposal (48--)		TPH - Diesel, Extractable (8015m)		MTBE (8260B) Confirmation, See Note	TEMPERATURE ON RECEIPT C°
B-11-W	8/6/02	1:40	W	4	X	X	X																		-01

FIELD NOTES:

Container/Preservative or PID Readings or Laboratory Notes

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	John Cuttle / Kiff Analytical	080902	1202

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10/16/00 Revision

CAC Graphics (714) 898-9702

KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Max Shahbazian
Cambria Environmental Technology INC.
1144 65th Street, Suite B
Oakland, CA 94808

Subject : 28 Soil Samples
Project Name : 5755 Broadway, Oakland, CA
Project Number : 244-0483-006
P.O. Number : 98995756

Dear Mr. Shahbazian,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Joel Kiff

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-1-5.0** Matrix : Soil Lab Number : 27924-01
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Total Xylenes	**< 0.010**	0.010	mg/Kg	EPA 8260B	8/13/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/13/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/13/2002
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	8/13/2002
4-Bromofluorobenzene (Surr)	91.2		% Recovery	EPA 8260B	8/13/2002

Sample : **B-1-9.0** Matrix : Soil Lab Number : 27924-02
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/13/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/13/2002
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	8/13/2002
4-Bromofluorobenzene (Surr)	90.9		% Recovery	EPA 8260B	8/13/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-1-15.5** Matrix : Soil Lab Number : 27924-03
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/13/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/13/2002
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	8/13/2002
4-Bromofluorobenzene (Surr)	90.3		% Recovery	EPA 8260B	8/13/2002

Sample : **B-2-5.0** Matrix : Soil Lab Number : 27924-04
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Total Xylenes	**< 0.010**	0.010	mg/Kg	EPA 8260B	8/13/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/13/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/13/2002
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	8/13/2002
4-Bromofluorobenzene (Surr)	91.6		% Recovery	EPA 8260B	8/13/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-2-10.0** Matrix : Soil Lab Number : 27924-05
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/13/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/13/2002
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	8/13/2002
4-Bromofluorobenzene (Surr)	91.3		% Recovery	EPA 8260B	8/13/2002

Sample : **B-2-15.5** Matrix : Soil Lab Number : 27924-06
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/13/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/13/2002
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	8/13/2002
4-Bromofluorobenzene (Surr)	90.2		% Recovery	EPA 8260B	8/13/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-3-5.0** Matrix : Soil Lab Number : 27924-07
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/14/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/14/2002
Toluene - d8 (Surr)	98.5		% Recovery	EPA 8260B	8/14/2002
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	8/14/2002

Sample : **B-3-10.0** Matrix : Soil Lab Number : 27924-08
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/14/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/14/2002
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	8/14/2002
4-Bromofluorobenzene (Surr)	91.7		% Recovery	EPA 8260B	8/14/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-3-15.5** Matrix : Soil Lab Number : 27924-09
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/14/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/14/2002
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	8/14/2002
4-Bromofluorobenzene (Surr)	91.7		% Recovery	EPA 8260B	8/14/2002

Sample : **B-4-5.0** Matrix : Soil Lab Number : 27924-10
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/15/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/15/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/15/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/15/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/15/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/15/2002
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	8/15/2002
4-Bromofluorobenzene (Surr)	92.6		% Recovery	EPA 8260B	8/15/2002

Joel Kiff

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-4-10.0** Matrix : Soil Lab Number : 27924-11
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/14/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/14/2002
Toluene - d8 (Surr)	98.8		% Recovery	EPA 8260B	8/14/2002
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	8/14/2002

Sample : **B-4-15.5** Matrix : Soil Lab Number : 27924-12
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/14/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/14/2002
Toluene - d8 (Surr)	98.7		% Recovery	EPA 8260B	8/14/2002
4-Bromofluorobenzene (Surr)	99.5		% Recovery	EPA 8260B	8/14/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-5-5.5** Matrix : Soil Lab Number : 27924-13

Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.050**	0.050	mg/Kg	EPA 8260B	8/15/2002
Toluene	**< 0.050**	0.050	mg/Kg	EPA 8260B	8/15/2002
Ethylbenzene	**1.6**	0.050	mg/Kg	EPA 8260B	8/15/2002
Total Xylenes	**6.7**	0.10	mg/Kg	EPA 8260B	8/15/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/15/2002
TPH as Gasoline	**260**	5.0	mg/Kg	EPA 8260B	8/15/2002
Toluene - d8 (Surr)	95.3		% Recovery	EPA 8260B	8/15/2002
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	8/15/2002

Sample : **B-5-10.0** Matrix : Soil Lab Number : 27924-14

Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/16/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/16/2002
Ethylbenzene	**0.018**	0.005	mg/Kg	EPA 8260B	8/16/2002
Total Xylenes	**0.021**	0.010	mg/Kg	EPA 8260B	8/16/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/16/2002
TPH as Gasoline	**4.5**	1.0	mg/Kg	EPA 8260B	8/16/2002
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	8/16/2002
4-Bromofluorobenzene (Surr)	107		% Recovery	EPA 8260B	8/16/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-5-15.5** Matrix : Soil Lab Number : 27924-15
Sample Date :8/6/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/13/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/13/2002
Toluene - d8 (Surr)	116		% Recovery	EPA 8260B	8/13/2002
4-Bromofluorobenzene (Surr)	83.1		% Recovery	EPA 8260B	8/13/2002

Sample : **B-6-5.0** Matrix : Soil Lab Number : 27924-16
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.039**	0.025	mg/Kg	EPA 8260B	8/15/2002
Toluene	**< 0.025**	0.025	mg/Kg	EPA 8260B	8/15/2002
Ethylbenzene	**1.5**	0.025	mg/Kg	EPA 8260B	8/15/2002
Total Xylenes	**0.30**	0.050	mg/Kg	EPA 8260B	8/15/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/15/2002
TPH as Gasoline	**110**	5.0	mg/Kg	EPA 8260B	8/15/2002
Toluene - d8 (Surr)	96.4		% Recovery	EPA 8260B	8/15/2002
4-Bromofluorobenzene (Surr)	105		% Recovery	EPA 8260B	8/15/2002

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-6-10.0** Matrix : Soil Lab Number : 27924-17
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/14/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/14/2002
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	8/14/2002
4-Bromofluorobenzene (Surr)	91.6		% Recovery	EPA 8260B	8/14/2002

Sample : **B-6-15.5** Matrix : Soil Lab Number : 27924-18
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/14/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/14/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/14/2002
Toluene - d8 (Surr)	99.7		% Recovery	EPA 8260B	8/14/2002
4-Bromofluorobenzene (Surr)	89.8		% Recovery	EPA 8260B	8/14/2002

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-7-5.0** Matrix : Soil Lab Number : 27924-19
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/16/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/16/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/16/2002
Total Xylenes	**< 0.010**	0.010	mg/Kg	EPA 8260B	8/16/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/16/2002
TPH as Gasoline	**3.3**	1.0	mg/Kg	EPA 8260B	8/16/2002
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	8/16/2002
4-Bromofluorobenzene (Surr)	99.1		% Recovery	EPA 8260B	8/16/2002

Sample : **B-7-10.5** Matrix : Soil Lab Number : 27924-20
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/12/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/12/2002
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	8/12/2002
4-Bromofluorobenzene (Surr)	90.3		% Recovery	EPA 8260B	8/12/2002

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-8-5.0** Matrix : Soil Lab Number : 27924-21
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.025**	0.025	mg/Kg	EPA 8260B	8/12/2002
Toluene	**< 0.025**	0.025	mg/Kg	EPA 8260B	8/12/2002
Ethylbenzene	**2.2**	0.025	mg/Kg	EPA 8260B	8/12/2002
Total Xylenes	**3.8**	0.050	mg/Kg	EPA 8260B	8/12/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/12/2002
TPH as Gasoline	**210**	5.0	mg/Kg	EPA 8260B	8/12/2002
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	8/12/2002
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	8/12/2002

Sample : **B-8-10.5** Matrix : Soil Lab Number : 27924-22
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/12/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/12/2002
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	8/12/2002
4-Bromofluorobenzene (Surr)	93.4		% Recovery	EPA 8260B	8/12/2002

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KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-9-5.0** Matrix : Soil Lab Number : 27924-23
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.096**	0.025	mg/Kg	EPA 8260B	8/12/2002
Toluene	**0.028**	0.025	mg/Kg	EPA 8260B	8/12/2002
Ethylbenzene	**0.85**	0.025	mg/Kg	EPA 8260B	8/12/2002
Total Xylenes	**4.3**	0.050	mg/Kg	EPA 8260B	8/12/2002
Methyl-t-butyl ether (MTBE)	**0.9**	0.5	mg/Kg	EPA 8260B	8/12/2002
TPH as Gasoline	**82**	5.0	mg/Kg	EPA 8260B	8/12/2002
Toluene - d8 (Surr)	104		% Recovery	EPA 8260B	8/12/2002
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	8/12/2002

Sample : **B-9-10.5** Matrix : Soil Lab Number : 27924-24
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/12/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/12/2002
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	8/12/2002
4-Bromofluorobenzene (Surr)	93.6		% Recovery	EPA 8260B	8/12/2002

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-10-5.0** Matrix : Soil Lab Number : 27924-25
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.016**	0.005	mg/Kg	EPA 8260B	8/13/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/13/2002
Ethylbenzene	**0.060**	0.005	mg/Kg	EPA 8260B	8/13/2002
Total Xylenes	**0.018**	0.005	mg/Kg	EPA 8260B	8/13/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/13/2002
TPH as Gasoline	**29**	1.0	mg/Kg	EPA 8260B	8/13/2002
Toluene - d8 (Surr)	115		% Recovery	EPA 8260B	8/13/2002
4-Bromofluorobenzene (Surr)	83.3		% Recovery	EPA 8260B	8/13/2002

Sample : **B-10-10.5** Matrix : Soil Lab Number : 27924-26
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Total Xylenes	**0.014**	0.005	mg/Kg	EPA 8260B	8/12/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/12/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/12/2002
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	8/12/2002
4-Bromofluorobenzene (Surr)	97.0		% Recovery	EPA 8260B	8/12/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

KIFF ANALYTICAL LLC

Report Number : 27924
Date : 8/19/2002

Project Name : **5755 Broadway, Oakland, CA**
Project Number : **244-0483-006**

Sample : **B-11-5.0** Matrix : Soil Lab Number : 27924-27
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.0063**	0.005	mg/Kg	EPA 8260B	8/15/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/15/2002
Ethylbenzene	**0.019**	0.005	mg/Kg	EPA 8260B	8/15/2002
Total Xylenes	**0.018**	0.005	mg/Kg	EPA 8260B	8/15/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/15/2002
TPH as Gasoline	1.7	1.0	mg/Kg	EPA 8260B	8/15/2002
Toluene - d8 (Surr)	99.3		% Recovery	EPA 8260B	8/15/2002
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	8/15/2002

Sample : **B-11-10.5** Matrix : Soil Lab Number : 27924-28
Sample Date :8/7/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	8/12/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	8/12/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	8/12/2002
Toluene - d8 (Surr)	103		% Recovery	EPA 8260B	8/12/2002
4-Bromofluorobenzene (Surr)	97.9		% Recovery	EPA 8260B	8/12/2002

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 27924

Date : 8/19/2002

QC Report : Method Blank Data

Project Name : **5755 Broadway, Oakland, CA**

Project Number : **244-0483-006**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.005	0.005	mg/Kg	EPA 8260B	8/10/2002
Toluene	< 0.005	0.005	mg/Kg	EPA 8260B	8/10/2002
Ethylbenzene	< 0.005	0.005	mg/Kg	EPA 8260B	8/10/2002
Total Xylenes	< 0.005	0.005	mg/Kg	EPA 8260B	8/10/2002
Methyl-t-butyl ether (MTBE)	< 0.5	0 5	mg/Kg	EPA 8260B	8/10/2002
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	8/10/2002
Toluene - d8 (Surr)	101		%	EPA 8260B	8/10/2002
4-Bromofluorobenzene (Surr)	96.0		%	EPA 8260B	8/10/2002
Benzene	< 0.005	0.005	mg/Kg	EPA 8260B	8/12/2002
Toluene	< 0.005	0.005	mg/Kg	EPA 8260B	8/12/2002
Ethylbenzene	< 0.005	0.005	mg/Kg	EPA 8260B	8/12/2002
Total Xylenes	< 0.005	0.005	mg/Kg	EPA 8260B	8/12/2002
Methyl-t-butyl ether (MTBE)	< 0.5	0.5	mg/Kg	EPA 8260B	8/12/2002
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	8/12/2002
Toluene - d8 (Surr)	100		%	EPA 8260B	8/12/2002
4-Bromofluorobenzene (Surr)	90.8		%	EPA 8260B	8/12/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 27924

Date : 8/19/2002

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **5755 Broadway, Oakland,**

Project Number : **244-0483-006**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	27920-02	<0.0050	0.0394	0.0388	0.0435	0.0435	mg/Kg	EPA 8260B	8/10/02	110	112	1.37	70-130	25
Toluene	27920-02	<0.0050	0.0394	0.0388	0.0417	0.0422	mg/Kg	EPA 8260B	8/10/02	106	108	2.42	70-130	25
Tert-Butanol	27920-02	<0.0050	0.197	0.194	0.184	0.187	mg/Kg	EPA 8260B	8/10/02	93.5	96.3	2.95	70-130	25
Methyl-t-Butyl Ether	27920-02	<0.0050	0.0394	0.0388	0.0373	0.0366	mg/Kg	EPA 8260B	8/10/02	94.8	94.2	0.582	70-130	25
Benzene	27924-20	<0.0050	0.0398	0.0395	0.0430	0.0431	mg/Kg	EPA 8260B	8/12/02	108	109	0.992	70-130	25
Toluene	27924-20	<0.0050	0.0398	0.0395	0.0398	0.0401	mg/Kg	EPA 8260B	8/12/02	100	101	1.36	70-130	25
Tert-Butanol	27924-20	<0.0050	0.199	0.198	0.196	0.202	mg/Kg	EPA 8260B	8/12/02	98.2	102	3.97	70-130	25
Methyl-t-Butyl Ether	27924-20	<0.0050	0.0398	0.0395	0.0412	0.0402	mg/Kg	EPA 8260B	8/12/02	103	102	1.44	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

Report Number : 27924

Date : 8/19/2002

QC Report : Laboratory Control Sample (LCS)

Project Name : **5755 Broadway, Oakland,**

Project Number : **244-0483-006**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	0.0374	mg/Kg	EPA 8260B	8/10/02	111	70-130
Toluene	0.0374	mg/Kg	EPA 8260B	8/10/02	108	70-130
Tert-Butanol	0.187	mg/Kg	EPA 8260B	8/10/02	91.6	70-130
Methyl-t-Butyl Ether	0.0374	mg/Kg	EPA 8260B	8/10/02	86.5	70-130
Benzene	0.0400	mg/Kg	EPA 8260B	8/12/02	106	70-130
Toluene	0.0400	mg/Kg	EPA 8260B	8/12/02	98.0	70-130
Tert-Butanol	0.200	mg/Kg	EPA 8260B	8/12/02	94.8	70-130
Methyl-t-Butyl Ether	0.0400	mg/Kg	EPA 8260B	8/12/02	96.9	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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(530) 297-4800 (530) 297-4803 fax

SHELL Chain Of Custody Record

Shell Project Manager to be Invoiced:

☑ SCIENCE & ENGINEERING Karen Petryna

☐ TECHNICAL SERVICES

☐ GMT HOUSTON

27924

9 8 9 9 5 7 5 6

DATE: 8/6/02 -8/7/02

PAGE: 1 of 3

SAMPLING COMPANY: Cambria Environmental Technology Inc.

LOG CODE: CETO

SITE ADDRESS (street and City): 5755 Broadway, Oakland, CA

GLOBAL ID NO.: T0600101270

ADDRESS: 1144 65th Street, Suite B, Oakland, CA, 94608

EDF DELIVERABLE TO (Responsible Party or Designee): ShellOaklandEDF@cambria-env.com

PHONE NO.: 510-420-3344

E-MAIL: ShellOaklandEDF@cambria-env.com

CONSULTANT PROJECT NO.: 244-0483-006

PROJECT CONTACT (Hardcopy or PDF Report to): Max Shahbazian

SAMPLER NAME(S) (Print): James Loetada

TELEPHONE: 510-420-3344

FAX: 510-420-8170

E-MAIL: mshahbazian@cambria-env.com

TURNAROUND TIME (BUSINESS DAYS):

☑ 10 DAYS ☐ 5 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

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

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

REQUESTED ANALYSIS

Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 2416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (4B--)		TPH - Diesel, Extractable (8015m)		MTBE (8260B) Confirmation, See Note	TEMPERATURE ON RECEIPT C°
B-1-5.0	8/6/02	9:07	Soil	1	X	X	X																		-01
B-1-9.0		9:20																							-02
B-1-15.5		9:30																							-03
B-2-5.0		11:04																							-04
B-2-10.0		11:15																							-05
B-2-15.5		11:22																							-06
B-3-5.0		9:58																							-07
B-3-10.0		10:10																							-08
B-3-15.5		10:16																							-09
B-4-5.0		12:12																							-10

FIELD NOTES:

Container/Preservative or PID Readings or Laboratory Notes

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) John Cuttle / Kiff Analytical	Date: 080502	Time: 1245

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Davis, CA 95616

(530) 297-4800 (530) 297-4803 fax

SHELL Chain Of Custody Record

Shell Project Manager to be invoiced:

☑ SCIENCE & ENGINEERING Karen Petryna

☐ TECHNICAL SERVICES

☐ GMT: HOUSTON

27924

9 8 9 9 5 7 5 6

DATE: 8/6/02 -8/7/02

PAGE: 2 of 3

SAMPLING COMPANY: Cambria Environmental Technology Inc.	LOG CODE: CETO
ADDRESS: 1144 65th Street, Suite B, Oakland, CA, 94608	
PROJECT CONTACT (Hardcopy or PDF Report to): Max Shahbazian	
TELEPHONE: 510-420-3344	FAX: 510-420-9170
E-MAIL: mshahbazian@cambria-env.com	
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 ☐	

SITE ADDRESS (Street and City): 5755 Broadway, Oakland, CA	GLOBAL ID NO.: T0600101270
EDF DELIVERABLE TO (Responsible Party or Designee): ShellOaklandEDF@cambria-env.com	PHONE NO.: 510-420-3344
E-MAIL: ShellOaklandEDF@cambria-env.com	CONSULTANT PROJECT NO.: 244-0483-006
SAMPLER NAME(S) (Print): James Lockette	

REQUESTED ANALYSIS

Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (48-_____)		TPH - Diesel, Extractable (8015m)		MTBE (8260B) Confirmation, See Note	TEMPERATURE ON RECEIPT C°
B-4-10.0	8/6/02	12:19	Soil	1	X	X	X																		-11
B-4-15.5		12:29																							-12
B-5-5.5		3:41																							-13
B-5-10.0		3:52																							-14
B-5-15.5		4:06																							-15
B-6-5.0	8/7/02	8:43																							-16
B-6-10.0		8:54																							-17
B-6-15.5		9:06																							-18
B-7-5.0		10:01																							-19
B-7-10.5		10:09																							-20

FIELD NOTES:

Container/Preservative or PID Readings or Laboratory Notes

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) John Cuttle / Kiff Analytical	Date: 080802	Time: 1245

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Davis, CA 95616
(530) 297-4800 (530) 297-4803 fax

SHELL Chain Of Custody Record

Shell Project Manager to be invoiced:
☑ SCIENCE & ENGINEERING Karen Petryna
☐ TECHNICAL SERVICES
☐ GMT HOUSTON

27924

9 8 9 9 5 7 5 6

DATE: 8/6/02 -8/7/02
PAGE: 3 of 3

SAMPLING COMPANY: Cambria Environmental Technology Inc.	LOG CODE: CETO	SITE ADDRESS (Street and City): 5755 Broadway, Oakland, CA	GLOBAL ID NO.: T0600101270
ADDRESS: 1144 65th Street, Suite B, Oakland, CA, 94608		EDF DELIVERABLE TO (Responsible Party or Designee): ShellOaklandEDF@cambria-env.com	PHONE NO.: 510-420-3344
PROJECT CONTACT (Hardcopy or PDF Report to): Max Shahbazian		E-MAIL: ShellOaklandEDF@cambria-env.com	CONSULTANT PROJECT NO.: 244-0483-006
TELEPHONE: 510-420-3344	FAX: 510-420-6170	E-MAIL: mshahbazian@cambria-env.com	SAMPLER NAME(S) (Print): James Loetterle

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

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

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

REQUESTED ANALYSIS

Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable	BTEX	MTBE (8021B - 5ppb RL)	MTBE (8260B - 0.5ppb RL)	Oxygenates (5) by (8260B)	Ethanol (8260B)	Methanol	EDB & 1,2-DCA (8260B)	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	TRPH (418.1)	Vapor VOCs BTEX / MTBE (TO-15)	Vapor VOCs Full List (TO-15)	Vapor TPH (ASTM 3416m)	Vapor Fixed Gases (ASTM D1946)	Test for Disposal (4B-)	TPH - Diesel, Extractable (8015m)	MTBE (8260B) Confirmation, See Note	TEMPERATURE ON RECEIPT C°
B-8-5.0	8/7/02	10:49	Soil	1	X	X	X																-21
B-8-10.5		11:03																					-22
B-9-5.0		12:17																					-23
B-9-10.5		12:29																					-24
B-10-5.0		2:17																					-25
B-10-10.5		2:27																					-26
B-11-5.0		3:11																					-27
B-11-10.5		3:21																					-28

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

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) John Loetterle / Kiff Analytical	Date: 080802	Time: 1245

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