EQUILON
ENTERPRISES LLC
Shell & Texaco Working Together

June 21, 2002

Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502-6577

JUN 28 2002

RE: EQUILON ENTERPRISES LLC / Equiva Services LLC dba SHELL OIL PRODUCTS US

Dear Sir or Madam:

The Shell purchase of Texaco's interest in Equilon Enterprises LLC and Equiva Services LLC has been approved by government authorities and was completed in early February.

Please be advised that effective March 1, 2002, Equilon Enterprises LLC and Equiva Services LLC will begin doing business as (DBA) "Shell Oil Products US." Since Equilon Enterprises LLC will remain the owner and/or the responsible Party of remediation activities at 2703 Martin Luther King Jr. Way, Oakland, California, no changes are needed or requested for permits.

If you have any questions please contact Ms. Karen Petryna at 559.645.9306.

Yours truly,

Matthew W. Derby (Cambria)
for

Karen Petryna
Sr. Environmental Engineer

CAMBRIA

June 21, 2002

Don Hwang
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Re: **Subsurface Investigation Report**
Former Shell-branded Service Station
2703 Martin Luther King Jr. Way
Oakland, California 94112
Incident # 97093397
Cambria Project # 244-0781

Dear Mr. Hwang:

Cambria Environmental Technology, Inc. (Cambria) is submitting the results of the subsurface investigation conducted on April 11, 2002 at the referenced site on behalf of Shell Oil Products US (Shell). The objective of this investigation was to further define the extent of hydrocarbon impact in the northwest portion of the site. The investigation was conducted in accordance with Cambria's December 19, 2001 *Subsurface Investigation Work Plan*, which was approved by the Alameda County Health Care Services Agency (ACHCSA) in a letter dated February 19, 2002. Presented below are summaries of the site background, investigation procedures, investigation results, and our conclusions and recommendations.

SITE SUMMARY

Site Location: This former Shell-branded service station is located on the northwest corner of the intersection of Martin Luther King Jr. Way and 27th Street in Oakland, California (see Figures 1 and 2). The site is surrounded primarily by residential dwellings, but some light commercial development is included.

Site Lithology: The site is predominantly underlain by clay and clayey sand with lesser amounts of silt and silty sand to a maximum explored depth of 21 feet below grade (fbg).

Groundwater Flow and Direction: Historically, groundwater depths have ranged from approximately 4.6 to 10 fbg. The groundwater flow direction has predominately been to the south, fluctuating from southeast to southwest; however, during the first quarter 2002 monitoring event, the groundwater flow direction was observed to the northeast.

Oakland, CA
San Ramon, CA
Sonoma, CA

Cambria Environmental Technology, Inc.

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

Site Use: A Shell service station operated on the property from approximately 1959 to 1979. Three fuel underground storage tanks (USTs) associated with the former Shell service station were removed after Shell terminated operations at the site.

In 1979, Acme West Ambulance Company (Acme) purchased the site and installed a 2,000-gallon UST for gasoline storage. Acme sold the property to Auto-Tech West (ATW) in 1986. According to an August 25, 1986 ACHCSA inspector's report, ATW reportedly never used the UST, although a 150-gallon aboveground waste oil tank, a 15-gallon carburetor cleaner tank, and a parts cleaning tank with solvent were reportedly in use.

Currently, the site is occupied by ATW and is utilized as an automotive repair shop. The current site operator uses the northwest corner of the property and the wooden car port for storage of such things as non-operational automobiles, portable gasoline containers, tires, and drums which are possibly used for waste oil collection and storage.

1994 UST Removal: The 2,000-gallon UST was removed on October 11, 1994 by KTW & Associates on behalf of ATW. Two soil samples (TP-1-N and TP-2-S) were collected from beneath the tank (Figure 2). Chemical analysis of the soil samples identified the presence of total petroleum hydrocarbons as gasoline (TPHg) at concentrations ranging from 870 parts per million (ppm) to 18,000 ppm. Benzene concentrations in these samples ranged from 2.9 ppm to 100 ppm. The tank pit remained open until March 19, 1996 when the excavation was back-filled subsequent to over-excavation by a Shell contractor.

1995 Phase I Environmental Site Assessment (ESA): In August and September 1995, Enviros Inc. (Enviros) performed a Phase I ESA for this site. Available information collected during this ESA indicates that the subject property was occupied by residential housing prior to approximately 1959. A building permit to erect a building was obtained for Shell Oil Company in February 1959. A building permit to "close lube bays with sheet metal panels" was secured for Shell Oil Company in July 1976.

In 1979, several building permits were secured for Acme to modify existing site structures. Two building permits secured in 1979 related to the installation of a fuel pump at the site.

During a site survey in conjunction with the Phase I ESA, an excavation was observed near the southwest corner of the service building. The excavation was covered by a blue tarp. This excavation's location is consistent with that of the 2,000-gallon UST removed in 1994 by ATW, and with a large concrete slab observed in aerial photographs taken in 1971 and 1973, and a smaller concrete slab observed in aerial photographs taken in 1981 and 1985. The larger concrete

slab observed in the aerial photographs was likely covering the USTs operated by Shell, and the smaller slab was likely covering the UST operated by Acme, confirming that the same location was used for both UST complexes.

1995 Subsurface Investigation: A site assessment was performed by ACC Environmental Consultants on May 23, 1995. This included drilling nine soil borings (B-1 through B-9) using a pneumatic sampling tool in the vicinity of the excavation which formerly housed both Shell's and Acme's USTs and the product dispenser islands, and collecting soil and groundwater samples for chemical analysis (Figure 2). TPHg concentrations in soil samples ranged from <20.0 ppm to 830 ppm. Benzene concentrations ranged from <1.0 ppm to 1.8 ppm. Separate phase hydrocarbons (SPH) were identified in water samples collected from four of the soil borings (B-1, B-5, B-6 and B-9). TPHg concentrations in the non-SPH grab groundwater samples submitted for chemical analysis ranged from <50 parts per billion (ppb) to 89,000 ppb. Benzene concentrations in the grab groundwater samples ranged from <0.5 ppb to 21,000 ppb.

Over-excavation and back-filling of Acme's former UST excavation were performed on March 19, 1996. The excavation, originally left open to 9 fbg, was over-excavated to approximately 11 fbg. Two soil samples (TP-3-W and TP-4-E) were collected from the bottom of the over-excavated former UST area. Soil sample TP-3-W, collected from the western end of the excavation, contained 560 ppm TPHg and 3.1 ppm benzene. Soil sample TP-4-E, collected from the eastern end of the excavation, contained 2,700 ppm TPHg and <3.0 ppm benzene. The excavation was back-filled with clean imported fill material. Soil sampling and back-filling activities are documented in Enviros' May 10, 1996 correspondence.

1996 Subsurface Investigation: In July 1996, Enviros performed additional site assessment activities. Six exploratory borings (B-10, B-11, B-12, B-13, V-1, and V-2) were drilled and sampled on July 17 and 19, 1996 using a hollow-stem auger drill rig (Figure 2). Borings B-11 and B-12 were completed as groundwater monitoring wells MW-1 and MW-2, and borings V-1 and V-2 were completed as soil vapor extraction wells V-1 and V-2, respectively. Soil sampling was not performed in boring V-1 due to the fact that it was installed into the back-fill material within the former UST excavation. A soil sample from below the saturated zone in boring V-2 was submitted for physical parameter analyses (porosity, permeability, fractional organic carbon content, and dry bulk density).

TPHg and benzene were not detected in soil samples collected from MW-1 (B-11), MW-2 (B-12) and B-13. TPHg was detected in soil samples collected from B-10 and V-2 at concentrations of 1.7 ppm and 110 ppm, respectively. Benzene concentrations in soil samples from B-10 and V-2 were <0.0050 ppm and 0.29 ppm, respectively.

Grab groundwater samples were collected from borings B-10, B-12 (MW-2), and B-13 at the depth of first encountered groundwater (approximately 8 to 11 fbg) for chemical analysis. Boring B-11 (MW-1) did not yield sufficient groundwater for grab groundwater sample collection. Monitoring wells MW-1 and MW-2 were developed and sampled on August 2, 1999 by Blaine Tech Services (Blaine) of San Jose, CA.

TPHg concentrations in the groundwater samples ranged from <50 ppb to 290,000 ppb. Benzene concentrations ranged from <0.50 ppb to 34,000 ppb.

1997 Modified Phase I ESA: In February 1997, Enviros performed a modified Phase I ESA for the subject facility. A review of aerial photographs (1952 to 1994), city directories (1967 to 1993) and Sanborn maps (1912 to 1970) did not reveal evidence of an off-site source of petroleum hydrocarbons which would have impacted groundwater onsite. The properties located north and west of the subject facility appear to have been occupied by residential houses from at least 1912 to the present. The nearest gasoline stations identified in the vicinity of the subject facility were a former Chevron station (740 27th Street at West) approximately 450 feet to the west, a former station (26th Street and Martin Luther King, Jr. Way) approximately 300 feet to the south, and a former Mobil station (554 27th Street) approximately 950 feet to the east.

2000 Sensitive Receptor Survey: In late 2000, Cambria performed a sensitive receptor survey which attempted to identify wells and underground utility conduits which may be impacted by subsurface conditions onsite. Cambria obtained well installation and destruction records from the California Department of Water Resources (DWR) in order to identify any active water producing wells in the vicinity of the site which may be at risk to petroleum hydrocarbon impact due to contaminant migration from the subsurface of the site. DWR records did not identify any existing wells within a ½-mile radius of the site.

2000 Subsurface Investigation: In November 2000, Cambria installed three soil borings (B-17, B-18 and B-19) and three groundwater monitoring wells (MW-3, MW-4 and MW-5) (Figure 2). Up to 2,100 ppm TPHg and 3.3 ppm benzene were reported in soil samples collected. No TPHg or benzene was detected in soil samples collected from well MW-3. Except for 0.0070 ppm detected in soil sample B-18-7.0, no methyl tertiary butyl ether (MTBE) was detected in any of the analyzed soil samples. Tertiary butyl alcohol (TBA) was detected in soil samples MW4-5.0 and B19-5.0 at concentrations of 0.0079 and 0.0059 ppm, respectively.

Grab groundwater samples were collected from borings B17 through B19 at first encountered groundwater for analyses during the investigation. TPHg concentrations in grab water samples collected from the borings ranged from 58,000 to 190,000 micrograms per liter (µg/l or ppb). Benzene concentrations ranged from 4,400 to 13,000 ppb. MTBE was detected in groundwater at

concentrations of 16 ppb and 300 ppb from B19 and B17, respectively, and TBA was detected at 240 ppb in B19 only. No SPH was observed during the investigation.

2001 Oxygen Releasing Compound (ORC) Installation: As approved by the (ACHCSA), Blaine installed ORCs in wells V-1 and V-2 during the second quarter monitoring event on May 2, 2001. Pending the current investigation, ORCs were removed during the fourth quarter 2001 monitoring event. MTBE has not been detected in these two wells since the ORCs were installed.

Groundwater Monitoring: Quarterly groundwater monitoring has been ongoing at the site since August 1996. No TPHg or benzene has been reported in groundwater samples collected from monitoring wells MW-1 and MW-2 since monitoring began. Well V-1, installed within the former UST excavation, has had decreasing TPHg and benzene concentrations since 1997. Well V-2, located downgradient of the former UST excavation, has had concentrations of up to 90,000 ppb TPHg and 10,200 ppb benzene.

Wells MW-3, MW-4 and MW-5 were added to the quarterly monitoring program in May 2001. No TPHg or benzene has been reported in well MW-3 since monitoring began. Up to 16,000 ppb TPHg and 4,100 ppb benzene have been reported in well MW-4, and up to 160,000 ppb TPHg and 12,000 ppb benzene have been reported in well MW-5. TPHg and benzene concentrations in groundwater from wells MW-4 and MW-5 have shown a decreasing concentration trend since installation.

MTBE has not been detected in any samples collected from the site wells that were analyzed by EPA Method 8260. No MTBE has been reported in samples collected from well MW-1 since monitoring began, except for 2.36 ppb by EPA Method 8020 on January 18, 1999. MTBE has been reported in well MW-2 at 6.3 ppb on January 9, 1998 and at 2.47 ppb on January 18, 1999 (by EPA method 8020) only. Several samples from well V-1 have had reported MTBE concentrations when analyzed by EPA Method 8020, while results have been below detection limits when analyzed by EPA Method 8260. This includes a sample with a reported MTBE concentration of 1,900 ppb (by EPA Method 8020) on October 24, 1997, which had a result of <200 ppb when confirmed by EPA Method 8260 analysis. During two sampling events (July 2, 1997 and October 24, 1997), well V-2 samples had MTBE results reported as 530 ppb and 120 ppb, respectively, when analyzed by EPA Method 8020; however, both were found to be below detection limits when the samples were analyzed by EPA Method 8260. No MTBE has been reported in samples from wells MW-3, MW-4 or MW-5 since monitoring began.

INVESTIGATION PROCEDURES

Cambria advanced three soil borings to further define the extent of hydrocarbon impact in the northwest portion of the site (Figure 2). The borings were advanced using a hand auger and were continuously logged for lithologic description. In addition, for chemical analysis, soil samples were collected at approximately 5-foot intervals and from the soil-groundwater interface, and one grab groundwater sample was collected from each boring.

The procedures for this subsurface investigation, described in Cambria's approved work plan, are summarized below. Analytical results for soil and groundwater are summarized in Tables 1 and 2, respectively, and laboratory analytical reports are presented as Attachment A. Boring logs and the drilling permit are presented in Attachments B and C, respectively. Soil disposal confirmation and Cambria's standard field procedures for hand-auger sampling are presented in Attachments D and E, respectively.

Personnel Present: Jason Gerke, Staff Geologist, of Cambria.
Sanjiv Gill, Field Technician, of Cambria.

Permit: Alameda County Public Works Agency Permit #W02-0271 (Attachment C).

Drilling Date: April 11, 2002.

Drilling Method: Hand auger.

Number of Borings: Three borings: B-20 through B-22 (Figure 2).

Boring Depths: 9.0 fbg (Attachment B).

Sediment Lithology: Soil observed in boring B-20 consisted of silty clays, silty sands and clayey silt to the total explored depth of 9 fbg. Soil encountered in borings B-21 and B-22 consisted of silty clay to the total depth of 9 fbg. Boring logs are included as Attachment B.

Groundwater Depths: Groundwater was first encountered in the borings between 8.0 fbg (B-20) and 8.8 fbg (B-21 and B-22).

Chemical Analyses: Soil and grab groundwater samples from the borings were analyzed by a State-approved laboratory for the following analytes by EPA Method 8260:

- TPHg;
- MTBE; and
- Benzene, toluene, ethylbenzene and xylenes (BTEX).

Soil Stockpile Analysis: To characterize stockpiled soil for disposal, four brass tubes of soil were collected from the stockpiled soil, and then composited by the analytical laboratory. The composite sample was analyzed for:

- TPHg by modified EPA Method 8260;
- BTEX and MTBE by EPA Method 8260; and
- Total threshold limit concentration lead.

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

Soil Handling: Soil cuttings produced from the borings were stockpiled onsite. The cuttings were transported to Forward Landfill in Manteca, California for disposal on May 2, 2002. Disposal confirmation is included in Appendix E.

INVESTIGATION RESULTS

Analytical Results for Soil Sampling: The maximum TPHg and benzene concentrations detected in soil were 380 ppm and 0.17 ppm, respectively, in the soil sample collected from 8.0 fbg in boring B-22, located behind the station building. No TPHg was detected in soil samples collected from boring B-21. No MTBE was detected in any of the analyzed soil samples collected from borings B-20, B-21 or B-22. Soil sampling results are summarized in Table 1, and laboratory analytical results are included as Attachment A.

Analytical Results for Grab Groundwater Sampling: Up to 160,000 ppb TPHg and 18,000 ppb benzene were reported in grab groundwater samples collected from borings B-20, B-21 and B-22. No MTBE was detected in grab groundwater samples collected from the borings. Grab groundwater sampling results are summarized in Table 2, and laboratory analytical results are included as Attachment A.

CONCLUSIONS AND RECOMMENDATIONS

As stated previously, groundwater flow direction has typically fluctuated from southeast to southwest; however, during the first quarter 2002 monitoring event, the groundwater flow direction was northeast. A rose diagram of groundwater flow direction is included on Figure 2. Elevated hydrocarbon concentrations have been detected onsite as far as 40 feet upgradient of the former USTs at the site, and as far as 70 feet upgradient of the nearest former dispenser island at the site. The current investigation sampled locations as near as practical to the property lines, and grab groundwater sample results and recent quarterly groundwater monitoring results indicate that the highest concentrations of hydrocarbons in groundwater beneath the site are present near the upgradient property boundaries.

While a Phase I ESA was been previously conducted for the site without identifying any upgradient sources, the results of this investigation and previous investigations at the site suggest the possible presence of either an upgradient source in the site vicinity or a secondary source onsite not associated with the fuel USTs and product piping previously operated by Shell.

As stated previously, the current site operator uses the northwest corner of the property and the wooden car port for storage of such things as non-operational automobiles, portable gasoline containers, tires, and drums, possibly for waste oil storage. Cambria recommends that the County contact the current site owner to determine if these items are properly stored in accordance with City and County regulations. Cambria believes that site operation since 1979 may have the potential to contribute to the previously existing hydrocarbon impacts to soil and groundwater.

In addition, Cambria recommends the following course of action:

- Cambria will install ORC in well MW-5 in order to enhance intrinsic bioremediation. In addition, quarterly groundwater samples from selected site wells will be analyzed additionally for bioparameters including dissolved oxygen, oxidation reduction potential, ferrous iron, nitrate, sulfate and total alkalinity.
- Cambria will complete a site conceptual model for the site, including compiling all available historical soil and groundwater analytical data and available soil boring logs.
- Cambria will complete cross-sectional diagrams of the site using available boring logs and historical soil analytical results to identify potential source areas onsite.
- Cambria will complete a 500-foot door-to-door well, basement and tank survey to identify any potential sensitive receptors or additional sources, including domestic wells, basements or underground heating or oil tanks, in the immediate site vicinity.
- Cambria recommends collecting soil vapor samples in the areas of highest reported soil contamination detected onsite to determine if volatilization from soil and/or groundwater

to indoor/outdoor air is a completed exposure pathway for the site. We propose to advance several soil borings, depending on the results of the cross-sectional diagrams described above, to approximately 6 fbg, just above the groundwater table, and collect vapor samples at approximately 2 fbg, 4 fbg and 6 fbg. Collected vapor samples will be analyzed for TPHg, BTEX and MTBE by EPA Method 8260.

Upon ACHCSA approval of these recommendations, we will prepare the cross-sectional diagrams and complete the 500-foot door-to-door survey. Upon completion of these two items, we will submit a work plan with more defined proposed vapor boring locations.

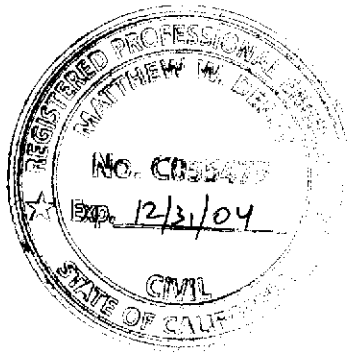
CLOSING

Please call Jacquelyn Jones at (510) 420-3316 if you have any questions or comments. Thank you for your assistance.

Sincerely,
Cambria Environmental Technology, Inc.

Jacquelyn L. Jones
Project Geologist

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



Figures: 1 -Vicinity/Area Well Survey Map
2 - Soil Boring Location Map

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

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

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869

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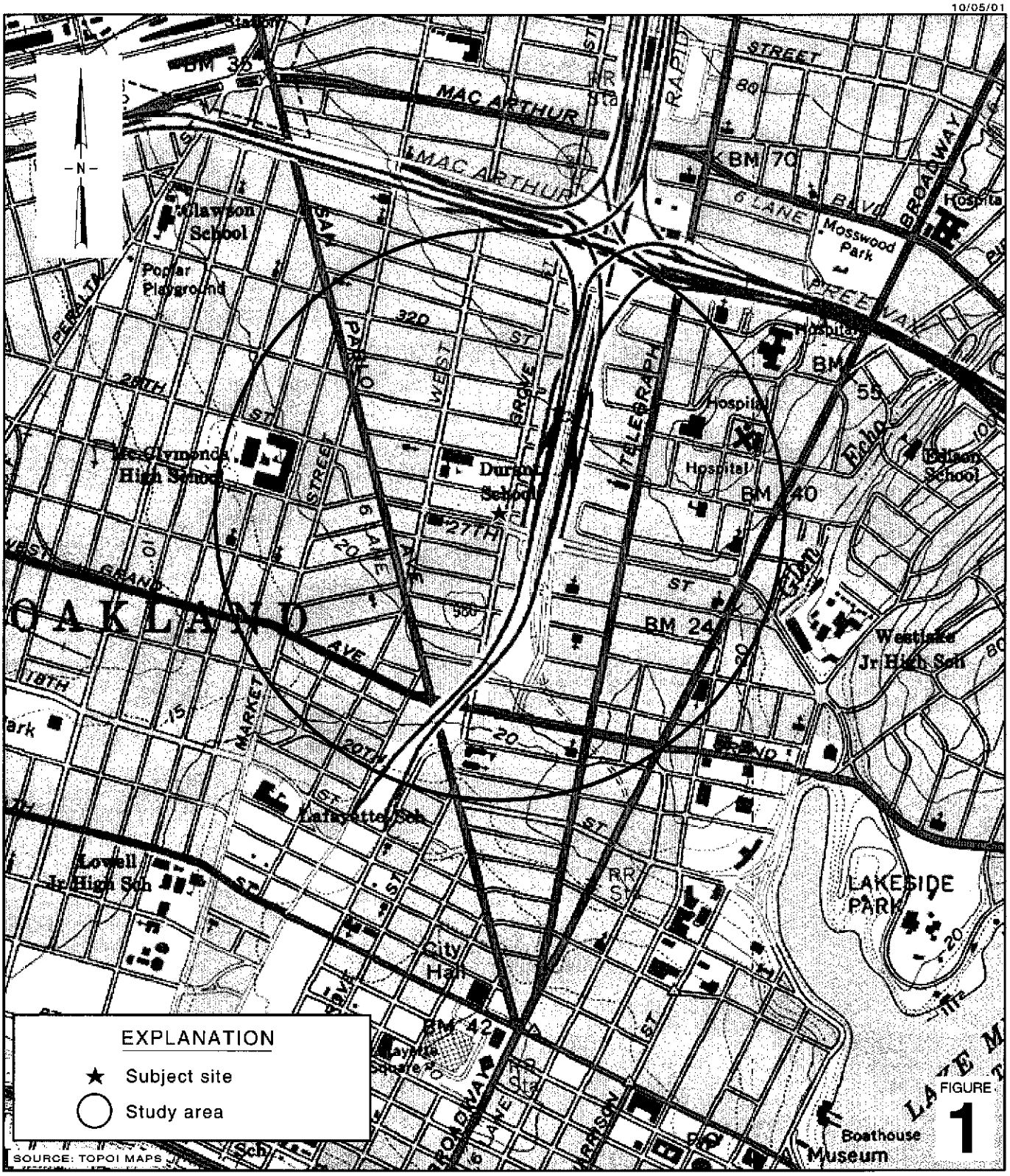
10/05/01



G:\OAKLAND 2703 MLK\FIGURES\VIC-WELL-SURVEY.AI

FIGURE 1

Former Shell Service Station
2703 Martin Luther King Jr. Way
Oakland, California
Incident #97093397

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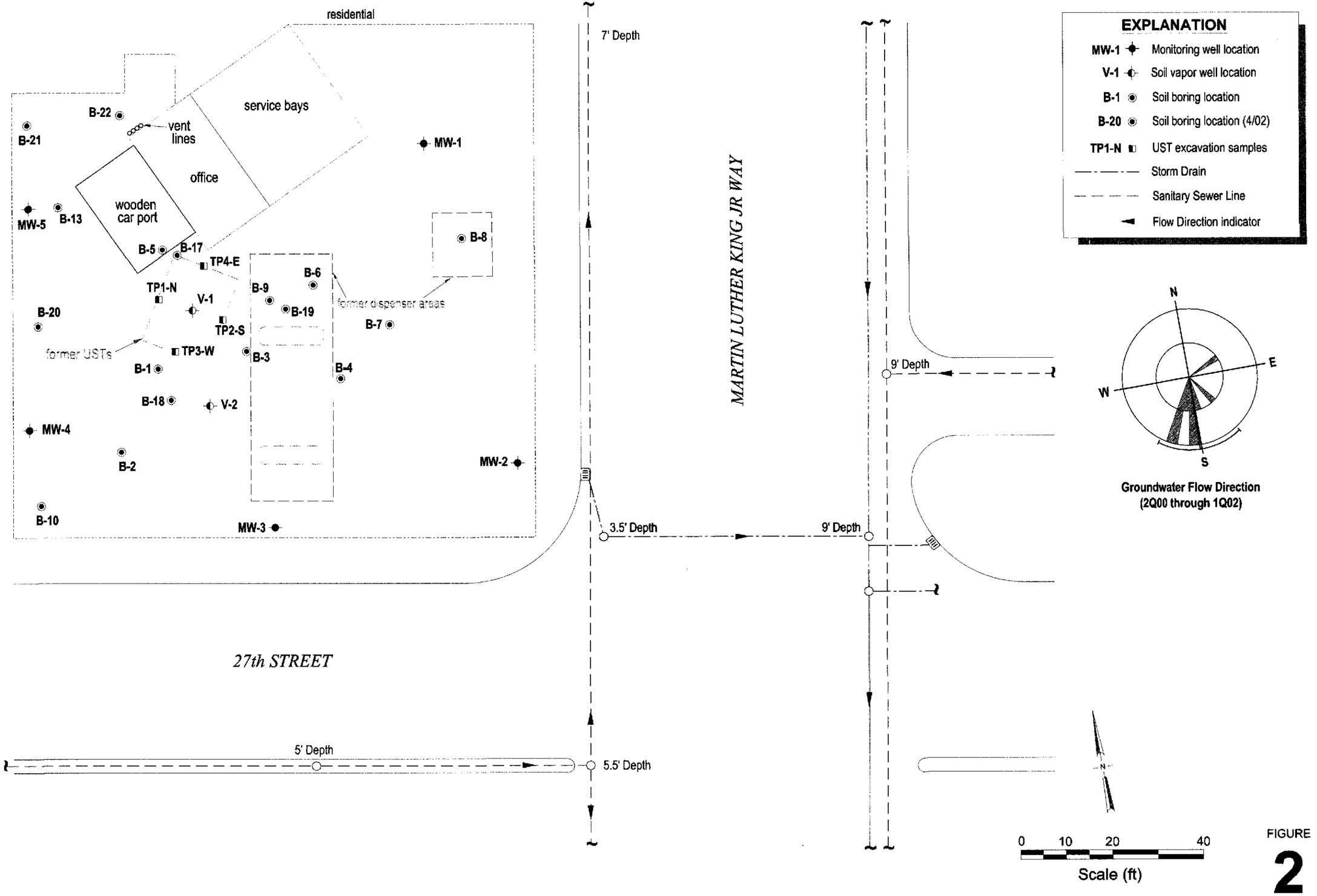
Vicinity / Area Well Survey Map
(1/2 - Mile Radius)

08/04/02

Soil Boring Location Map



FIGURE

2

Former Shell Service Station
2703 Martin Luther King Jr. Way
Oakland, California
Incident #97093397

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G:\OAKLAND 2703 MLK\FIGURES\BOR-LOC-5-06-02.DWG

Table 1. Soil Analytical Data - Shell-branded Service Station - 2703 Martin Luther King Jr. Way, Oakland, California
Incident # 97093397

Sample ID	Depth (feet below grade)	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
		← (ppm) →					
Sample date: April 11, 2002							
B-20-4.5	4.5	**1.1**	<0.5	**0.0075**	<0.005	<0.005	<0.005
B-20-7.5	7.5	**22**	<0.5	<0.005	<0.005	**0.14**	**0.027**
B-21-3.0	3.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-21-8.0	8.0	<1.0	<0.5	**0.0083**	<0.005	<0.005	**0.011**
B-22-3.0	3.0	<1.0	<0.5	<0.005	<0.005	<0.005	<0.005
B-22-8.0	8.0	**380**	<0.5	**0.17**	**0.27**	**6.1**	**31**

Notes and Abbreviations:

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

MTBE = Methyl tert-butyl ether, analyzed by EPA Method 8260B

Benzene, ethylbenzene, toluene, xylenes, analyzed by EPA Method 8260B

ppm = parts per million

<X = Below laboratory detection limit of X

Table 2. Grab Groundwater Analytical Data - Shell-branded Service Station - 2703 Martin Luther King Jr. Way, Oakland, Califc
Incident # 97093397

Sample ID	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	←		(ppb)			→
Sample date: April 11, 2002						
B-20	**58,000**	<200	**5,000**	**200**	**3,800**	**4,500**
B-21	**160,000**	<500	**18,000**	**9,200**	**5,500**	**29,000**
B-22	**110,000**	<250	**6,700**	**1,200**	**4,700**	**23,000**

Notes and Abbreviations:

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

MTBE = Methyl tert-butyl ether, analyzed by EPA Method 8260B

Benzene, ethylbenzene, toluene, xylenes, analyzed by EPA Method 8260B

ppb = parts per billion

<X = Below laboratory detection limit of X

ATTACHMENT A

Soil and Groundwater Analytical Reports

KIFF ANALYTICAL LLC

Report Number : 25921
Date : 4/25/2002

Jacquelyn Jones
Cambria Environmental Technology, Inc.
1144 65th Street, Suite B
Oakland, CA 94608

Subject : 3 Water Samples and 6 Soil Samples
Project Name : 2703 Martin Luther King Jr. Way-Oakland
Project Number : 244-0781
P.O. Number : 97093397

Dear Ms. Jones,

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 : 25921
Date : 4/25/2002

Project Name : **2703 Martin Luther King Jr. Way-Oakland**
Project Number : **244-0781**

Sample : **B-20-4.5** Matrix : Soil Lab Number : 25921-01
Sample Date :4/11/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.0075**	0.005	mg/Kg	EPA 8260B	4/18/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	4/18/2002
TPH as Gasoline	**1.1**	1.0	mg/Kg	EPA 8260B	4/18/2002
Toluene - d8 (Surr)	98.0		% Recovery	EPA 8260B	4/18/2002
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	4/18/2002

Sample : **B-20-7.5** Matrix : Soil Lab Number : 25921-02
Sample Date :4/11/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/19/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/19/2002
Ethylbenzene	**0.14**	0.005	mg/Kg	EPA 8260B	4/19/2002
Total Xylenes	**0.027**	0.005	mg/Kg	EPA 8260B	4/19/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	4/19/2002
TPH as Gasoline	**22**	1.0	mg/Kg	EPA 8260B	4/19/2002
Toluene - d8 (Surr)	98.8		% Recovery	EPA 8260B	4/19/2002
4-Bromofluorobenzene (Surr)	99.0		% Recovery	EPA 8260B	4/19/2002

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 25921
Date : 4/25/2002

Project Name : **2703 Martin Luther King Jr. Way-Oakland**
Project Number : **244-0781**

Sample : **B-20** Matrix : Water Lab Number : 25921-03
Sample Date :4/11/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**5000**	20	ug/L	EPA 8260B	4/19/2002
Toluene	**200**	20	ug/L	EPA 8260B	4/19/2002
Ethylbenzene	**3800**	20	ug/L	EPA 8260B	4/19/2002
Total Xylenes	**4500**	20	ug/L	EPA 8260B	4/19/2002
Methyl-t-butyl ether (MTBE)	**< 200**	200	ug/L	EPA 8260B	4/19/2002
TPH as Gasoline	**58000**	2000	ug/L	EPA 8260B	4/19/2002
Toluene - d8 (Surr)	99.2		% Recovery	EPA 8260B	4/19/2002
4-Bromofluorobenzene (Surr)	99.0		% Recovery	EPA 8260B	4/19/2002

Sample : **B-21-3.0** Matrix : Soil Lab Number : 25921-04
Sample Date :4/11/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	4/18/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	4/18/2002
Toluene - d8 (Surr)	90.6		% Recovery	EPA 8260B	4/18/2002
4-Bromofluorobenzene (Surr)	97.5		% Recovery	EPA 8260B	4/18/2002

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 25921
Date : 4/25/2002

Project Name : **2703 Martin Luther King Jr. Way-Oakland**
Project Number : **244-0781**

Sample : **B-21-8.0** Matrix : Soil Lab Number : 25921-05
Sample Date :4/11/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.0083**	0.005	mg/Kg	EPA 8260B	4/18/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Total Xylenes	**0.011**	0.005	mg/Kg	EPA 8260B	4/18/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	4/18/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	4/18/2002
Toluene - d8 (Surr)	90.5		% Recovery	EPA 8260B	4/18/2002
4-Bromofluorobenzene (Surr)	99.8		% Recovery	EPA 8260B	4/18/2002

Sample : **B-21** Matrix : Water Lab Number : 25921-06
Sample Date :4/11/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**18000**	50	ug/L	EPA 8260B	4/18/2002
Toluene	**9200**	50	ug/L	EPA 8260B	4/18/2002
Ethylbenzene	**5500**	50	ug/L	EPA 8260B	4/18/2002
Total Xylenes	**29000**	50	ug/L	EPA 8260B	4/18/2002
Methyl-t-butyl ether (MTBE)	**< 500**	500	ug/L	EPA 8260B	4/18/2002
TPH as Gasoline	**160000**	5000	ug/L	EPA 8260B	4/18/2002
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	4/18/2002
4-Bromofluorobenzene (Surr)	96.6		% Recovery	EPA 8260B	4/18/2002

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 25921
Date : 4/25/2002

Project Name : **2703 Martin Luther King Jr. Way-Oakland**
Project Number : **244-0781**

Sample : **B-22-3.0** Matrix : Soil Lab Number : 25921-07
Sample Date :4/11/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Toluene	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Ethylbenzene	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Total Xylenes	**< 0.005**	0.005	mg/Kg	EPA 8260B	4/18/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	4/18/2002
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	4/18/2002
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	4/18/2002
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	4/18/2002

Sample : **B-22-8.0** Matrix : Soil Lab Number : 25921-08
Sample Date :4/11/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.17**	0.050	mg/Kg	EPA 8260B	4/19/2002
Toluene	**0.27**	0.050	mg/Kg	EPA 8260B	4/19/2002
Ethylbenzene	**6.1**	0.050	mg/Kg	EPA 8260B	4/19/2002
Total Xylenes	**31**	0.10	mg/Kg	EPA 8260B	4/19/2002
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	4/19/2002
TPH as Gasoline	**380**	5.0	mg/Kg	EPA 8260B	4/19/2002
Toluene - d8 (Surr)	94.2		% Recovery	EPA 8260B	4/19/2002
4-Bromofluorobenzene (Surr)	108		% Recovery	EPA 8260B	4/19/2002

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 25921
Date : 4/25/2002

Project Name : **2703 Martin Luther King Jr. Way-Oakland**
Project Number : **244-0781**

Sample : **B-22** Matrix : Water Lab Number : 25921-09
Sample Date :4/11/2002

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**6700**	25	ug/L	EPA 8260B	4/18/2002
Toluene	**1200**	25	ug/L	EPA 8260B	4/18/2002
Ethylbenzene	**4700**	25	ug/L	EPA 8260B	4/18/2002
Total Xylenes	**23000**	25	ug/L	EPA 8260B	4/18/2002
Methyl-t-butyl ether (MTBE)	**< 250**	250	ug/L	EPA 8260B	4/18/2002
TPH as Gasoline	**110000**	2500	ug/L	EPA 8260B	4/18/2002
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	4/18/2002
4-Bromofluorobenzene (Surr)	97.6		% Recovery	EPA 8260B	4/18/2002

Approved By: Joel Kiff

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

Report Number : 25921

Date : 4/25/2002

QC Report : Method Blank Data

Project Name : **2703 Martin Luther King Jr. Way-Oakland**

Project Number : **244-0781**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.005	0.005	mg/Kg	EPA 8260B	4/19/2002
Toluene	< 0.005	0.005	mg/Kg	EPA 8260B	4/19/2002
Ethylbenzene	< 0.005	0.005	mg/Kg	EPA 8260B	4/19/2002
Total Xylenes	< 0.005	0.005	mg/Kg	EPA 8260B	4/19/2002
Methyl-t-butyl ether (MTBE)	< 0.5	0.5	mg/Kg	EPA 8260B	4/19/2002
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	4/19/2002
Toluene - d8 (Surr)	101		%	EPA 8260B	4/19/2002
4-Bromofluorobenzene (Surr)	102		%	EPA 8260B	4/19/2002
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/18/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/18/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/18/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/18/2002
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/18/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/18/2002
Toluene - d8 (Surr)	99.2		%	EPA 8260B	4/18/2002
4-Bromofluorobenzene (Surr)	98.4		%	EPA 8260B	4/18/2002
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/17/2002
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/17/2002
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/17/2002
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/17/2002
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/17/2002
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/17/2002
Toluene - d8 (Surr)	99.9		%	EPA 8260B	4/17/2002
4-Bromofluorobenzene (Surr)	96.2		%	EPA 8260B	4/17/2002

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 : 25921

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 4/25/2002

Project Name : **2703 Martin Luther King**

Project Number : **244-0781**

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	25938-08	2.8	39.5	40.4	42.5	42.6	ug/L	EPA 8260B	4/18/02	100	98.6	1.93	70-130	25
Toluene	25938-08	<0.50	39.5	40.4	38.3	38.3	ug/L	EPA 8260B	4/18/02	97.0	94.8	2.35	70-130	25
Tert-Butanol	25938-08	<5.0	198	202	193	197	ug/L	EPA 8260B	4/18/02	97.5	97.3	0.149	70-130	25
Methyl-t-Butyl Ether	25938-08	<0.50	39.5	40.4	37.5	37.6	ug/L	EPA 8260B	4/18/02	94.9	93.2	1.83	70-130	25
Benzene	25950-04	<0.50	40.0	40.0	37.4	37.3	ug/L	EPA 8260B	4/17/02	93.5	93.2	0.268	70-130	25
Toluene	25950-04	<0.50	40.0	40.0	38.1	38.4	ug/L	EPA 8260B	4/17/02	95.3	96.0	0.758	70-130	25
Tert-Butanol	25950-04	1400	200	200	1600	1620	ug/L	EPA 8260B	4/17/02	120	129	7.25	70-130	25
Methyl-t-Butyl Ether	25950-04	<0.50	40.0	40.0	34.8	35.4	ug/L	EPA 8260B	4/17/02	87.0	88.4	1.68	70-130	25
Benzene	25922-04	<0.0050	0.0395	0.0391	0.0277	0.0214	mg/Kg	EPA 8260B	4/19/02	70.0	54.8	24.4	70-130	25
Toluene	25922-04	<0.0050	0.0395	0.0391	0.0252	0.0185	mg/Kg	EPA 8260B	4/19/02	63.7	47.3	29.6	70-130	25
Tert-Butanol	25922-04	<0.0050	0.198	0.196	0.146	0.140	mg/Kg	EPA 8260B	4/19/02	74.1	71.7	3.22	70-130	25
Methyl-t-Butyl Ether	25922-04	<0.0050	0.0395	0.0391	0.0303	0.0266	mg/Kg	EPA 8260B	4/19/02	76.8	67.9	12.2	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 25921

Date : 4/25/2002

QC Report : Laboratory Control Sample (LCS)

Project Name : **2703 Martin Luther King**

Project Number : **244-0781**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	20.0	ug/L	EPA 8260B	4/18/02	102	70-130
Toluene	20.0	ug/L	EPA 8260B	4/18/02	98.1	70-130
Tert-Butanol	100	ug/L	EPA 8260B	4/18/02	92.6	70-130
Methyl-t-Butyl Ether	20.0	ug/L	EPA 8260B	4/18/02	107	70-130
Benzene	40.0	ug/L	EPA 8260B	4/17/02	96.9	70-130
Toluene	40.0	ug/L	EPA 8260B	4/17/02	98.4	70-130
Tert-Butanol	200	ug/L	EPA 8260B	4/17/02	99.5	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	4/17/02	95.8	70-130
Benzene	0.0393	mg/Kg	EPA 8260B	4/19/02	85.6	70-130
Toluene	0.0393	mg/Kg	EPA 8260B	4/19/02	86.3	70-130
Tert-Butanol	0.196	mg/Kg	EPA 8260B	4/19/02	86.0	70-130
Methyl-t-Butyl Ether	0.0393	mg/Kg	EPA 8260B	4/19/02	82.3	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 25921
☐ TECHNICAL SERVICES
☐ GMT HOUSTON

INCIDENT NUMBER (SAP ONLY): 97093397
(SAP / GMT NUMBER IS REQUIRED)

DATE: 4/11/02
PAGE: 1 of 1

SAMPLING COMPANY: Cambria Environmental Technology
LOG CODE: CETO
SITE ADDRESS (Street and City): 2703 Martin Luther King Jr. Way - Oakland
GLOBAL ID NO.: T0600101876
ADDRESS: 1144-65TH Street, Oakland, CA 94608
EDF DELIVERABLE TO (Responsible Party or Designee): shelloaklandedf@cambria-env.com
PHONE NO.:
E-MAIL:
CONSULTANT PROJECT NO.: 244-0781
PROJECT CONTACT (Hardcopy or PDF Report to): Jacquelyn Jones
SAMPLER NAME(S) (Print): Jason K. Gerke
TELEPHONE: 510-420-3316
FAX: 510-420-9170
E-MAIL: jjones@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 ☐

cc lab report to: jgerke@cambria-env.com

REQUESTED ANALYSIS

LAB USE ONLY	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 D1945)	Test for Disposal (48–)		TPH - Diesel, Extractable (8015m)		MTBE (8260B) Confirmation, See Note	TEMPERATURE ON RECEIPT C°
	B-20 - 4.5	4/11/02	1050	Soil	1	X	X	X																		01
	B-20-7.5		1125	Soil	1	X	X	X																		02
	B-20		1200	GW	4	X	X	X																		03
	B-21 - 3.0		1255	Soil	1	X	X	X																		04
	B-21 - 8.0		1450	Soil	1	X	X	X																		05
	B-21		1500	GW	4	X	X	X																		06
	B-22 - 3.0		1510	Soil	1	X	X	X																		07
	B-22 - 8.0		1540	Soil	1	X	X	X																		08
	B-22		1600	GW	4	X	X	X																		09

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

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Jason Mark			
	Howard Brown KIFF	04/15/02	1100

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

10/16/00 Revision

Q&Q Graphic (714) 898-9702

KIFF ANALYTICAL LLC

Report Number : 25920
Date : 4/24/02

Jacquelyn Jones
Cambria Environmental Technology, Inc.
1144 65th Street, Suite B
Oakland, CA 94608

Subject : 5 Soil Samples
Project Name : 2703 Martin Luther King Jr. Way - Oakland
Project Number : 244-0781
P.O. Number : SAP# 129449

Dear Ms. Jones,

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 : 25920
Date : 4/24/02

Project Name : **2703 Martin Luther King Jr. Way - Oakland**
Project Number : **244-0781**

Sample : **SP-1-A** Matrix : Soil Lab Number : 25920-01
Sample Date :4/11/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**420**	5.0	mg/Kg	EPA 8260B	4/18/02
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	4/18/02

Sample : **SP-1-B** Matrix : Soil Lab Number : 25920-02
Sample Date :4/11/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	4/17/02
4-Bromofluorobenzene (Surr)	97.0		% Recovery	EPA 8260B	4/17/02

Sample : **SP-1-C** Matrix : Soil Lab Number : 25920-03
Sample Date :4/11/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**48**	5.0	mg/Kg	EPA 8260B	4/21/02
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	4/21/02

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 25920
Date : 4/24/02

Project Name : **2703 Martin Luther King Jr. Way - Oakland**
Project Number : **244-0781**

Sample : **SP-1-D** Matrix : Soil Lab Number : 25920-04
Sample Date :4/11/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**4.3**	1.0	mg/Kg	EPA 8260B	4/18/02
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	4/18/02

Sample : **SP-1-A,B,C,D** Matrix : Soil Lab Number : 25920-05
Sample Date :4/11/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**0.034**	0.025	mg/Kg	EPA 8260B	4/20/02
Toluene	**0.055**	0.025	mg/Kg	EPA 8260B	4/20/02
Ethylbenzene	**1.1**	0.025	mg/Kg	EPA 8260B	4/20/02
Total Xylenes	**5.8**	0.050	mg/Kg	EPA 8260B	4/20/02
Methyl-t-butyl ether (MTBE)	**< 0.5**	0.5	mg/Kg	EPA 8260B	4/20/02
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	4/20/02
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	4/20/02

Approved By: Joel Kiff

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

Report Number : 25920

Date : 4/24/02

QC Report : Method Blank Data

Project Name : **2703 Martin Luther King Jr. Way - Oakland**

Project Number : **244-0781**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.005	0.005	mg/Kg	EPA 8260B	4/16/02
Toluene	< 0.005	0.005	mg/Kg	EPA 8260B	4/16/02
Ethylbenzene	< 0.005	0.005	mg/Kg	EPA 8260B	4/16/02
Total Xylenes	< 0.005	0.005	mg/Kg	EPA 8260B	4/16/02
Methyl-t-butyl ether (MTBE)	< 0.5	0.5	mg/Kg	EPA 8260B	4/16/02
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	4/16/02
Toluene - d8 (Surr)	98.0		%	EPA 8260B	4/16/02
4-Bromofluorobenzene (Surr)	102		%	EPA 8260B	4/16/02

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 : 25920

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 4/24/02

Project Name : **2703 Martin Luther King**

Project Number : **244-0781**

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	25900-14	<0.0050	0.0397	0.0393	0.0364	0.0362	mg/Kg	EPA 8260B	4/16/02	91.8	92.2	0.380	70-130	25
Toluene	25900-14	<0.0050	0.0397	0.0393	0.0365	0.0362	mg/Kg	EPA 8260B	4/16/02	92.1	92.2	0.136	70-130	25
Tert-Butanol	25900-14	<0.0050	0.198	0.196	0.179	0.179	mg/Kg	EPA 8260B	4/16/02	90.1	91.1	1.18	70-130	25
Methyl-t-Butyl Ether	25900-14	<0.0050	0.0397	0.0393	0.0334	0.0340	mg/Kg	EPA 8260B	4/16/02	84.2	86.6	2.75	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 25920

QC Report : Laboratory Control Sample (LCS)

Date : 4/24/02

Project Name : **2703 Martin Luther King**

Project Number : **244-0781**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	0.0398	mg/Kg	EPA 8260B	4/16/02	92.8	70-130
Toluene	0.0398	mg/Kg	EPA 8260B	4/16/02	93.0	70-130
Tert-Butanol	0.199	mg/Kg	EPA 8260B	4/16/02	91.6	70-130
Methyl-t-Butyl Ether	0.0398	mg/Kg	EPA 8260B	4/16/02	88.2	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

Calscience
Environmental
Laboratories, Inc.

April 24, 2002

Joel Kiff
Kiff Analytical
720 Olive Drive, Suite D
Davis, CA 95616-0000

Subject: **Calscience Work Order No.: 02-04-0828**
Client Reference: 2703 Martin Luther King Jr. Way-Oakland

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 4/18/02 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Larry Lem
Project Manager

Michael J. Crisostomo
Quality Assurance Manager

Calscience Environmental Laboratories, Inc.

ANALYTICAL REPORT

Kiff Analytical
720 Olive Drive, Suite D
Davis, CA 95616-0000

Date Received: 04/18/02
Work Order No: 02-04-0828
Preparation: Total Digestion
Method: EPA 6010B

Project: 2703 Martin Luther King Jr. Way-Oakland

Client Sample Number	Lab Sample Number	Matrix	Date Collected	Date Prepared	Date Analyzed	QC Batch ID
SP-1-A, B, C, D	02-04-0828-1	Solid	04/11/02	04/18/02	04/19/02	020418lca4

Parameter	Result	RL	DF	Qual	Units
Lead	5.85	0.50	1		mg/kg

Method Blank	097-01-002-3,292	Solid	N/A	04/18/02	04/19/02	020418lca4

Parameter	Result	RL	DF	Qual	Units
Lead	ND	0.500	1		mg/kg

RL - Reporting Limit . DF - Dilution Factor . Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Kiff Analytical
720 Olive Drive, Suite D
Davis, CA 95616-0000

Date Received: 04/18/02
Work Order No: 02-04-0828
Preparation: Total Digestion
Method: EPA 6010B

Project: 2703 Martin Luther King Jr. Way-Oakland

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02-04-0786-6	Solid	ICP 3300	04/18/02	04/22/02	041802ms4

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Lead	88	84	75-125	2	0-20	

Calscience Environmental Laboratories, Inc.

Quality Control - Laboratory Control Sample

Kiff Analytical
720 Olive Drive, Suite D
Davis, CA 95616-0000

Date Received: 04/18/02
Work Order No: 02-04-0828
Preparation: Total Digestion
Method: EPA 6010B

Project: 2703 Martin Luther King Jr. Way-Oakland

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
097-01-002-3,292	Solid	ICP 3300	04/18/02	020418-I	020418lcs4

Parameter	Conc Added	Conc Recovered	%Rec	%Rec CL	Qualifiers
Lead	50.0	46.9	94	80-120	

Calscience Environmental Laboratories, Inc.

GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 02-04-0828

Qualifier	Definition
ND	Not detected at indicated reporting limit.

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 02-04-0878

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: KCC **DATE:** 4/18/02

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.
_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

3 °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: _____

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: ✓ No (Not Intact) : _____ Not Applicable (N/A): _____

Initial: _____

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	—		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers for analyses requested	✓		
Proper preservation noted on sample label(s)			—
VOA vial(s) free of headspace.			✓
Tedlar bag(s) free of condensation.			—

Initial: _____

COMMENTS:

CALSCIENCE ENVIRONMENTAL LABORATORIES, INC.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1432
TEL: (714) 895-5494 • FAX: (714) 894-7501

Kiff Analytical Note:
Equiva Waste Disposal Form Page 4B-28 Analyses
SAP# Incident No. 129449

CHAIN OF CUSTODY RECORD

Date 041602
Page 1 of 1

LABORATORY CLIENT: Kiff Analytical, LLC	CLIENT PROJECT NAME / NUMBER: 2703 Martin Luther King Jr. Way - Oakland
ADDRESS: 720 Olive Drive, Suite D	PROJECT CONTACT: Joel Kiff
CITY: Davis STATE: CA ZIP: 95616	SAMPLER(S): (SIGNATURE)
TEL: (530) 297-4800 FAX: (530) 297-4803 E-MAIL:	P.O. NO.: CalCNS 25920
TURNAROUND TIME: Due April 26, 2002 ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☐ 10 DAYS	LAB USE ONLY 24-0812
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) ☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___.	COOLER RECEIPT TEMP = ____ °C
SPECIAL INSTRUCTIONS	

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT	TTLC PB	STLC PB if TTLC ->50 mg/kg	Organic PB if TTLC =>13 mg/kg	Aquatic Fish Bioassay if TPH>5000 ppm. Part 800 of Standard Methods, 15th ed. Call Kiff to determine TPH.
	SP-1-A,B,C,D		041102		SO	1	X	X	X	X

Relinquished by: (Signature) Dw. Th — Kiff Analytical	Received by: (Signature)	Date: 041702	Time: 1830
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received for Laboratory by: (Signature)	Date: 4/18/02	Time: 1023

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Yellow and Pink copies respectively.

10/01/00 Revision

Q&D Graphic (714) 998-8702

KIFF ANALYTICAL

SHELL Chain Of Custody Record

720 Olive Drive, Suite D
Davis, CA 95616
(530) 297-4800 (530) 297-4803 fax

Shell Project Manager to be Invoiced:
☐ SCIENCE & ENGINEERING
☐ TECHNICAL SERVICES
☑ CRMT HOUSTON

25920
Tim Dazey

INCIDENT NUMBER (SEE ONLY)

SAP or FACILITY NUMBER (USE ONLY): 1 2 9 4 4 9

DATE: 4/11/02
PAGE: 1 of 1

SAMPLING COMPANY: Cambria Environmental Technology	LOG CODE: CETO	SITE ADDRESS (Street and City): 2703 Martin Luther King Jr. Way - Oakland	GLOBAL ID NO.: T0600101876
ADDRESS: 1144-65TH Street, Oakland, CA 94608		EDF DELIVERABLE TO (Responsible Party or Designee):	PHONE NO.: / E-MAIL: / CONSULTANT PROJECT NO.: 244-0781
PROJECT CONTACT (Hardcopy or PDF Report to): Jacquelyn Jones		SAMPLER NAME(S) (Print): Jason K. Gerke	LAB USE ONLY
TELEPHONE: 510-420-3316 / FAX: 510-420-9170 / E-MAIL: jjones@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 ☐
Composite SP-1-A through D.

Copy analytical reports to TDAZEY@EQUILON.COM and jgerke@cambria-env.com

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- ~~72~~ 96)		TPH - Diesel, Extractable (8015m)		MTBE (8260B) Confirmation, See Note	TEMPERATURE ON RECEIPT C°
SP-1-A	4/11/02		Soil	1																1					01
SP-1-B	"		"	1																1					02
SP-1-C	"		"	1																1					03
SP-1-D	↓		↓	1																1					04

Relinquished by: (Signature) [signature]	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Harold Brun KIFF	Date: 04/15/02	Time: 1100

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

10/16/00 Revision

QBQ Graphic (714) 898-9702

25920

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

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

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

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

MINIMUM REQUIRED TESTING

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

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

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

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

LABORATORY INSTRUCTIONS (MINIMUM GUIDELINES ONLY)

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

PROCEDURE ORIGINAL DATE: 07/10/90
PROCEDURE REVISED DATE: 03/05/97

ATTACHMENT B

Soil Boring Logs

Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	B-20
JOB/SITE NAME	2703 Martin Luther King Jr. Way	**DRILLING STARTED**	11-Apr-02
LOCATION	Oakland	**DRILLING COMPLETED**	11-Apr-02
PROJECT NUMBER	244-0781	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Cambria	**GROUND SURFACE ELEVATION**	
DRILLING METHOD	Hand-auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	4"	**SCREENED INTERVAL**	NA
LOGGED BY	J. Gerke	**DEPTH TO WATER (First Encountered)**	8.0 ft (11-Apr-02) ▽
REVIEWED BY	S. Bork, RG# 5620	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Located approximately 20 feet north of MW-5, in the northwest portion of the property.		

PID (ppm)	TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
								ASPHALT	0.5	
						CL		Silty CLAY(CL); light gray; damp; 60% clay, 30% silt, 10% fine grained sand, high plasticity. @ 1 fbg - odor.	1.9	
						SM		Silty SAND(SM); light gray; damp; 25% clay, 30% silt, 45% fine grained sand, no plasticity, odor.	2.9	
	1.1		B-20- 4.5		5	CL		Silty CLAY(CL); dark gray with light brown mottling; damp; 60% clay, 30% silt; 10% fine grained sand, high plasticity, odor. @ 4 fbg - greenish gray. @ 6.5 fbg - 45% clay, 40% silt, 15% sand; medium plasticity; strong odor.		◄ Portland Type I/II Cement
	22		B-20- 7.5			ML		Clayey SILT(ML); light greenish gray; damp; 35% clay, 50% silt, 15% fine grained sand, low plasticity, odor. @ 8 fbg - wet; 30% clay, 45% silt, 25% sand; approximately 5% sheen observed on water. ▽	7.1 9.0	Bottom of Boring @ 9 ft

WELL LOG (PID/TPHG) G:\OAA292-1\FIGURES\GINT\OAKL2703.GPJ DEFAULT.GDT 5/7/02

Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	B-21
JOB/SITE NAME	2703 Martin Luther King Jr. Way	**DRILLING STARTED**	11-Apr-02
LOCATION	Oakland	**DRILLING COMPLETED**	11-Apr-02
PROJECT NUMBER	244-0781	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Cambria	**GROUND SURFACE ELEVATION**	
DRILLING METHOD	Hand-auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	4"	**SCREENED INTERVAL**	NA
LOGGED BY	J. Gerke	**DEPTH TO WATER (First Encountered)**	8.8 ft (11-Apr-02) ▽
REVIEWED BY	S. Bork, RG# 5620	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Located approximately 6 feet north of building, in the northwest portion of the property.		

PID (ppm)	TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
								ASPHALT	0.3	
								FILL light brown; gravelley sand.		
								Silty CLAY(CL); dark gray; damp; 70% clay, 20% silt; 10% fine grained sand, high plasticity; fine roots.	1.7	
	<1.0		B-21- 3.0					@ 4.0 fbg - yellowish brown; 60% clay, 25% silt, 15% sand; medium plasticity.		◄ Portland Type I/II Cement
					5	CL				
	<1.0		B-21- 8.0					@ 8 fbg - 40% clay, 35% silt, 25% sand; low plasticity.		
								@ 8.8 fbg - wet, slight odor. ▽	9.0	Bottom of Boring @ 9 ft

WELL LOG (PID/TPHG) G:\OAA292--1\FIGURES\GINT\OAKL2703.GPJ DEFAULT.GDT 5/7/02

Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	B-22
JOB/SITE NAME	2703 Martin Luther King Jr. Way	**DRILLING STARTED**	11-Apr-02
LOCATION	Oakland	**DRILLING COMPLETED**	11-Apr-02
PROJECT NUMBER	244-0781	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Cambria	**GROUND SURFACE ELEVATION**	
DRILLING METHOD	Hand-auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	4"	***SCREENED INTERVAL***	NA
LOGGED BY	J. Gerke	**DEPTH TO WATER (First Encountered)**	8.8 ft (11-Apr-02) ▽
REVIEWED BY	S. Bork, RG# 5620	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
								ASPHALT	0.3	
								FILL light brown; gravelley sand.		
									1.3	
								Silty CLAY(CL); dark gray; damp; 60% clay, 30% silt; *10% fine grained sand, high plasticity; fine roots.*		
	<1.0		B-22- 3.0					@ 2.8 fbg - yellowish brown; 50% clay, 35% silt, 15% sand; medium plasticity.		
					5	CL				Portland Type I/II Cement
								@ 6.2 fbg - greensih gray; 55% clay, 35% silt, 10% sand; medium plasticity, strong odor.		
	380		B-22- 8.0					@ 8 fbg - 45% clay, 40% silt, 15% sand; low plasticity.		
								@ 8.8 fbg - wet. ▽	9.0	Bottom of Boring @ 9 ft

WELL LOG (PID/TPHG) G:\OAA292-1\FIGURES\GINT\OAKL2703.GPJ DEFAULT.GDT 5/7/02

ATTACHMENT C

Drilling Permit

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-5554
FAX (510)782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 2703 MLK WAY
OAKLAND, CA
CROSS STREET = 27th STREET

CLIENT
Name EQUIVA SERVICES, LLC
Address P.O. BOX 13869 Phone
City BURBANK Zip 91510

APPLICANT
Name CAMBRIA ENVIRONMENTAL
Fax 510.420.9170
Address 1144 65th Street, Suite B Phone 510.420.7339
City OAKLAND Zip 94608

FOR OFFICE USE
PERMIT NUMBER W02-0271
WELL NUMBER
APN

TYPE OF PROJECT

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

PROPOSED WATER SUPPLY WELL USE

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

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☐
Cable	☐	Other	☐	HAND AUGER	☐

DRILLER'S NAME N/A
DRILLER'S LICENSE NO. N/A

WELL PROJECTS
Drill Hole Diameter ~~2~~ in. Maximum
Casing Diameter ____ in. Depth ~~20~~ ft.
Surface Seal Depth ____ ft. Owner's Well Number ____

GEOTECHNICAL PROJECTS
Number of Borings 3 Maximum
Hole Diameter 2 in. Depth 10 ft.

ESTIMATED STARTING DATE March 20, 2002
ESTIMATED COMPLETION DATE March 20, 2002

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

APPLICANT'S SIGNATURE ____ DATE 2/27/02
PLEASE PRINT NAME SHANNON COUCH

PERMIT CONDITIONS
Circled Permit Requirements Apply

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

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

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

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

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

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

G. SPECIAL CONDITIONS

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

APPROVED ____ DATE 3-4-02

Rev.5-13-00

ATTACHMENT D

Soil Disposal Confirmation

MANLEY & SONS TRUCKING, INC.
ROCK
SAND
DEMO
FILL DIRT
TOP SOIL
CA 009430
(916) 381-6864

Hazardous Waste Hauler (Registration #2843)

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

Disposal Confirmation

Request for Transportation Received: 04/26/02

Consultant Information

Company:	Cambria
Contact:	Gerke, Jason
Phone:	510-420-3320
Fax:	510-420-9170

Site Information

Station #:	
Street Address:	2073 Martin Luther King
City, State, ZIP:	Oakland, CA 94612
Customer:	Shell Oil Company RESA-0023-LDC
RIPR #:	11250
SAP # / Location:	129449
Incident #:	97093397
Location / WIC #:	2045508-1701
Environmental Engineer:	Petryna, Karen E.
Fax:	
Material Description:	Soil from hand auger borings
Estimated Quantity:	5 X 5-gallon buckets
Service Requested Date:	05/03/02
Disposal Facility:	Forward Landfill
Contact:	Joe Griffith
Phone:	800-204-4242
Approval #:	1907
Date of Disposal:	05/02/02
Actual Tonnage	.071 Tons
Transporter:	Manley & Sons Trucking, Inc.
Contact:	Glenell Forbes
Phone:	916 381-6864
Fax:	916 381-1573
Invoice:	50176A
Date of Invoice:	05/03/02

Fax To: Consultant Cc:Tim Dazey Shell

ATTACHMENT E

Standard Field Procedures for Hand-Auger Soil Borings

CAMBRIA

STANDARD FIELD PROCEDURES FOR HAND-AUGER SOIL BORINGS

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

Objectives

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

Soil Classification/Logging

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

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

Soil Boring and Sampling

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

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

Sample Storage, Handling and Transport

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

Field Screening

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

Water Sampling

Water samples, if they are collected from the boring, are collected from the open borehole using bailers. The ground water samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory.

Duplicates and Blanks

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

Grouting

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

Waste Handling and Disposal

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

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

5/30/02