CAMBRIA

#3849

June 7, 2001

Mr. Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Oakland, California 94502-6577

Re: **Offsite Subsurface Investigation**
Shell-branded Service Station
105 5th Street
Oakland, California
Incident #98995757
SAP #135700
Cambria Project #243-0472

JUN 12 2001

Dear Mr. Chan:

On behalf of Equiva Services LLC, Cambria Environmental Technology, Inc. (Cambria) is submitting the results of the subsurface investigation conducted February 12, 2001 at the referenced site. The investigation was conducted in accordance with our November 30, 1999 *Additional Investigation Work Plan,* which was approved by the Alameda County Health Care Services Agency (ACHCSA) in a letter dated May 11, 2000. Presented below are summaries of the site background, investigation procedures, investigation results, well survey results, conduit study results, and conclusions and recommendations. A site conceptual model is included as Attachment A.

SITE BACKGROUND

Location: This active Shell-branded service station is located on the corner of Fifth Street and Oak Street in Oakland, California. The site is surrounded by commercial property (Figure 1).

1996 Upgrade Activities: During November and December of 1996, Armer/Norman & Associates of Walnut Creek, California removed five gasoline dispensers, two diesel dispensers, associated piping and inactive piping to a former diesel fuel dispenser. On November 27, 1996, Cambria collected soil samples from beneath the seven dispenser locations and the inactive diesel fuel piping prior to replacement. Armer/Norman & Associates replaced the gasoline and diesel dispensers and associated piping with additional secondary containment. After receiving analytical results indicating the presence of hydrocarbons, Cambria filed an *Underground Storage Tank Unauthorized Release Site Report* with the ACHCSA.

Oakland, CA
San Ramon, CA
Sonoma, CA

Cambria Environmental Technology, Inc.

1144 65th Street
Suite B
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Tel (510) 420-0700
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1998 Upgrade Activities: In February 1998 Paradiso Mechanical of San Leandro, California installed secondary containment on the turbine sumps. Since secondary containment had previously been added to the dispensers, no additional dispenser upgrade activities were performed. Cambria inspected the tank pit on February 26, 1998, and no field indications of hydrocarbons, such as staining or odor, were observed.

1998 Subsurface Investigation: On July 23, 1998, Cambria advanced three borings in the assumed downgradient direction from existing dispensers and two borings in the assumed upgradient direction from the existing dispensers. The soil borings were advanced to depths of 11.0 to 12.0 feet below grade (fbg). The maximum reported hydrocarbon concentrations in soil were 15 miligrams per kilogram (mg/kg) total purgeable hydrocarbons as gasoline (TPHg) in boring SB-3 at 5.0 fbg, and 0.48 mg/kg methyl tert-butyl ether (MTBE) (EPA Method 8020) in boring SB-5 at 5.0 fbg. No benzene was detected in the soil samples. The maximum detected hydrocarbon concentrations in groundwater were 90,000 micrograms per liter (µg/L) TPHg in boring SB-3, 27,000 µg/L total purgeable hydrocarbons as diesel (TPHd) in SB-4, 1,300 µg/L benzene in SB-3, and 4,100 µg/L MTBE (EPA Method 8020) in SB-4 (Figure 2).

1999 Monitoring Well Installations: On May 14,1999, Cambria installed three groundwater monitoring wells (MW-1, MW-2 and MW-3) to a depth of 25 fbg. Hydrocarbons were not detected in soil samples from MW-1 or MW-3. The maximum reported hydrocarbon concentrations in soil samples collected from boring MW-2 were 1,700 mg/kg TPHg at 5.5 fbg, 0.0369 mg/kg benzene at 10.5 fbg, and 13.2 mg/kg MTBE (EPA Method 8020) at 5.5 fbg. Hydrocarbons were not detected in groundwater collected from MW-1, located upgradient of the existing dispensers. The maximum detected concentrations in groundwater were 13,800 µg/L TPHg in MW-2, 1,790 µg/L benzene in MW-2, and 324,000 µg/L MTBE (by EPA Method 8260) in MW-3 (Figure 2).

INVESTIGATION PROCEDURES

Cambria positioned the soil borings and groundwater monitoring well to further delineate the extent of hydrocarbons and MTBE in soil and groundwater beneath the site. Three soil borings were drilled offsite, one of which was converted to a groundwater monitoring well, MW-4 (Figure 2).

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

and presented as Attachment B. Boring logs and Cambria's standard field procedures for monitoring wells are presented as Attachments C and D, respectively. The monitoring well elevation survey, performed by Virgil Chavez Land Surveying of Vallejo, California, is presented as Attachment E.

Personnel Present: Shannon Couch, Staff Geologist, of Cambria.

Permits: Alameda County Public Works Agency Drilling Permit #W00-918. City of Oakland Minor Encroachment Permit. City of Oakland Excavation Permit #X0002314.

Drilling Company: Gregg Drilling of Martinez, California (License #485165).

Drilling Date: February 12, 2001.

Drilling Method: Hollow-stem auger with split-spoon sampler.

Number of Borings: Two borings, SB-6 and SB-7 (Figure 2).

Number of Wells: One well, MW-4 (Figure 2).

Boring Depths: SB-6 and SB-7, 25.0 fbg (Attachment C).

Well Depth: 25.0 fbg (Attachment C).

Sediment Lithology: The site is underlain by sand to an approximate depth of 10 fbg, silty sand to an approximate depth of 15 fbg, and clayey sand to an approximate depth of 20 fbg in boring MW-4 and the total explored depth of 25.0 fbg in borings SB-6 and 7. In boring MW-4, silty sand underlies the clayey sand to the total explored depth on 25.0 fbg. (Attachment C)

Groundwater Depths: Groundwater was encountered at approximately 10.0 fbg during drilling activities. Static groundwater levels in wells MW-1, MW-2, MW-3, and MW-4 will be measured by Blaine Tech Services (Blaine) of San Jose, California during the next quarterly monitoring event and will be reported in Cambria's *Second Quarter 2001 Monitoring Report.* Past monitoring reports have shown groundwater levels in site wells to be 5.4-6.6 fbg.

Well Materials: Well MW-4 is constructed using two-inch diameter schedule 40 PVC, 0.020-inch slotted well screen, and schedule 40 PVC well casing. The eight-inch diameter boring annulus around well MW-4 is filled using Monterey 2x12 sand.

Screened Interval: The screened interval in well MW-4 is 10 to 25 fbg. (Attachment C).

Well Elevation Survey The top of casing elevations were surveyed by Virgil Chavez Land Surveying of Vallejo, California on April 4, 2001. (Attachment E).

Well Development and Sampling: Blaine will develop and sample wells MW-1, MW-2, MW-3, and MW-4 using surge block agitation and pump evacuation during the second quarter 2001 monitoring event.

Chemical Analyses: Soil samples and grab groundwater samples from each boring were analyzed for:

- TPHg, BTEX, and MTBE by EPA Method 8260B; and
- TPHd by modified EPA Method 8015.

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 samples were analyzed for:

- TPHg by modified EPA Method 8260B;
- BTEX and MTBE by EPA Method 8260B; and
- TTLC lead.

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

Soil Handling: Soil cuttings produced from the borings were transported by Manley and Sons Trucking Company of Sacramento, California to Forward Landfill in Manteca, California for disposal on May 16, 2001 (Attachment F).

INVESTIGATION RESULTS

Analytical Results for Soil Samples: TPHg, MTBE and benzene were detected in the soil samples collected from borings SB-6, SB-7 and MW-4. Soil analytical data is summarized in Table 1, and the certified laboratory analytical results are presented in Attachment B.

Analytical Results for Groundwater Samples: TPHd, TPHg, MTBE and benzene were not detected in the grab groundwater samples collected from borings SB-6, SB-7 and MW-4. Groundwater analytical data is summarized in Table 2 and the certified laboratory analytical results are presented in Attachment B.

WELL SURVEY RESULTS

Cambria identified two potential receptor wells through California Department of Water Resources (DWR) records. One irrigation well and one well of unknown use were located within a half-mile radius of the subject site. Well number 1 is of unknown use, and is located approximately 2,400 feet north (upgradient) of the site. Although no proposed use is indicated on the well driller's log, the well is labeled as "MW-6" by the driller, and the well is located next to an automobile dealership. It appears likely that this is a groundwater monitoring well. Well number 2 is used for irrigation, and is located approximately 3,000 feet northwest (upgradient) of the site.

Given the observed groundwater flow direction and the distance to potential receptor wells, wells are unlikely to be impacted by the petroleum hydrocarbon constituents in soil and groundwater at the site. Well survey results are summarized in Table 3, and copies of the pertinent well driller's reports are included in Appendix G. The locations of wells identified in the well survey are shown on Figure 3.

CONDUIT STUDY RESULTS

Cambria performed a site reconnaissance and reviewed City of Oakland engineering maps to identify utility conduits downgradient of the site. A 12-inch diameter sanitary sewer main beneath Oak Street is graded to flow to the southwest. The sewer main is buried approximately 6 fbg. An 8-inch diameter sanitary sewer main beneath Fifth Street is graded to flow southeast,

and joins the 12-inch sanitary sewer main at the Oak Street/ Fifth Street intersection. A 24-inch diameter storm drain conduit, also identified beneath Oak Street, is graded to flow to the southwest. The storm drain is buried approximately 6 fbg. Storm drain and sanitary sewer locations are shown on Figure 2.

Static groundwater depths at the site have ranged from 5-7 fbg. Thus groundwater may have infiltrated the sewer and storm drain trenches and flowed preferentially within the more permeable backfill.

CONCLUSIONS AND RECOMMENDATIONS

Samples collected from this offsite subsurface investigation show no evidence of hydrocarbon or MTBE contamination. Results from the conduit study identified potential preferential pathways in the sanitary sewer and storm drain trenches in Oak Street that are graded to flow to the southwest. Results from the sensitive receptor survey show that it is unlikely that site contaminants will impact potential sensitive receptors.

Cambria recommends continuing quarterly monitoring at the site to evaluate TPHg, benzene, and MTBE trends in on- and offsite monitoring wells and continuing monthly groundwater and vapor extraction from wells MW-2 and MW-3. Remediation effectiveness will be evaluated in upcoming monitoring reports.

CLOSING

Please call James Loetterle at (510) 420-3336 if you have any questions or comments regarding the contents of this report.

Sincerely,
Cambria Environmental Technology, Inc.

James Loetterle
Staff Geologist

Diane M. Lundquist P.E.
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
DIANE M. LUNDQUIST
No. C45725
CIVIL
STATE OF CALIFORNIA

Figures:
1 - Vicinity Map
2 - Site Map
3 - Well Survey Map

Tables:
1 - Soil Analytical Data
2 - Groundwater Analytical Data
3 - Well Survey Results

Attachments:
A - Site Conceptual Model
B - Analytical Results for Soil and Groundwater
C - Soil Boring Logs
D - Cambria's Standard Field Procedures for Monitoring Wells
E - Monitoring Well Elevation Survey
F - Soil Disposal Confirmation
G - Well Survey Drillers' Reports

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

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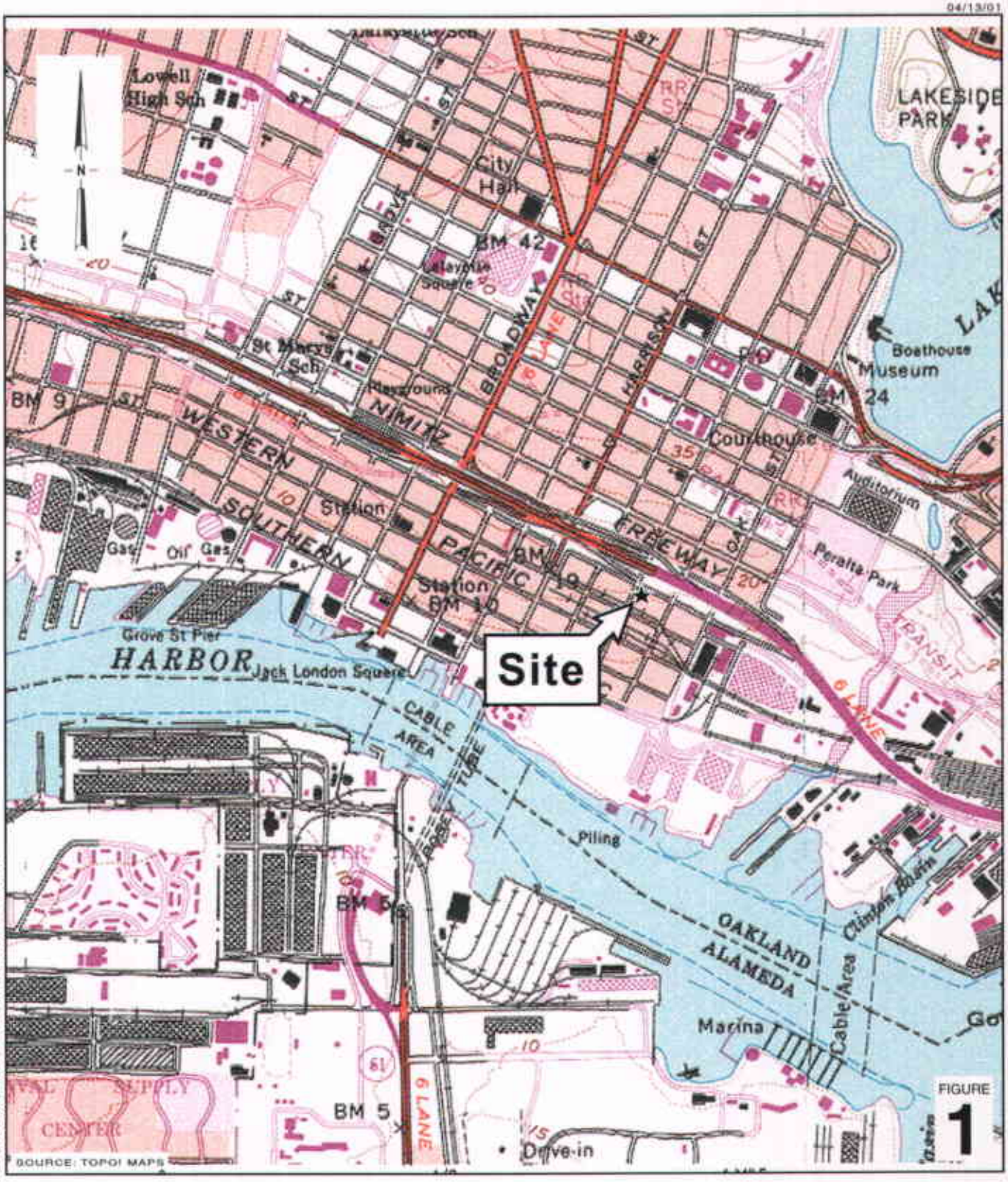

Shell-branded Service Station

105 Fifth Street

Oakland, California

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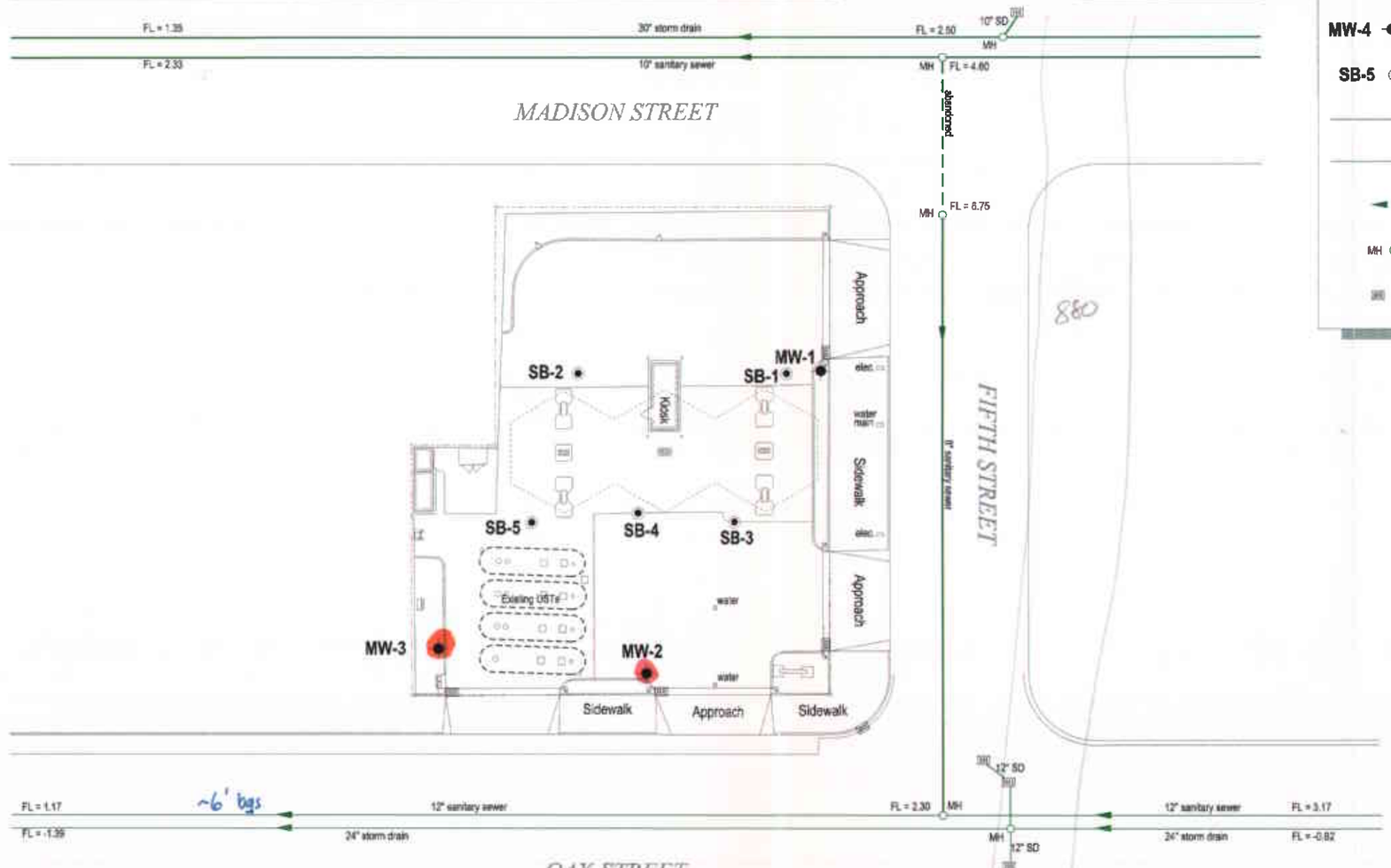
Vicinity Map

Site Map

(All locations are Approximate)

EXPLANATION

- MW-1 — Monitoring Well Location
- SB-1 — Soil Boring Location
- MW-4 — Monitoring Well Location (02/12/01)
- SB-5 — Soil Boring Location (02/12/01)
- Sanitary Sewer Line
- Storm Drain Line
- Flow Direction
- MH — Manhole
- Storm Drain Inlet

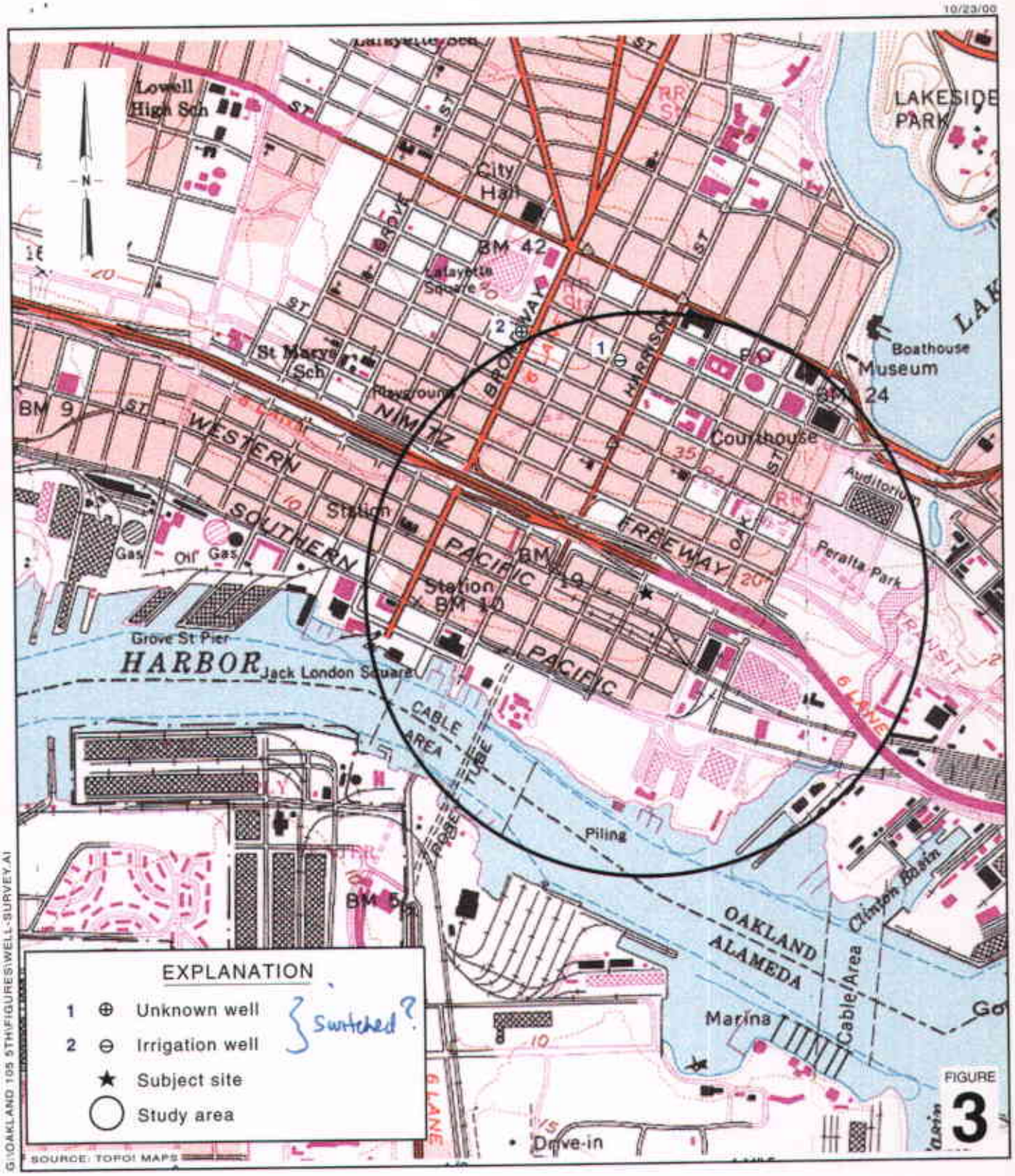


Shell-branded Service Station
105 Fifth Street
Oakland, California
Incident #98995757

FIGURE
2

CAMBRIA

G:\OAKLAND 105 5TH\FIGURES\WELL-BOR-LOC.DWG



Shell-branded Service Station
105 Fifth Street
Oakland, California
Incident# 98995757

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Well Survey Map

(1/2 Mile Radius)

Table 1. Soil Analytical Data - Shell-branded Service Station - 105 5th Street, Oakland, California - Incident # 97153724

Sample ID	Depth (feet)	TPHg	MTBE (8260)	Benzene	Toluene	Ethylbenzene	Xylenes
		← (Concentrations reported in milligrams per kiligram mg/kg) →					
MW-4-5	5.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-4-10.0	10.0	<1.0	<0.0050	<0.050	<0.0050	<0.0050	<0.0050
MW-4-15.0	15.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-4-20.0	20.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB-6-5.0	5.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB-6-10.0	10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB-6-15.0	15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.05
SB-6-20.0	20	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB-7-5.0	5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB-7-10.0	10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB-7-15.0	15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
SB-7-20.0	20	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Samples collected on February 12, 2001.

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline analyzed by modified EPA Method 8260.
MTBE = Methyl tert-butyl ether, analyzed by EPA Method 8260
Benzene, ethylbenzene, toluene, xylenes analyzed by EPA Method 8260.
<x = Below detection limit of x miligrams per liter.

Table 2. Groundwater Analytical Data - Shell-branded Service Station - 105 5th Street, Oakland, California - Incident # 98995757

Sample ID	Depth (feet)	TPHd	TPHg	MTBE (8260)	Benzene	Toluene	Ethylbenzene	Xylenes
		← (Concentrations reported in micrograms per liter µg/L) →						
MW-4-10W	10.0	<50.0	<50.0	<0.50	<0.50	<0.50	<0.50	<0.50
SB-6-10.0	10.0	<50.0	<50.0	<0.50	<0.50	<0.50	<0.50	<0.50
SB-7-10.0	10.0	1480.0	<50.0	<0.50	<0.50	<0.50	<0.50	<0.50

Samples collected on February 12, 2001.

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline analyzed by modified EPA Method 8260.
MTBE = Methyl tert-butyl ether, analyzed by EPA Method 8260
Benzene, ethylbenzene, toluene, xylenes analyzed by EPA Method 8260.
<x = Below detection limit of x micrograms per liter.

Table 3. Well Survey Results - Shell-branded Service Station, 105 5th Street, Oakland, California. Incident #

LOCATION	Well ID	Installation Date	Owner	Use	Depth (ft bgs)	Screened Interval (ft bgs)	Sealed Interval (ft bgs)
1	1S4W-35G7	March 1, 1988	City of Oakland Redevelopment	UNK	44	20-44	0-20
2	1S4W-35F12	September 23, 1990	Bramela Pacific, Inc.	IRR	470	180-470	0-180

Well Locations provided by the State of California Department of Water Resources

Notes and Abbreviations:

Location = Column number refers to map location on Figure 2.
Well ID = California State well identification number as recorded by the Department of Water Resources in Sacramento, California.
UNK = Unknown.
IRR = Irrigation

ATTACHMENT A

Site Conceptual Model

SITE CONCEPTUAL MODEL

Date: April 5, 2001

Cambria Environmental Technology, Inc.

Site Address:	105 5th Street	**Incident Number:**	98995757
City:	Oakland	**Regulator:**	Alameda County Health Care Services Agency

Item	Evaluation Criteria	Comments/Discussion
1	**Hydrocarbon Source**	
1.1	Identify/Describe Release Source and Volume (if known)	On November 27, 1996 soil samples collected from beneath the seven fuel dispensers indicated the presence of hydrocarbons. Cambria filed an Underground Storage Tank Unauthorized Release Site Report with the ACHCSA. The volume of the release is unknown.
1.2	Discuss Steps Taken to Stop Release	Five gasoline dispensers, two diesel dispensers, and associated piping were removed and replaced with additional secondary replacement.
2	**Site Characterization**	
2.1	Current Site Use/Status	The site is an active Shell-branded service station located at the intersection of Fifth Street and Oak Street in Oakland, California. The site is surrounded by commercial properties.
2.2	Soil Definition Status	Hydrocarbon and MTBE concentrations in soil are defined by non-detection of contaminants in soil samples from borings MW-4, SB-6, and SB-7 downgradient of the site, MW-3 crossgradient of the site, and MW-1 upgradient of the site.
2.3	Separate-Phase Hydrocarbon Definition Status	No SPH has been detected. ~~1400ppm TPHd @ 10.0'~~
2.4	Groundwater Definition Status (BTEX)	BTEX is defined in groundwater by non-detection of contaminants in well MW-1 upgradient to the north, well MW-3 crossgradient to the southwest, and well MW-4 downgradient to the southeast.
2.5	BTEX Plume Stability and Concentration Trends	In seven quarters of groundwater monitoring the BTEX plume appears to be stable and concentrations appear to be decreasing
2.6	Groundwater Definition Status (MTBE)	MTBE is defined in groundwater upgradient and downgradient of the site by non-detection of contaminants in wells MW-1 and MW-4 respectively. MTBE in groundwater is undefined crossgradient of the site by detection of contaminants in wells MW-3 and MW-2.
2.7	MTBE Plume Stability and Concentration Trends	In the last three quarters of groundwater monitoring the MTBE plume concentrations appear to be shrinking slightly
2.8	Groundwater Flow Direction, Depth Trends and Gradient Trends	Groundwater flows toward the southeast with a gradient of 0.0085. Depth to groundwater ranges from 4.5 to 6.5 fbg.
2.9	Stratigraphy and Hydrogeology	The site is underlain by sand, silty sand, and clayey sand to the total explored depth of 25 fbg.

Item	Evaluation Criteria	Comments/Discussion
2.10	Preferential Pathways Analysis	A 12-inch diameter sanitary sewer main beneath Oak Street flows to the southwest. The sewer main is buried approximately 6 fbg. An 8-inch diameter sanitary sewer main beneath Fifth Street flows southeast, and joins the 12-inch sanitary sewer main at the Oak Street/ Fifth Street intersection. A 24-inch diameter storm drain conduit, also identified beneath Oak Street flows to the southwest. The storm drain is buried approximately 6 fbg. Depth to groundwater at the site has ranged from 5-7 fbg. If groundwater has infiltrated the sewer and storm drain trenches and flowed preferentially within the porous backfill, it is likely that the conduit trenches are serving as preferential pathways for the migration of petroleum hydrocarbons and MTBE.
2.11	Other Pertinent Issues	
3	**Remediation Status**	
3.1	Remedial Actions Taken	Eight groundwater extraction events from wells MW-2 and MW-3 have removed 4,540 cumulative gallons since March 2000. Six vapor extraction events from wells MW-2 and MW-3 have removed 1782 cubic feet of soil vapor since March 2000.
3.2	Area Remediated	The area surrounding MW-2 and MW-3 on the eastern and southern sides of the USTs, respectively.
3.3	Remediation Effectiveness	Since March 2000, groundwater extraction has removed over 7 pounds of MTBE, and negligible amounts of TPHg and benzene. Since March 2000, vapor extraction has removed over 6 pounds of MTBE, and negligible amounts of TPHg and benzene.
4	**Well and Sensitive Receptor Survey**	
4.1	Shallow Groundwater Use	No known use.
4.2	Deep Groundwater Use	Deeper groundwater from the East Bay Plain groundwater basin is used for municipal, industrial process, industrial service, and agricultural water supply.
4.3	Well Survey Results	Cambria identified a total of 2 potential receptor wells through Department of Water Resources (DWR) records within a half-mile radius of the subject site. One irrigation well is located approximately 3,000 feet northwest (upgradient) of the site, and one well of unknown use is located approximately 2,400 feet north (upgradient) of the site.
4.4	Likelihood of Impact to Wells	Given the groundwater flow direction at the site, and the distance of the wells from the site, the potential receptor wells are unlikely to be impacted.
4.5	Likelihood of Impact to Surface Water	The closest surface body of water is the Inner Oakland Harbor which lies 1,700 feet southwest of the site. Impact to the Inner Harbor is unlikely due to the distance from the site and downgradient definition of the contaminant plume.
5	**Risk Assessment**	

How much HC has been removed?

Item	Evaluation Criteria	Comments/Discussion
5.1	Site Conceptual Exposure Model (current and future uses)	The site is currently an active gasoline service station. Impacted soil and groundwater exists beneath the dispenser islands, USTs, and eastern portion of the site.
5.2	Exposure Pathways	Exposure to surface and subsurface soils by construction workers near the dispensers or sewer piping. Inhalation of volatilized soil vapors in outdoor air by commercial occupants. Vertical migration of impacted shallow groundwater to a deep beneficial aquifer. Lateral migration impacted shallow groundwater to surface water.
5.3	Risk Assessment Status	No formal risk assessment has been performed.
5.4	Identified Human Exceedances	None identified.
5.5	Identified Ecological Exceedances	None identified.
6	**Additional Recommended Data or Tasks**	
6.1		

Attachments: Groundwater and Soil Data Tables, and Figures
Soil Boring Logs

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WELL CONCENTRATIONS
Shell-branded Service Station
105 5th Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)	DO Reading (ppm)
MW-1	07/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	12.22	17.56	-5.34	NA
MW-1	07/23/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	<2.00	12.22	6.45	5.77	NA
MW-1	11/01/1999	100	NA	15.6	3.12	4.04	12.6	6.69	NA	12.22	6.59	5.63	0.5/0.7
MW-1	01/05/2000	<50.0	<20.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	6.38	5.84	1.2/1.4
MW-1	04/07/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	5.83	6.39	1.6/2.4
MW-1	07/26/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	6.10	6.12	1.1/1.4
MW-1	10/28/2000	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	12.22	14.08	-1.86	2.2/2.7
MW-1	**01/30/2001**	**<50.0**	**<50.0**	**<0.500**	**<0.500**	**<0.500**	**<0.500**	**<2.50**	**NA**	**12.22**	**10.71**	**1.51**	**1.2/1.6**
MW-2	07/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	10.87	18.24	-7.37	NA
MW-2	07/23/1999	13,800	NA	1,790	<100	<100	682	29,900	29,400	10.87	5.98	4.89	NA
MW-2	11/01/1999	2,420	NA	316	10.8	119	44.2	17,000	NA	10.87	6.03	4.84	0.5/0.3
MW-2	01/05/2000	2,120a	687	301a	<5.00a	116a	84.4a	14,700	NA	10.87	5.90	4.97	2.1/2.6
MW-2	04/07/2000	4,940b	1,300	659b	<25.0b	214b	314b	41,800b	NA	10.87	5.37	5.50	0.4/0.2
MW-2	07/26/2000	5,010	1,520	409	<50.0	302	307	54,300	NA	10.87	5.81	5.06	2.1/2.2
MW-2	10/28/2000	1,720	412	82.2	<10.0	46.0	102	9,800	NA	10.87	14.59	-3.72	0.7/0.7
MW-2	**01/30/2001**	**1,640**	**574**	**14.7**	**<5.00**	**40.1**	**58.1**	**3,670**	**NA**	**10.87**	**10.31**	**0.56**	**1.8/2.0**
MW-3	07/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	11.27	19.07	-7.80	NA
MW-3	07/23/1999	128	NA	<0.500	<0.500	<0.500	<0.500	404,000	324,000	11.27	6.43	4.84	NA
MW-3	11/01/1999	<1,000	NA	<10.0	<10.0	<10.0	<10.0	169,000	224,000	11.27	6.48	4.79	0.5/0.3
MW-3	01/05/2000	137	322	<1.00	<1.00	<1.00	<1.00	165,000	219,000	11.27	6.35	4.92	2.4/2.2
MW-3	04/07/2000	<1,000	264	853	<10.0	<10.0	<10.0	283,000	196,000a	11.27	5.91	5.36	04/0.2
MW-3	07/26/2000	<20,000	585	<200	<200	<200	<200	437,000	320,000	11.27	5.83	5.44	1.9/1.7
MW-3	10/28/2000	<12,500	441	<125	<125	<125	<125	266,000	308,000	11.27	17.51	-6.24	1.1/1.4
MW-3	**01/30/2001**	**<5,000**	**555**	**<50.0**	**<50.0**	**<50.0**	**<50.0**	**248,000**	[illegible]	**11.27**	**11.43**	**-0.16**	**2.0/2.2**

WELL CONCENTRATIONS
Shell-branded Service Station
105 5th Street
Oakland, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft)	GW Elevation (MSL)	DO Reading (ppm)

Abbreviations:
TPPH = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
TEPH = Total petroleum hydrocarbons as diesel by modified EPA Method 8015
BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8020
MTBE = methyl-tertiary-butyl ether
TOC = Top of Casing Elevation
GW = Groundwater
DO = Dissolved Oxygen
ug/L = parts per billion
ppm = parts per million
msl = Mean sea level
ft = Feet
<n = Below detection limit
NA = Not applicable
n/n = Pre-purge/Post-purge

Notes:
a = Sample was analyzed outside of the EPA recommended holding time
b = Result was generated out of hold time

Table 1. Soil Sample Analytic Data - Shell Service Station, WIC# 204-5510-0402, 105 5th Street, Oakland, California

Sample ID	Date Collected	TPPH	TEPH	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
		(Concentrations reported in milligrams per kilograms)						
D-1	11/27/96	2,500	1,400	26	21	6.7	33	49
D-2	11/27/96	3,200	---	<19	6.4	22	36	210
D-3	11/27/96	23	11	0.30	<0.025	0.064	0.15	1.6
D-4	11/27/96	1,900	---	<12	<2.5	3.6	12	85
D-5	11/27/96	1.0	---	<0.025	0.0064	<0.0050	<0.0050	<0.0050
D-6	11/27/96	1,900	---	<5.0	<1.0	1.6	8.7	75
D-7	11/27/96	1,600	14,000	<12	<2.5	11	21	65
D-8	11/27/96	3,500	---	<19	5.4	25	42	180
SP-1(A-D)	12/4/96	330	1,800	<2.5	<0.50	<0.50	2.1	7.3

Abbreviations:

TPPH = Total purgable petroleum hydrocarbons as gasoline by Modified EPA Method 8015.
TEPH = Total extractable petroleum hydrocarbons as diesel by Modified EPA Method 8015.
MTBE = Methyl tert-butyl ether by EPA Method 8020.
Benzene, ethylbenzene, toluene, xylenes by EPA method 8020.

Samples D-1 through D-8 taken at approximately 5 feet below grade.

Table 1. **Soil Analytical Data** - Shell-branded Service Station WIC# 204-5510-0402, 105 Fifth Street, Oakland, California

Sample ID	Depth (feet)	Date Sampled	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
			← Concentrations in mg/kg →						
SB-1-5.0	5.0	7/23/98	1.3	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025
SB-2-5.0	5.0	7/23/98	1.1	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025
SB-3-5.0	5.0	7/23/98	15	2.8	<0.0050	<0.0050	0.0080	0.014	<0.025
SB-4-5.0	5.0	7/23/98	2.5	1.3	<0.0050	0.0063	0.012	0.038	0.13
SB-5-5.0	5.0	7/23/98	8.4	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.48

Abbreviations and Notes:

TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015
TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
MTBE = Methyl tert-butyl ether by EPA Method 8020
mg/kg = Milligrams per kilogram
<n = Below detection limit of n mg/kg
Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020

Table 1. Soil Analytical Data - Shell-branded Service Station, 105 Fifth Street, Oakland, California - Incident #98995757

Sample ID	Depth (ft)	Date Sampled	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
			(Concentrations reported in milligrams per kilogram)					
MW1-5.5'	5.5'	5/14/99	<0.400	<0.0100	<0.00200	<0.00200	<0.00200	<0.00400
MW1-10.5'	10.5'	5/14/99	<0.400	<0.0100	<0.00200	<0.00200	<0.00200	<0.00400
MW1-15.5'	15.5'	5/14/99	<0.400	<0.0100	<0.00200	<0.00200	<0.00200	<0.00400
MW1-20.5'	20.5'	5/14/99	<0.400	<0.0100	<0.00200	<0.00200	<0.00200	<0.00400
MW1-25.5'	25.5'	5/14/99	<0.400	<0.0100	<0.00200	<0.00200	<0.00200	<0.00400
MW2-5.5'	5.5'	5/14/99	1700	21.5 (13.2)	<2.0	<2.0	8.52	5.32
MW2-10.5'	10.5'	5/14/99	<2.0	2.13	0.0369	<0.0100	<0.0100	<0.0200
MW2-15.5'	15.5'	5/14/99	<0.400	0.0219	<0.00200	<0.00200	<0.00200	<0.00400
MW2-20.5'	20.5'	5/14/99	<0.400	0.0421	<0.00200	<0.00200	<0.00200	<0.00400
MW2-25.5'	25.5'	5/14/99	<0.400	0.0254	<0.00200	<0.00200	<0.00200	<0.00400
MW3-6.5'	6.5'	5/14/99	<20.0	19.2	<0.100	<0.100	<0.100	<0.200
MW3-11.5'	11.5'	5/14/99	<20.0	20.4 (8.83)	<0.100	<0.100	<0.100	<0.200
MW3-16.5'	16.5'	5/14/99	<20.0	9.14	<0.100	<0.100	<0.100	<0.200
MW3-21.5'	21.5'	5/14/99	<2.0	1.18	<0.0100	<0.0100	<0.0100	<0.0200
MW3-25'	25'	5/14/99	<0.400	0.201	<0.00200	<0.00200	<0.00200	<0.00400

Notes and Abbreviations:

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
MTBE = Methyl tert-butyl ether by EPA Method 8020
(13.2) = MTBE concentration by EPA method 8260
Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020
<n = Below detection limit of n mg/kg

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California

Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH Removed To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene Removed To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE Removed To Date (pounds)
					TPPH			**Benzene**			**MTBE**		
04/21/00	MW-2	150	150	04/07/00	4,940	0.00618	0.00618	659	0.00082	0.00082	41,800	0.05232	0.05232
04/28/00	MW-2	100	250	04/07/00	4,940	0.00412	0.01031	659	0.00055	0.00137	41,800	0.03488	0.08720
05/05/00	MW-2	310	560	04/07/00	4,940	0.01278	0.02308	659	0.00170	0.00308	41,800	0.10813	0.19532
05/12/00	MW-2	350	910	04/07/00	4,940	0.01443	0.03751	659	0.00192	0.00500	41,800	0.12208	0.31740
06/02/00	MW-2	257	1,167	04/07/00	4,940	0.01059	0.04811	659	0.00141	0.00642	41,800	0.08964	0.40704
07/06/00	MW-2	334	1,501	04/07/00	4,940	0.01377	0.06187	659	0.00184	0.00825	41,800	0.11650	0.52354
09/12/00	MW-2	312	1,813	07/26/00	5,010	0.01304	0.07492	409	0.00106	0.00932	54,300	0.14137	0.66491
10/26/00	MW-2	56	1,869	07/26/00	5,010	0.00234	0.07726	409	0.00019	0.00951	54,300	0.02537	0.69028
04/21/00	MW-3	100	100	04/07/00	<1,000	<0.00083	<0.00083	853	0.00071	0.00071	283,000	0.23615	0.23615
04/28/00	MW-3	100	200	04/07/00	<1,000	<0.00083	<0.00167	853	0.00071	0.00142	283,000	0.23615	0.47229
05/05/00	MW-3	50	250	04/07/00	<1,000	<0.00042	<0.00209	853	0.00036	0.00178	283,000	0.11807	0.59036
05/12/00	MW-3	150	400	04/07/00	<1,000	<0.00125	<0.00334	853	0.00107	0.00285	283,000	0.35422	0.94458
06/02/00	MW-3	550	950	04/07/00	<1,000	<0.00459	<0.00793	853	0.00391	0.00676	283,000	1.29880	2.24338
07/06/00	MW-3	528	1,478	04/07/00	<1,000	<0.00441	<0.01233	853	0.00376	0.01052	283,000	1.24685	3.49023
08/16/00	MW-3	849	2,327	07/26/00	<20,000	<0.14169	<0.15402	<200	<0.00142	<0.01194	**320,000**	2.26699	5.75722
09/12/00	MW-3	188	2,515	07/26/00	<20,000	<0.03137	<0.18539	<200	<0.00031	<0.01225	**320,000**	0.50200	6.25922
10/26/00	MW-3	156	2,671	07/26/00	<20,000	<0.02603	<0.21143	<200	<0.00026	<0.01251	**320,000**	0.41655	6.67577
Total Gallons Extracted:			**4,540**		**Total Pounds Removed:**		**<0.28869**			**<0.02202**			**7.36605**
					Total Gallons Removed:		**<0.04733**			**<0.00302**			**1.18807**

Should not express

3.8043 / 1

Should not express

Significant MTBE release

Table 1: Groundwater Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California

					TPPH			Benzene			MTBE		
Date Purged	Well ID	Volume Pumped (gal)	Cumulative Volume Pumped (gal)	Date Sampled	TPPH Concentration (ppb)	TPPH Removed (pounds)	TPPH Removed To Date (pounds)	Benzene Concentration (ppb)	Benzene Removed (pounds)	Benzene Removed To Date (pounds)	MTBE Concentration (ppb)	MTBE Removed (pounds)	MTBE Removed To Date (pounds)

Abbreviations & Notes:

TPPH = Total purgeable hydrocarbons as gasoline
MtBE = Methyl tert-butyl ether
µg/L = Micrograms per liter
ppb = Parts per billion, equivalent to µg/L
L = Liter
gal = Gallon
g = Gram
Mass removed based on the formula: volume extracted (gal) x Concentration (µg/L) x (g/10^6µg) x (pound/453.6g) x (3.785 L/gal)
Volume removal data based on the formula: density (in gms/cc) x 9.339 (ccxlbs/gmsxgals)
TPPH, benzene analyzed by EPA Method 8015/8020
MTBE analyzed by EPA Method 8260 in bold font, all other MTBE analyzed by EPA Method 8020
Concentrations based on most recent groundwater monitoring results
Groundwater extracted by vacuum trucks provided by ACTI. Water disposed of at a Martinez Refinery.

Table 2: Vapor Extraction - Mass Removal Data - Shell-branded Service Station, Incident #98995757, 105 Fifth Street, Oakland, California

							TPPH		Benzene		MTBE	
		Interval	System				TPHg	Cumulative	Benzene	Cumulative	MTBE	Cumulative
		Hours of	Flow	Hydrocarbon Concentrations			Removal	TPHg	Removal	Benzene	Removal	MTBE
	Well	Operation	Rate	TPHg	Benzene	MTBE	Rate	Removed	Rate	Removed	Rate	Removed
Date	ID	(hours)	(CFM)	(Concentrations in ppmv)			(#/hour)	(#)	(#/hour)	(#)	(#/hour)	(#)
04/21/00	MW-2	1.00	9.0	1,949	52	836	0.234	0.234	0.006	0.006	0.103	0.103
06/02/00	MW-2	3.50	0.4	30	6.51	108	0.000	0.235	0.000	0.006	0.001	0.105
07/06/00	MW-2	4.00	0.7	<567	<6.3	647	<0.005	<0.256	<0.000	<0.006	0.006	0.130
08/16/00	MW-2	3.00	8.6	13,654	<39	1,861	1.570	4.965	<0.004	<0.018	0.219	0.787
09/12/00	MW-2	4.00	7.6	12,100	<31.4	6,410	1.229	9.883	<0.003	<0.030	0.666	3.452
10/26/00	MW-2	1.50	5.5	35.1	0.562	41.0	0.003	9.887	0.000	<0.030	0.003	3.457
04/21/00	MW-3	1.00	7.0	<28	<0.31	594	<0.003	0.003	<0.000	<0.000	0.057	0.057
06/02/00	MW-3	4.25	0.3	<14.2	0.36	608	<0.000	0.003	0.000	<0.000	0.002	0.067
07/06/00	MW-3	4.00	0.7	38	4.4	133	0.000	0.004	0.000	<0.000	0.001	0.073
08/16/00	MW-3	6.75	7.0	<1,416	<15.7	3,333	<0.133	0.899	<0.001	<0.009	0.319	2.227
09/12/00	MW-3	4.00	7.6	<1,420	<15.7	1,850	<0.144	1.476	<0.001	<0.015	0.192	2.996
10/26/00	MW-3	4.00	7.2	<2,840	<31.4	531	<0.273	2.569	<0.003	<0.026	0.052	3.205
Total Pounds Removed:							**TPHg =**	**12.456**	**Benzene =**	**<0.056**	**MTBE =**	**6.662**

Abbreviations and Notes:

CFM = Cubic feet per minute

TPHg = Total petroleum hydrocarbons as gasoline (C6-C12) by modified EPA Method 8015 in 1 liter tedlar bag samples

ppmv = Parts per million by volume

= Pounds

NA = Not available

TPHG, Benzene, and MTBE analyzed by EPA Method 8015/8020 in 1 liter tedlar bag samples

TPHg / Benzene / MTBE removal rate = Rate based on Bay Area Air Quality Management District's Manual of Procedures for Soil Vapor Extraction dated July 17, 1991.

(Rate = Concentration (ppmv) x system flow rate (cfm) x (1lb-mole/386ft3) x molecular weight (86 lb/lb-mole for TPHg, 78 lb/lb-mole for benzene, 88 lb/lb-mole for MTBE) x 60 min/hour x 1/1,000,000)

Cumulative TPHg / Benzene / MTBE removal = Previous removal rate multiplied by the hour-interval of operation plus the previous total

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

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME	MW-3
JOB/SITE NAME	oak105	DRILLING STARTED	14-May-99
LOCATION	105 Fifth Street, Oakland, California	DRILLING COMPLETED	14-May-99
PROJECT NUMBER	240-0472	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hollow-stem auger (Limited Access Rig)	TOP OF CASING ELEVATION	11.27' ft above msl
BORING DIAMETER	10"	SCREENED INTERVAL	5 to 25 ft bgs
LOGGED BY	T. Buggle	DEPTH TO WATER (First Encountered)	12.5 ftNA
REVIEWED BY	Darryk Ataide	DEPTH TO WATER (Static)	NA
REMARKS	Hand augered to 5' bgs.		

TPHg (mg/kg)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
	N/A						**ASPHALT**	0.8	Portland Type I/II
					SP		Silty SAND; (SM); black; soft; moist; 30% silt, 70% sand; low plasiticity; high estimated permeability.		Bentonite Seal
	N/A			5					Monterey Sand #3
<20.0	N/A	MW-3 @6.5							
							SAND; (SP); brown rust; soft; moist; 5% silt, 95% sand; low plasiticity; high estimated permeability.	7.5	
	N/A			10					
<20.0	N/A	MW-3 @11.5							
	N/A			15			@ 15' - brown, grey, rust; soft-medium; wet.		4"-diam., 0.010" Slotted Schedule 40 PVC
<20.0	N/A	MW-3 @16.5			SP				
							@ 17.5 - brown, grey, rust; medium; wet; 10% clay,10% silt, 80% sand; medium-high estimated permeability.		
	N/A			20					
<2.0	N/A	MW-3 @21.5							
	N/A								
<0.400	N/A	MW-3 @25.0		25				25.0	Bottom of Boring @ 25 ft

WELL LOG (TPH-G) G:\OAK105\GINT\OAK105.GPJ DEFAULT.GDT 9/9/99

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

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	BORING/WELL NAME	MW-2
JOB/SITE NAME	oak105	DRILLING STARTED	14-May-99
LOCATION	105 Fifth Street, Oakland, California	DRILLING COMPLETED	14-May-99
PROJECT NUMBER	240-0472	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION	10.87' ft above msl
BORING DIAMETER	10"	SCREENED INTERVAL	4 to 24 ft bgs
LOGGED BY	T. Buggle	DEPTH TO WATER (First Encountered)	14.0 ftNA
REVIEWED BY	Darryk Ataide	DEPTH TO WATER (Static)	NA
REMARKS	Hand augered to 5' bgs.		

TPHg (mg/kg)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHLAT	0.8	Portland Type I/II
					ML		**Sandy SILT**; (ML); black; soft; 60% silt, 40% sand; low plasticity; high estimated permeability.		Bentonite Seal
1700	4 4 6	MW-2 @5.5		5					Monterey Sand #3
								7.5	
<2.0	10 15 26	MW-2 @10.5		10	SP		**Silty SAND**; (SP); grey-black; soft; moist, 30% silt, 70% sand; high plasticity; high estimated permeability.		
								12.5	
<0.400	17 30 50	MW-2 @15.5		15	SP		**SAND**; (SP); brown, rust, grey; soft; wet; 5% silt, 95% sand; low plasticity; high estimated permeability. ▽		4"-diam., 0.010" Slotted Schedule 40 PVC
<0.400	8 8 10	MW-2 @20.5		20					
								22.5	
<0.400	2 2 3	MW-2 @25.5		25	GM		**Silty SAND**; (ML); brown, rust; soft; wet; 5% clay, 15% silt, 80% sand; low plasticity; high estimated permeability.	25.5	Bottom of Boring @ 25.5 ft

WELL LOG (TPH-G) G:\OAK105\GINT\OAK105.GPJ DEFAULT.GDT 9/9/99

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Oakland, CA 94608
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Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	**BORING/WELL NAME**	MW-1
JOB/SITE NAME	oak105	**DRILLING STARTED**	14-May-99
LOCATION	105 Fifth Street, Oakland, California	**DRILLING COMPLETED**	14-May-99
PROJECT NUMBER	240-0472	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	12.22' ft above msl
BORING DIAMETER	10"	**SCREENED INTERVAL**	4 to 24 ft bgs
LOGGED BY	T. Buggle	**DEPTH TO WATER (First Encountered)**	15.8 ftNA
REVIEWED BY	Darryk Ataide	**DEPTH TO WATER (Static)**	NA
REMARKS	Hand augered to 5' bgs.		

TPHg (mg/kg)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)
							SAND; (SAND); brown; soft; 5% silt, 90% sand, 5% gravel; low plasticity; high estimated permeability.	
	2 3 6						2 4' - 5% silt, 95% sand.	
<0.400		MW-1@5.5		5				
							2 4' - 5% clay, 5% silt, 90% sand.	
	13 15 20							
<0.400		MW-1 @10.5		10	SP			
	N/A N/A						@ 14' - color brown, orange, rust	
<0.400	N/A	MW-1 @15.5		15			▽	
	7 10 20							
<0.400		MW-1 @20.5		20				
	3/18							
<0.400		MW-1 @25.5		25				25.5

WELL DIAGRAM

- Portland Type I/II
- Bentonite Seal
- Monterey Sand #3
- 4"-diam., 0.010" Slotted Schedule 40 PVC
- Bottom of Boring @ 25.5 ft

WELL LOG (TPH-G) G:\OAK105\GINT\OAK105.GPJ DEFAULT.GDT 9/9/99

ATTACHMENT B

Analytical Results for Soil and Groundwater

KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Shannon Couch
Cambria Environmental Technology, Inc.
1144 65th Street, Suite C
Oakland, CA 94608

Subject : 3 Water Samples and 12 Soil Samples
Project Name : 105 5th Street, Oakland
Project Number : 243-0472
P.O. Number : Incident# 98995757

Dear Ms. Couch,

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 : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **MW-4-10W** Matrix : Water Lab Number : 19328-01
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	02/24/2001
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	02/24/2001
4-Bromofluorobenzene (Surr)	98.8		% Recovery	EPA 8260B	02/24/2001
TPH as Diesel	**< 50**	50	ug/L	M EPA 8015	02/25/2001

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **SB-6-10** Matrix : Water Lab Number : 19328-02
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	02/24/2001
Toluene - d8 (Surr)	98.5		% Recovery	EPA 8260B	02/24/2001
4-Bromofluorobenzene (Surr)	98.5		% Recovery	EPA 8260B	02/24/2001
TPH as Diesel	**< 50**	50	ug/L	M EPA 8015	02/25/2001

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **SB-7-10** Matrix: [redacted] Lab Number : 19328-03
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	02/24/2001
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	02/24/2001
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	02/24/2001
4-Bromofluorobenzene (Surr)	99.1		% Recovery	EPA 8260B	02/24/2001
TPH as Diesel	[redacted]			M EPA 8015	02/25/2001

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **MW-4-15** Matrix : Soil Lab Number : 19328-04
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/24/2001
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	02/24/2001
4-Bromofluorobenzene (Surr)	99.9		% Recovery	EPA 8260B	02/24/2001

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **MW-4-5** Matrix : Soil Lab Number : 19328-05
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/24/2001
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	02/24/2001
4-Bromofluorobenzene (Surr)	98.4		% Recovery	EPA 8260B	02/24/2001

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **SB-6-5** Matrix : Soil Lab Number : 19328-06
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/25/2001
Toluene - d8 (Surr)	98.8		% Recovery	EPA 8260B	02/25/2001
4-Bromofluorobenzene (Surr)	98.3		% Recovery	EPA 8260B	02/25/2001

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **SB-6-10.0** Matrix : Soil Lab Number : 19328-07
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/25/2001
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	02/25/2001
4-Bromofluorobenzene (Surr)	98.7		% Recovery	EPA 8260B	02/25/2001

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **SB-7-15** Matrix : Soil Lab Number : 19328-08
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/24/2001
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	02/24/2001
4-Bromofluorobenzene (Surr)	97.6		% Recovery	EPA 8260B	02/24/2001

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **MW-4-10.0** Matrix : Soil Lab Number : 19328-09
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/25/2001
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	02/25/2001
4-Bromofluorobenzene (Surr)	97.9		% Recovery	EPA 8260B	02/25/2001

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **SB-7-5.0** Matrix : Soil Lab Number : 19328-10
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/27/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/27/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/27/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/27/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/27/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/27/2001
Toluene - d8 (Surr)	99.2		% Recovery	EPA 8260B	02/27/2001
4-Bromofluorobenzene (Surr)	99.2		% Recovery	EPA 8260B	02/27/2001

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **SB-7-20** Matrix : Soil Lab Number : 19328-11
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/27/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/27/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/27/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/27/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/27/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/27/2001
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	02/27/2001
4-Bromofluorobenzene (Surr)	99.5		% Recovery	EPA 8260B	02/27/2001

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **SB-7-10** Matrix : Soil Lab Number : 19328-12
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/24/2001
Toluene - d8 (Surr)	99.7		% Recovery	EPA 8260B	02/24/2001
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	02/24/2001

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **SB-6-20** Matrix : Soil Lab Number : 19328-13
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/24/2001
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	02/24/2001
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	02/24/2001

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **SB-6-15** Matrix : Soil Lab Number : 19328-14
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/24/2001
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	02/24/2001
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	02/24/2001

Approved By: Joel Kiff

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KIFF ANALYTICAL LLC

Report Number : 19328
Date : 02/28/2001

Project Name : **105 5th Street, Oakland**
Project Number : **243-0472**

Sample : **MW-4-20** Matrix : Soil Lab Number : 19328-15
Sample Date :02/12/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/24/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/24/2001
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	02/24/2001
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	02/24/2001

Approved By: Joel Kiff

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

Report Number : 19328

Date : 02/28/2001

Project Name : **105 5th Street, Oakland**

Project Number : **243-0472**

Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	02/26/2001
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	02/26/2001
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	02/26/2001
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	02/26/2001
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	EPA 8260B	02/26/2001
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	02/26/2001
Toluene - d8 (Surr)	98.8		% Recovery	EPA 8260B	02/26/2001
4-Bromofluorobenzene (Surr)	98.7		% Recovery	EPA 8260B	02/26/2001

Approved By: Joel Kiff

Report Number : 19328

Date : 02/28/2001

Project Name : **105 5th Street, Oakland**

Project Number : **243-0472**

Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	02/25/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	02/25/2001
Toluene - d8 (Surr)	98.4		% Recovery	EPA 8260B	02/25/2001
4-Bromofluorobenzene (Surr)	98.6		% Recovery	EPA 8260B	02/25/2001

Approved By: Joel Kiff

Report Number : 19328

Date : 02/28/2001

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **105 5th Street, Oakland**

Project Number : **243-0472**

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
Spike Recovery Data														
Benzene	19325-01	<0.0050	0.0494	0.0493	0.0444	0.0445	mg/Kg	EPA 8260B	02/25/2000	89.9	90.3	0.377	70-130	25
Toluene	19325-01	<0.0050	0.0494	0.0493	0.0448	0.0450	mg/Kg	EPA 8260B	02/25/2000	90.6	91.2	0.726	70-130	25
Tert-Butanol	19325-01	0.27	0.0494	0.0493	0.240	0.236	mg/Kg	EPA 8260B	02/25/2000	0.00	0.00	0.00	70-130	25
Methyl-t-Butyl Ether	19325-01	0.88	0.0494	0.0493	0.914	0.769	mg/Kg	EPA 8260B	02/25/2000	68.6	[illegible]	200	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 19328

Date : 02/28/2001

QC Report : Laboratory Control Sample (LCS)

Project Name : **105 5th Street, Oakland**

Project Number : **243-0472**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	0.0392	mg/Kg	EPA 8260B	02/25/200	90.8	70-130
Toluene	0.0392	mg/Kg	EPA 8260B	02/25/200	88.6	70-130
Tert-Butanol	0.196	mg/Kg	EPA 8260B	02/25/200	110	70-130
Methyl-t-Butyl Ether	0.0392	mg/Kg	EPA 8260B	02/25/200	95.4	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 19328

Date : 02/28/01

Project Name : **105 5th Street, Oakland**

Project Number : **243-0472**

Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	**< 50**	50	ug/L	M EPA 8015	02/25/01

Approved By: Joel Kiff

Report Number : 19328

Date : 02/28/01

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **105 5th Street, Oakland**

Project Number : **243-0472**

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
Spike Recovery Data														
TPH as Diesel	Blank	<50	1000	1000	711	832	ug/L	M EPA 8015	02/24/01	71.1	83.2	15.7	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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EQUIVA Enterprises LLC Chain Of Custody Record

1 of 20

Equiva Project Manager (To be Invoiced):		INCIDENT NUMBER (S&E)	DATE: 6/20/01
Science & Engineering (S&E)	☑ Karen Petryna		
Technical Services (TS)		SAP or CRMT NUMBER (TS/CRMT)	PAGE: 1 OF 2
CRMT Houston			

CONSULTANT COMPANY: Cambria Environmental	SITE ADDRESS (Street and City): 105 5th Street, Oakland
ADDRESS: 1144 65th Street, Suite B	PROJECT CONTACT (Report to): Shannon Couch / CONSULTANT PROJECT NO.:
CITY: Oakland, Ca	SAMPLER NAME(s) (Print): Shannon Couch / LAB USE ONLY
TEL: 510.420.3324 FAX: 510.420.9170 E-MAIL: scouch@cambria-env.com	

TURNAROUND TIME (BUSINESS DAYS): ☐ 10 DAYS ☑ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

☐ LA-RWQCB REPORT FORMAT UST AGENCY:

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

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Confirm all 8020 detections with 8260

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Purgeable (8015m)	TPH - Extractable (8015m)	BTEX / MTBE (8021B)	BTEX / MTBE + Oxygenates (8260B)	VOCs Full List + Oxygenates (8260B)	MTBE (8260B) Confirmation, See Note	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	Ethanol, Methanol (8015B)	Metals (Specify) ____	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- ____)	Field Notes: Container/Preservative or PID Readings or Laboratory Notes	
	MW-4-10W	2/12		Water	6	X	X	X			X												1
	SB-6-10																						2
	SB-7-10																						3
	MW-4-15			Soil	1																		4
	MW-4-5																						5
	SB-6-5																						6
	SB-6-10.0																						7
	SB-7-15																						8
	MW-4-10.0																						9
	SB-7-5.0																						10

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) Mark Brumm Analytical	Date: 022201	Time: 1125

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

10/01/00 Revision

Q&Q Graphic (714) 893-9702

14328

EQUIVA Enterprises LLC Chain Of Custody Record

Equiva Project Manager (To be invoiced):	
Science & Engineering (S&E)	X
Technical Services (TS)	
CRMT Houston	

Karen Petryna

INCIDENT NUMBER (S&E): 98995757

SAP or CRMT NUMBER (TS/CRMT):

DATE: 2/20/01

PAGE: 2 OF 2

CONSULTANT COMPANY: Cambria Environmental

ADDRESS: 1144 65th Street, Suite B

CITY: Oakland, Ca

TEL: 510.420.3324 FAX: 510.420.9170 E-MAIL: scouch@cambria-env.com

SITE ADDRESS (Street and City): 105 5th Street, Oakland

PROJECT CONTACT (Report to): Shannon Coven

CONSULTANT PROJECT NO.: 243-0472

SAMPLER NAME(s) (Print): Shannon Couch

LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS)

☐ 10 DAYS ☒ 5 DAYS ☐ 72 HR ☐ 48 HR ☐ 24 HR ☐ <24 HR

☐ LA-RWQCB REPORT FORMAT UST AGENCY:

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

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT (C)

Confirm all 8020 detections with 8260

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Purgeable (8015m)	TPH - Extractable (8015m)	BTEX / MTBE (8021B)	BTEX / MTBE + Oxygenates (8260B)	VOCs Full List + Oxygenates (8260B)	MTBE (8260B) Confirmation, See Note	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	Ethanol, Methanol (8015B)	Metals (Specify) ____	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-- ____)					Field Notes: Container/Preservative or PID Readings or Laboratory Notes	
	SB-7-20	2/12		Soil		X		X			X															11
	SB-7-10																									12
	SB-6-20																									13
	SB-6-15																									14
	[redacted]																									
	[redacted]																									
	[redacted]																									
	MW-4-20					X		X			X															15

	Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	[signature]			
	Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	Relinquished by: (Signature)	Received by: (Signature) [signature] [signature]	Date: 022201	Time: 1125

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

10/01/00 Revision

Q&Q Graphic (714) 898-9702

KIFF ANALYTICAL LLC

Report Number : 19997
Date : 4/26/2001

James Loetterle
Cambria Environmental Technology Inc.
1144 65th Street, Suite B
Oakland, CA 94608

Subject : 5 Soil Samples
Project Name : 105 5th Street, Oakland, CA
Project Number : 243-0472
P.O. Number : Incident# 98995757

Dear Mr. Loetterle,

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 : 19997
Date : 4/26/2001

Project Name : **105 5th Street, Oakland, CA**
Project Number : **243-0472**

Sample : **SP-1 (1)** Matrix : Soil Lab Number : 19997-01
Sample Date :4/19/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	4/23/2001
4-Bromofluorobenzene (Surr)	96.1		% Recovery	EPA 8260B	4/23/2001

Sample : **SP-1 (2)** Matrix : Soil Lab Number : 19997-02
Sample Date :4/19/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	4/23/2001
4-Bromofluorobenzene (Surr)	92.3		% Recovery	EPA 8260B	4/23/2001

Sample : **SP-1 (3)** Matrix : Soil Lab Number : 19997-03
Sample Date :4/19/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	4/23/2001
4-Bromofluorobenzene (Surr)	98.2		% Recovery	EPA 8260B	4/23/2001

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 19997
Date : 4/26/2001

Project Name : **105 5th Street, Oakland, CA**
Project Number : **243-0472**

Sample : **SP-1 (4)** Matrix : Soil Lab Number : 19997-04
Sample Date :4/19/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	4/23/2001
4-Bromofluorobenzene (Surr)	96.3		% Recovery	EPA 8260B	4/23/2001

Sample : **SP-1 (1-4)** Matrix : Soil Lab Number : 19997-05
Sample Date :4/19/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	4/23/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	4/23/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	4/23/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	4/23/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	4/23/2001
Toluene - d8 (Surr)	97.2		% Recovery	EPA 8260B	4/23/2001
4-Bromofluorobenzene (Surr)	88.8		% Recovery	EPA 8260B	4/23/2001

Approved By: Joel Kiff

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

Report Number : 19997
Date : 4/26/2001

Project Name : **105 5th Street, Oakland,**
Project Number : **243-0472**

Quality Control Data - Method Blank

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	4/22/2001
Toluene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	4/22/2001
Ethylbenzene	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	4/22/2001
Total Xylenes	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	4/22/2001
Methyl-t-butyl ether	**< 0.0050**	0.0050	mg/Kg	EPA 8260B	4/22/2001
TPH as Gasoline	**< 1.0**	1.0	mg/Kg	EPA 8260B	4/22/2001
Toluene - d8 (Surr)	99.7		% Recovery	EPA 8260B	4/22/2001
4-Bromofluorobenzene (Surr)	99.1		% Recovery	EPA 8260B	4/22/2001

Approved By: Joel Kiff

Report Number : 19997

Date : 4/26/2001

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **105 5th Street, Oakland,**

Project Number : **243-0472**

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
Spike Recovery Data														
Benzene	19997-03	<0.0050	0.0499	0.0454	0.0408	0.0371	mg/Kg	EPA 8260B	4/26/2001	81.7	81.7	0.0245	70-130	25
Toluene	19997-03	<0.0050	0.0499	0.0454	0.0360	0.0329	mg/Kg	EPA 8260B	4/26/2001	72.2	72.4	0.277	70-130	25
Tert-Butanol	19997-03	<0.0050	0.0499	0.0454	0.0478	0.0394	mg/Kg	EPA 8260B	4/26/2001	95.7	86.6	10.0	70-130	25
Methyl-t-Butyl Ether	19997-03	<0.0050	0.0499	0.0454	0.0325	0.0320	mg/Kg	EPA 8260B	4/26/2001	65.2	70.5	7.81	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 19997

QC Report : Laboratory Control Sample (LCS)

Date : 4/26/2001

Project Name : **105 5th Street, Oakland,**

Project Number : **243-0472**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	0.0383	mg/Kg	EPA 8260B	4/22/2001	89.9	70-130
Toluene	0.0383	mg/Kg	EPA 8260B	4/22/2001	82.1	70-130
Tert-Butanol	0.192	mg/Kg	EPA 8260B	4/22/2001	84.5	70-130
Methyl-t-Butyl Ether	0.0383	mg/Kg	EPA 8260B	4/22/2001	95.0	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

Sequoia Analytical

819 Striker Avenue, Suite 8
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
www.sequoialabs.com

April 24 , 2001

Joel Kiff
Kiff Analytical
720 Olive Drive, Suite D
Davis, CA 95616
RE: Equiva 105 5th St., Oakland, CA / S104293

Enclosed are the results of analyses for samples received by the laboratory on 04/20/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew For Lito Diaz
Laboratory Director

CA ELAP Certificate Number 1624

Sequoia Analytical

819 Striker Avenue, Suite 8
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
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Kiff Analytical	Project: Equiva 105 5th St., Oakland, CA	
720 Olive Drive, Suite D	Project Number: 243-0472	**Reported:**
Davis CA, 95616	Project Manager: Joel Kiff	04/24/01 15:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-1 (1-4)	S104293-01	Soil	04/19/01 00:00	04/20/01 16:59

Sequoia Analytical

819 Striker Avenue, Suite 8
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
www.sequoialabs.com

Kiff Analytical	Project: Equiva 105 5th St., Oakland, CA	
720 Olive Drive, Suite D	Project Number: 243-0472	**Reported:**
Davis CA, 95616	Project Manager: Joel Kiff	04/24/01 15:40

Total Metals by EPA 6000/7000 Series Methods

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-1 (1-4) (S104293-01) Soil Sampled: 04/19/01 00:00 Received: 04/20/01 16:59									
Lead	**11.1**	10.0	mg/kg	4	1040254	04/20/01	04/21/01	EPA 6010A	

Sequoia Analytical

819 Striker Avenue, Suite 8
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
www.sequoialabs.com

Kiff Analytical	Project: Equiva 105 5th St., Oakland, CA	
720 Olive Drive, Suite D	Project Number: 243-0472	**Reported:**
Davis CA, 95616	Project Manager: Joel Kiff	04/24/01 15:40

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1040254 - EPA 3050B										
Blank (1040254-BLK1)				Prepared: 04/20/01 Analyzed: 04/21/01						
Lead	ND	2.50	mg/kg							
LCS (1040254-BS1)				Prepared: 04/20/01 Analyzed: 04/21/01						
Lead	53.0	2.50	mg/kg	50.0		106	80-120			
Matrix Spike (1040254-MS1)	**Source: S104243-01**			Prepared: 04/20/01 Analyzed: 04/21/01						
Lead	56.5	10.0	mg/kg	50.0	ND	104	80-120			
Matrix Spike Dup (1040254-MSD1)	**Source: S104243-01**			Prepared: 04/20/01 Analyzed: 04/21/01						
Lead	57.2	10.0	mg/kg	50.0	ND	106	80-120	1.23	20	

Sequoia Analytical

819 Striker Avenue, Suite 8
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
www.sequoialabs.com

Kiff Analytical	Project: Equiva 105 5th St., Oakland, CA	
720 Olive Drive, Suite D	Project Number: 243-0472	**Reported:**
Davis CA, 95616	Project Manager: Joel Kiff	04/24/01 15:40

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

19997

KIFF ANALYTICAL SUBCONTRACT FORM

Please mail results to :

JOEL KIFF
KIFF ANALYTICAL
720 OLIVE DRIVE, SUITE D
DAVIS, CA 95616

Please fax to :

530-297-4803

Subcontract Lab: **Sequoia**
819 Striker Ave, Suite 8
Sacramento, CA 95834

916-921-9600

Account No. :

PROJECT NAME : 105 5th Street, Oakland, CA
PROJECT NUMBER: 243-0472

Sample	Matrix	Sampled	Tests	Due	Container
SP-1 (1-4)	SO	04/19/2001	Lead - ICAP *	04/27/2001	

S104293-01

* Please test per Waste Mgmt. Procedures (4B-28), attached. Also, refer to attached COC for billing. Thank you. -mec
042001
1609

Relinquished by : Oscar Hernandez Date/Time: 042001/1659 Received by: Monica Gregsen 4/20/01 1659

Relinquished by : _____ Date/Time: _____ Received by: _____

Relinquished by : _____ Date/Time: _____ Received by: _____

KIFF ANALYTICAL

720 Olive Drive, Suite D

Davis, CA 95616

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

EQUIVA Services LLC Chain Of Custody Record 19997

Equiva Project Manager to be invoiced:

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

Tim Dazey

INCIDENT NUMBER (S&E ONLY): 9 8 9 9 6 7 5 7

SAP or CRMT NUMBER (TS/CRMT):

DATE: 4/19/01

PAGE: 1 of 2

CONSULTANT COMPANY: Cambria Environmental Technology Inc.	SITE ADDRESS (Street and City): 105 5th Street, Oakland, CA
ADDRESS: 1144 65th Street, Suite B	PROJECT CONTACT (Report to): JamesLoetterle (510)420-3336
CITY: Oakland, CA, 94608	CONSULTANT PROJECT NO.: 243-0472
TELEPHONE: (510) 420-0700 FAX: (510) 420-9170 E-MAIL:	SAMPLER NAME(S) (Print): James Loetterle; jloetterle@cambria-env.com

LAB USE ONLY:

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: ____

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

SPECIAL INSTRUCTIONS OR NOTES: TEMPERATURE ON RECEIPT C°

TPHg required for all samples. All others to be run on composites

Metals: run TTLC. If TTLC>=13mg/kg, then run Organic Lead

If TTLC>= 50mg/kg, then run STLC lead. See Attached Sheet.

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Purgeable (8015m)	TPH - Extractable (8015m)	BTEX / MTBE (8021B)	BTEX / MTBE + Oxygenates (8260B)	VOCs Full List + Oxygenates (8260B)	MTBE (8260B) Confirmation, See Note	EPA 5035 Extraction for Volatiles	VOCs Halogenated/Aromatic (8021B)	Ethanol, Methanol (8015B)	Metals (Specify) See Attached Sheet	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-____)					FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
	SP-1 (1-4)	4/19/2001	2:30	soil	4	x		x							x											See Attached Sheet -01-05

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]			
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) John Cuttle / Kiff Analytical	Date: 041901	Time: 1500

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

10/23/00 Revision

ISSUED DATE: 05/23/97 19997
CANCELS ISSUE: 03/05/97
ISSUED BY: RLG

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

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

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

MINIMUM REQUIRED TESTING

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

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

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

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

LABORATORY INSTRUCTIONS (MINIMUM GUIDELINES ONLY)

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

ATTACHMENT C

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	Equiva Services LLC	**BORING/WELL NAME**	SB-6
JOB/SITE NAME	oak105	**DRILLING STARTED**	12-Feb-01
LOCATION	105 Fifth Street, Oakland, California	**DRILLING COMPLETED**	12-Feb-01
PROJECT NUMBER	240-0472	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	2"	**SCREENED INTERVAL**	NA
LOGGED BY	S. Couch	**DEPTH TO WATER (First Encountered)**	10.0 ft (12-Feb-01) ▽
REVIEWED BY	S. Bork, RG# 5626	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Hand augered to 5'.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHALT	0.3	
							FILL: dark brown; damp; 20% silt, 80% fine to medium grained sand; low plasticity.		
		SB-6- 5.0		5	SP		**SAND** (SP); reddish brown; damp; 10% silt, 90% fine to medium grained sand; no plasticity.	5.0	
		SB-6-10.0		10	SM		▽ **Silty SAND** (SM); brown; moist; 25% silt, 75% fine grained sand; low plasticity.	10.0	Portland Type I/II
		SB-6-15.0		15	SC		**Clayey SAND** (SC); brown; wet; 20% clay, 80% fine grained sand; low to medium plasticity.	15.0	
		SB-6-20.0		20			@ 20 fbg - greyish brown; saturated; 25% clay, 10% silt, 65% fine grained sand.		
				25				25.0	Bottom of Boring @ 25 ft

WELL LOG (PID) G:\OAKLAN~1\GINT\OAK105.GPJ DEFAULT.GDT 6/7/01

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

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	**BORING/WELL NAME**	SB-7
JOB/SITE NAME	oak105	**DRILLING STARTED**	12-Feb-01
LOCATION	105 Fifth Street, Oakland, California	**DRILLING COMPLETED**	12-Feb-01
PROJECT NUMBER	240-0472	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	2"	**SCREENED INTERVAL**	NA
LOGGED BY	S. Couch	**DEPTH TO WATER (First Encountered)**	10.0 ft (12-Feb-01) ▽
REVIEWED BY	S. Bork, RG# 5626	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Hand augered to 5'.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHALT	0.3	
							FILL; brown; damp; 20% silt, 80% fine to medium grained sand; low plasticity.		
		SB-7- 5.0		5	SP		**SAND** (SP); reddish brown; damp; 10% silt, 90% fine to medium grained sand; no plasticity.	5.0	
							▽	10.0	
		SB-7- 10.0		10	SM		**Silty SAND** (SM); brown; moist; 25% silt, 75% fine grained sand; low plasticity.		Portland Type I/II
							@ 14 fbg - yellowish grey brown.	15.0	
		SB-7- 15.0		15	SC		**Clayey SAND** (SC); grey brown; moist; 20% clay, 80% fine grained sand; low to medium plasticity.		
		SB-7- 20.0		20			@ 20 fbg - saturated; 20% clay, 15% silt, 65% fine grained sand.		
				25				25.0	Bottom of Boring @ 25 ft

WELL LOG (PID) G:\OAKLAN~1\GINT\OAK105.GPJ DEFAULT GDT 6/7/01

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

BORING/WELL LOG

CLIENT NAME	Equiva Services LLC	**BORING/WELL NAME**	MW-4
JOB/SITE NAME	oak105	**DRILLING STARTED**	12-Feb-01
LOCATION	105 Fifth Street, Oakland, California	**DRILLING COMPLETED**	12-Feb-01
PROJECT NUMBER	240-0472	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	8"	**SCREENED INTERVAL**	10 to 25 ft bgs
LOGGED BY	S. Couch	**DEPTH TO WATER (First Encountered)**	10.0 ft (12-Feb-01)
REVIEWED BY	S. Bork, RG# 5626	**DEPTH TO WATER (Static)**	NA
REMARKS	Hand augered to 5'.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHALT	0.5	Portland Type I/II
							FILL: brown; damp; 10% silt, 90% fine to medium grained sand.		
		MW-4-5.0		5	SP		**SAND** (SP); black; damp; 10% silt, 90% fine grained sand; no plasticity.	5.0	Bentonite Seal
		MW-4-10.0		10	SM		▽ **Silty SAND** (SM); dark reddish brown; moist; 25% silt, 75% fine grained sand; oxidation; low plasticity.	10.0	Monterey Sand #2/12
		MW-4-15.0		15	SC		**Clayey SAND** (SC); greyish brown; wet; 20% clay, 80% fine grained sand; low to medium plasticity.	15.0	2"-diam., 0.020" Slotted Schedule 40 PVC
		MW-4-20.0		20	ML		**Silty SAND** (ML); grey; saturated; 5% clay, 15% silt, 80% fine grained sand; low plasticity.	20.0	
				25				25.0	Bottom of Boring @ 25 ft

WELL LOG (PID) G:\OAKLAN~1\GINT\OAK105.GPJ DEFAULT.GDT 4/17/01

ATTACHMENT D

Cambria's Standard Field Procedures for Monitoring Wells

CAMBRIA

STANDARD FIELD PROCEDURES FOR MONITORING WELLS

This document describes Cambria Environmental Technology's standard field methods for drilling, 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.

Well Construction and Surveying

Groundwater monitoring wells are installed in soil borings 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 feet 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 ft 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 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.

ATTACHMENT E

Monitoring Well Elevation Survey

Virgil Chavez Land Surveying
312 Georgia Street, Suite 225
Vallejo, California 94590-5907
(707) 553-2476 • Fax (707) 553-8698

April 4, 2001
Project No. 1703-18

James Loetterle
Cambria Environmental
1144 65th Street, Suite C
Oakland, Ca. 94608

Subject: Monitoring Well Survey
Shell Service Station
105 Fifth Street
Oakland, Ca.

Dear James:

This is to confirm that we have proceeded at your request to survey the monitoring wells located at the above referenced location. The survey was performed on March 29, 2001. The benchmark for the survey was a cut square in the top of curb, in mid-return at a over a curb inlet, at the northwest corner of 7th Fallon Street. Measurement locations were marked at approximate north side of top of box and top of casings. The stations and offsets are referenced to the back of sidewalk on Oak Street (BSW), looking southerly, beginning at the intersection (Intx.) with Fifth Street.
Benchmark Elevation = 19.29 feet, NGVD 29.

Well No.	Rim Elevation	TOC Elevation	Station	Offset
MW - 1	12.82'	12.22'	0+01.56	98.05(RT)
MW - 2	11.22'	10.87'	0+54.15	10.33(RT)
MW - 3	11.78'	11.27'	1+16.59	13.04(RT)
MW - 4	9.63'	9.50'	1+36.60	-116.24(LT)
BSW Intx.			0+00.00	0.00
BSW Oak St.			---	0.00

Sincerely,

Virgil D. Chavez

Virgil D. Chavez, PLS 6323

ATTACHMENT F

Soil Disposal Confirmation

NORTHERN CALIFORNIA SALES OFFICE • SPECIAL WASTE

Forward • Keller Canyon • Newby Island • Ox Mountain

ALLIED WASTE COMPANIES BFI

Cambria Environmental
1144 65th Street, Suite C
Oakland, CA 94608

Attn: Mr. Loetterie

Re: Approval No. 752
Gasoline Contaminated Soil
105 5th St.

Dear Mr. Loetterie:

FORWARD INC. is pleased to inform you that the approximately 10 tons of Gasoline Contaminated Soil from the referenced site has been approved for acceptance at our Manteca, California Landfill as a Class 2 waste. This approval has been based on the information provided in the waste profile and associated materials submitted on behalf of Equilon Enterprises LLC (Generator). Acceptance of the waste is subject to regulatory requirements, and is also subject to the "Terms and Conditions" agreed to and signed by Generator in the waste profile.

Your approval number for this project will be 752. This number should be used in all scheduling and correspondence with ***FORWARD, INC.*** regarding this waste profile.

This profile shall remain in effect until May 17, 2002, or until any significant changes in the waste stream occur. At that time, ***FORWARD, INC.*** will re-evaluate the profile, and current analytical data and requirements will be reviewed.

Please schedule all waste shipments with the Landfill (209-982-4298) at least 24 hours in advance. The landfills hours of operation are Monday through Friday 6:00 am to 6:00 pm for soil, 6:00 am to 3:00 pm for asbestos, 6:00 am to 5:00 pm for all other waste types.

Thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact me or our Customer Service at (800) 204-4242.

Sincerely,

Allied Waste Industries

Brad Bonner/J.F.

Brad J. Bonner
Special Waste Sales Manager
Northern, CA

BJB/jf

F:\FORWARD\MERGE FORMS\ACCEPT.DOC

ATTACHMENT G

Well Survey Drillers' Reports

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED