

December 15, 2003

Alameda County

DEC 1 7 2003

Mr. Don Hwang Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577 Environmental Health

Subject:

Shell-branded Service Station

350 Grand Avenue Oakland, California

Dear Mr. Hwang:

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

As always, please feel free to contact me directly at (559) 645-9306 with any questions or concerns.

Sincerely,

Shell Oil Products US

Karen Petryna

Sr. Environmental Engineer

Karen Petryna

December 15, 2003

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

Re: Interim Remediation Report

Shell-branded Service Station 350 Grand Avenue Oakland, California SAP Code 135698 Incident #98995755



Dear Mr. Hwang:

Cambria Environmental Technology, Inc. (Cambria) prepared this *Interim Remediation Report* on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) for the referenced site (Figures 1 and 2). The following sections describe the site background and summarize the interim remediation activities and results.

SITE BACKGROUND

Site Description: The site is an active Shell-branded Service Station, located at the northeast corner of the intersection of Grand Avenue and Perkins Street in Oakland, California (Figure 1). Lakeside Park is located at the southwest corner of this intersection. The area surrounding the site consists of mixed commercial and residential properties.

Soil Lithology: The site is underlain by silty and sandy clays to an explored depth of 20 feet below grade (fbg).

Groundwater Flow Direction and Depth: Groundwater generally flows in a southerly direction, as illustrated by the rose diagram shown on Figure 2. Depth to water has ranged historically between 7 and 15 fbg.

Oakland, CA San Ramon, CA Sonoma, CA

Cambria Environmental Technology, Inc.

270 Perkins Street P.O. Box 259 Sonoma, CA 95476 Tel (707) 935-4850 Fax (707) 935-6649 1990 Soil Borings: On May 11, 1990, GeoStrategies Inc. of Hayward, California (GSI) drilled five exploratory soil borings with a hollow-stem auger drilling rig. The highest hydrocarbon concentration in soil was in boring S-A, located at the southwest corner of the property in the vicinity of the gasoline USTs. Levels detected at a depth of 9.5 fbg in this area were 2,900 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg), 2,400 ppm total petroleum hydrocarbons as diesel (TPHd), and 13 ppm benzene.

1991 Monitoring Well Installation: On January 7, 1991, GSI installed three monitoring wells (S-1, S-2, and S-3) at the site (Figure 2). The highest hydrocarbon concentrations in soil and groundwater were in well S-2, located at the southwest corner of the property in the vicinity of the gasoline USTs. Detected levels were 440 ppm TPHg, 360 ppm TPHd, and 4.5 ppm benzene in soil at 8.5 fbg; and 2,500 parts per billion (ppb) TPHg, 1,200 ppb TPHd, and 550 ppb benzene in groundwater. No TPHg, TPHd, or benzene was detected in the groundwater sample from well S-1.



1993 Hydropunch Borings: On January 27, 1993, GSI installed three hydropunch borings off site (Figure 2). The highest hydrocarbon concentrations were detected in boring HP-1, located crossgradient of the USTs. Maximum concentrations in that boring were 1,500 ppm TPHg, 18 ppm TPHd, and 0.11 ppm benzene in soil at 6.5 fbg and 22,000 ppb TPHg, 14,000 ppb TPHd, and 2,500 ppb benzene in groundwater. TPHg and benzene were not detected in soil and groundwater samples from borings HP-2 and HP-3, located downgradient of the USTs.

1996 Tank Removal: On April 22, 1996, Weiss Associates of Emeryville, California (WA) observed the removal of three 10,000-gallon gasoline USTs and one 10,000-gallon diesel UST and collected soil samples. Up to 4,800 ppm TPHg, 2,800 ppm TPHd, and 22 ppm benzene were detected in samples collected from the UST excavation, product piping trenches, and beneath the product dispensers.

1998 Potential Receptor Survey: In April 1998, Cambria identified wells and surface water bodies within a ½-mile radius of the site. Three water producing wells are located between 2,640 feet and 3,960 feet crossgradient of the site. Lake Merritt is located approximately 900 feet downgradient of the site. The potential receptor survey results were presented to the ACHCSA in Cambria's May 31, 1998 MTBE Investigation Report and are identified on Figure 1.

1998 Geoprobe Well Installation: On April 16, 1998, Cambria installed two ¾-inch diameter pre-packed wells (S-4 and S-5) within the Grand Avenue right-of-way, downgradient of the site. No TPHg, benzene, toluene, ethylbenzene, or xylenes (BTEX), or MTBE were detected in soil or groundwater in the borings.

1999 Geoprobe Boring Installation: In March 1999, Cambria installed three Geoprobe borings to evaluate whether utility conduit trenches serve as preferential pathways for the migration of impacted groundwater. Two borings (HP-4 and HP-5) were advanced within the sanitary sewer conduit trench along the north sidewalk on Grand Ave, and the third boring (HP-6) was advanced within Perkins Street. The maximum TPHg concentration detected in soil was 408 ppm in soil sample HP-4-10. The maximum MTBE concentration reported (by EPA Method 8020) in soil was 2.52 ppm in soil sample HP-4-10. Grab groundwater samples collected from HP-4 contained

2

100,000 ppb TPHg, 83,000 ppb TPHd, and 2,000 ppb MTBE (by EPA Method 8020). Grab groundwater samples from HP-5, near the diesel UST complex, contained 160 ppb TPHg. TPHg, BTEX, and MTBE were below detection limits in grab groundwater samples from HP-5 and HP-6.

2001 Dual-Phase Vapor Extraction (DVE) Pilot Test: In June 2001, Cambria conducted an 8-hour DVE pilot test on groundwater monitoring well S-2. DVE is the process of applying high vacuum through an airtight well seal to simultaneously extract soil vapors from the vadose zone and enhance groundwater extraction from the saturated zone. Approximately 50 gallons of groundwater were extracted during the 8-hour test. This data is consistent with the low permeability soil (sandy silt and silt) encountered at this site. Estimated mass removal through groundwater extraction of TPHg, benzene and MTBE was 0.008 pounds, 0.0004 pounds and 0.009 pounds, respectively. Estimated mass removal through vapor extraction of TPHg, benzene and MTBE was 2.44 pounds, 0.002 pounds and 0.005 pounds, respectively.

2002 Tank Backfill Well Installation: On July 10, 2002, Gregg Drilling installed two tank backfill wells (T-1 and T-2) at the site (Figure 2). A groundwater sample collected from T-1 on July 16, 2002 contained <5,000 ppb TPHg, 180 ppb TPHd, <50 ppb benzene, and 14,000 ppb MTBE. A groundwater sample collected from T-2 on July 16, 2002 contained <5,000 ppb TPHg, 390 ppb TPHd, <50 ppb benzene, and 17,000 ppb MTBE.

2002 Initiation of Batch Groundwater Extraction: Batch GWE using vacuum trucks was initiated on the two tank backfill wells beginning in October 2002, and have been occurring on a twice-monthly basis through October 2003. Concentrations of MTBE in T-1 have been reduced from 17,000 to 3300 ppb, and MTBE in T-2 has been reduced from 17,000 to 2,800 ppb as of the third quarter 2003 sample event. These activities have successfully removed approximately 0.419 pounds of TPHg, 0.001 pounds of benzene and 2.55 pounds of MTBE from the groundwater. The batch GWE is ongoing on a monthly basis, and is reported with the quarterly groundwater monitoring reports.

Groundwater Monitoring: Groundwater monitoring has been conducted at the site since well installation in 1991. The maximum contaminant concentrations at this site have always been detected at the location of well S-2. Historically, samples from well S-2 have contained up to 120,000 ppb TPHg, 36,000 ppb TPHd, 10,000 ppb benzene, and 30,200 ppb MTBE. The concentrations of these constituents in well S-2 as of the third quarter 2003 were 26,000 ppb TPHg, 4,800 ppb TPHd, 850 ppb benzene and 13,000 ppb of MTBE.



INTERIM REMEDIATION - DUAL-PHASE EXTRACTION

As discussed above, a pilot test using dual-phase vapor extraction (DVE) was performed in 2001. This test lasted for 8-hours and was unsuccessful in removing significant volumes of groundwater or contaminated soil vapor. After two additional years of groundwater monitoring, the concentrations in well S-2 were still markedly elevated. Since the lateral extent of impacted groundwater does not extend to wells S-4 and S-5, and since there are underground utility conduits near the southwest corner of the site, Cambria decided to conduct an extended dual-phase extraction (DPE) test on S-2. The DPE test on well S-2 was scheduled to last 5-days, if it was observed to be successful. The intent was to closely monitor the operations and try to maximize the effectiveness of DPE by increasing or decreasing the flow rates or other system parameters.



DPE was performed in an effort to extract contaminant vapors from the soils between approximately 6-9 fbg in well S-2. On the third day of testing (as described below), it was determined that this method was ineffective at S-2. Since the equipment and personnel were already mobilized to the site, Cambria decided to perform vapor extraction from one of the tank backfill wells in order to gain additional knowledge about the site conditions. Thus, Cambria performed DPE from monitoring well S-2 and soil vapor extraction (SVE) from tank backfill well T-1 between September 15 and 18, 2003.

DPE Equipment: A Solleco trailer-mounted liquid-ring pump with electric catalytic oxidizer (Solleco unit) was used as the extraction and vapor abatement device during interim remediation. A 100-kilowatt generator powered the Solleco unit. A recirculation valve controlled the applied vacuum and vapor extraction flow rate. The Solleco unit is equipped with auto-dilution and manual dilution valves for additional vacuum and flow control, as well as to maintain oxidizer temperatures within the specified range.

Field vapor concentrations were measured with a Horiba model MEXA554JU organic vapor analyzer (OVA). Vapor samples were collected in one-liter tedlar bags using a Thomas Industries model 907CDC18F vacuum pump. Vacuum induced in nearby wells, at the wellhead, and within the sample manifold was monitored using Magnehelic differential pressure gauges. A thermal anemometer was used to measure system, dilution, and wellhead vapor flow rates.

Groundwater extracted during the DPE test (approximately 35 gallons) was transported to Shell's Martinez Refinery for recycling.

Data Collection and Sampling: Data was collected on standard forms (Appendix A). The depth to water in onsite monitoring wells was recorded prior to beginning DPE. Throughout the DPE activities, Cambria measured the applied vacuum, airflow, volatile organic vapor concentration, and vacuum influence in nearby wells at 15-60 minute intervals. Samples of the extracted soil vapor were collected several times each day from the extraction well.

Analyses: All laboratory samples were analyzed by Severn Trent Laboratories, Inc. (STL San Francisco) of Pleasanton, California (a State of California certified laboratory) using EPA Method 8260B to determine TPHg, BTEX, and MTBE concentrations and verify field measurements.



Results of DPE Interim Remediation

Details of the DPE activities are presented below. Vapor extraction data is summarized in Table 1. The field data sheets are included as Appendix A and the laboratory analytical reports are included in Appendix B.

September 15, 2003: Cambria mobilized the DPE equipment to the site on September 15 and set up on well S-2. Electrical difficulties were encountered with the Solleco unit and generator on September 15. Operational time was minimal (approximately one hour) and conducted to troubleshoot, service and repair the Solleco unit. Data collection during this time is not considered consistent with the objective of this interim remediation, and representative of the subsurface yield. In consideration of these circumstances, the data collected on this day was not included in the results and analysis of the DPE activities.

September 16, 2003: DPE from monitoring well S-2 began at 8:19 on September 16. Applied vacuum readings were measured at the wellhead. An initial wellhead vacuum of 7.5 inches mercury-gauge (Hg) resulted from a liquid-ring pump-generated vacuum of 15 inches Hg. The maximum wellhead vacuum achieved was 13 inches Hg. After some initial adjustments, a wellhead vacuum of approximately 7.5 inches Hg was established. This vacuum level was maintained throughout the day. Since accurate readings could not be obtained at the wellhead due to excessive moisture in the vapor stream, the total system flow rate and the dilution flow rate were measured, and the wellhead flow rate was calculated by taking the difference between these two measurements. Cambria also determined that a small amount of dilution air at the wellhead (obtained by opening the wellhead ports slightly) was required to promote the extraction of water and vapor from the low permeable soil formation surrounding the well. This

volume of air is considered negligible to the overall flow rate. However, samples were collected with wellhead dilution and without wellhead dilution, for comparison.

The Solleco unit operated overnight at the established vacuum setting to maximize the remedial effort. The extraction flow rate ranged from 1 to 27 standard cubic feet per minute (scfm), and averaged 15.3 scfm. No vacuum influence was observed in tank backfill well T-1 The Solleco unit was placed on top of well T-2 due to space constraints and safety considerations at the site. Therefore, Cambria was unable to monitor vacuum influence in well T-2.



A vapor sample collected from the wellhead at 09:43, with the *dilution port open*, did not contain detectable concentrations of total petroleum hydrocarbons as gasoline (TPHg), benzene, methyl tertiary butyl ether (MTBE) at detection limits of 10, 0.31 and 0.14 parts per million by volume (ppmv), respectively. The vapor sample collected from the wellhead at 14:17 with the *dilution port open* contained <10 ppmv TPHg, <0.31 ppmv benzene, and <0.14 ppmv MTBE. Similarly, the vapor sample collected from the wellhead at 14:19 with the *dilution port closed* contained <10 ppmv TPHg, <0.31 ppmv benzene, and <0.14 ppmv MTBE.

September 17, 2003: DPE from well S-2 was performed on September 17 with periodic alternation between using wellhead dilution and excluding wellhead dilution. Again, this was determined necessary to extract groundwater and vapors given the low permeability of the soil formation. The wellhead vacuum ranged from of 7 to 16 inches Hg, with a liquid-ring pump vacuum level between 18 and 21 inches Hg. The Solleco unit was operated, using wellhead dilution air, over night at the established vacuum setting. The extraction flow rate ranged from 2 to 9 scfm, and averaged 4.6 scfm. No vacuum influence was observed in tank backfill well T-1.

The vapor sample collected from the wellhead at 12:45 with the *dilution port open* contained <10 ppmv TPHg, <0.31 ppmv benzene, and <0.14 ppmv MTBE. Similarly, the vapor sample collected from the wellhead at 14:00 with the *dilution port closed* contained <10 ppmv TPHg, <0.31 ppmv benzene, and <0.14 ppmv MTBE. The vapor sample collected from the wellhead at 15:55 with the *dilution port open* contained <10 ppmv TPHg, <0.31 ppmv benzene, and <0.14 ppmv MTBE. Similarly, the vapor sample collected from the wellhead at 15:59 with the *dilution port closed* contained <10 ppmv TPHg, <0.31 ppmv benzene, and <0.14 ppmv MTBE.

September 18, 2003: Vapor samples were collected from well S-2 with the dilution port open and the dilution port closed on September 18 at 9:21 and 9:29, respectively. The analytical results of these samples indicated that TPHg, benzene and MTBE were not present in well S-2 at detection limits of 10, 0.31 and 0.14 ppmv, respectively.

Following sample collection from S-2, the DPE equipment was moved to tank backfill well T-1. SVE (excludes groundwater extraction) from well T-1 began at approximately 10:09 on September 18. Applied vacuum readings were measured at the wellhead. Extraction flow rates were measured at the wellhead. An approximate wellhead vacuum of 0.1 inches Hg was established with the liquid-ring pump set at a vacuum of approximately 5 inches Hg. The extraction flow rate ranged from 40 to 51 scfm, and averaged 48.9 scfm. Vacuum influence in nearby wells was not measured during SVE activities on well T-1. A sample collected from T-1 at 11:02 contained <10 ppmv TPHg, <0.31 ppmv benzene, and <0.14 ppmv MTBE. A sample collected from T-1 at 15:00 contained 52 ppmv TPHg, <0.31 ppmv benzene, and 1.5 ppmv MTBE.



RESULTS

During extraction from well S-2, vacuum influence was not discernible in well T-1, which is located approximately 30 feet away. The lack of discernible vacuum influence may be attributed to either the low permeable soil near well S-2 inhibiting the extent of vacuum influence, or the high permeable backfill material (pea gravel) within the UST facility dissipating the vacuum applied to the formation. Approximately 35 gallons of groundwater were extracted from well S-2 during the pilot test. Mass removal based on this amount of water is considered insignificant, and is not reported. TPHg, benzene and MTBE concentrations were low or not detected in vapor samples collected from S-2 and T-1 throughout the pilot test activities. Based on operating parameters and vapor sample analytical results, the total TPHg vapor-phase mass removed from S-2 is estimated at 0.016 pounds. Benzene and MTBE vapor-phase mass removed from T-1 is estimated at 0.136 and 0.004 pounds, respectively. Benzene vapor-phase mass removed from T-1 was insignificant.

CONCLUSIONS

The data from the DPE testing over the course of three days confirms that DPE is not an effective technique for interim remediation at this site. This conclusion is primarily attributed to low-permeability soil beneath the site. The amount of hydrocarbons and MTBE removed from the site by DPE activities was minimal. Cambria does not recommend further implementation of this remedial technology at the subject site.

CLOSING

Cambria is still awaiting comments or approval of the *Tank Backfill Well Installation Report and Investigation Work Plan Addendum* dated September 26, 2002. Upon receiving written approval of our work plan addendum, Cambria will obtain the required permits and schedule the field activities for installation of the four proposed borings, shown on Figure 2.

If you have any questions regarding the contents of this document, please call Ana Friel at (707) 442-2700.

FRIEL



Sincerely,

Cambria Environmental Technology, Inc.

Cynthia Vasko

Senior Staff Engineer

Ana Friel

Senior Project Geologist

RG#6452

Attachments:

Table 1. Dual-Phase Extraction – Vapor Phase Mass Removal Data

Figure 1. Site Vicinity and Area Well Survey Map

Figure 2. Site Plan

Appendix A. Field Data Sheets

Appendix B. Certified Laboratory Analytical Reports

cc: Karen Petryna, Shell Oil Products US Gursharnjeet Cheema, 1060 St. Raphael Drive, Bay Point, CA 94565

Table 1. Dual Phase Extraction Test - Vapor Phase Mass Removal Data, Shell-branded Service Station, 350 Grand Avenue, Oakland, California

										<u>T</u> :	PHg	<u>Ber</u>	nzene	<u>M</u>	TBE
	Hour	Cumulative					Hydroc	arbon Conce	ntrations	Removal	Cumulative	Removal	Cumulative	Removal	Cumulative
Well #	Meter	Operation	Vacuu	m (in Hg)	Flow	v Rate	TPHg	Benzene	MTBE	Rate	Removed	Rate	Removed	Rate	Removed
Date/Time	(hours)	(hours)	Gage	Absolute	(cfm)	(scfm)	(Conc	entrations in	ppmv)	(#/hour)	(#)	(#/hour)	(#)	(#/hour)	(#)
	· · · · ·						·				, ,	,		,	.,
S-2 DPE TEST															
9/16/2003 8:19	735.7	0.0	7.5	22	NA	23				0.002	0.000	0.000	0.000	0.000	0.000
9/16/2003 8:31	736.0	0.3	12	18	38.5	23	1,734			0.002	0.000	0.000	0.000	0.000	0.000
9/16/2003 8:56	736.3	0.6	13	17	36	20	1,605			0.001	0.001	0.000	0.000	0.000	0.000
9/16/2003 9:29	736.8	1.1	13	17	NA	20	1,478			0.001	0.002	0.000	0.000	0.000	0.000
9/16/2003 9:43	737.1	1.4	13	17	18.5	10	<10	< 0.31	< 0.14	0.001	0.002	0.000	0.000	0.000	0.000
9/16/2003 10:33	737.9	2.2	7	23	35.5	27	142			0.002	0.003	0.000	0.000	0.000	0.000
9/16/2003 11:40	738.9	3.2	7.5	22	1	1	131			0.000	0.003	0.000	0.000	0.000	0.000
9/16/2003 12:30	739.9	4.2	7.5	22	4.5	3	127			0.000	0.003	0.000	0.000	0.000	0.000
9/16/2003 14:17	741.6	5.9	7.5	22	13.5	10	<10	< 0.31	< 0.14	0.001	0.005	0.000	0.000	0.000	0.000
9/16/2003 14:19	741.6	5.9	7.5	22	19	14	<10	< 0.31	< 0.14	0.001	0.005	0.000	0.000	0.000	0.000
9/17/2003 12:45	764.0	28.3	8	22	5	4	<10	< 0.31	< 0.14	0.000	0.010	0.000	0.000	0.000	0.000
9/17/2003 12:50	764.2	28.5	15	15	NA	4	0			0.000	0.010	0.000	0.000	0.000	0.000
9/17/2003 14:01	765.4	29.7	5	25	8	7	<10	<0.31	<0.14	0.000	0.011	0.000	0.000	0.000	0.000
9/17/2003 14:27	765.9	30.2	15	15	4	2	0			0.000	110.0	0.000	0.000	0.000	0.000
9/17/2003 15:01	766.4	30.7	7	23	8.5	7	2			0.000	0.011	0.000	0.000	0.000	0.000
9/17/2003 15:05	766.6	30.9	14.5	15	4.5	2	0			0.000	0.011	0.000	0.000	0.000	0.000
9/17/2003 15:54	767.4	31.7	7	23	11.5	9	<10	<0.31	<0.14	0.001	0.011	0.000	0.000	0.000	0.000
9/17/2003 15:59	767.5	31.8	16	14	6	3	<10	< 0.31	< 0.14	0.000	0.012	0.000	0.000	0.000	0.000
9/18/2003 9:13	784.6	48.9	8	22	5.5	4	<10	<0.31	< 0.14	0.000	0.016	0.000	0.000	0.000	0.000
9/18/2003 9:29	784.9	49.2	14.5	15	5	3	<10	< 0.31	<0.14	0.000	0.016	0.000	0.000	0.000	0.000
T-1 SVE TEST			_		_										
9/18/2003 10:09	784.9	0.0	0.1	30	0	0				0.000	0.000	0.000	0.000	0.000	0.000
9/18/2003 10:45	785.5	0.6	0.1	30	40	40	6			0.003	0.002	0.000	0.000	0.000	0.000
9/18/2003 11:02	785.8	0.9	0.1	30	50	50	<10	<0.31	<0.14	0.003	0.003	0.000	0.000	0.000	0.000
9/18/2003 11:30	786.3	1.4	0.1	30	51.2	51	2			0.035	0.020	0.000	0.000	0.001	0.001
9/18/2003 12:40	787.5	2.6	0.1	30	51	51	1	••		0.035	0.063	0.000	0.000	0.001	0.002

Table 1. Dual Phase Extraction Test - Vapor Phase Mass Removal Data, Shell-branded Service Station, 350 Grand Avenue, Oakland, California

										<u>T</u> .	PHg	<u>Ber</u>	<u>izene</u>	<u>M</u>	TBE
	Hour	Cumulative					Hydroc	arbon Conce	ntrations	Removal	Cumulative	Removal	Cumulative	Removal	Cumulative
Well #	Meter	Operation	Vacuu	m (in Hg)	Flo	w Rate	TPHg	Benzene	MTBE	Rate	Removed	Rate	Removed	Rate	Removed
Date/Time	(hours)	(hours)	Gage	Absolute	(cfm)	(scfm)	(Conc	entrations in	ppmv)	(#/hour)	(#)	(#/hour)	(#)	(#/hour)	(#)
9/18/2003 13:30	788.6	3.7	0.1	30	50.1	50	0			0.035	0.101	0.000	0.000	0.001	0.003
9/18/2003 14:01	788.9	4.0	0.1	30	50.1	50	0			0.035	0.111	0.000	0.000	0.001	0.003
9/18/2003 14:30	789.3	4.4	0.1	30	50	50	0			0.035	0.125	0.000	0.000	0.001	0.004
9/18/2003 15:00	789.6	4.7	0.1	30	50	50	52	< 0.31	1.5	0.035	0.136	0.000	0.000	0.001	0.004
								VIII.					TATELO DE LA CONTRACTOR	NATIONAL PROPERTY OF COMMAND	Mark A Delay of the Annual Ann
Total Pounds Re	moved:			The second secon						TPHg	0.152	Benzene	0.001	MTBE	0.004

Abbreviations and Notes:

CFM = Cubic feet per minute

SCFM = Standard cubic feet per minute

oF = Degrees Farenheit

in Hg = inches of mercury column ppmv = Parts per million by volume

Atmospheric pressure = 29.921 in Hg TPHg = Total petroleum hydrocarbons as gasoline

Absolute = Atmospheric pressure - gage vacuum (in Hg) MTBE = methyl tertiary butyl ether

Bold = Sample concentrations from laboratory analysis; Non-Bold = field measured concentrations by a Horiba organic vapor analyzer.

Italics = Sample was collected with dilution air at the wellhead.

TPHg, Benzene, and MTBE analyzed by EPA Method 8260B from 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.

= Pounds

(Rate = Laboratory analytical concentration (ppmv) x system flow rate (scfm) 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)

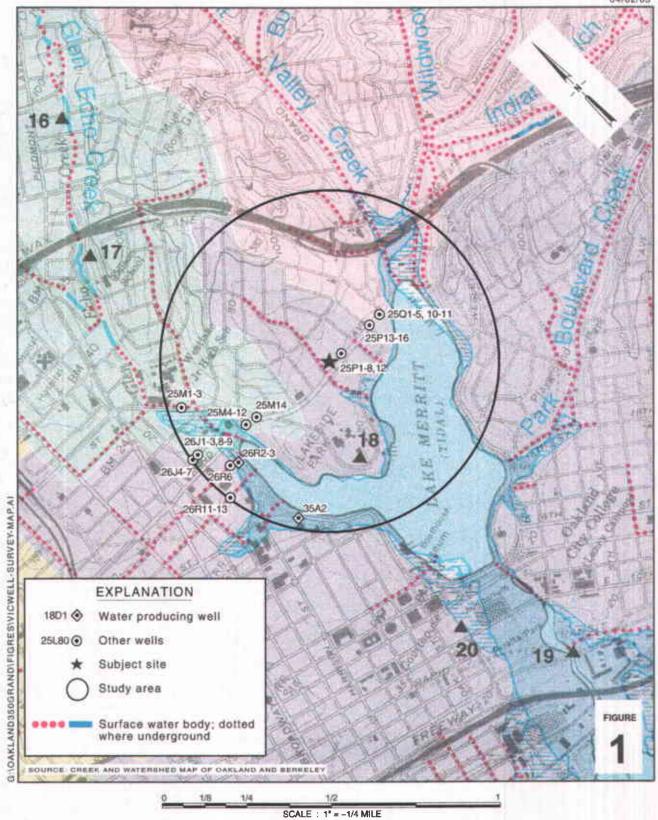
Cumulative TPHg / Benzene / MTBE removal = removal rate multiplied by the hour-interval of operation plus the previous total

S-2 flow rate was calculated based on the difference between the system and dilution flow rates. T-1 flow rate was measured at the wellhead.

When flow rate data was not available, the flow rate was assumed to be equal to the previous flow rate measurement. For the initial reading on September 16, the flow rate was assumed to be equal to the subsequent flow rate measurement.

When constituents are not detected, the concentration is assumed to be equal to half the detection limit in subsequent calculations.

Mass removal calculations were based on the laboratory analytical results. For well S-2, the results of samples collected with wellhead dilution were used.



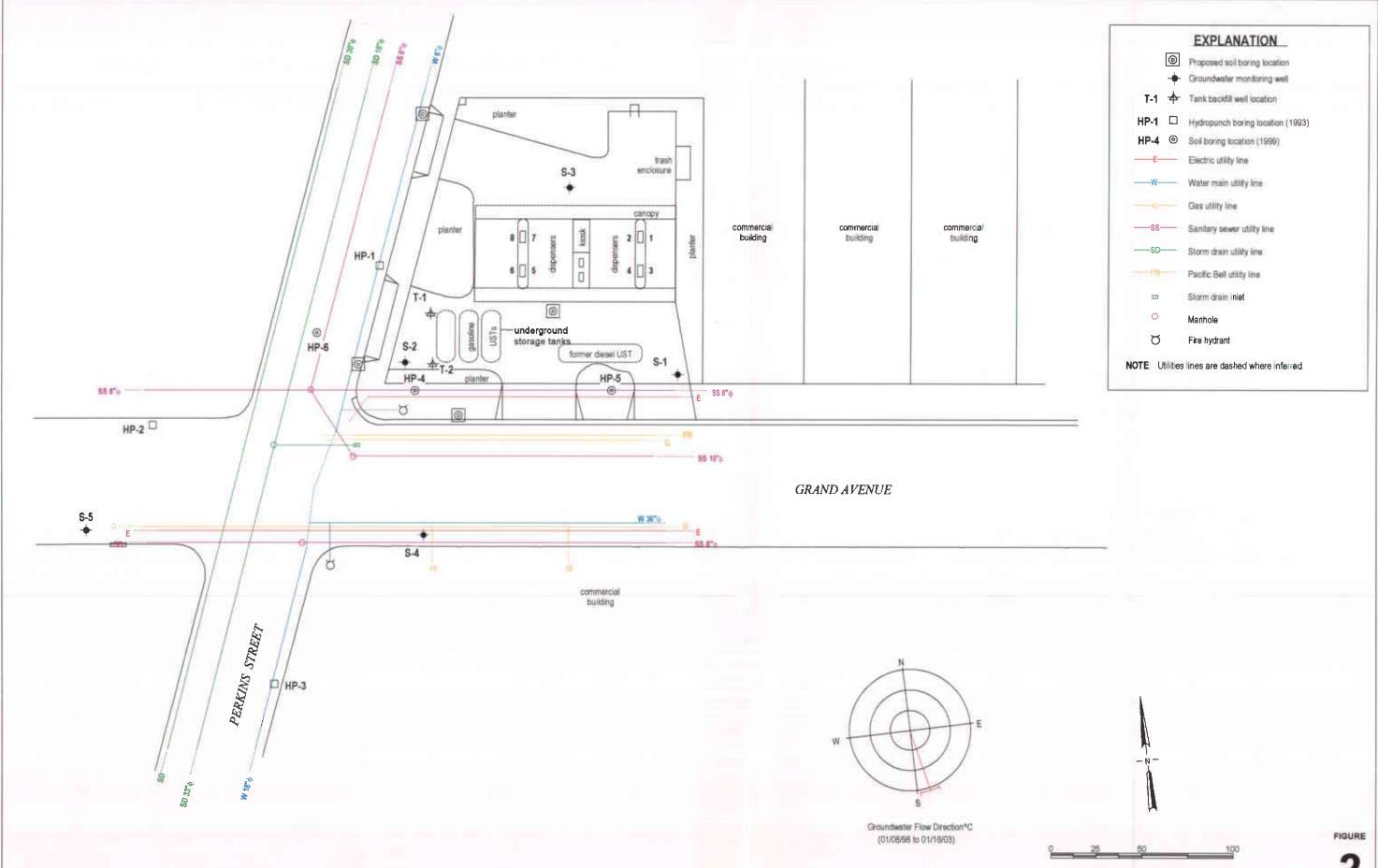
Shell-branded Service Station

350 Grand Avenue Oakland, California Incident #98995755



Vicinity/Area Well Survey Map

CAMBRIA



APPENDIX A

Field Data Sheets

DAILY FIELD REPORT

Project Name: 5Hall Oil	Cambria Mgr: O.L.	Field Person: DSUSCH
Project Number: 245 - 0715	Date: 9/15/07	Site Address: 350 GAANO
General Tasks:	TEST	DAILHAND

Time	Activity/Comments	Hours
0600	DEPART BASE (SAC) FOR EQUIPMENT YAND. TO	
	DID Sollred	
0930	Drop Sollew AT SITE GO TO DEFICE (EV) TO	
	DO TIME SHART AND PIU TROBAN BAGS	
1200	henvir for STR.	<u>.</u>
1247	ON SITE ACAIN, 5-2 WATER LOVAL (SER ATTACHED)	
	PROBLEM W/ SYSTEM (SEE ESCO) TROUBLE SHOOT	
	HOOSE DOWER HEAD, AND THOW METER DISPHAY PROBLEM	
1330	PAUL IL ONS.TR HELPMOUR EQUIPMENT, FINALLY	
	ABLATO GAT STANTAD	
1430	START DRUATER, OF 5-2	
1445	STANT AT 15" HG, FON STRP TEST, NO STEP TEST THIS	
	LOCATION, FOILMATION TOO TIGHT.	,.,
	1 - 11 1 - 11 - 1 - 1 - 1 - 1 - 1 - 1 -	· <u>·</u> ·
	* THIS ENDOF THOSE WELLS THAT WILDTON AIM	
	MUST BR ADIDAD AT WELL HRAD TO	
	KARI) AIR / WATER MOUING. SELECT 13" LIR	
	LAST READINGS TALK WIDAN SECURE	
1531	 	
	S.TR LIAM FOR NAY, DONOT KUN	
	OVER DIGHT, DAN WANTS TO TAILE ALOOK	
	TOMPTORROW.	
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	RMS/EIFL DVFFELDRPT WPD	 ~

Site Address: 350 G-NAND

Project No. 245-015-007

Incidient No. 78995555

Date: 9/15/03

Technician: 0.054/1

Project Mgr: 0.4

Time (hh:mm	Hour Meter (hrs)	LR Pump Vac (in Hg)	Wellhead Vac (in Hg)	System Flow (cfm)	Dilution Flow (cfm)	Wellhead Flow (\$2) (cfin)	Vapor	Effluent Vapor (ppmv)	GW Flow (gpm)	GW Volume (gal)	
BE		W	ARM	P	CANI	515TRA	,			48155	TOTALIZEN
1430	734.7	16.0	7") y [0]	OR	0/12					
1505	734.8	16.0	フ ⁿ	101	TR SR	011	95 750 1000	0	<u>در</u> در	7/0	•
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OIR = Over RANGE

GANNEWMOON 1658 NADITE TOOL 2002/DDE RIGHT Sheet May 03

> SAMPLE LOCATION

NOTES:

DPE Op Form

Site Address:	350 GRAND, OAKLAND
Project No	245-0715-007
Incidient No.	98995755

Technician:

Project Mgr:

	Hour	รีย์ เมื่อเรื่องการกำระบบสัก	Sapinal Haragada	a distribution and the	Obs	servation Well	Data		egynko sii ay nazat			200 CONTRACTOR (CONTRACTOR (CO
Time (hh:mm)	Meter	T1	255 TIG 5775	1 72	ing a 19 12 - 1911	/	33	S4	S5 (DTW)	S2 Stinger Depth	5-4	
	(hrs)	(in H20)	(WTO)	(in H2O)	(DTW)	(DTW)	(DTW)	(DTW)	(שייש)	Striger Deptit	8.41	ae,
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NOTES:	

DAILY FIELD REPORT

Project Name: SHEII Cambria Mgr: D.L Field Person: D. Nosch

Project Number: 245-0715 Date: 9/16/03 Site Address: 350 Grawn

General Tasks: OPE TEST

Project Number: 245-0715 Date: 9/16/03 Site Address: 350 Grawn

OAKLAND, CA

Time	Activity/Comments	Hours
0530	DADANT DASK (SACHAMENTO)	2
0729	AnnivE SITE, SECURE PARKING, SYSTEM / EQUIPMENT	
<u> </u>	All SREM! ARE INTACT. WARMUP CEEN. SET.	
0750	WARM UP SOILECO WAITING FOR DAN TO ARRIVE	
0815	DANCAIL "OU AHRADWILL DALATE) OK STANT DEWATER	
0830	DONOT TRY HOU KEVEL IN RAILY A.M.	
	YOU WILL GET HUNT, THIS SERENS TO BE A CAN-pod	
	DIU, RIGHT DAST MY ARRA AND WITH All TRAFFIC CONTROL	
	up, LOOK OUT	
0831	BRADINGS FOR INF. CON ARE W/DIHUTION ON	<u> </u>
	EFF. SIDE OF DUMP, DAN ON SITE	
0955	NAN DIPARTS AFTER RUALUATING DE L'ANAMETERS	
1033	TAKE READINGS AND RE-ADJUST LIR TO SET POINT	
	IDR WANT TO:	
1200	DRURTO (FURL Truck! HAS NO PROBLEM W/	
	US RENNING SYSTEM DURING FUEL DROP	
	ON WIPOSITION OF OUR RQUIPMENT TO	
	TANKS AND FILL PORTS.	
1406	FINAL SAMPLES WAY'S CHEADING	
1500	SPEURE SITE, Allis WAIL LAQUE FOR SAF	
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te Addres <u>s: 350 G.AN/</u> oject No. <u>245-07/5</u> cidient No. <u>9899575</u>	007					Date: Technician:	9/16/0.	CH	•
C ((CO) + + +						I CCITITICIAN.	~ ~ ~ ~ ~ ~ ~		
cidient No. 7 / / / / / / / / / / / / / / / / / /						Project Mgr			
	<u> </u>		ス"			r roject ingr		/	
Hour LR Pum	Wellhead	System	Dilutión	Wellhead	Influent	Effluent	GW	GW	
Time Meter Vac	Vac	Z'Flow II	2 Flow W	Flow (S2)	Vapor	Vapor (ppmv)	Flow (gpm)	Volume (gal)	
hhtmm) (hrs) (in Hg)	(in Hg)	(clm)	(cfm)	(cfm)	(ppmv) O/W	O	1-2	는 10 는 10	
7/9 7557 15	7.5	1030	NW	100	1734		27	230	
183/ 136.0 18.5	1/1	66.5	105.0	1100			, ,	7.00	
0856 736.3 19	1913	65.0	101.0		1605.0 1478.0		21	Vannilar	١,
7929 736.8 19	13	(NOTE)		14 6	1770.0			UNHOCK	<i> K</i>
7943 777.1 18	1.12	82.5	101.0	18.5	120		MIST	UNUROZIC	†
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k pulled up sting		BO WE					 	VALUES	1
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open to texture	7 MM	el q VA	poes,	IS IN	OAVE	WIRIL	MACTU	<u> </u>	1
000 000	+	/2.5	CVC	ر ا	(AIXO)		T .	NoLack	1
033 737.9 16.75	12-	63.0	98.5	* -	1350	ム	mist		
140 238.7 18	1,5	11.0	100		131.0	2	MIST	NoLock	1
230 74/29.9 18	7.5	74.0	69,5	-	1250	0	mist	wolock	=
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419 741.6 182	3 7.5	57.5	715	-	20.0	0	MIST	wolock	۱4
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Site Address: 350 GRAND, OAKLAND

Project No. 245-0715-007

Incidient No. 98995755

Date: 9/16
Technician: 0.0wcH

Project Mgr: Di Les Cond

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Time	Meter	T1	Т/1 (WTQ)	T/2 (in H2O)	T2 DTW)	S1 (DTW)	S3 (WTO)	S4 (DTW)	S5 (DTW)	S2 Stinger Depth	17.0	
(hh:mm)	(hrs)	(in H20)	Set (D. M.)			\				10	09:03	
0741			* ~ 2	LOADL	<u>R 10</u>		-					
0750	735,5		8.82	ACCE DO TO TIGHT	22 ,		<u> </u>			/3		
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0835	736.0						0.00	Y.86	8.40	15/10		
0850		0.0	18.82	<u></u>		7.56	9.68	7.30	0.90	10//2		
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1100	73 F. S	0.0	8.81			7.56	9.67	8.85	5/3 G	14.5	₹.2	
1230	735.9	0,0	8.80			7.56	9.67	8.85	8,08	19.5	(.2)	
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NOTES:

SHELL Chain Of Custody Record STL-San Francisco INCIDENT NUMBER (S&E ONLY) Shell Project Manager to be invoiced: 5 5 9 SCIENCE & ENGINEERING Karen Petryna 1220 Quarry Lane SAP of CRMT NUMBER (TS/CRMT) TECHNICAL SERVICES Pleasanton, CA 94566 CRMT HOUSTON. (925) 484-1919 (925) 484-1096 fax SITE ADDRESS (Street and City): SAMPLING COMPANY: CAMBRIA ENVIRONMENTAL CETS 350 Grande Ave, Oakland TECHNOLOGY INC CONSULTANT PROJECT NO.: E-MAIL: EDF DELIVERABLE TO (Responsible Party or Designee): PHONE NO.: ADDRESS: 5900 HOLLIS ST, Suite A, Emeryville, CA 94608 245-0715-007 PROJECT CONTACT (Herdcopy or PDF Report to): LAB USE ONLY SAMPLER NAME(S) (Print) Dan Lescure PATTON BUSCH TELEPHONE: diescure@cambria-env.com (5<u>10) 4</u>20-3306 (510) 420-9170 TURNAROUND TIME (BUSINESS DAYS) REQUESTED ANALYSIS 10 DAYS 🕏 5 DAYS 🗆 72 HOURS 🗀 48 HOURS 🗀 24 HOURS 🗀 LESS THAN 24 HOURS ☐ LA - RWQCB REPORT FORMAT ☑ UST AGENCY: 77 J. FIELD NOTES: HIGHEST per BORING GC/MS MTBE CONFIRMATION: HIGHEST Container/Preservative (8015m) CHECK BOX IF EDD IS NOT NEEDED SPECIAL INSTRUCTIONS OR NOTES: or PID Readings Semi-Volatiles by 8270C or Laboratory Notes Disposal TPH - Extractable and EDB Lofzi Total TPH - Purgeable /OCs by 8250B S Oxygenates Methanol 1,2 DCA **Fest for** CAM17 LUFTS TEMPERATURE ON RECEIPT C* MTBE BTEX NO. OF LAB USE Ã Field Sample Identification CONT. DATE TIME 0940 Received by: (Signature Recelyed by: (Signature) Received by: (Signature) Relinquished by: (Signature) 10/16/00 Revision

DAILY FIELD REPORT

Cambria Mgr: O. L. Field Person: D.DuscH Project Name: 5Hall Site Address: 350 Grano Date: 9/11/03 Project Number: 245-0715 OAKLAND General Tasks: OPE TEST

Time	Activity/Comments	Hours
1030	DAPART BASE (SAMAMENTO) I-80 W-CLOSED	
	THO A.M. SOUSE A.M TO DO ACOUPLAGE	
	OTHER TASKS, CALL DANILRAUR MASSAGE	
1231	Aniva SITE, DELAY AT I-STO OFF RAMP	
	CLOSED NO 10 NOMB QUAL ACTIVITIES	
1245	FINAlly ON SITE, SYSTEM HAS KUN All NIGHT	
	FURL O.K. S.TR MANAGERA O.K. TAKE FIRST GERRINK	<u> </u>
	$(A/(K)A_0)$	
	INSTRUCTIONS: CONTINUA RUNNINH, DO RARDINHS	
	AND SAMPLES W/ WALL MILLOW HOW WILHOUT	·
	WRI WILDTION. TURN WOWN ECAT TRMP TO	· · · · · · · · · · · · · · · · · · ·
	400°F TO CONSERVE FURL AS READINGS ARE VERY	
	Lοω.	<u> </u>
	SEE OPE DATA SHART.	-
1601)	COTTRET HAST RADINGS OF WAY, All IS WELL SITAL EQUIPMANT SAUND FURL O.K.	<u> </u>
	SITAL EQUIPMENT SAUNE FURL O.K	
GATEMPI ATELEO		L

9/17/03 D.DuscH 350 GRAND 245-0715-007 Site Address: Date: Technician: Project No. 98995755 Project Mgr: Incidient No.

	Time	Hour Meter (hrs)	LR Pump Vac (in Hg):	Wellhead Vac	System Flow 3 (cfm)	Dilution Flow?" (cfm)	Wellhead Flow (S2) (cfm)	Influent Vapor (ppmv)	Effluent Vapor	GW Flow (gpm)	GW Volume (gal)	
#)	(hh:mm) 1245			<i>5</i>	86.0	75.		\$6.0		MIST	235	Nolack
_	1250	764.0 164,Z	20,5	150	(43.5)	645	€-	0.0	0	NONE	***************************************	
	1401	765,4	18.5	8	75	670	7/w	1.0	0	mist		
	1427	765.9	21.0	15_			TIW	1,0 0.0	0	mist	Nohock	(WD
								2 0			Nohoel Nolock Noll	NO
25	1501 1505	766.4	18.4	7	79.5	66.0 60.5	1/6	2,0 00	0	MIST	Dalle	- 1
	1305	166.6	01.0	14.5	ω.		1/w_	00	<i>U</i>	////5/	NOUNC	C/L
	1554		180	7	75	G),5	T/w	40	0	MIST		
	1559		21.0	16.0	GG.0	60.0	T/w	0.0	0		STANT L	oc/C
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 Site Address:
 350 GARNO, OAKHANO

 Project No.
 245-015-007

 Incidient No.
 98995755

Date: 9/11/03
Technician: 0. DoseH
Project Mgr: 0. L.

Time	Hour Meter	11	T1 (DTW)		T2 H2O)		Ob T2 TW)	servation Well S1 (DTW)	SS (DTW)	S4 (DTW)		S5 4(DTW)	S2 Stinger Depth		
hh:mm) 130	(hrs) 7 <i>65</i> .9	(in H20)	8.78	3,55,011	HZO)		í	7.68	9.66			41)	15.00		
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SHELL CHAIR OF CUSTOMY INCOME STL-San Francisco INCIDENT NUMBER (S&E ONLY) Shell Project Manager to be invoiced: 5 | 5 5 FISCIENCE & ENGINEERING 9 Karen Petryna 1220 Quarry Lane SAP or CRMT NUMBER (TS/CRMT) TECHNICAL SERVICES Pleasanton, CA 94566 CAMT HOUSTON. (925) 484-1919 (925) 484-1096 fax SITE ADDRESS (Street and City): SAMPLING COMPANY: CAMBRIA ENVIRONMENTAL 350 Grande Ave, Oakland TECHNOLOGY INC CONSULTANT PROJECT NO. EDF DELIVERABLE TO (Responsible Party or Designee): E-MAIL: HONE NO.: ADDRESS: 5900 HOLLIS ST, Suite A, Emeryville, CA 94608 245-0715-007 PROJECT CONTACT (Hardcopy or PDF Report to) SAMPLER NAME(S) (Print): LAB USE ONLY Dan Lescure ATTON DUSCH É-MAIL: TELEPHONE: (510) 420 3306 (510) 420-9170 diescure@cambria-env.com TURNAROUND TIME (BUSINESS DAYS): REQUESTED ANALYSIS 🕱 10 DAYS 🗋 5 DAYS 🗌 72 HOURS 🔲 48 HOURS 🔲 24 HOURS 🗀 LESS THAN 24 HOURS ☐ LA - RWQCB REPORT FORMAT ☑ UST AGENCY: 101 TCLP FIELD NOTES: HIGHEST per BORING ____ GC/MS MTBE CONFIRMATION: HIGHEST _ Container/Preservative CHECK BOX IF EDD IS NOT NEEDED SPECIAL INSTRUCTIONS OR NOTES: (8015m) STC STLC Semi-Volatiles by 8270C or PID Readings or Laboratory Notes TPH - Extractable 1,2 DCA and EDB Disposal O Total TPH - Purgeable Total **VOCs by 8260B** 5 Oxygenates NPIE TESTING Methanol Ethanol Test for CAM17 LUFTS MTBE TEMPERATURE ON RECEIPT C° Lead SAMPLING NO. OF 18.4 MATRIX Field Sample Identification USE DATE TIME ONL Time: Received by: (Signature) Received by: (Signature) Received by: (Signature)

10/16/00 Revision

DAILY FIELD REPORT

Project Name: 5Hall	Cambria Mgr: DL	Field Person: D. Dusc A
Project Number: 245-0715	Date: 9/18/03	Site Address: 350 GAANI)
General Tasks: OPE		DAKLAND

Time	Activity/Comments	Hours
0700	WADANT BASE (SAC) FOR SITE	
0400	ON SITE, 350 GRAND, SYSTEM HAS RUN All	2
	$\mathcal{N}_{i}\mathcal{L}_{i}\mathcal{H}\mathcal{T}_{i}$	
0930	TALK WIDAN, WANTS TO RUN ON T-1,OK	
	SATUD TO QUE (SEE DRE FORM).	
_	TRAIN J.R. ON SISTEM, GO OUZH All ASPRITS	
	OF MOURING HOCATIONS, MONITORING, ADJUSTMANT	
_	OF SOMREO, RIC.	
1300	CALL DAKEN TANK FOR P/U [F7170W) THEX WILL	
	DO ON MONDALE TO 100 Ans	
	LEAUN MRSSACN W/ONYNO-MANK)	
	CENERATOR WILL STAY ON SITE PRINCESCO, WE WILL HOCK	
	UP, THRY WILL MOD MONDAY TO (CICHMOND) SITE	
	E.T.A-11:00	
1500		
1500	Complete Testing SAMPHE AND DREAK	
	Complete Testing Samphe AND BREAK. Down System Demos To Emeryville.	
	TO DOOP SOTTEE. STATION MANAGER PHEASED W/ USE, (CAMBRIA). NO PROBLEMS	
	STATION MANAGERASAT WIT	· ··
	OSK, (CAMISICIA).	
	JICOSLEMS	
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 Site Address:
 350 Conand Aux

 Project No.
 245-0715

 Incidient No.
 98995755

Date: 9/18/03
Technician: DASSEH

Project Mgr: O.L

	Hour	LR Pump	Wellhead Vac	System	Dilution	Wellhead Flow (\$2)	influent Vapor	Effluent Vapor	GW Flow	GW. Volume
Time (hh:mm)	Meter (hrs)	Vac (in Hg)	vat -(ip.¥g)	3 Flow &	(cfm)	(cfm)	(ppmv)	(ppmv)	(gpm)	(gal)
<i>/</i>)%/3	XUL.	101	Y	75.	69,5	The	2.0	0	<i>O</i>	MIST
0929	784.9	21	14,5	6905	64.5	T/W	Ö	0	0	14151
<u> </u>	10000	<u> </u>	111-2	10 121	(C) 1. J	1/2		<u> </u>		
				Sour	CH	7-1				
inus	755.5	H	0.0	1970	010	400	60		0	NO MI
1045	785.8	-	0.0	1800	010	500	20		0	NOOMST
100	18501	7	0.1	182.0	SIR	57 2	20		0	1001121
1200	287.5	*	0.1	181.0	OR	51.0	1.0		7)	Donn
1770	789.6	7	0.1	180.0	1	30.1	0.0		6	VOCAGE
<u>1000</u>	788.5	3-	0.1	100.0	011	50.1	80		(2)	NONE
1901	100.1	2-	_	180:0	0/2		0.0		0	10000
	789.3	<u> </u>	0,1	18/D	OR	50.0	0.0		Ü	Vomis?
1500	789.6	.5	0.1	106.1	UK	50.0	0.0	 		CUMIST
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Site Address: 350 (JANO)

Project No. 245-0715-007

Incidient No.

Date: 9/18/03
Technician: DoscH
Project Mgr:

4.0	Hour					servation Wel						
Time	Meter	11	T1 (1)	140 a 72	T2	S1	S3	. S4	S5	- S2		
(hh:mm)	(hrs)	(in H20)	(DTW)	(in H2O)	(DTW)	(DTW)	(WTa)	(DTW)	(DTW)	Stinger Depth		pur caspigage a new
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1400							<u></u>		<u> </u>			
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STL-San Francisco INCIDENT NUMBER (S&E ONLY) Shell Project Manager to be invoiced: 5 8 FISCIENCE & ENGINEERING Karen Petryna 1220 Quarry Lane TECHNICAL SERVICES SAP of CRMT NUMBER (TS/CRMT) Pleasanton, CA 94566 CRMT HOUSTON (925) 484-1919 (925) 484-1096 fax SITE ADDRESS (Street and City): GLOBAL ID NO .: LOG CODE: SAMPLING COMPANY: CAMBRIA ENVIRONMENTAL CRTS 350 Grande Ave, Oakland TECHNOLOGY INC EQF DELIVERABLE TO (Responsible Party or Designes): PHONE NO.: E-MAIL: CONSULTANT PROJECT NO.: ADDRESS: 5900 HOLLIS ST. Suite A, Emeryville, CA 94608 245-0715-007 PROJECT CONTACT (Hardcopy or PDF Reportio): SAMPLER NAME(S) (Print) LAB USE ONLY Dan Lescure AYTON, DUSCH TELEPHONE: E-MAIL: dlescure@cambria-env.com (510) 420-3306 (510) 420-9170 JORNARODNO TIME (BUSINESS DAYS): REQUESTED ANALYSIS 🖈 DAYS 🗎 5 DAYS 🗀 72 HOURS 🔲 48 HOURS 🔲 24 HOURS 🔲 LESS THAN 24 HOURS □ LA - BWOCB REPORT FORMAT
U UST AGENCY: TCLP TCLP 17. LP FIELD NOTES: GC/MS MTBE CONFIRMATION: HIGHEST HIGHEST per BORING CHECK BOX IF EDD IS NOT NEEDED (8015m) Container/Preservative SPECIAL INSTRUCTIONS OR NOTES: STC Semi-Volatiles by 8270C or PID Readings or Laboratory Notes TPH - Extractable 1,2 DCA and EDB Disposal Total Total Total TPH - Purgeable VOCs by 8260B 5 Oxygenates OPE TRETING Methanol Ethanol Test for CAM17 LUFTS MTBE Lead TEMPERATURE ON RECEIPT C° - SAMPLING NO. OF tBA Field Sample Identification MATRIX USE CONT. (714) 898-9702 Time: Received by: (Signature) Relinquished by: (Signature) Time. Received by: (Signature) Relinquished by: 46 Time: Received by: (Signature) 10/16/00 Revision

CHEER OF MI OF CHORD INCOME

APPENDIX B Certified Laboratory Analytical Reports



Submission#: 2003-09-0535

Cambria Environmental Emeryville

September 29, 2003

5900 Hollis Street, Ste. A Emeryville, CA 94608

Attn.:

Dan Lescure

Project#: 245-0715-007

Project:

98995755

Site:

350 Grande Ave, Oakland

Dear Dan

Attached is our report for your samples received on 09/16/2003 15:30 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

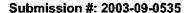
Please note that any unused portion of the samples will be discarded after 10/31/2003 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

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

Sincerely,

Vincent Vancil Project Manager





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/16/2003 15:30

Site: 350 Grande Ave, Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
S-2A	09/15/2003 15:15	Air	1
S-2-C-WD	09/16/2003 14:17	Air	2
S-2-C-WO	09/16/2003 14:19	Air	3
S-2-B-WD	09/16/2003 09:43	Air	4





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/16/2003 15:30

Site: 350 Grande Ave, Oakland

Prep(s):

5030B

Test(s):

8260FAB

Sample ID: S-2A

Lab ID:

2003-09-0535 - 1

Sampled: 09/15/2003 15:15

Extracted:

9/17/2003 12:06

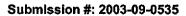
Matrix:

Air

QC Batch#: 2003/09/17-1E.65

Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	2900	140	ppmv	10.00	09/17/2003 12:06	
Benzene	ND	3.1	ppmv	10.00	09/17/2003 12:06	
Toluene	ND	2.6	ppmv	10.00	09/17/2003 12:06	
Ethylbenzene	ND	2.3	ppmv	10.00	09/17/2003 12:06	
Total xylenes	ND	2.3	ppmv	10.00	09/17/2003 12:06	
Methyl tert-butyl ether (MTBE)	3.9	1.4	ppmv	10.00	09/17/2003 12:06	
Surrogate(s)						
1,2-Dichloroethane-d4	94.3	76-130	%	1.00	09/17/2003 12:06	
Toluene-d8	99.4	78-115	%	1.00	09/17/2003 12:06	





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/16/2003 15:30

Site: 350 Grande Ave, Oakland

Prep(s): 5030B

Test(s): 8260FAB

Sample ID: S-2-C-WD

Lab ID: 2003-09-0535 - 2

Sampled: 09/16/2003 14:17

Extracted: 9/17/2003 01:45

Matrix: Air

QC Batch#: 2003/09/16-2C.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10	ppmv	1.00	09/17/2003 01:45	dl
Benzene	ND	0.31	ppmv	1.00	09/17/2003 01:45	
Toluene	ND	0.26	ppmv	1.00	09/17/2003 01:45	
Ethylbenzene	ND	0.23	ppmv	1.00	09/17/2003 01:45	
Total xylenes	ND	0.23	ppmv	1.00	09/17/2003 01:45	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	09/17/2003 01:45	
Surrogate(s)						
1,2-Dichloroethane-d4	110.0	76-130	%	1.00	09/17/2003 01:45	
Toluene-d8	100.0	78-115	%	1.00	09/17/2003 01:45	



Cambria Environmental Emeryville

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Project: 245-0715-007

98995755

Received: 09/16/2003 15:30

Site: 350 Grande Ave, Oakland

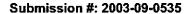
 Prep(s):
 5030B
 Test(s):
 8260FAB

 Sample ID:
 S-2-C-WO
 Lab ID:
 2003-09-0535 - 3

 Sampled:
 09/16/2003 14:19
 Extracted:
 9/17/2003 02:07

 Matrix:
 Air
 QC Batch#:
 2003/09/16-2C.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10	ppmv	1.00	09/17/2003 02:07	dl
Benzene	ND	0.31	ppmv	1.00	09/17/2003 02:07	
Toluene	ND	0.26	ppmv	1.00	09/17/2003 02:07	
Ethylbenzene	ND	0.23	ppmv	1.00	09/17/2003 02:07	
Total xylenes	ND	0.23	ppmv	1.00	09/17/2003 02:07	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	09/17/2003 02:07	
Surrogate(s)						
1,2-Dichloroethane-d4	107.2	76-130	%	1.00	09/17/2003 02:07	
Toluene-d8	102.3	78-115	%	1.00	09/17/2003 02:07	





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/16/2003 15:30

Site: 350 Grande Ave, Oakland

Prep(s): 5030B

8260FAB Test(s):

Sample ID: S-2-B-WD

Matrix:

Lab ID:

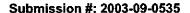
2003-09-0535 - 4

Sampled: 09/16/2003 09:43 Extracted:

9/17/2003 02:30

QC Batch#: 2003/09/16-2C.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10	ppmv	1.00	09/17/2003 02:30	dl
Benzene	ND	0.31	ppmv	1.00	09/17/2003 02:30	
Toluene	ND	0.26	ppmv	1.00	09/17/2003 02:30	
Ethylbenzene	ND	0.23	ppmv	1.00	09/17/2003 02:30	
Total xylenes	ND	0.23	ppmv	1.00	09/17/2003 02:30	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	09/17/2003 02:30	
Surrogate(s)						
1,2-Dichloroethane-d4	115.9	76-130	%	1.00	09/17/2003 02:30	
Toluene-d8	101.4	78-115	%	1.00	09/17/2003 02:30	





Cambria Environmental Emeryville

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Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/16/2003 15:30

그 그리는 이 시간 및 이 시간 등 환경을 가는 맛을 느꼈다면 했다.		
그리는 아이라는 병급이 하게 되는 일반 때문의 그림과 하고 가득하다.	Batch QC Report	ku 1944-a ili bili diribili balan balan diribi da 2014 di 1981. Si
그는 이 도시에 1980년 교육 네트는 해석했다. (학생원학교 중의 대학의 학생학 학생	[기반기] [2017] - 그는 그리고 마양하면 이 경험적인 교육을 대통하는 100명을 되었는데 100명을 보는 것이다.	
	u Presidit Statement de Viller (1946), de Mission (1977), de Mission (1977), de Mission (1977), de Mission (19	
Prep(s): 5030B		Test(s): 8260FAB
	ANTEN ANTONIO ARTENIO EN PORTO DE CASTA CARRESTA PARTE EN PRESENTA	
Method Blank	Water	QC Batch # 2003/09/16-2C.65
	일 기계 4세 - 그는 그는 지원, 보호 15 15 25 25 25 15 15 15 15 15 15 15 15 15 15	of Extragal Carry Car (1976) and the Carry
MB: 2003/09/16-2C.65-038	in 1949 - Minney and Francis (1981) in the State of Material Materials (1981) between 1984 in 1982 (1987) 🚯	ate Extracted: 09/17/2003 00:38
IND: 2000/00/10-20:00-000	그리다 스팅 그는 사람들이 되었다면 되고 생각하다면 가장 함께 되었다. 하는 사람들	
	그렇는 하는 그림에 하는 아침에 가지 하는 사람들은 점점을 모고 모든 것으로 되었다.	내 하는데 하다 보다 하는데 하는데 하는데 하는데 아니라 하는데 그렇게 되었다.
The first of the second party of the property	 Control of the control of the property of the control of the control	Printing and PSI and Table Monthly responsible to both and printing of the control of the contro

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/17/2003 00:38	
Benzene	ND	0.5	ug/L	09/17/2003 00:38	
Toluene	ND	0.5	ug/L	09/17/2003 00:38	
Ethylbenzene	ND	0.5	ug/L	09/17/2003 00:38	
Total xylenes	ND	1.0	ug/L	09/17/2003 00:38	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	09/17/2003 00:38	
Surrogates(s)					
1,2-Dichloroethane-d4	95.2	76-130	%	09/17/2003 00:38	
Toluene-d8	109.6	78-115	%	09/17/2003 00:38	



Cambria Environmental Emeryville

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Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/16/2003 15:30

	THE SECTION AND LOCAL SECTIONS OF THE PROPERTY AND ADMINISTRATION OF THE PROPERTY OF THE PROPE	나와 요즘 보통, 전에 맞다면 하면 보다. 그는 가는 사람들이 하는 사람들이 가게 되었다. 그 사람들이 가게 하는 것이 되었다. 그는 것이 없는 것이다. 그래 그래 되었다. 이 사는
网络大鼠 化抗乳 化二氯甲酚 医多山麻疹 医骶线 化二氯基磺酸盐	Batch QC	學起送(점점) 하는 사람들이 되는 사람들이 되는 사람들이 가득하는 사람들이 되었다. 사람들이 가지 수 가득하는 것이다.
一 自己的理解的 人名法伊克斯托里拉索托克教 的复数人名英格兰教		INCREDIBLEM AND AND A LANGUAGE CONTRACTOR OF A SECOND CONTRACTOR OF
The state of the s		TOTAL TOTAL CONTROL OF THE STATE OF THE STAT
 The control of the papers of the restriction of the papers of the papers. 		
	그 사람이 되는 것 같아. 하지 못하면 맛없는 어머니는 그 사고 이번 때문에 그 모양되었다.	그렇게 하게 하다. 그는 그러워 나무 있었다고 말았다면 사이들을 취임하는 가게 되는 것은 한다면 많은 사고를 된 것으로 했다.
DALLES CONTRACTOR CONT	in the contract of the contrac	
Prep(s): 5030B	The Land St. 57 F. St. 10 B. S. S. S. S. S. Arth. 1987; A. S.	Test(s): 8260FAB
i ioptoti occor	在1900年1916年 - 1916年1月2日 - 1916年1月2日 - 1916年1月2日 - 1918年1月2日 - 1918年1日	
The control of the co	(1) 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	강으로 보고했다면서 가는 사람들이 있다. 그 항상 등사가 보고 있는 것들은 사람들이 보고 있다면 보고 있다. 그는 사람들이 없는 것이다.
Method Blank	Wate	er QC Batch # 2003/09/17-1E.65
Method Digith		A GO DAIGH WEUUSION SIENUS
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	그는 그 전략 성분하는 사람들이 그리고 그리고 그리고 하는데 하는데 그리고 있다면 화학하다 다리	경찰하는 함께 하는 내가 가는 그 있는데 그리고 있는데 하는 경기를 하는데 하는데 하는데 하는데 하는데 하는데 하는데 하는데 없었다. 그렇게 하는데 없는데 없는데 없는데 없는데 없는데 없는데 없는데
(1) 数据 Land. (注意的 1.5%) 以 可能力能力 (1.5%)。	- 2.1 2.10 d 1 d 1. 186 febru 1826 e 1845 97 d 4.9.	보다는 경기를 가는 기가 가다면 다른 것이 되었다. 이 사람들은 사람들이 가지 않는 것이 되었다. 그리고 있는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없다. 그렇게 다른 것이 없는 것이 없다.
MD-2002/00/47 4E 6E	- 6 4 9 1 年 4 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2. E. C
MB: 2003/09/17-1E.65		Date Extracted: 09/17/2003 10:13
		그녀의 집에서 가장 사내가 되었다. 전 사람들은 장면을 받는 것 같아. 한 경우를 하지 않는 것이 되었다. 그는 것이 없는 것이 없는 것이 없다.
	그리고 그는 그를 다른 사람들이 되는 것은 그 집 한 불하는 중 사용장을 중심했다.	, 하늘, 등 한 경험 나는 어떤 생활 전 가는 병원에 가려가 들어 되었다면 하는 것이 하는 사람들이 되는 것이 되는 것 같아. 하는 것 같아 하는 것 같아 하는 것 같아.
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Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/17/2003 10:13	
Benzene	ND	0.5	ug/L	09/17/2003 10:13	
Toluene	ND	0.5	ug/L	09/17/2003 10:13	
Ethylbenzene	ND	0.5	ug/L	09/17/2003 10:13	'
Total xylenes	ND	1.0	ug/L	09/17/2003 10:13	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	09/17/2003 10:13	
Surrogates(s)					
1,2-Dichloroethane-d4	96.8	76-130	%	09/17/2003 10:13	
Toluene-d8	107.6	78-115	%	09/17/2003 10:13	





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/16/2003 15:30

			3atch QC Re	port				542		
Prep(s); 5030B								Tes	st(s): 82	60FAB
Laboratory Control Spik	•		Wate			Q(: Batch	# 200	3/09/16	-20,65
LCS 2003/09/16-2C LCSD 2003/09/16-2C			Extracted: (Extracted: (Meter filitig	Analyze Analyze	da Mile Daji		
Compound	Conc.	ug/L	Exp.Conc.	Reco	very %	RPD	Ctrl.Lin	nits %	Fl	ags
			- 1							
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene Methyl tert-butyl ether (MTBE)	23.5 24.1	24.9 25.7 20.1	25 25 25 25	94.0 96.4 77.6	99.6 102.8 80.4	5.8 6.4 3.5	Rec. 69-129 70-130 65-165	20 20 20 20	LCS	LCSD



Cambria Environmental Emeryville

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Project: 245-0715-007

98995755

Received: 09/16/2003 15:30

			Batch QC Re	port			Sie igni			
Prep(s): 5030B								Tes	st(s): 82	60FAB
Laboratory Control Spik	ë		Wate			Q	C Batch	# 200	3/09/17	'-1E.65
LCS 2003/09/17-1E. LCSD 2003/09/17-1E.			Extracted: (Extracted: (4.C. 36 Sir C	54 S. W. C.	erwali e Buli	Analyze Analyze	はく ちときょう	Spirit of its factoring in a	eu (jiji) sadi w
Compound	Conc.	ug/L	Exp.Conc.	Reco	very %	RPD	Ctrl.Lin	nits %	Fla	ags
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene Toluene Methyl tert-butyl ether (MTBE)	24.3 24.2 20.1	23.6 24.8 20.1	25 25 25	97.2 96.8 80.4	94.4 99.2 80.4	2.9 2.4 0.0	69-129 70-130 65-165			
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	495 542	467 536	500 500	99.0 108.4	93.4 107.2		76-130 78-115			





Cambria Environmental Emeryville

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Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/16/2003 15:30

Site: 350 Grande Ave, Oakland

Legend and Notes

Analysis Flag

o

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

Result Flag

di

Analyte reporting limit represents Method Detection Limit (MDL).

SHELL Chain Of Custody Record STL-San Francisco Shell Project Manager to be involced: MICIDENT NUMBER (SAE ONLY) ELECTRICE & ENGINEERING 1220 Quarry Lane Karen Petryna THE HOUSE SERVICES Pleasanton, CA 94566 SAR of CRMT NUMBER (TS/CRMT) 2003-09-0535 CENT HOUSTON (925) 484-1919 (925) 484-1096 fax OU COUR SAMPLING COMPANY CAMBRIA ENVIRONMENTAL CETS TECHNOLOGY INC 350 Grande Ave, Oakland OF DELIVERABLE TO PROCESSION Party By Background HONE NO CONTRACTOR PROJECT NO. 5900 HCLLIS ST, Suite A, Emeryville, CA 94508 PROJECT CONTACT PROPERTY OF POF Reports 245-0715-007 Dan Lescure LOUR EXPLORED IN LAB USE ONLY TELEPHENE JAYTON DOSCH (\$10) 420-3306 (510) 420-9170 diascure@cambria-env.com 10 DAYS 1 5 DAYS 72 HOURS 48 HOURS 24 HOURS LESS THAN 24 HOURS REQUESTED ANALYSIS LA - AVIOCE REPORT FORMAT DUST AGENCY SCINS WITE CONSTRUCTION HIGHEST ____HIGHEST per BORING **FIELD NOTES:** SPECIAL INSTRUCTIONS OR HOTES: CHECK BOX IF EDD IS NOT NEEDED. M. Ħ (BO15m) Container/Preservative of PID Readings or Laboratory Notes Ð BTEX EMPERATURE ON RECEIPT C' NO. OF Field Sample Identification E CONT. DATE TIME Received trade Kearqualled by: [Sipsac.ru |BFIB/60 Reseston



Submission#: 2003-09-0728

Cambria Environmental Emeryville

October 02, 2003

5900 Hollis Street, Ste. A Emeryville, CA 94608

Attn.:

Dan Lescure

Project#:

245-0715-007

Project:

98995755

Site:

350 Grande Ave, Oakland

Dear Dan

Attached is our report for your samples received on 09/19/2003 11:25

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 11/03/2003 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

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

Sincerely,

Vincent Vancil Project Manager





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

Site: 350 Grande Ave, Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
S-2D-WD	09/17/2003 12:45	Air	1
S-2D-ND	09/17/2003 14:00	Air	2
S-2E-WD	09/17/2003 15:55	Air	3
S-2E-ND	09/17/2003 15:59	Air	4





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

Site: 350 Grande Ave, Oakland

Prep(s):

5030B

Test(s):

8260FAB

Sample ID:

S-2D-WD

Lab ID:

2003-09-0728 - 1

Sampled:

09/17/2003 12:45

Extracted:

9/22/2003 16:08

Matrix:

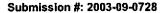
Air

QC Batch#:

2003/09/22-1F.64

Analysis Flag: HT (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10	ppmv	1.00	09/22/2003 16:08	di
Benzene	ND	0.31	ppmv	1.00	09/22/2003 16:08	
Toluene	ND	0.26	ppmv	1.00	09/22/2003 16:08	
Ethylbenzene	ND	0.23	ppmv	1.00	09/22/2003 16:08	
Total xylenes	ND	0.23	ppmv	1.00	09/22/2003 16:08	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	09/22/2003 16:08	
Surrogate(s)						
1,2-Dichloroethane-d4	84.4	76-130	%	1.00	09/22/2003 16:08	
Toluene-d8	96.0	78-115	%	1.00	09/22/2003 16:08	





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

Site: 350 Grande Ave, Oakland

Prep(s):

5030B

Test(s):

8260FAB

Sample ID:

S-2D-ND

Lab ID:

2003-09-0728 - 2

9/22/2003 15:45

Sampled:

09/17/2003 14:00

40 04 0 E

Matrix:

7.71.00

Extracted: QC Batch#:

2003/09/22-1Z.64

Analysis Flag: HT (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10	ppmv	1.00	09/22/2003 15:45	dl
Benzene	ND	0.31	ppmv	1.00	09/22/2003 15:45	
Toluene	ND	0.26	ppmv	1.00	09/22/2003 15:45	
Ethylbenzene	ND	0.23	ppmv	1.00	09/22/2003 15:45	
Total xylenes	ND	0.23	ppmv	1.00	09/22/2003 15:45	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	09/22/2003 15:45	
Surrogate(s)						
1,2-Dichloroethane-d4	86.9	76-130	%	1.00	09/22/2003 15:45	
Toluene-d8	96.5	78-115	%	1.00	09/22/2003 15:45	





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

Site: 350 Grande Ave, Oakland

Prep(s):

Matrix:

5030B

Sample ID: S-2E-WD

Sampled:

09/17/2003 15:55

Air

Test(s):

8260FAB

Lab ID:

2003-09-0728 - 3

Extracted:

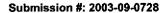
9/22/2003 15:23

QC Batch#:

2003/09/22-1Z.64

Analysis Flag: HT (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10	ppmv	1.00	09/22/2003 15:23	đl
Benzene	ND	0.31	ppmv	1.00	09/22/2003 15:23	
Toluene	ND	0.26	ppmv	1.00	09/22/2003 15:23	
Ethylbenzene	ND	0.23	ppmv	1.00	09/22/2003 15:23	
Total xylenes	ND	0.23	ppmv	1.00	09/22/2003 15:23	,
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	09/22/2003 15:23	
Surrogate(s)		1	į į			
1,2-Dichloroethane-d4	85.4	76-130	%	1.00	09/22/2003 15:23	
Toluene-d8	99.9	78-115	%	1.00	09/22/2003 15:23	





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

Site: 350 Grande Ave, Oakland

Prep(s):

5030B

Test(s):

8260FAB

Sample ID: S-2E-ND

Lab ID:

2003-09-0728 - 4

Sampled: 09/17/2003 15:59

Extracted:

9/22/2003 15:01

Matrix:

Air

QC Batch#:

2003/09/22-1Z.64

Analysis Flag: HT (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10	ppmv	1.00	09/22/2003 15:01	dl
Benzene	ND	0.31	ppmv	1.00	09/22/2003 15:01	
Toluene	ND	0.26	ppmv	1.00	09/22/2003 15:01	
Ethylbenzene	ND	0.23	ppmv	1.00	09/22/2003 15:01	
Total xylenes	ND	0.23	ppmv	1.00	09/22/2003 15:01	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	09/22/2003 15:01	
Surrogate(s)						
1,2-Dichloroethane-d4	87.2	76-130	%	1.00	09/22/2003 15:01	
Toluene-d8	96.0	78-115	%	1.00	09/22/2003 15:01	





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

		Batch QC	Report		
Prep(s): 5030B					Test(s): 8260FAB
Method Blank		Wat	er	QC Batcl	h # 2003/09/22-1F.64
MB: 2003/09/22-1	F.64-008			Date Extracte	ed: 09/22/2003 12:08

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/22/2003 12:08	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	09/22/2003 12:08	
Benzene	ND	0.5	ug/L	09/22/2003 12:08	
Toluene	ND	0.5	ug/L	09/22/2003 12:08	
Ethylbenzene	ND	0.5	ug/L	09/22/2003 12:08	
Total xylenes	ND	1.0	ug/L	09/22/2003 12:08	
Surrogates(s)					
1,2-Dichloroethane-d4	82.0	76-130	%	09/22/2003 12:08	
Toluene-d8	98.0	78-115	%	09/22/2003 12:08	





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

		FIFE AREAS IN TVICTORS TO SERVE SECTION	스 바다 12.6 (12.4 %) 그렇다 생활하다 하는데 우리하다 다양하고 있는데는
		itch QC Report	endigels de la receisió de la collectión d
<u> </u>	[하다 학교 (125] : 함께 나타를 하다니는 프로그램 모르	(Icii ac vehoir	
and the second s			THE PROPERTY OF THE PROPERTY O
			BARDIN 11. 9. 1881 - 1891 1. 1811 1887 1898
D-44/-1- 5030D	and the second of the second o		TANKAL DOCOTAD
Prep(s): 5030B	化对邻甲基甲基甲酚 医神经囊 医骶骨髓	나이들 나는 회의 들은 아들이 되고 있는 것은 사무를 받았다.	Test(s): 8260FAB
		이 불만들 동아 없었다. 그는 그렇게 하느라고 있는 것은 100 100 100 없다.	
Method Blank		Water	QC Batch # 2003/09/22-1Z.64
Michiga Blank	一点大人,就是一个身体的现在分词,就是一种重要的	보면 문화 로운 전략하고 하는 사람이 있는 사람들이 있는 것이 되었다.	
		집 문항 활성되었다고 있다면서 그 바다를 부모되었다.	67.44 · 15.4 · 4.64 · 35.4 · 62.4 · 54.4 · 55.4 · 6 · 6 · 6 · 6 · 6 · 6 · 6 · 6 · 6 ·
MB: 2003/09/22-1Z.64-00		이어가 살아왔다가 맞는 보이니까요 하면요. [편집 사] 모양의	Date Extracted: 09/22/2003 12:08
IVID. 2003/03/22-12.04-00	🕶 tagatara arabah arabah atau atau	900 (2004) 3840 (940) 486 (940) 946 (940)	Date Extracted. USIZZIZUUS 12.00
		[12] 이 [11] - 이 나는 사람들은 보고 있는 사람들은 사용하는 보호된 10 [17]	물이 하느님이 빨리 열리가 있는 취실하다 모든 하루색적이 됐었다.
化共享减少 医线点 化二氯甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基		in South to the Light in 1975 the earth 1986 in Chill I	e it seed to with a take the military and it is

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/22/2003 12:08	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	09/22/2003 12:08	
Benzene	ND	0.5	ug/L	09/22/2003 12:08	
Toluene	ND	0.5	ug/L	09/22/2003 12:08	
Ethylbenzene	ND	0.5	ug/L	09/22/2003 12:08	
Total xylenes	ND	1.0	ug/L	09/22/2003 12:08	
Surrogates(s)					
1,2-Dichloroethane-d4	82.0	76-130	%	09/22/2003 12:08	
Toluene-d8	98.0	78-115	%	09/22/2003 12:08	





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

	Batch QC Repo	
Prep(s): 5030B		Test(s): 8260FAB
Laboratory Control Spike	Water	Batch # 2003/09/22-1F.64
LCS 2003/09/22-1F.64-02		Analyzed: 09/22/2003 11:24 Analyzed: 09/22/2003 11:46

Compound	Conc.	ug/L	Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	24.6	23.8	25	98.4	95.2	3.3	65-165	20		
Benzene	23.2	24.8	25	92.8	99.2	6.7	69-129	20		
Toluene	26.8	25.8	25	107.2	103.2	3.8	70-130	20		
Surrogates(s)		1								
1,2-Dichloroethane-d4	426	419	500	85.2	83.8		76-130			
Toluene-d8	494	502	500	98.8	100.4		78-115			



Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

Site: 350 Grande Ave, Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike

Water

QC Batch # 2003/09/22-1Z.64

LCS

2003/09/22-1Z.64-024

Extracted: 09/22/2003

Analyzed: 09/22/2003 11:24

LCSD 2003/09/22-1Z.64-046

Extracted: 09/22/2003

Analyzed: 09/22/2003 11:46

Compound	Conc.	ug/L	Exp.Conc.	Reco	very %	RPD	Ctrl.Lim	its %	Fla	igs
	LCS	LCSD		LCS _	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE) Benzene	24.6 23.2	23.8 24.8	25 25	98.4 92.8	95.2 99.2	3.3 6.7	65-165 69-129	20 20		
Toluene	26.8	25.8	25	107.2	103.2	3.8	70-130	20		
Surrogates(s) 1,2-Dichloroethane-d4 Toluene-d8	426 494	419 502	500 500	85.2 98.8	83.8 100.4		76-130 78-115			



Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

Site: 350 Grande Ave, Oakland

Legend and Notes

Analysis Flag

HT

Extracted out of holding time

Result Flag

dΙ

Analyte reporting limit represents Method Detection Limit (MDL).

STL-San Francisco

SHELL Chain Of Custody Record

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10) 420-3306 (510) 420-9170			vre@cambi	іяепу,сап	•		114	X		17/	0	رد		4	<u>C</u> ,	4/_		144	· . · .						
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PECIAL INSTRUCTIONS OR NOTES: CHEC	K BOX IF E	OU IS M	or Meeder			(8015m)				s ***.				ខ្ព	9	9	U 21							Container/Preservative or PID Readings	/ja
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Field Sample Identification	SAME		MATRIX	NO. OF CONT.	H	TPH-E	BTEX	MT8	S Oxugenater	1,2 DCA	Ethanol	Mathanot	VOCE by RZGOS	Semi-Volatites by	Lead	LUFTS	CAMIT	Test for			-			TEMPERATURE ON RECEIPT C	***
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5-2E-WD	9/1/63		Air	7	X		X	1																	
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Submission#: 2003-09-0727

Cambria Environmental Emeryville

October 02, 2003

5900 Hollis Street, Ste. A Emeryville, CA 94608

Attn.:

Dan Lescure

Project#:

245-0715-007

Project:

98995755

Site:

350 Grande Ave. Oakland

Dear Dan

Attached is our report for your samples received on 09/19/2003 11:25

This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 11/03/2003 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

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

Sincerely,

Vincent Vancil

Project Manager





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

Site: 350 Grande Ave. Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
S-2 FWD	09/18/2003 09:21	Air	1
S-2 FND	09/18/2003 09:29	Air	2
T-1-A	09/18/2003 11:02	Air	3
T-1-B	09/18/2003 15:00	Air	4





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

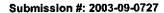
Received: 09/19/2003 11:25

Site: 350 Grande Ave. Oakland

Prep(s):	5030B Test(s): 8260FAB	
Sample ID:	S-2 FWD Lab ID: 2003-09-0727 - 1	
Sampled:	09/18/2003 09:21 Extracted: 9/20/2003 01:05	
Matrix:	Air QC Batch#: 2003/09/19-3A.65	

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10	ppmv	1.00	09/20/2003 01:05	dl
Benzene	ND	0.31	ppmv	1.00	09/20/2003 01:05	
Toluene	ND	0.26	ppmv	1.00	09/20/2003 01:05	
Ethylbenzene	ND	0.23	ppmv	1.00	09/20/2003 01:05	
Total xylenes	ND	0.23	ppmv	1.00	09/20/2003 01:05	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	09/20/2003 01:05	
Surrogate(s)						
1,2-Dichloroethane-d4	92.6	76-130	%	1.00	09/20/2003 01:05	
Toluene-d8	100.9	78-115	%	1.00	09/20/2003 01:05	
		3				

Page 2 of 8





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

Site: 350 Grande Ave. Oakland

Prep(s):

5030B

Test(s):

8260FAB

Sample ID: S-2 FND

Lab ID:

2003-09-0727 - 2

Sampled: 09/18/2003 09:29

Extracted:

9/20/2003 00:43

Matrix: Air

QC Batch#:

2003/09/19-3A.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10	ppmv	1.00	09/20/2003 00:43	đl
Benzene	ND	0.31	ppmv	1.00	09/20/2003 00:43	
Toluene	ND	0.26	ppmv	1.00	09/20/2003 00:43	
Ethylbenzene	ND	0.23	ppmv	1.00	09/20/2003 00:43	
Total xylenes	ND	0.23	ppmv	1.00	09/20/2003 00:43	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	09/20/2003 00:43	
Surrogate(s)		ŀ				
1,2-Dichloroethane-d4	92.2	76-130	%	1.00	09/20/2003 00:43	
Toluene-d8	97.0	78-115	%	1.00	09/20/2003 00:43	





Cambria Environmental Emeryville

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Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

350 Grande Ave. Oakland

Prep(s):

5030B

Sample ID: T-1-A

09/18/2003 11:02

Sampled: Matrix:

8260FAB Test(s):

Lab ID:

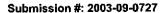
Extracted:

2003-09-0727 - 3 9/20/2003 00:20

QC Batch#:

2003/09/19-3A.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10	ppmv	1.00	09/20/2003 00:20	dl
Benzene	ND	0.31	ppmv	1.00	09/20/2003 00:20	
Toluene	ND	0.26	ppmv	1.00	09/20/2003 00:20	
Ethylbenzene	ND	0.23	ppmv	1.00	09/20/2003 00:20	
Total xylenes	ND	0.23	ppmv	1.00	09/20/2003 00:20	
Methyl tert-butyl ether (MTBE)	ND	0.14	ppmv	1.00	09/20/2003 00:20	
Surrogate(s)						
1,2-Dichloroethane-d4	93.7	76-130	%	1.00	09/20/2003 00:20	
Toluene-d8	97.6	78- 1 15	%	1.00	09/20/2003 00:20	





Cambria Environmental Emeryville

Attn.: Dan Lescure

5900 Hollis Street, Ste. A Emeryville, CA 94608

Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Alameda County

DEC 1 7 2003

Environmental Hoolin

Received: 09/19/2003 11:25

Site: 350 Grande Ave. Oakland

Prep(s):

5030B

Test(s):

8260FAB

Sample ID: T-1-B

Lab ID:

Sampled:

09/18/2003 15:00

Extracted:

2003-09-0727 - 4 9/19/2003 23:58

Matrix:

QC Batch#:

2003/09/19-3A.65

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	52	14	ppmv	1.00	09/19/2003 23:58	
Benzene	ND	0.31	ppmv	1.00	09/19/2003 23:58	
Toluene	0.26	0.26	ppmv	1.00	09/19/2003 23:58	
Ethylbenzene	ND	0.23	ppmv	1.00	09/19/2003 23:58	
Total xylenes	ND	0.23	ppmv	1.00	09/19/2003 23:58	
Methyl tert-butyl ether (MTBE)	1.5	0.14	ppmv	1.00	09/19/2003 23:58	
Surrogate(s)						
1,2-Dichloroethane-d4	89.3	76-130	%	1.00	09/19/2003 23:58	
Toluene-d8	99.4	78-115	%	1.00	09/19/2003 23:58	





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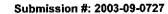
Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

		Batch QC Report		
Prep(s): 503	0B			Test(s): 8260FAB
Method Blank		Water	QC Batch	# 2003/09/19-3A.65
MB: 2003/09/1	9-3A.65-035		Date Extracted	1: 09/19/2003 23:35

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	09/19/2003 23:35	
Benzene	ND	0.5	ug/L	09/19/2003 23:35	
Toluene	ND	0.5	ug/L	09/19/2003 23:35	
Ethylbenzene	ND	0.5	ug/L	09/19/2003 23:35	
Total xylenes	ND	1.0	ug/L	09/19/2003 23:35	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	09/19/2003 23:35	
Surrogates(s)	ļ				
1,2-Dichloroethane-d4	89.1	76-130	%	09/19/2003 23:35	
Toluene-d8	103.8	78-115	%	09/19/2003 23:35	





Alameda County

DEC 1 7 2503

Environmental

Cambria Environmental Emeryville

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Phone: (510) 420-0700 Fax: (510) 420-9170

Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

Site: 350 Grande Ave. Oakland

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Laboratory Control Spike

Prep(s): 5030B

QC Batch # 2003/09/19-3A.65

LCS 2003/09/19-3A.65-050 Extracted: 09/19/2003

Analyzed: 09/19/2003 22:50

LCSD 2003/09/19-3A.65-013 Extracted: 09/19/2003

Analyzed: 09/19/2003 23:13

Compound	Conc.	ug/L	Exp.Conc.	Reco	very %	RPD	Ctrl.Lim	its %	Flags		
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD	
Benzene	24.1	25.1	25	96.4	100.4	4.1	69-129	20		Ì	
Toluene	24.0	25.0	25	96.0	100.0	4.1	70-130	20			
Methyl tert-butyl ether (MTBE)	20.2	21.4	25	80.8	85.6	5.8	65-165	20			
Surrogates(s)											
1,2-Dichloroethane-d4	456	470	500	91.2	94.0		76-130			ļ	
Toluene-d8	525	514	500	105.0	102.8		78-115				





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Project: 245-0715-007

98995755

Received: 09/19/2003 11:25

Site: 350 Grande Ave. Oakland

Legend and Notes

Result Flag

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Analyte reporting limit represents Method Detection Limit (MDL).

STL-San Francisco	FC1	Shell Project Manager to be invoiced: Shell Project Manager to be invoiced: Shell Project Manager to be invoiced:														040									
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