CAMBRIA

March 1, 2007

Ms. Donna Drogos
Alameda County Department of Environmental Health
UST Local Oversight Program
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Re: **Supplemental Site Characterization Report**
Hooshi's Auto Service
1499 MacArthur Boulevard
Oakland, California 94602
ACEH Fuel Leak Case No. RO0000516
Cambria Project #129-0741

Dear Ms. Drogos:

On behalf of Ms. Naomi Gatzke, Cambria Environmental Technology, Inc. (Cambria) has prepared the following *Supplemental Site Characterization Report* for the above referenced site.

We are recommending evaluating and selecting a remedial alternative in a *Remedial Action Plan*, due to elevated concentrations of petroleum products. Please approve this recommendation.

If you would like to discuss this document or the project, please call Mark Jonas at 510/420-3307.

Sincerely,

Cambria Environmental Technology, Inc.

Mark Jonas, P.G.
Senior Project Manager

Enclosure

cc: Ms. Naomi Gatzke, 1545 Scenic View Drive, San Leandro, CA 94577
Mr. Ben Heningburg, State Water Resources Control Board, P.O. Box 2231, Sacramento, CA 95812

Cambria Environmental Technology, Inc.

5900 Hollis Street
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Emeryville, CA 94608
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SUPPLEMENTAL SITE CHARACTERIZATION REPORT
HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA
ACEH FUEL LEAK CASE NO. RO0000516

MARCH 1, 2007

Prepared for:

Naomi Gatzke
1545 Scenic View Dr.
San Leandro, CA 94577

Prepared by:

Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Emeryville, California 94608

Cambria Project No. 129-07471

Cambria Environmental Technology, Inc. (Cambria) prepared this document for use by our client and appropriate regulatory agencies. It is based partially on information available to Cambria from outside sources and/or in the public domain, and partially on information supplied by Cambria and its subcontractors. Cambria makes no warranty or guarantee, expressed or implied, included or intended in this document, with respect to the accuracy of information obtained from these outside sources or the public domain, or any conclusions or recommendations based on information that was not independently verified by Cambria. This document represents the best professional judgment of Cambria. None of the work performed hereunder constitutes or shall be represented as a legal opinion of any kind or nature.

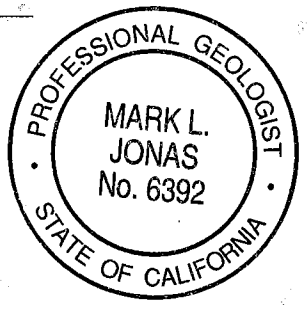
I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge."

Written by:

Celina Hernandez
Senior Staff Geologist

Reviewed By:

Mark Jonas, P.G.
Senior Project Geologist



CAMBRIA

SUPPLEMENTAL SITE CHARACTERIZATION REPORT
HOOSHI'S AUTO SERVICE
1499 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA
ACEH FUEL LEAK CASE NO. RO0000516

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APPENDICES

1.0 INTRODUCTION

On behalf of Ms. Naomi Gatzke, Cambria Environmental Technology, Inc. (Cambria) has prepared the following *Supplemental Site Characterization Report* for the above referenced site. This document is in accordance with Cambria's July 20, 2006 *Work Plan Additional Site Assessment (Work Plan),* as approved in the September 15, 2006 letter from the Alameda County Environmental Health Services (ACEH) and as modified in October 31, 2006 and November 29, 2006 e-mails (Appendix A). The site is referenced under ACEH Fuel Leak Case Number RO0000516. Following is a brief discussion of the site background, environmental setting, previous studies, the 2006/2007 sampling procedures and results, a discussion of the results, conclusions, and recommendations.

2.0 SITE BACKGROUND

2.1. Site Description

The site is located at 1499 MacArthur Boulevard in Oakland, California and currently operates as an automobile service business. It is located in a commercial and residential area, bound by MacArthur Boulevard to the north, 14th Avenue to the east, and Interstate 580 to the south. Surrounding topography is relatively hilly and generally slopes to the south and southwest. Prior to 1990, the site apparently operated as a gasoline service station. Figures 1 and 2 present the facility location and a site plan, respectively.

3.0 ENVIRONMENTAL SETTING

The site is located to the west of the Oakland-Berkeley Hills on the East Bay Plain, which generally slopes gently to the west, towards San Francisco Bay.

3.1. Geology

The site is located in the Coast Range Physiographic Province, characterized by northwest-southeast trending valleys and ridges. This region lies between the Pacific Ocean to the west and the Great Valley to the east. The oldest known bedrock in the Coast Range Province is marine sedimentary and volcanic rocks that form the Franciscan Assemblage. Geologic formations in the San Francisco Bay Region range in age from Jurassic to Recent Holocene.

The San Francisco Bay is located in a broad depression in the Franciscan bedrock resulting from an east-west expansion between the San Andreas and Hayward fault systems. Unconsolidated

sediments in the East Bay Plain vary in thickness, with some areas up 1,000 ft thick. From oldest to youngest, the unconsolidated sediments are 1/ Santa Clara Formation, 2/ Alameda Formation, 3/ Temescal Formation, and 4/ artificial fill. The Early Pleistocene Santa Clara Formation consists of alluvial fan deposits inter-fingered with lake, swamp, river channel, and flood plain deposits, ranging from 300 to 600 ft thick. The Late Pleistocene Alameda Formation was deposited primarily in an estuarine environment and consists of alluvial fan deposits bound by mud deposits on the top and bottom of the formation. The Alameda Formation ranges from 26 to 245 ft thick and is subdivided into the Yerba Buena Mud, San Antinio, Merritt, and Young Bay Mud Members. The Early Holocene Temescal Formation is an alluvial fan deposit consisting primarily of silts and clays with some gravel layers. The Temescal Formation ranges from 1 to 50 ft thick, thinning toward the bay. Based on the Department of the Interior U.S. Geological Survey, *Geologic Map of the Hayward Fault Zone, 1995,* the site geology consists of undifferentiated Quaternary surficial deposits, possibly Temescal Formation.

Based on previous studies, soil material beneath the site consists of fill, clay, and clayey sand. The apparent fill consists of poorly graded sands, gravels, and clay materials, from 0 to 6 feet (ft) below ground surface (bgs). Underlying the fill material is clay approximately 4 to 8 ft in thickness. Below the clay is clayey sand, observed to the total explored depth of 20 ft bgs.

3.2. Hydrogeology

The site is located in the East Bay Plain Subbasin, Groundwater Basin No. 2-9.04 (Department of Water Resources 2003). The East Bay Plain Subbasin is a northwest trending alluvial basin, bounded on the north by San Pablo Bay, on the east by the contact with Franciscan basement rock, and on the south by the Nile Cone Groundwater Basin. The East Bay Plain Subbasin extends beneath the San Francisco Bay to the west. The East Bay Plain Subbasin aquifer system consists of unconsolidated sediments of Quaternary age. These include the Santa Clara Formation, Alameda Formation, Temescal Formation, and artificial fill. The water-bearing formation at the site is currently undefined. In the project area most rainfall occurs between November and March. The average annual rainfall is approximately 23 inches.

According to the California Regional Water Quality Control Board San Francisco Bay Region's Water Quality Control Plan (1995), this groundwater basin has been designated as existing beneficial use for municipal and domestic, industrial process, industrial service, and agricultural water supplies.

Throughout most of the East Bay Plain in the region of the site, water level contours show that the general direction of groundwater flow is towards San Francisco Bay. Groundwater flow direction typically correlates to topography. Based on the regional topography and the results

from onsite groundwater monitoring, the groundwater beneath the site flows in a southwesterly direction, towards the San Francisco Bay.

Previous to the fourth quarter 2000, the depth to groundwater had ranged from approximately 8.15 to 18.55 ft bgs and groundwater tended to mound in the vicinity of MW-2. Since the fourth quarter 2000 event, the depth to groundwater has ranged from approximately 4.88 to 14.05 ft bgs and the gradient has generally been towards the southwest.

4.0 PREVIOUS INVESTIGATIONS

Previous environmental investigations with sampling and analysis were performed since 1993. The following presents previous environmental reports, followed by a summary of soil and groundwater analytical results. Figure 2 presents existing borings at the site. Monitoring well construction details are presented in Table 1. Groundwater and soil data are presented in Tables 2 and 3.

UST Removal Activities: Three underground storage tanks (USTs) were removed from the site by "others" in October 1990, after which subsurface soil sampling was performed. The size, construction, contents, and condition of the USTs and excavation were not reported. No observations of a release, soil or groundwater sampling, number or location of piping and/or dispenser locations, or waste manifests were included in the reviewed report.

Subsurface Assessment Activities: A subsurface assessment was conducted by "others" in 1993, during which three groundwater monitoring wells (MW-1, MW-2, and MW-3) were installed at the site. Results of this assessment indicated that the soil and groundwater beneath the site were impacted by petroleum hydrocarbons that may have leaked from the former USTs.

Phase II Site Characterization: Century West Engineering Corporation (CWEC) performed site characterization activities as described in their *Report of Phase II Site Characterization*, dated August 30, 1996 for the subject site. This report indicated that:

On June 24, 1996, CWEC advanced 12 Geoprobe™ borings to a maximum depth of approximately 20 ft bgs to collect soil and groundwater samples.

On June 27, 1996, CWEC installed three groundwater monitoring wells (MW-4, MW-5, and MW-6). CWEC concluded that high concentrations of hydrocarbons in soil and groundwater, and separate phase hydrocarbons (SPH) are probably limited to the UST excavation vicinity (Figure 2).

In July 1996, CWEC performed a soil vapor extraction (SVE) pilot test at three monitoring wells (MW-1, MW-2, and MW-5) and also performed a hydraulic slug test in two site wells. Soil vapor samples were collected during the pilot test. As a result of the pilot test, CWEC concluded that significant vacuum influence was observed in wells MW-1, MW-2, MW-3, and MW-5 and high concentrations of volatile organic compounds (VOCs) were measured in vapor samples collected from wells MW-1, MW-2, and MW-5. Vacuum influence was not observed at wells MW-4 or MW-6.

As a result of the hydraulic slug tests, CWEC concluded the hydraulic conductivity (K) of aquifer materials at locations MW-1 and MW-3 had a K value of $1.0x10^{-5}$ centimeters per second (cm/s) and $2.6x10^{-5}$ cm/s, respectively.

Remedial Activities: On September 19, 2000, Cambria installed a SVE remediation system. Monitoring wells MW-1, MW-2, and MW-5 were connected to the system. On October 23, 2000, in-well air sparging was initiated in wells MW-2 and MW-5 to help remove any remaining SPH. The SVE system operations were performed for eight months (September 2000 through April 2001) and were subsequently halted due to low hydrocarbon removal rates. A total of 16.5 pounds of hydrocarbons were removed during the SVE activities. SVE helped significantly reduce the dissolved-phase hydrocarbon concentrations in monitoring wells in MW-2 and MW-5.

Groundwater Monitoring: Groundwater onsite has been monitored and sampled from January 1993 to the present. During the fourth quarter 2000, groundwater levels rose approximately 5 ft and have remained at these levels to date. However, groundwater levels are still within the well screen intervals of 5 to 20 ft. Since the fourth quarter of 2000, groundwater depths have fluctuated between 4.88 and 14.05 ft bgs. Seasonal groundwater depth fluctuations have been relatively flat with first and second quarter groundwater depths usually being slightly less than the third and fourth quarters. Recently, groundwater depth ranges from 6 to 7.5 feet below ground surface (bgs). Groundwater analytical results are presented in Table 2. Time-series analysis graphics for TPHg and benzene in groundwater are provided in Appendix B.

5.0 2006 SOIL AND GROUNDWATER INVESTIGATION

This section of the report presents preparations and procedures for soil and grab groundwater samples collected during the December 21st through 22nd, 2006 field event. Work was performed in accordance with the modified and approved July 20, 2006 *Work Plan*. Soil and groundwater analytical data are presented in Tables 2 and 3, and on Figures 3 and 4. Standard operating procedures are presented in Appendix C.

5.1. Summary of 2006 Soil and Groundwater Investigation

The objectives of the 2006 soil and groundwater investigation activities were to provide sampling results adjacent to the former UST excavation to determine if residual contamination exists in soil beyond the original excavation. To meet these objectives, Cambria collected and analyzed soil and grab groundwater samples from borings B-1 through B-5.

5.2. 2006 Soil and Groundwater Sampling Procedures

The locations of 2006 borings B-1 through B-5 are presented on Figures 2, 3, and 4. Drilling activities were sufficiently conducted according to Cambria's Standard Operating Procedures, presented in the 2006 *Work Plan* (Appendix C). Boring logs are presented in Appendix D.

Drilling Dates: Vironex advanced soil borings B-1 through B-5 and performed soil and grab groundwater sampling on December 20 through 22, 2006.

Personnel Present: Cambria's Senior Staff Geologist Celina Hernandez and Christina McClelland advanced soil borings, which was overseen by Cambria's Senior Project Geologist Mark Jonas, a California Professional Geologist No. 6392.

Permits: The Alameda County Public Works Agency (ACPWA) issued the subsurface drilling permit for the soil boring activities (Appendix E).

Drilling Company: Vironex (C57 # 705927) of Pacheco, California advanced soil borings using a direct push rig.

Drilling Method: Cambria marked out boring locations with white paint and notified underground service alert (USA) to have the utilities marked out. Cambria also completed a utility survey surrounding the probe locations with Cruz Brothers Locators of Scotts Valley, California. After the boring locations were cleared, Vironex advanced borings B-1 through B-5, initially using a hand auger and then using the direct push method.

Soil Sampling Method: Undisturbed soil samples were collected from borings B-1 through B-5. Cambria logged the soil in each boring, as presented in Appendix D. Soil samples were screened using a photoionization detector (PID). PID results are presented on the boring logs. Soil samples were collected, labeled, placed in an ice chest cooled with bagged ice, and documented on a Chain of Custody record (COC). Soil samples were submitted to a McCampbell Analytical, Inc. (McCampbell) for analysis, with appropriate documentation and signatures on the COC. The COC is provided in Appendix F.

Grab Groundwater Sampling Method: After completion of each borehole down to 20 ft bgs, PVC was temporarily installed in the borehole while the groundwater level recovered. When sufficient water was present in the boring, a grab groundwater samples was collected using a clean disposable bailer. Each sample was labeled, placed in a cooled ice crest, documented on a COC, and submitted to McCampbell for analysis.

Sample Analysis: Each soil sample was analyzed for total petroleum hydrocarbons as gasoline (TPHg) by EPA Method modified 8015, and benezene, toluene, ethylbenzene, and xylenes (BTEX), and methyl teritiary butyl ether (MTBE) by EPA Method 8260B. Groundwater samples were analyzed for TPHg by EPA Method modified 8015, BTEX by EPA Method 8021B and/or EPA Method 8260B, and MTBE by EPA Method 8260B. Copies of the laboratory analytical reports and COCs are provided in Appendix F.

6.0 2006 SOIL SAMPLING RESULTS

Soil and grab groundwater samples were collected from borings B-1 through B-5. Grab groundwater sampling results are presented in Table 2 and Figure 4. Soil analytical results are presented in Table 3 and Figure 3. Copies of the analytical laboratory report and COCs are included in Appendix F. Following is a summary of analytical results.

6.1. 2006 Soil Sampling Results

A summary of soil analytical results for the borings B-1 through B-5 is provided in this section. Soil samples were collected from depths of 5-5.5, 10, 15 and 19.5 ft bgs. The following Tables 6-1 present 2006 soil results for detected constituents:

The following Tables 6-1 present 2006 soil results for analyzed constituents:

Table 6-1
Summary of Soil Results from Borings B-1 through B-5

Depth (feet)	Frequency & Highest Concentration	TPHg	Benzene	Toluene	Ethyl benzene	Xylenes	MTBE
5-5.5	Frequency	0/5 (0%)	0/5 (0%)	0/5 (0%)	0/5 (0%)	0/5 (0%)	0/5 (0%)
	Highest Conc. (mg/kg)	ND	ND	ND	ND	ND	ND
10	Frequency	1/5 (20%)	1/5 (20%)	0/5 (0%)	0/5 (0%)	0/5 (0%)	1/5 (20%)
	Highest Conc. (mg/kg)	**3.3**	**0.043**	ND	ND	ND	**0.01**
15	Frequency	2/5 (40%)	1/5 (20%)	3/5 (60%)	3/5 (60%)	4/5 (80%)	0/5 (0%)
	Highest Conc. (mg/kg)	**560**	**0.54**	**3.2**	**9.6**	**69**	ND
19.5	Frequency	2/4 (50%)	1/4 (25%)	0/4 (0%)	2/4 (50%)	2/4 (50%)	0/4 (0%)
	Highest Conc. (mg/kg)	**15**	**0.026**	ND	**0.017**	**0.12**	ND

Notes: ND = Not Detected; TPHg = Total Petroleum Hydrocarbons as Gasoline; MTBE = Methyl tertiary butyl ether

As identified in this table, most of the elevated concentrations of the petroleum products analyzed were found around 15 feet bgs. Depth to first encountered water ranged from 5 to 12 feet bgs. Therefore, soil samples were generally collected under saturated conditions and results may have been influenced by the elevated concentrations found in groundwater.

Figure 3 graphically presents soil sampling results.

6.2. 2006 Grab Groundwater Sampling Results

Grab groundwater samples were collected from borings B-1 through B-5, from an approximately depth of 20 feet bgs. Table 2 and Figure 4 present a summary of the groundwater analytical results. The analytical laboratory report is provided in Appendix F.

The following Tables 6-2 presents 2006 groundwater results for constituents analyzed by EPA Method 8021B for TPHg and EPA Method 8260B for BTEX and MTBE:

Table 6-2
Summary of Grab Groundwater Results from Borings B-1 through B-5

Boring	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)
B-1	13,000	28	ND<17	520	1,300	ND<17
B-2	40,000	1,100	1,300	840	5,900	ND<50
B-3	300	3.2	0.98	1.4	1.2	ND<0.5
B-4	7,600	87	22	520	450	ND<10
B-5	72,000	850	3,100	2,800	16,000	ND<100

Notes: ND = Not Detected; TPHg = Total Petroleum Hydrocarbons as Gasoline; MTBE = Methyl tertiary butyl ether

Elevated concentrations of TPHg and BTEX exist in groundwater at the site. Significantly elevated concentrations were generally detected in areas where elevated concentrations were detected in soil, as identified in Figures 3 and 4.

Due to the finding of elevated concentrations of TPHg and BTEX in groundwater, our recommendation is to select and implement a remedial alternative through a selection process defined in a proposed *Remedial Action Plan.*

7.0 SOIL VAPOR INVESTIGATION

This section of the report presents preparations and procedures for the installation and sampling for soil vapor probes SG-1 through SG-9 (Figure 2). Work was performed in accordance with the modified and approved July 20, 2006 *Work Plan*. Standard operating procedures are presented in Appendix C. Soil vapor probe construction details are presented on the soil boring logs in Appendix D. Soil vapor sampling data sheets are presented in Appendix G. Table 4 and Figure 5 present the soil vapor analytical data.

7.1. Summary of Soil Vapor Investigation

The objectives of the 2006 site investigation activities were to determine if groundwater and soil concentrations of benzene may present a potential vapor intrusion risk. To meet these objectives, Cambria installed and sampled soil vapor probes SG-1 through SG-9 surrounding the former UST cavity and along the perimeter of the site. The soil vapor probes were installed during December 20 through 22, 2006 and were sampled on January 18 and 19, 2007.

7.2. Soil Vapor Sampling Procedures

Recently advanced soil vapor probes SG-1 through SG-9 are identified on Figure 5. Soil vapor probes were constructed following Cambria's standard operating procedures (Appendix C) based on the Department of Toxic Substances Control's (DTSC) January 28, 2003 *Advisory-Active Soil Gas Investigation* (DTSC *Advisory*).

Installation and Sampling Dates: On December 20 through 22, 2006, Vironex installed soil vapor probes SG-1 through SG-9 across the site. Cambria sampled the probes on January 18 and 19, 2007.

Personnel Present: Installation and sampling were completed by Cambria Senior Staff Geologist Celina Hernandez and Christina McClelland which were overseen by Cambria's Senior Project Geologist Mark Jonas, a California Professional Geologist No. 6392.

Permits: The Alameda County Public Works Agency (ACPWA) issued the subsurface drilling permit for the soil vapor probes. A copy of the permit is in Appendix D.

Drilling Company: Vironex (C57 # 705927) of Pacheco, California installed the soil vapor probes using a hand auger.

Probe Materials: Soil vapor probes were constructed following Cambria's standard operating procedures (Appendix C) based on the January 28, 2003 DTSC's *Advisory-Active Soil Gas Investigation* guidelines. Vapor probes SG-1 through SG-9 were constructed using 6-inch long

sections of 1 -inch diameter, schedule 40 PVC well casing with 0.010 inch screen size. These pipe sections were capped on both ends using PVC pipe caps. One cap was drilled and tapped to allow for the installation of a compression fitting. Nylaflow® tubing (¼-inch) was inserted in the compression fitting and the assembly was lowered into the boring to the specified depth (approximately 5 to 5.5 fbg), with the tubing terminating above grade. Sand was added to the borehole around the probes as a filter pack. Granular bentonite was used as a seal from the top of the filter pack to approximately 1 ft bgs. A soil vapor probe construction is presented on soil boring logs in Appendix D.

Probe Installation: Prior to probe installation, Cambria marked out boring locations with white paint and notified underground service alert (USA) to have the underground utilities marked. Cambria also completed a utility survey surrounding the probe locations with Cruz Brothers Locators of Scotts Valley, California. Cambria logged the soil cuttings in each boring, as presented in Appendix C. No soil samples were collected for analyses. However, probes SG-1, SG-2, SG-3, and SG-4 were installed adjacent to boring B-1 through B-4, respectively.

Soil Vapor Sampling: Soil vapor probes were sampled on January 18 and 19, 2007. Soil vapor sampling and leak testing were performed following the DTSC's January 28, 2003 *Advisory-Active Soil Gas Investigation* guidelines. Soil vapor sampling data sheets are presented in Appendix G. Paper towels with shaving cream in plastic zip-loc bags were placed at sample system connections for the leak test.

Purging and sampling were conducted at a rate of approximately 100 milliliters per minute (mL/min). Vapor samples were collected in one liter Summa™ canisters after removing approximately three purge volumes from the screen interval. Each sample was labeled, documented on a COC, and submitted to Air Toxics, Ltd. of Folsom, California for analysis. Soil vapor sampling forms are presented in Appendix E.

Soil Vapor Sample Analysis: Each soil vapor sample was analyzed according to the modified and approved *Work Plan* for benzene, and leak test (tracer) compounds isobutane, butane and propane by modified EPA method TO-15 using GC/MS in full scan mode by Air Toxics, Ltd. of Folsom, California. These tracer compounds were identified by EPA method TO-15 as the most abundant compounds of the specific shaving cream analyzed and indicated by distinctive peaks on the petroleum hydrocarbon chromatograph separate from TPH in the gasoline range. Copies of the benzene and tracer results are provided in Appendix F.

8.0 SOIL VAPOR SAMPLING RESULTS

Soil vapor samples were collected from soil vapor probes SG-1 through SG-9. No soil vapor sample was collected from probe SG-4 due to the presence of groundwater in the probe. Soil vapor sampling results are presented in Table 4 and on Figure 5. The analytical laboratory report and COCs are included in Appendix F. Following is a summary of analytical results. A discussion of the analytical results, with a comparison with the San Francisco Bay Regional Water Quality Control Board's (RWQCB) Environmental Screening Level (ESL) published in February 2005, are presented.

8.1. Soil Vapor Sampling Results

A summary of soil vapor analytical results for soil vapor probes SG-1 through SG-9 is provided in this section. Soil vapor samples were collected from approximately 5 ft bgs. No soil vapor sample was collected from SG-4 because groundwater was encountered in the probe. Table 4 and Figure 5 present a summary of soil vapor analytical results. The analytical laboratory report is provided in Appendix F. The following Tables 8-1 present 2006 soil vapor results for benzene:

Table 8-1
Soil Gas Results for Benzene at 5 feet bgs

Vapor Probe Sample ID	Benzene (µg/m³)
SG-1	4.2
SG-2	6.4
SG-3	ND<3.9
SG-5	ND<3.9
SG-7	4.4
SG-8	15
SG-9	ND<73

Notes: µg/m³ = micrograms per cubic meters; ND<n = not detected (ND) above laboratory reporting limit,n

The following Table 8-2 compares the highest concentration with Regional Water Quality Control Board, San Francisco Bay Region (2005) Table E Environmental Screening Levels for vapor intrusion.

Table 8-2
Soil Gas Results for Benzene and Environmental Screening Levels

Analyte	Frequency of Detection	Highest Concentration (µg/m³)	Shallow Soil Gas Screening Levels	
			Residential Land Use (µg/m³)	Commercial/Industrial Use (µg/m³)
Benzene	4/8 (50%)	15	85	290

As identified by these results, none of the soil gas results exceed the environmental screening levels for vapor intrusion. Estimates from the California Environmental Protection Agency website reports average ambient background levels for benzene range from 0.5 - 11 $\mu g/m^3$.

In accordance with the DTSC's January 28, 2003 *Advisory-Active Soil Gas Investigations* guidance document, dated, leak testing was performed during sampling. Shaving cream was used as a leak detector to determine if ambient air was entering the Summa™ canisters during sampling by recognizing if the specific leak test compound was detected in the analysis. Isobutane, butane and propane were identified by modified EPA method TO-15 as the most abundant compounds of the specific shaving cream analyzed and indicated by distinctive peaks on the petroleum hydrocarbon chromatograph separate from TPH in the gasoline range. The standard compound of the leak test, based on analysis of the shaving cream, is isobutane at approximately 350,000 $\mu g/m^3$. Leak test compounds (isobutene, butane and propane) were detected in five of eight samples collected in January 2007. Although isobutane was reported in 5 of the 8 samples, the highest amount reported was 1,300 $\mu g/m^3$ in SG-3, an amount considered negligible, being less than one percent of the standard.

9.0 CONCLUSIONS AND RECOMMENDATIONS

Following are conclusions and recommendations.

9.1. Conclusions

Following are conclusions from the site characterization study presented in this report:

- Based on the 2006 soil sampling results, elevated concentrations apparently exists around 15 feet bgs, south and northwest of the excavation.
- Elevated concentration of TPHg and BTEX exist in groundwater.
- None of the soil gas results exceed the residential and commercial/industrial environmental screening levels for vapor intrusion.

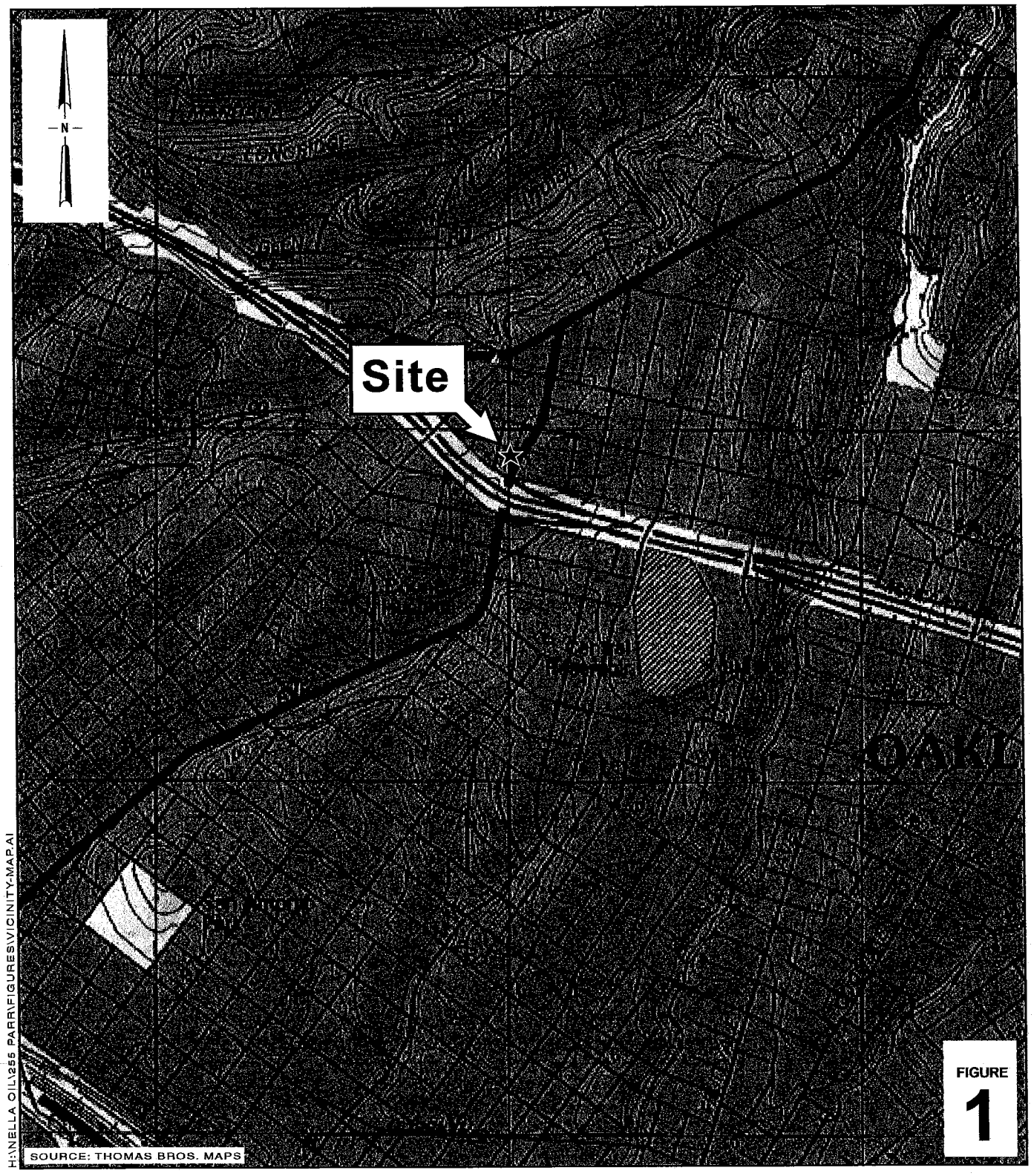
9.2. Recommendation

Following is our recommendation:

- Due to the finding of elevated concentrations of petroleum product in soil and groundwater at the site, our recommendation is to evaluate and select a remedial alternative in a proposed *Remedial Action Plan.*

FIGURES

07/08/04



H:\NELLA OIL\255 PARR\FIGURES\VICINITY-MAP.AI

FIGURE
1

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Hooshii's Auto Service

1499 MacArthur Boulevard

Oakland, California

CAMBRIA

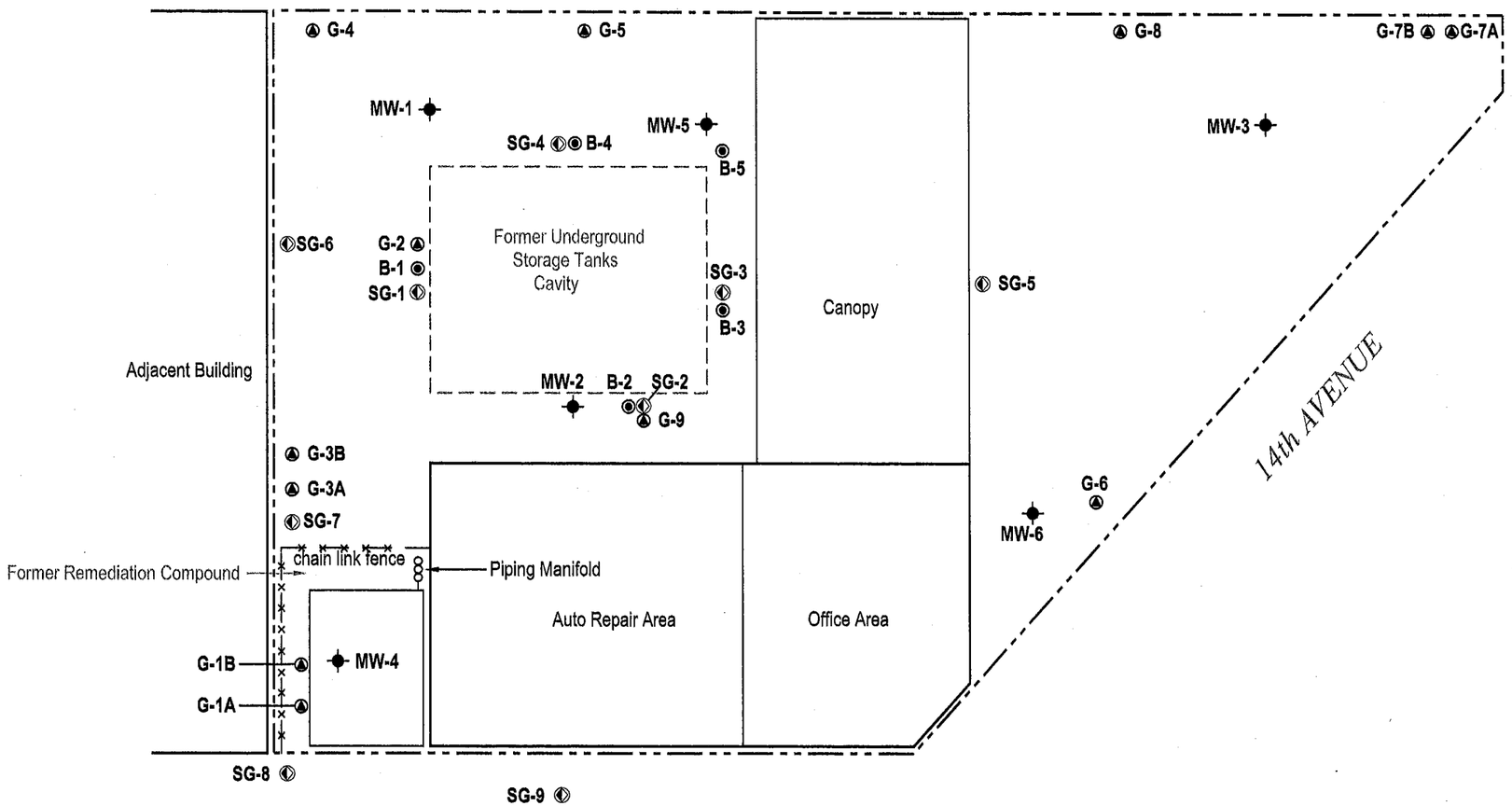
Vicinity Map

02/14/07

Site Plan

EXPLANATION

- MW-1 — Monitoring well location
- G-2 — Geoprobe boring location
- B-1 — Geoprobe boring location
- SG-1 — Soil gas sampling location



NOTE: All points surveyed to an arbitrary datum.

FIGURE

2

Hooshi's Auto Service
1499 MacArthur Boulevard
Oakland, California

CAMBRIA

H:\GATZKE (HOOSHI'S) - OAKLAND\FIGURES\SITEPLAN.DWG

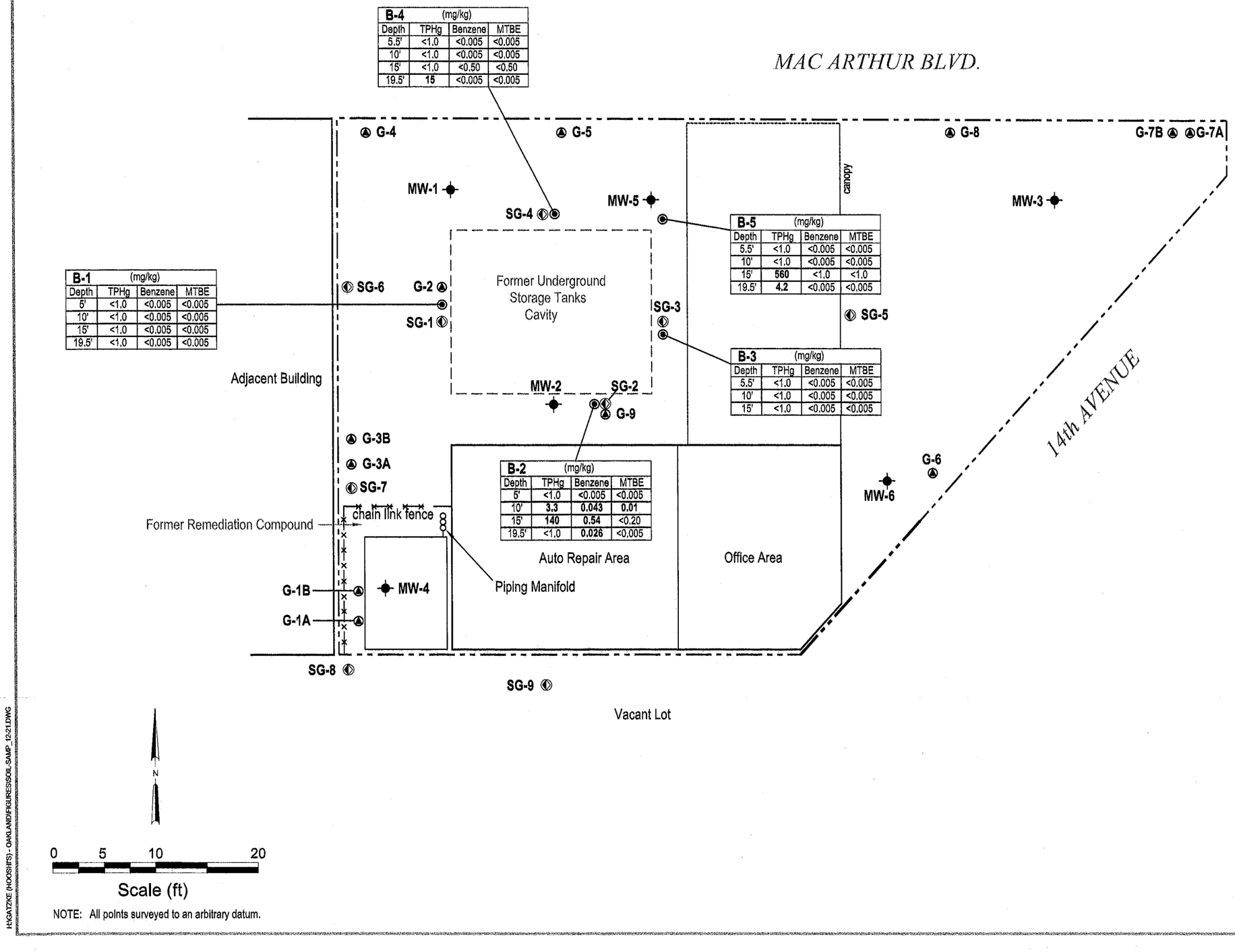
02/14/07

EXPLANATION

MW-1	Monitoring well location
G-2	Geoprobe boring location
B-1	Geoprobe boring location
SG-1	Soil gas sampling location
<1.0	Not detected above laboratory detection limit
mg/kg	milligrams per kilogram

Soil Sampling Results

December 21 and 22, 2006



B-4 (mg/kg)

Depth	TPHg	Benzene	MTBE
5.5'	<1.0	<0.005	<0.005
10'	<1.0	<0.005	<0.005
15'	<1.0	<0.50	<0.50
19.5'	15	<0.005	<0.005

B-5 (mg/kg)

Depth	TPHg	Benzene	MTBE
5.5'	<1.0	<0.005	<0.005
10'	<1.0	<0.005	<0.005
15'	560	<1.0	<1.0
19.5'	4.2	<0.005	<0.005

B-1 (mg/kg)

Depth	TPHg	Benzene	MTBE
5'	<1.0	<0.005	<0.005
10'	<1.0	<0.005	<0.005
15'	<1.0	<0.005	<0.005
19.5'	<1.0	<0.005	<0.005

B-3 (mg/kg)

Depth	TPHg	Benzene	MTBE
5.5'	<1.0	<0.005	<0.005
10'	<1.0	<0.005	<0.005
15'	<1.0	<0.005	<0.005

B-2 (mg/kg)

Depth	TPHg	Benzene	MTBE
5'	<1.0	<0.005	<0.005
10'	3.3	0.043	0.01
15'	140	0.54	<0.20
19.5'	<1.0	0.026	<0.005

N

0 5 10 20

Scale (ft)

NOTE: All points surveyed to an arbitrary datum.

FIGURE

3

Hooshi's Auto Service
1499 MacArthur Boulevard
Oakland, California

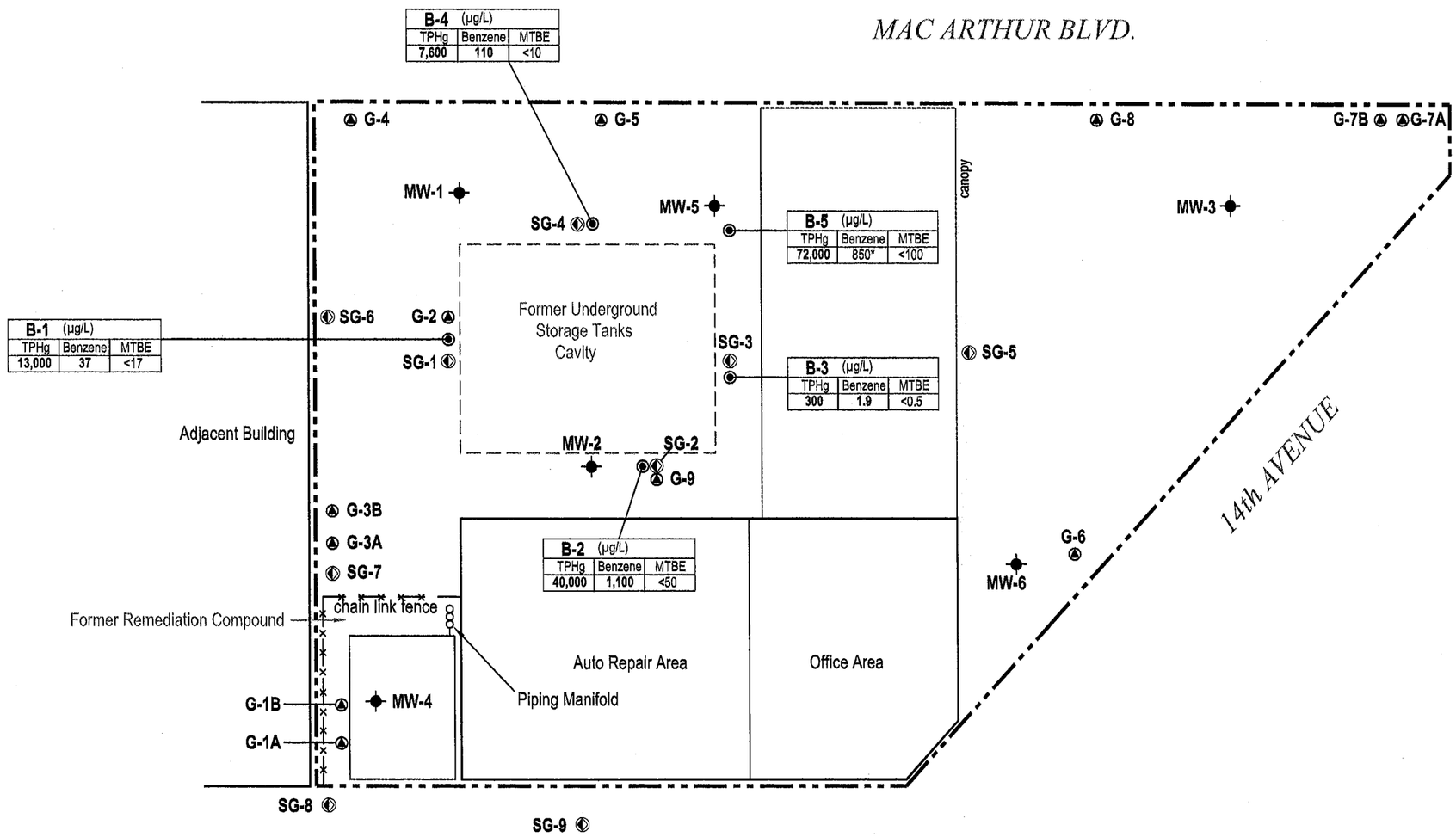
CAMBRIA

H:\GATZKE (HOOSHI'S) - OAKLAND\FIGURES\SOIL_SAMP_12-21.DWG

02/14/07

Grab Groundwater Sampling Results

December 21, 2006



EXPLANATION

MW-1	Monitoring well location
G-2	Geoprobe boring location
B-1	Geoprobe boring location
SG-1	Soil gas sampling location
<0.5	Not detected above laboratory detection limits
µg/L	Micrograms per Liter
*	Benzene by EPA method 8260 B
	TPHg and Benzene by EPA method 805M / 8021 B
	MTBE by EPA method 8260 B

NOTE: All points surveyed to an arbitrary datum.

FIGURE

4

Hooshi's Auto Service
1499 MacArthur Boulevard
Oakland, California

CAMBRIA

H:\GATZKE (HOOSHI'S) - OAKLAND\FIGURES\GW-SAMP_12-21.DWG

02/27/07

EXPLANATION

- MW-1 — Monitoring well location
- G-2 — Geoprobe boring location
- B-1 — Geoprobe boring location
- SG-1 — Soil gas sampling location
- NS — Not Sampled
- <3.9 — Not detected above laboratory detection limit
- Sample / Benzene — Sample designation; Soil Vapor data for Benzene in micrograms per cubic meter (µg/m³)

MAC ARTHUR BLVD.

14th AVENUE

Adjacent Building

Former Underground Storage Tanks Cavity

Canopy

Former Remediation Compound

chain link fence

Piping Manifold

Auto Repair Area

Office Area

Vacant Lot

G-4, G-5, G-8, G-7B, G-7A, MW-1, SG-4 NS, B-4, MW-5, B-5, MW-3, SG-6 <3.9, G-2, B-1, SG-1 4.2, SG-3 <3.9, B-3, SG-5 <3.9, MW-2, B-2, SG-2 6.4, G-9, G-6, MW-6, G-3B, G-3A, SG-7 4.4, G-1B, G-1A, MW-4, SG-8 15, SG-9 <73

N

0 5 10 20

Scale (ft)

NOTE: All points surveyed to an arbitrary datum.

FIGURE

5

Soil Vapor Sampling Results

January 18 and 19, 2007

CAMBRIA

Hooshi's Auto Service

1499 MacArthur Boulevard

Oakland, California

H:\GATZKE (HOOSHI'S) - OAKLAND\FIGURES\SV-SAMP_12-21.DWG

TABLES

Table 1. Monitoring Well Construction Details - Gatzke (Hooshi's) 1499 MacArthur Boulevard, Oakland, California
Cambria Project #129-0741

Well ID	Former ID	Date Installed	Date Destroyed	Borehole diameter (in)	Depth of borehole (ft)	Casing diameter (in)	Screened interval (ft bgs)	Filter Pack (ft bgs)	Bentonite seal (ft bgs)	Cement (ft bgs)	TOC elevation (ft above msl)
MW-1	B1	1/7/1993	--		20*	2					180.83
MW-2	B2	1/7/1993	--		20*	2					180.24
MW-3	B3	1/7/1993	--		20*	2					179.55
MW-4	--	6/27/1996	--		20	2	4.5 - 19	3.5 - 19	2.5 - 3.5	1 - 2.5	180.12
MW-5	--	6/27/1996	--		20	2	4.5 - 19	3.5 - 19	2.5 - 3.5	1 - 2.5	180.09
MW-6	--	6/27/1996	--		20	2	4.5 - 19	3.5 - 19	2.5 - 3.5	1 - 2.5	179.63

Abbreviations / Notes

ft = feet

in = inches

ft bgs = feet below grade surface

ft above msl = feet above mean sea level

TOC = top of casing

Elevations surveyed by Virgil Chavez Land Surveying.

* = Depth assume by downhole measurement.

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Table 2. Groundwater Elevation and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID *TOC (ft*)*	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft msl**)	SPH Thickness (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					←		(µg/L)			→	
2006 Grab Groundwater Analytical Data											
B-1*	12/21/2006	--	--	--	13,000	37 / 28	32 / ND<17	380 / 520	1,100 / 1,300	ND<17	a,i
B-2*	12/21/2006	--	--	--	40,000	1,100 / 1,100	1,300 / 1,300	990 / 840	6,400 / 5,900	ND<50	a,i
B-3*	12/21/2006	--	--	--	300	1.9 / 3.2	1.0 / 0.98	0.76 / 1.4	0.62 / 1.2	ND<0.5	a,i
B-4*	12/21/2006	--	--	--	7,600	110 / 87	32 / 22	470 / 520	520 / 450	ND<10	a,i
B-5*	12/22/2006	--	--	--	72,000	-- / 850	-- / 3,100	-- / 2,800	-- / 16,000	ND<100	a,h
Monitoring Well Groundwater Analytical Data											
MW-1	1/4/1993	--	--	--	539	130	12	22	13	--	
181.00	4/22/1993	--	--	--	1,130	75	8.0	38	11	--	
	12/27/1994	--	--	--	770	22	6.6	14	21	--	
	6/27/1996	14.11	166.89	--	3,300	260	34	59	170	80	
	12/10/1996	13.71	167.29	--	1,500	84	11	22	32	34	
	5/8/1998	13.85	167.15	--	3,200	300	12	62	36	ND<120	a
	8/17/1998	14.11	166.89	--	1,700	160	18	32	27	39	a
	11/4/1998	14.28	166.72	--	1,100	11	4.3	3.6	6.5	ND<50	a
	2/17/1999	13.41	167.59	--	320	200	47	72	75	57	a
	5/27/1999	14.16	166.84	--	2,500	81	12	29	41	ND<80	a
	8/19/1999	14.18	166.82	--	780	19	ND<0.5	5.7	4.5	28	a
180.83	11/23/1999	14.43	166.40	--	1,300	24	0.64	1.8	3.3	ND<100	a
	2/17/2000	13.85	166.98	--	1,300	60	9.1	22	19	22/16	a,b
	5/9/2000	14.01	166.82	--	2,700	55	13	19	25	34/29	a
	8/15/2000	14.24	166.59	--	--	--	--	--	--	--	
	12/1/2000	8.75	172.08	--	480	6.4	5.9	1.1	3.9	18 (21)	a
180.63	2/8/2001	8.49	172.14	--	64	ND<0.5	ND<0.5	ND<0.5	ND<0.5	6.1/5.6	a,c
	4/9/2001	8.71	171.92	--	--	--	--	--	--	--	
	4/24/2001	7.90	172.73	--	77	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5.6/3.7	c
	8/6/2001	8.83	171.80	--	140	1.7	0.55	ND<0.5	0.63	5.8/4.0	a
	10/22/2001	8.91	171.72	--	120	0.92	ND<0.5	ND<0.5	0.59	11(10)	a
	2/1/2002	8.15	172.48	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/19/2002	8.63	172.00	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/16/2002	8.79	171.84	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/3/2002	8.90	171.73	--	110	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	f
	1/10/2003	7.93	172.70	--	ND<50	ND<0.5	0.74	ND<0.5	ND<0.5	ND<5.0	
	4/21/2003	8.17	172.46	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/9/2003	8.92	171.71	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/7/2003	9.13	171.50	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/22/2004	8.20	172.43	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/2/2004	7.09	173.54	--	110	0.52	ND<0.5	ND<0.5	ND<0.5	ND<5.0	a
	12/29/2004	6.15	174.48	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/27/2005	7.15	173.48	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/6/2005	6.84	173.79	--	140	ND<0.5	0.55	ND<0.5	0.70	ND<5.0	c
	7/28/2005	7.36	173.27	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/14/2005	7.51	173.12	--	220	1.2	ND<0.5	0.56	0.75	ND<5.0	a
	1/30/2006	6.80	173.83	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/11/2006	6.60	174.03	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/14/2006	7.53	173.10	--	170	0.65	0.60	ND<0.5	ND<0.5	ND<5.0	a
	10/13/2006	7.47	173.16	--	200	0.93	ND<0.5	ND<0.5	ND<0.5	ND<5.0	a
	1/12/2007	**7.40**	**173.23**	--	**92**	**ND<0.5**	**ND<0.5**	**ND<0.5**	**ND<0.5**	**ND<5.0**	**c,i**
MW-2	1/4/1993	--	--	--	149,000	21,700	25,000	ND	7,760	--	
180.45	4/22/1993	--	--	--	136,300	9,900	15,870	15,300	2,190	--	
	12/27/1994	--	--	--	94,000	11,000	18,000	2,700	16,000	--	
	6/27/1996	12.61	168.64	1.00	--	--	--	--	--	--	
MW-2 cont'd	12/10/1996	11.10	169.55	0.25	--	--	--	--	--	--	

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Table 2. Groundwater Elevation and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID	Date	Depth to Groundwater	Groundwater Elevation	SPH Thickness	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
TOC (ft)*		(ft)	(ft msl**)	(ft)	←			(µg/L)		→	
	5/8/1998	10.81	169.66	0.03	--	--	--	--	--	--	
	8/17/1998	12.16	168.31	0.02	--	--	--	--	--	--	
	11/4/1998	12.61	167.86	0.02	--	--	--	--	--	--	
	2/17/1999	9.82	170.66	0.04	--	--	--	--	--	--	
	5/27/1999	11.07	169.48	0.13	--	--	--	--	--	--	
	8/19/1999	12.79	167.68	0.02	--	--	--	--	--	--	
180.24	11/23/1999	12.14	168.20	0.12	--	--	--	--	--	--	
	2/17/2000	10.01	170.37	0.18	--	--	--	--	--	--	
	5/9/2000	10.88	169.38	0.03	--	--	--	--	--	--	
	8/15/2000	12.28	167.97	0.01	--	--	--	--	--	--	
	12/1/2000	8.03	172.21	--	260,000	1,100	5,000	1,900	17,000	ND<100	a
	2/8/2001	7.86	172.38	--	2,900	1.7	14	5.0	140	ND<5.0	c,d
	4/9/2001	7.95	172.29	--	--	--	--	--	--	--	
	4/24/2001	6.90	173.34	--	56,000	360	980	1,000	4,700	ND<5.0	a,b
	8/6/2001	8.15	172.09	--	54,000	680	1,900	1,500	7,800	ND<200/ND<1(	a,b,j
	10/22/2001	8.22	172.02	--	32,000	420	770	1,100	4,100	ND<250	a,b
	2/1/2002	8.07	172.17	--	26,000	310	490	920	1,600	ND<1,000	a
	4/19/2002	8.60	171.64	--	16,000	300	240	1,000	990	ND<100	a
	7/16/2002	8.21	172.03	--	5,700	120	18	340	15	ND<50	a
	10/3/2002	8.14	172.10	--	4,400	44	16	68	20	ND<25	a
	1/10/2003	6.98	173.26	--	16,000	300	320	580	830	ND<100	a,b
	4/21/2003	7.25	172.99	--	12,000	350	260	610	380	ND<50	a
	7/9/2003	7.99	172.25	--	3,300	51	7.4	47	2.8	ND<17	a
	10/7/2003	8.21	172.03	--	2,400	93	11	34	22	ND<50	a
	1/22/2004	7.24	173.00	--	5,900	240	130	350	200	ND<50	a
	4/2/2004	6.29	173.95	--	37,000	840	1,500	1,300	5,900	ND<500	a
	12/29/2004	5.37	174.87	--	9,300	240	230	330	880	ND<50	a
	1/27/2005	6.38	173.86	--	37,000	1,200	1,400	1,300	5,200	<250	a
	4/6/2005	5.88	174.36	--	21,000	400	340	780	1,700	ND<100	a
	7/28/2005	6.61	173.63	--	35,000	690	1,200	1,200	5,200	ND<500	a
	10/14/2005	6.80	173.44	--	14,000	380	120	780	1,200	ND<100	a, b
	1/30/2006	5.91	174.33	--	22,000	310	140	1,300	2,800	ND<50	a,b,i
	4/11/2006	5.65	174.59	--	18,000	280	170	780	1,400	ND<250	a,b,i
	7/14/2006	6.76	173.48	--	49,000	340	140	1,600	4,800	ND<500	a,b
	10/13/2006	6.74	173.50	--	21,000	490	73	600	1,100	ND<110	a,b,i
	1/12/2007	**6.55**	**173.69**	--	**16,000**	**320**	**170**	**600**	**2,100**	**ND<250**	**a,i**
MW-3	1/4/1993	--	--	--	1,610	772	14	11	ND	--	
179.94	4/22/1993	--	--	--	3,040	980	34	19	16	--	
	12/27/1994	--	--	--	2,600	180	9.0	7.2	13	--	
	6/27/1996	13.20	166.74	--	2,000	22	2.9	11	7.4	56	
	12/10/1996	13.13	166.81	--	970	ND<0.5	ND<0.5	ND<0.5	ND<0.5	24	
	5/8/1998	13.03	166.91	--	780	3.7	2.1	1.1	2.4	ND<32	a
	8/17/1998	13.22	166.72	--	870	2.8	ND<0.5	ND<0.5	3.7	ND<5.0	b,c
	11/4/1998	13.31	166.63	--	770	1.6	4.4	2.0	6.9	ND<30	c
	2/17/1999	12.89	167.05	--	650	6.2	3.4	1.5	2.6	ND<5.0	b,c
	5/27/1999	12.32	167.62	--	570	1.5	1.2	0.72	1.1	ND<20	a
	8/19/1999	13.19	166.75	--	830	ND<0.5	1.9	ND<0.5	1.3	ND<20	c,d
179.55	11/23/1999	13.26	166.29	--	900	ND<0.5	1.8	0.56	1.4	ND<20	c,d
	2/17/2000	12.78	166.77	--	250	ND<0.5	1.5	ND<0.5	0.62	ND<5.0	d
	5/9/2000	12.92	166.63	--	690	ND<0.5	2.1	0.85	1.6	ND<5.0	a
	8/15/2000	13.19	166.36	--	610	ND<0.5	2.3	0.75	1.2	ND<5.0	c,d
	12/1/2000	7.50	172.05	--	120	ND<0.5	0.90	0.65	0.62	ND<5.0	c,d
	2/8/2001	7.20	172.35	--	87	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	c,d
	4/9/2001	7.33	172.22	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	

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Table 2. Groundwater Elevation and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID	Date	Depth to Groundwater	Groundwater Elevation	SPH Thickness	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
TOC (ft)*		(ft)	(ft msl**)	(ft)	←			(µg/L)		→	
MW-3 cont'd	8/6/2001	7.61	171.94	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/22/2001	7.58	171.97	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	2/1/2002	7.53	172.02	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	8.5/8.5	
	4/19/2002	7.95	171.60	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	9.0/11	
	7/16/2002	7.68	171.87	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	20/30	
	10/3/2002	7.78	171.77	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/10/2003	6.91	172.64	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	19/16	
sampled annually	4/21/2003	7.21	172.34	--	--	--	--	--	--	--	
	7/9/2003	8.05	171.50	--	--	--	--	--	--	--	
	10/7/2003	8.19	171.36	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/22/2004	7.13	172.42	--	--	--	--	--	--	--	
	4/2/2004	5.73	173.82	--	--	--	--	--	--	--	
	12/29/2004	4.88	174.67	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/27/2005	5.80	173.75	--	--	--	--	--	--	--	
	4/6/2005	5.49	174.06	--	--	--	--	--	--	--	
	7/28/2005	6.02	173.53	--	--	--	--	--	--	--	
	10/14/2005	6.11	173.44	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/30/2006	5.45	174.10	--	--	--	--	--	--	--	
	4/11/2006	5.22	174.33	--	--	--	--	--	--	--	
	7/14/2006	6.15	173.40	--	--	--	--	--	--	--	
	10/13/2006	6.03	173.52	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/12/2007	**5.98**	**173.57**	--	--	--	--	--	--	--	
MW-4	6/27/1996	17.03	163.51	--	720	2	0.5	2.5	23	3.2	
180.54	12/10/1996	8.50	172.04	--	80	2.4	ND<0.5	ND<0.5	6.6	ND<2.0	
	5/8/1998	11.46	169.08	--	ND<50	0.60	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	8/17/1998	13.98	166.56	--	ND<50	ND<0.5	ND<0.5	ND<0.5	0.5	ND<5.0	
	11/4/1998	14.36	166.18	--	96	9.7	8.1	4.8	18	ND<5.0	a
	2/17/1999	8.39	172.15	--	ND<50	ND<0.5	ND<0.5	ND<0.5	0.5	ND<5.0	
	5/27/1999	12.80	167.74	--	ND<50	ND<0.5	1.0	ND<0.5	2.9	ND<5.0	
	8/19/1999	14.42	166.12	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
180.12	11/23/1999	14.63	165.49	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	2/17/2000	8.15	171.97	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	5/9/2000	12.81	167.31	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	8/15/2000	14.29	165.83	--	ND<50	2.1	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	12/1/2000	12.80	167.32	--	81	6.0	8.4	1.0	5.6	ND<5.0	a
	2/8/2001	12.57	167.55	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/9/2001	12.50	167.62	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	8/6/2001	14.00	166.12	--	59	1.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	a
	10/22/2001	14.05	166.07	--	130	6.3	ND<0.5	0.88	ND<0.5	ND<5.0	a
	2/1/2002	13.47	166.65	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/19/2002	13.55	166.57	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/16/2002	14.05	166.07	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/3/2002	13.09	167.03	--	77	2.1	0.51	ND<0.5	ND<0.5	ND<5.0	a
	1/10/2003	12.04	168.08	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	20/15	a
sampled annually	4/21/2003	12.15	167.97	--	--	--	--	--	--	--	
	7/9/2003	12.90	167.22	--	--	--	--	--	--	--	
	10/7/2003	13.15	166.97	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/22/2004	12.09	168.03	--	--	--	--	--	--	--	
	4/2/2004	8.97	171.15	--	--	--	--	--	--	--	
	12/29/2004	7.85	172.27	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/27/2005	8.28	171.84	--	--	--	--	--	--	--	
	4/6/2005	8.07	172.05	--	--	--	--	--	--	--	
	7/28/2005	10.83	169.29	--	--	--	--	--	--	--	
	10/14/2005	11.49	168.63	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	

Table 2. Groundwater Elevation and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID *TOC (ft*)*	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft msl**)	SPH Thickness (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					←			(µg/L)		→	
MW-4 cont'd	1/30/2006	8.04	172.08	--	--	--	--	--	--	--	
	4/11/2006	8.03	172.09	--	--	--	--	--	--	--	
	7/14/2006	10.72	169.40	--	--	--	--	--	--	--	
	10/13/2006	11.25	168.87	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/12/2007	**8.89**	**171.23**	--	--	--	--	--	--	--	
MW-5	6/27/1996	13.62	166.74	0.16	--	--	--	--	--	--	
180.23	12/10/1996	13.26	167.77	1.00	--	--	--	--	--	--	
	5/8/1998	13.15	167.11	0.04	--	--	--	--	--	--	
	8/17/1998	13.36	166.89	0.02	--	--	--	--	--	--	
	11/4/1998	13.52	166.73	0.02	--	--	--	--	--	--	
	2/17/1999	13.02	167.23	0.02	--	--	--	--	--	--	
	5/27/1999	13.80	166.71	0.35	--	--	--	--	--	--	
	8/19/1999	13.45	166.86	0.10	--	--	--	--	--	--	
180.09	11/23/1999	14.03	166.35	0.36	--	--	--	--	--	--	
	2/17/2000	13.28	167.02	0.26	--	--	--	--	--	--	
	5/9/2000	13.55	166.77	0.29	--	--	--	--	--	--	
	8/15/2000	13.58	166.54	0.04	--	--	--	--	--	--	
	12/1/2000	8.00	172.09	0.00	54,000	240	1,700	870	1,000	ND<300	c,d
180.04	2/8/2001	7.88	172.16	0.00	33,000	63	420	120	4,500	ND<50	a,b
	4/9/2001	7.97	172.07	0.00	--	--	--	--	--	--	
	4/24/2001	7.00	173.04	0.00	3,200	ND<1.0	11	7	260	ND<5.0	c,d
	8/6/2001	8.17	171.87	--	2,700	11	40	21	240	ND<5.0	a
	10/22/2001	8.15	171.89	--	20,000	200	1,200	330	2,900	ND<100	a,b
	2/1/2002	8.07	171.97	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/19/2002	8.51	171.53	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/16/2002	8.40	171.64	--	ND<50	ND<0.5	ND<0.5	ND<0.5	1.7	ND<5.0	
	10/3/2002	8.18	171.86	--	15,000	94	830	460	2,200	ND<500	a
	1/10/2003	6.95	173.09	--	290	ND<0.5	1.8	ND<0.5	17	ND<5.0	a
	4/21/2003	7.18	172.86	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/9/2003	7.95	172.09	--	ND<50	ND<0.5	ND<0.5	ND<0.5	2.7	ND<5.0	
	10/7/2003	8.22	171.82	--	9,800	120	340	180	2,000	ND<50	a
	1/22/2004	7.18	172.86	--	250	ND<0.5	0.82	ND<0.5	29	ND<5.0	d
	4/2/2004	6.23	173.81	--	4,300	6.3	18	59	750	ND<25	a
MW-5 cont'd	12/29/2004	5.27	174.77	--	72	ND<0.5	0.78	ND<0.5	6.5	ND<5.0	d
	1/27/2005	6.25	173.79	--	3,300	<5.0	22	18	320	<50	a
	4/6/2005	5.90	174.14	--	3,100	1.3	6.9	7.2	100	ND<10	c,d
	7/28/2005	6.50	173.54	--	18,000	53	230	130	2,100	ND<500	a
	10/14/2005	6.65	173.39	--	23,000	140	370	240	2,100	ND<500	a, b
	1/30/2006	5.96	174.08	--	2,500	1.0	8.7	ND<1.0	130	ND<10	b,c,d
	4/11/2006	5.63	174.41	--	1,200	1.3	3.1	1.7	54	ND<5.0	a
	7/14/2006	6.65	173.39	--	13,000	27	66	30	480	ND<50	a,b
	10/13/2006	6.60	173.44	--	23,000	170	390	260	2,500	ND<250	a,b
	1/12/2007	**6.50**	**173.54**	--	**17,000**	**72**	**130**	**70**	**1,600**	**ND<250**	**a,h,i**
MW-6	6/27/1996	18.55	161.48	--	ND	ND	ND	ND	ND	--	
180.03	12/10/1999	11.79	168.24	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.0	
	5/8/1998	11.62	168.41	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	8/17/1998	12.66	167.37	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	11/4/1998	13.56	166.47	--	68	3.8	3.7	2.8	11	ND<5.0	a
	2/17/1999	12.91	167.12	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	5/27/1999	13.03	167.00	--	ND<50	1.0	1.7	0.82	4.9	ND<5.0	
	8/19/1999	13.10	166.93	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
179.63	11/23/1999	13.58	166.05	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	2/17/2000	10.72	168.91	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	5/9/2000	11.71	167.92	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	

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Table 2. Groundwater Elevation and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID	Date	Depth to Groundwater	Groundwater Elevation	SPH Thickness	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
TOC (ft)*		(ft)	(ft msl**)	(ft)	←			(µg/L)		→	
MW-6 cont'd	8/15/2000	12.49	167.14	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	12/1/2000	8.64	170.99	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	2/8/2001	8.20	171.43	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/9/2001	8.53	171.10	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	8/6/2001	8.69	170.94	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/22/2001	8.75	170.88	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	2/1/2002	8.31	171.32	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	4/19/2002	8.62	171.01	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	7/16/2002	8.84	170.79	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	10/3/2002	8.71	170.92	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/10/2003	6.99	172.64	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	19 (16)	
sampled annually	4/21/2003	7.15	172.48	--	--	--	--	--	--	--	
	7/9/2003	7.98	171.65	--	--	--	--	--	--	--	
	10/7/2003	8.28	171.35	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/22/2004	7.15	172.48	--	--	--	--	--	--	--	
	4/2/2004	6.56	173.07	--	--	--	--	--	--	--	
	12/29/2004	5.63	174.00	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/27/2005	6.66	172.97	--	--	--	--	--	--	--	
	4/6/2005	6.25	173.38	--	--	--	--	--	--	--	
	7/28/2005	6.71	172.92	--	--	--	--	--	--	--	
	10/14/2005	6.86	172.77	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/30/2006	6.35	173.28	--	--	--	--	--	--	--	
	4/11/2006	5.89	173.74	--	--	--	--	--	--	--	
	7/14/2006	6.80	172.83	--	--	--	--	--	--	--	
	10/13/2006	6.75	172.88	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	1/12/2007	**6.61**	**173.02**	--	--	--	--	--	--	--	
Trip Blank	5/8/1998	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	11/4/1998	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	5/27/1999	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	11/23/1999	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	12/1/2000	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	

Abbreviations and Methods:

TOC = Top of casing elevation

ft = Measured in feet

ft msl = elevation in feet mean sea level.

SPH = Separate phase hydrocarbons

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method SW8015C

Benzene, toluene, ethylbenzene, and xylenes by EPA Method SW8021B

MTBE = Methyl tertiary butyl ether by EPA Method SW8021B or SW8260B

µg/L = Micrograms per liter

-- = Not sampled, not analyzed, or not applicable

ND<0.5 = Not Detected (ND) above Detection Limit.

x.x/y.y = Result of EPA Method SW8021B / Result of EPA Method SW8260B

Analytical Laboratory Notes:

a - Unmodified or weakly modified gasoline is significant.

b - Lighter than water immiscible sheen is present.

c - No recognizable pattern on laboratory chromatogram.

d - Heavier gasoline range compounds are significant (aged gasoline?).

f - One to a few isolated non-target peaks present on laboratory chromatogram.

h = lighter than water immiscible sheen/product present.

i- Liquid sample contains greater than ~1 vol. % sediment

j - Sample diluted due to high organic content.

* = 2006 grab groundwater samples collected from 20 ft bgs.

** = Calculated groundwater elevation corrected for SPH by the relation: Groundwater Elevation = Well Elevation - Depth to Water + (0.8xSPH thickness (ft))

*** = Due to the air sparge system running during sampling, samples collected on 4/9/01 were anomalous. Well was resampled on 4/24/01 with the air sparge system off.

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Table 3. Soil Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Sample ID	Sample Depth (ft)	Sample Date	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
			← (mg/kg) →						
B-1-5	5	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-1-10	10	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-1-15	15	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	**0.011**	ND<0.005	
B-1-19.5	19.5	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-2-5	5	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-2-10	10	12/21/06	**3.3**	**0.043**	ND<0.005	ND<0.005	ND<0.005	**0.01**	a
B-2-15	15	12/21/06	**140**	**0.54**	**0.74**	**0.83**	**6.1**	<0.20	a
B-2-19.5	19.5	12/21/06	ND<1.0	**0.026**	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-3-5.5	5.5	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-3-10	10	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-3-15	15	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-4-5.5	5.5	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-4-10	10	12/21/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-4-15	15	12/21/06	ND<1.0	<0.050	**0.060**	**1.2**	**2.7**	ND<0.050	
B-4-19.5	19.5	12/21/06	**15**	ND<0.005	ND<0.005	**0.0057**	**0.0097**	ND<0.005	b,m
B-5-5.5	5.5	12/22/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-5-10	10	12/22/06	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
B-5-15	15	12/22/06	**560**	ND<1.0	**3.2**	**9.6**	**69**	ND<1.0	a
B-5-19.5	19.5	12/22/06	**4.2**	ND<0.005	ND<0.005	**0.017**	**0.12**	ND<0.005	b,m
(MW-1) B1-5.0	5	01/07/93	ND	ND	ND	ND	ND	--	
(MW-1) B1-10.0	10	01/07/93	ND	ND	ND	ND	ND	--	
(MW-1) B1-15.0	15	01/07/93	ND	ND	ND	ND	ND	--	
(MW-1) B1-20.0	20	01/07/93	ND	ND	ND	ND	ND	--	
(MW-2) B2-5.0	5	01/07/93	**5.5**	ND	ND	ND	ND	--	
(MW-2) B2-10.0	10	01/07/93	**1,460**	ND	**6.44**	ND	**63.1**	--	
(MW-2) B2-15.5	15.5	01/07/93	**17.8**	**0.849**	**0.125**	ND	**0.309**	--	
(MW-2) B2-20.5	20.5	01/07/93	ND	ND	ND	ND	ND	--	
(MW-3) B3-5.0	5	01/07/93	ND	ND	ND	ND	ND	--	
(MW-3) B3-10.0	10	01/07/93	ND	ND	ND	ND	ND	--	
(MW-3) B3-15.0	15	01/07/93	ND	ND	ND	ND	ND	--	
(MW-3) B3-20.0	20	01/07/93	ND	ND	ND	ND	ND	--	
MW-4-10	10	06/26/96	ND<1.0	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0025	--	
MW-5-10	10	06/26/96	ND<1.0	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0025	--	
MW-5-15	15	06/26/96	ND<1.0	**0.049**	**0.094**	**0.022**	**0.13**	--	
MW-6-10	10	06/26/96	ND<1.0	ND<0.0025	ND<0.0025	ND<0.0025	ND<0.0025	--	
G-2-10	10	06/24/96	ND	ND	ND	ND	ND	--	
G-2-15	15	06/24/96	ND	**0.006**	**0.009**	ND	**0.025**	--	
G-3B-10	10	06/24/96	ND	ND	ND	ND	ND	--	
G-3B-14.5	14.5	06/24/96	**1.5**	**0.14**	**0.012**	**0.052**	**0.18**	--	
G-4-10	10	06/24/96	ND	ND	ND	ND	ND	--	
G-5-7	7	06/24/96	ND	ND	ND	ND	ND	--	
G-5-12	12	06/24/96	ND	ND	ND	ND	ND	--	
G-6-10	10	06/24/96	ND	ND	ND	ND	ND	--	
G-7B-5	5	06/24/96	ND	ND	ND	ND	ND	--	
G-7B-10	10	06/24/96	ND	ND	ND	ND	ND	--	
G-8-10	10	06/24/96	ND	ND	ND	ND	ND	--	
G-9-11.5	11.5	06/24/96	**98**	**0.079**	**0.064**	**1.3**	**4.2**	--	
G-9-12.5	12.5	06/24/96	**860**	**3.1**	**11**	**14**	**97**	--	

Table 3. Soil Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Sample ID	Sample Depth (ft)	Sample Date	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
			← (mg/kg) →						

Notes:

TPHg = Total petroleum hydrocarbons as gasoline.

Benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8260 for 2006 soil samples.

Bold = Bold indicates concentration detected above laboratory reporting limit.

ND<X= Not detected above detection limit.

-- = Not analyzed.

a = Unmodified or weakly modified gasoline is significant.

b = Heavier gasoline range compounds are significant (aged gasoline?).

m = No recognizable pattern.

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Table 4. Soil Vapor Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Sample ID	Date Sampled	Depth (ft)	Benzene ($\mu g/m^3$)
SG-1	1/18/2007	5	**4.2**
SG-2	1/19/2007	5	**6.4**
SG-3	1/18/2007	5	ND<3.9
SG-4	1/18/2007	5	*Not sampled. Groundwater encountered in probe.*
SG-5	1/18/2007	5	ND<3.9
SG-6	1/18/2007	5	ND<3.9
SG-7	1/19/2007	5	**4.4**
SG-8	1/19/2007	5	**15**
SG-9	1/19/2007	5	ND<73
Duplicate Samples			
SG-1-Dup	1/18/2007	5	3.9
SG-2-Dup	1/19/2007	5	6.5
SG-7-Dup	1/19/2007	5	ND<3.6

Environmental Screening Levels, RWQCB-SFBR (2005)

RWQCB ESL Commercial/Industrial Land Use	290
RWQCB ESL Residential Land Use	85

Abbreviations and Analyses:

ND<n = Not dectected (ND) above laboratory detection limit, n.

ug/m^3 = Microgram per cubic meter.

ft = Measured in feet

Benzene by modified EPA Method TO-15.

Laboratory data qualifying flags:

n = The identification is based on presumptive evidence.

j = Estimated value

APPENDIX A

Agency Correspondence

Jonas, Mark

From: Jonas, Mark
Sent: Wednesday, November 29, 2006 3:56 PM
To: 'Hwang, Don, Env. Health'
Cc: Hernandez, Celina
Subject: Approved Extension - Hooshi's FLC#RO0000516

Dear Don:
Thank you for the extension.

Sincerely,
Mark Jonas
Cambria Environmental Technology, Inc.
510/420-3307

From: Hwang, Don, Env. Health [mailto:don.hwang@acgov.org]
Sent: Wednesday, November 29, 2006 1:34 PM
To: Jonas, Mark
Subject: RE: Request for Extension - Hooshi's FLC#RO0000516

ok

From: Jonas, Mark [mailto:mjonas@cambria-env.com]
Sent: Monday, November 20, 2006 12:09 PM
To: Hwang, Don, Env. Health
Subject: Request for Extension - Hooshi's FLC#RO0000516

Dear Don:
I hope all is going well with you.

We are requesting an extension for the Investigation Report for the Hooshi's site, located at 1499 MacArthur Boulevard, in Oakland, California, Fuel Leak Case #RO0000516. On July 20, 2006 we submitted the "Work Plan Additional Site Assessment." On September 15, 2006 we received the attached conditional approval to proceed from ACEH. We clarified some outstanding issues in a October 18, 2006 e-mail (considered the Letter Addendum to Workplan), and we received approval from you on October 31, 2006 via e-mail. Thank you for your approval. The September 15, 2006 letter (attached) stated "45 days after Workplan Approval – Soil and Groundwater Investigation Report." If we consider that the October 31, 2006 approval is the "Workplan Approval" then the due date would be December 15, 2006.

We have yet to receive approval from the client to proceed, we are having trouble scheduling drillers, and we need time to perform the work so **we request a due date of March 1, 2007 for submittal of the Investigation Report**. This should provide us the necessary time to schedule and perform the field work, analyze the samples, and write the report.

Sincerely,
Mark Jonas
Mark Jonas, P.G.
Senior Project Manager, x-107
Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A, Emeryville, California 94608
510/420-3307; 510/420-9170 fax

Jonas, Mark

From: Jonas, Mark
Sent: Tuesday, October 31, 2006 4:57 PM
To: 'Hwang, Don, Env. Health'
Subject: RE: Technical Comments ACEH 9-15-2006 ACEH Letter

Dear Don:
Thank you for your approval. We will consider this e-mail the Letter Addendum to Workplan, per the September 15, 2006 agency correspondence.

Sincerely,
Mark Jonas
Cambria Environmental Technology, Inc.
510/420-3307

From: Hwang, Don, Env. Health [mailto:don.hwang@acgov.org]
Sent: Tuesday, October 31, 2006 3:41 PM
To: Jonas, Mark
Subject: RE: Technical Comments ACEH 9-15-2006 ACEH Letter

Dear Mark, Your Recommendations are approveable. Don

From: Jonas, Mark [mailto:mjonas@cambria-env.com]
Sent: Wednesday, October 18, 2006 1:17 PM
To: Hwang, Don, Env. Health
Subject: Technical Comments ACEH 9-15-2006 ACEH Letter

Dear Don:
Attached is the September 15, 2006 ACEH letter for Hooshi's, Fuel Leak Case #RO0000516. I'd like to discuss some of the comments with you before we submit the Letter Addendum to Work Plan. Please consider the following:

Discussion of Comment 1: Source Area Verification Soil Sampling – In the Work Plan we proposed collecting soil samples at 5, 10, and 15 ft bgs. Most of the earlier data (presented in Table 2 of the Work Plan) sampled at these depths. ACEH asked that we not collect samples at 5, 10, and 15 ft bgs; but collect samples at changes of lithology, the soil/groundwater interface, and at areas of obvious contamination.

Recommendation: Collect soil samples at 5, 10, and 15 ft bgs, along with at significant changes of lithology, the soil/groundwater interface (if encountered before the maximum boring depth of 20 ft bgs), and at areas of obvious contamination.

Discussion of Comment 2 – Soil Gas Sampling – In the Work Plan we provided a very specific SOP for soil vapor sampling, including graphics. We proposed to collect soil gas samples at 5 ft bgs (in accord with DTSC guidance). Proposed sampling locations were identified on a figure. We proposed to analyze soil gas for benzene using analytical methods TO-15, TO-14A, or 8260. The ACEH comment states that "No specific procedures were provided" and asked that we present "the method, sample collection depth, etc." All this information was presented in the Work Plan:

Recommendation: Use the "shallow soil vapor point method for soil sampling" (see SOP in Work Plan) and analyze for benzene using TO-15.

Thank you for your time and consideration. Please contact me to discuss and finalize these issues.

Sincerely,
Mark Jonas
Mark Jonas, P.G.

10/31/2006

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

September 15, 2006

Naomi Gatzke
1545 Scenic View Dr.
San Leandro, CA 94577

Dear Ms. Gatzke:

Subject: Fuel Leak Case No. RO0000516, Hooshi's Auto Service,
1499 MacArthur Blvd., Oakland, CA 94602

Alameda County Environmental Health (ACEH) staff has recently reviewed the "Work Plan Additional Site Assessment", dated July 20, 2006, prepared by Cambria Environmental Technology, Inc. The Workplan proposes soil, groundwater, and soil gas sampling. We request that you address the following technical comments, perform the proposed work, and send us the reports requested below.

TECHNICAL COMMENTS

1. **Source Area Verification Soil Sampling -** The Workplan proposes that soil samples be collected from 5, 10, and 15 ft bgs. Instead, soil samples shall be collected at changes of lithology, at the soil/groundwater interface, and at areas of obvious contamination. Please clarify your proposal for soil sampling in a letter addendum to the Workplan.

2. **Soil Gas Sampling -** Cambria Environmental Technology's standard field methods for direct push and shallow soil vapor point soil vapor sampling were provided. No site specific procedures were provided. Please provide site specific procedures to evaluate the vapor pathway at this site, such as the method, sample collection depth, etc., and include in the letter addendum to the Workplan.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Don Hwang), according to the following schedule:

- **November 12, 2006 – Letter Addendum to Workplan**
- **45 days after Workplan Approval - Soil and Groundwater Investigation Report**

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6746.

Sincerely,

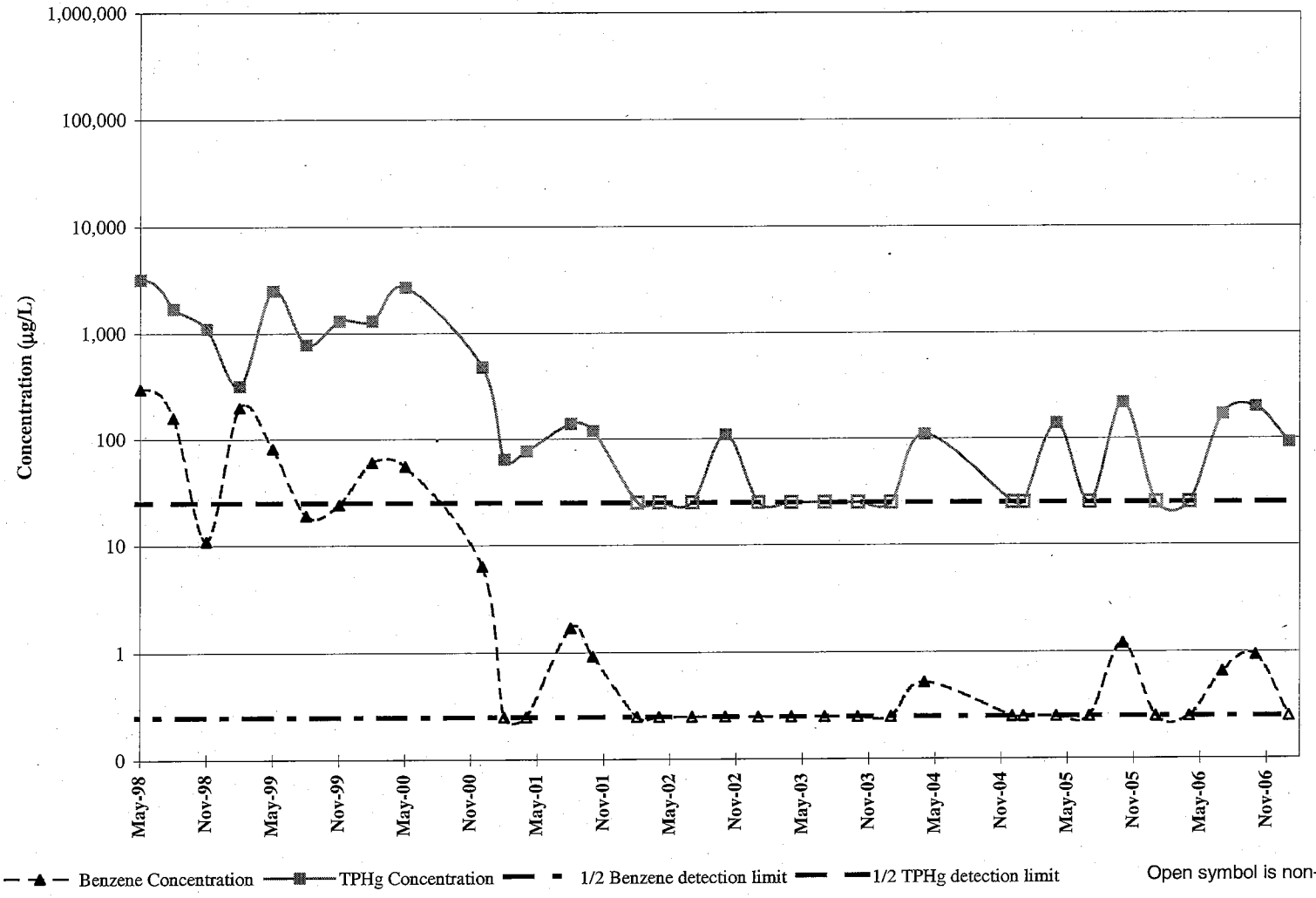
Don Hwang
Hazardous Materials Specialist

cc: Mark Jonas, Cambria Environmental Technology, Inc., 5900 Hollis St., Suite A, Oakland, CA 94608
Kevin Graves, SWQCB, Underground Storage Tank Cleanup Unit, P.O. Box 2231, Sacramento, CA 95812
Sunil Ramdass, SWQCB, Division of Financial Assistance/Underground Storage Tank Cleanup Fund, 1001 I St., P.O. Box 944212, Sacramento, CA 94244
Donna Drogos
File

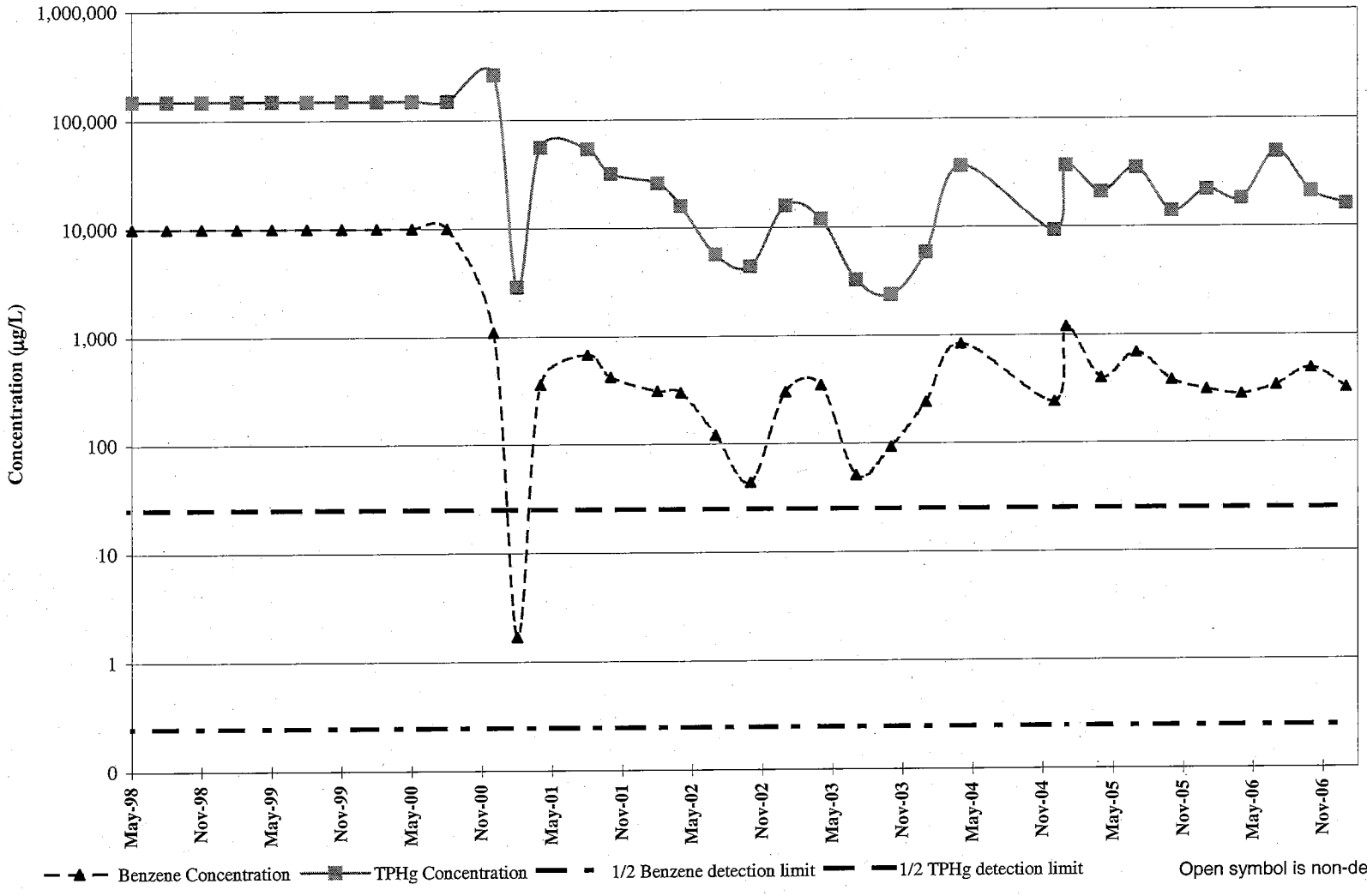
APPENDIX B

Groundwater Concentration
Trend Analysis

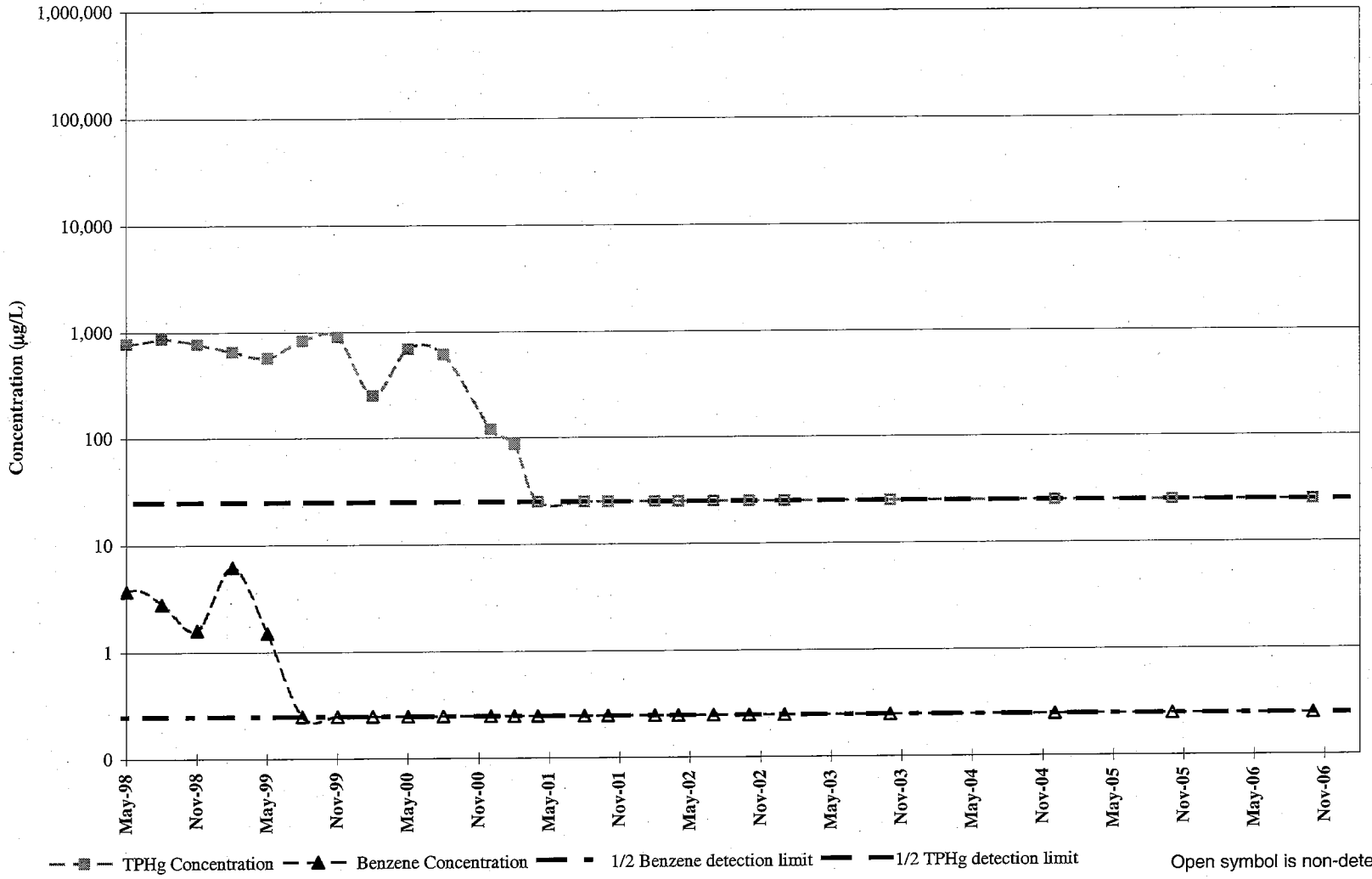
Monitoring Well MW-1
TPHg and Benzene Concentration Trend
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA



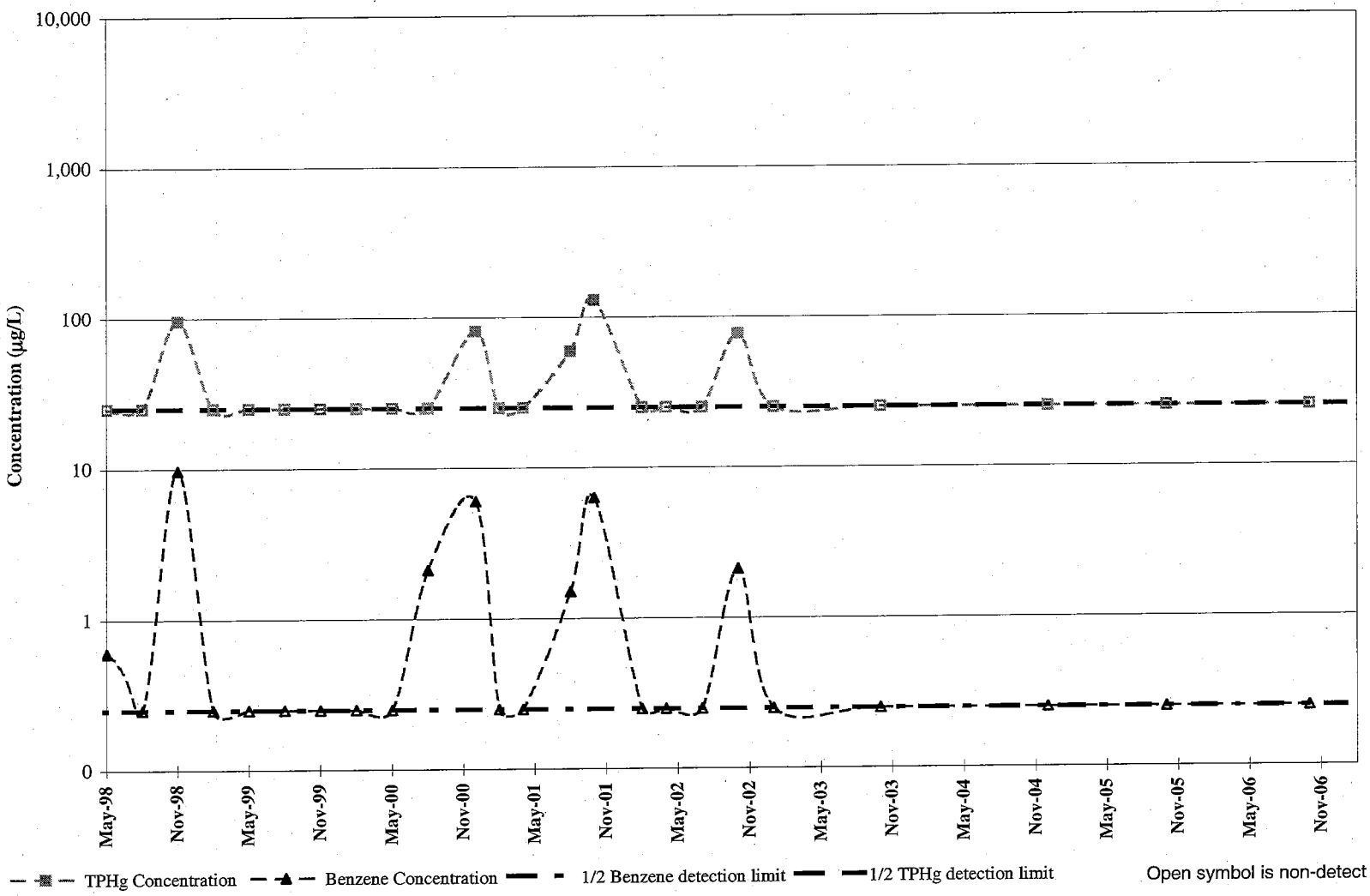
Monitoring Well MW-2
TPHg and Benzene Concentration Trend
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA



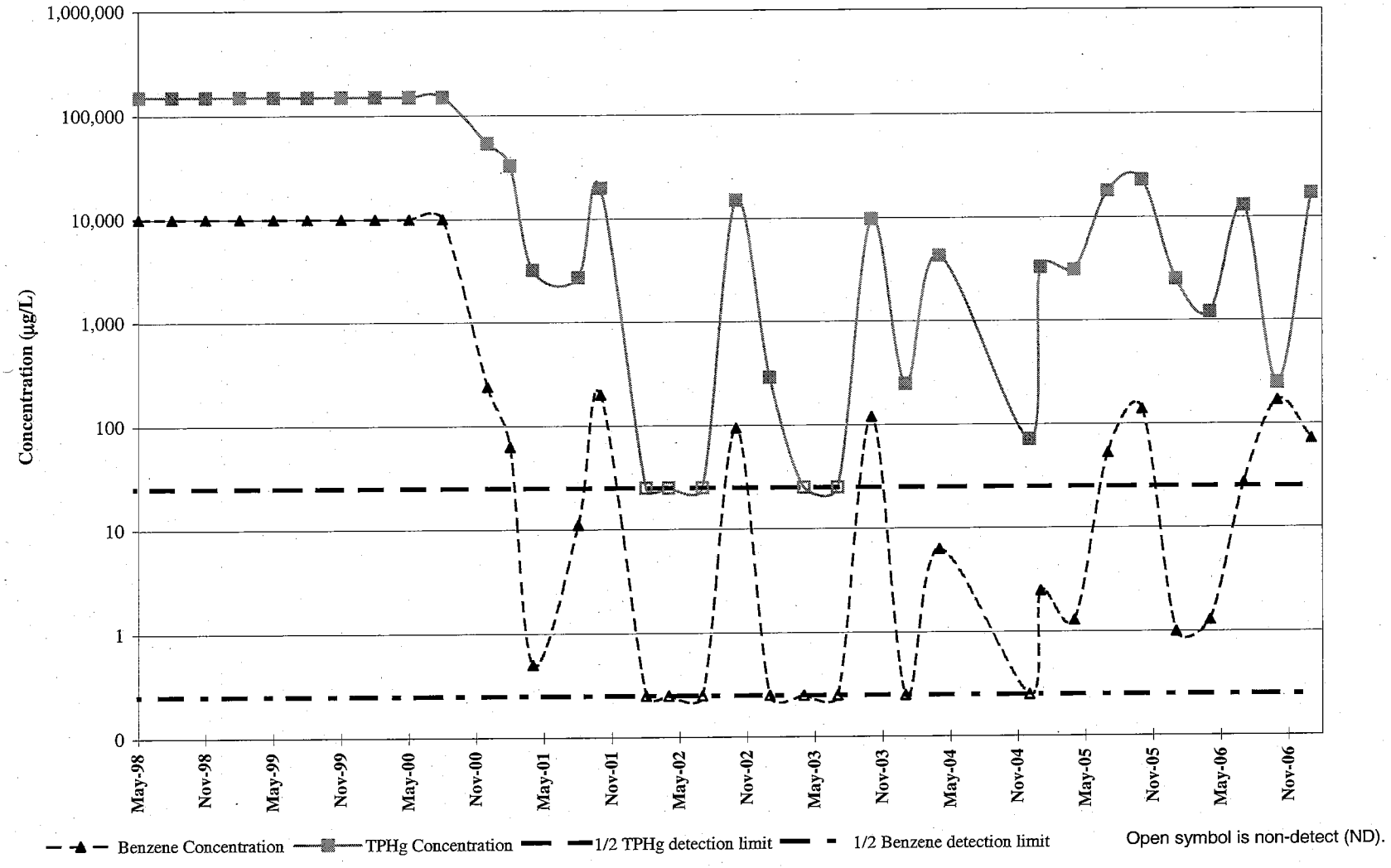
Monitoring Well MW-3
TPHg and Benzene Concentration Trend
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA



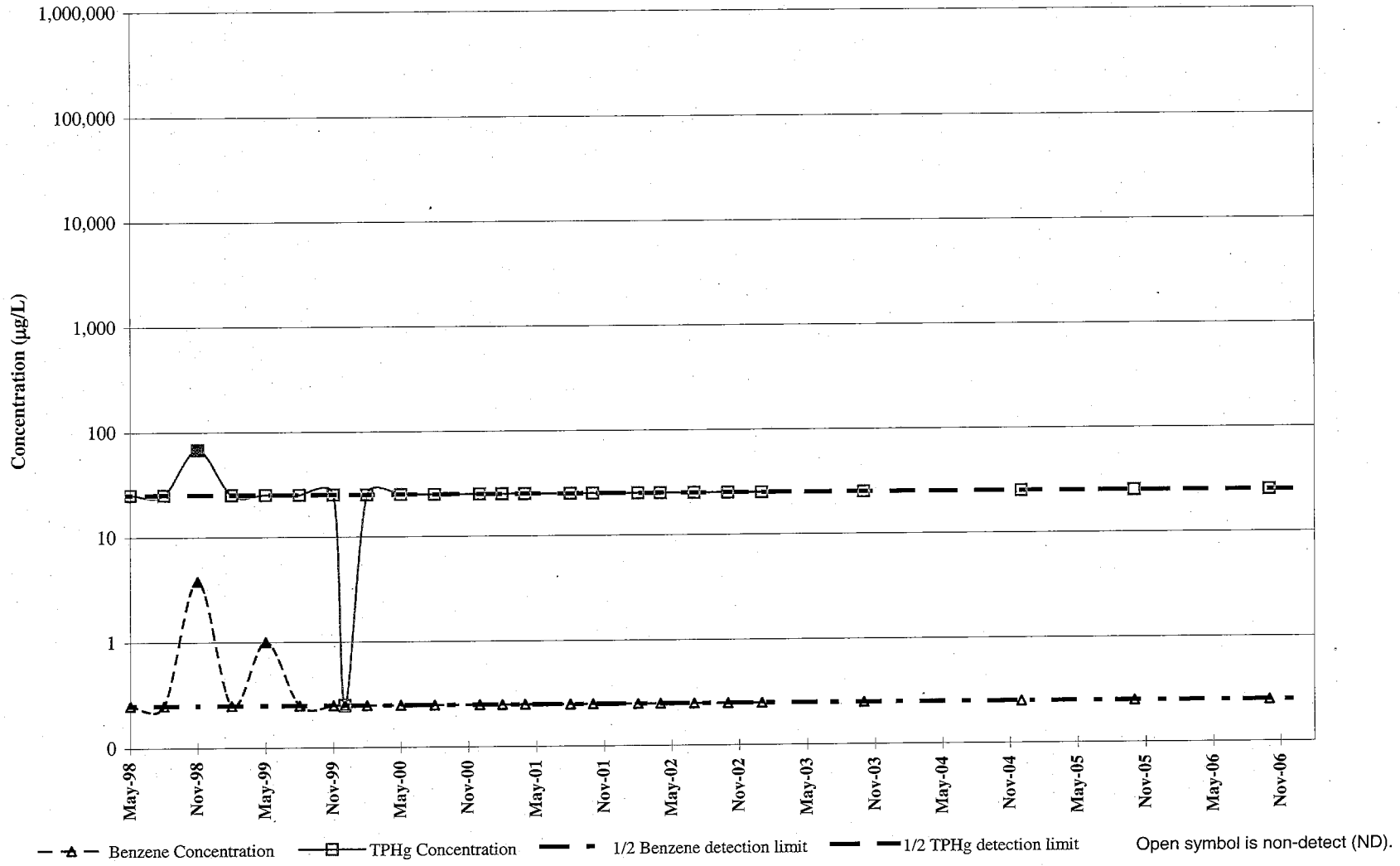
Monitoring Well MW-4
TPHg and Benzene Concentration Trend
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA



Monitoring Well MW-5
TPHg and Benzene Concentration Trend
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA



Monitoring Well MW-6
TPHg and Benzene Concentration Trend
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA



APPENDIX C

Standard Operating Procedures

STANDARD FIELD PROCEDURES FOR GEOPROBE® SOIL AND GROUNDWATER SAMPLING

This document describes Cambria Environmental Technology, Inc.'s standard field methods for GeoProbe® soil and groundwater sampling. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Objectives

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

Soil Classification/Logging

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

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

Soil Sampling

GeoProbe® soil samples are collected from borings driven using hydraulic push technologies. A minimum of one and one half ft of the soil column is collected for every five ft of drilled depth. Additional soil samples can be collected near the water table and at lithologic changes. Samples are collected using samplers lined with polyethylene or brass tubes driven into undisturbed sediments at the bottom of the borehole. The ground surface immediately adjacent to the boring is used as a datum to measure sample depth. The horizontal location of each boring is measured in the field relative to a permanent on-site reference using a measuring wheel or tape measure.

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

Sample Storage, Handling and Transport

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

Field Screening

After a soil sample has been collected, soil from the remaining tubing is placed inside a sealed plastic bag and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable GasTech® or photoionization detector measures volatile hydrocarbon vapor concentrations in the bag's headspace, extracting the vapor through a slit in the plastic bag. The measurements are used along with the field observations, odors, stratigraphy and ground water depth to select soil samples for analysis.

Grab Groundwater Sampling

Groundwater samples are collected from the open borehole using bailers, advancing disposable Tygon® tubing into the borehole and extracting ground water using a diaphragm pump, or using a hydro-punch style sampler with a bailer or tubing. The ground water samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4° C, and transported under chain-of-custody to the laboratory.

Duplicates and Blanks

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

Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

F:\TEMPLATE\SOPS\GEOPROBE.DOC

STANDARD FIELD PROCEDURES FOR SOIL VAPOR SAMPLING
SOIL VAPOR PROBE

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

Objectives

Soil vapor samples are collected and analyzed to assess whether vapor-phase subsurface contaminants pose a threat to human health or the environment.

Soil Vapor Probe Installation

Soil vapor probes are installed in the vadose zone to check for hydrocarbon vapor migration. The wells are typically constructed with short screens to target horizons through which hydrocarbon vapor migration could occur. These wells can be constructed in borings drilled with hand auger equipment or using push technologies such as the Geoprobe and using non-collapsible polyethylene tubing set in small sand packed regions overlain by grout.

Soil Vapor Sampling

The required volume of soil vapor is purged through the polyethylene tubing using a standard vacuum pump. The soil vapor can then be sampled by attaching a vacuum sealed summa canister to the tubing. The summa canister should be attached to an air flow regulator and sediment filter which will regulate the rate that air can fill the summa canister. Once the canister is appropriately connected and a pressure test has been performed the canister can be opened and air allowed to flow in under vacuum pressure. Once the pressure valve reads -5 pounds per square inch the vacuum canister can be closed and sampling ended. Once collected, the vapor sample is transported under chain-of-custody to a state-certified laboratory. The ground surface immediately adjacent to the boring is used as a datum to measure sample depth. Drilling and sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Storage, Handling and Transport

Samples are stored and transported under chain-of-custody to a state-certified analytic laboratory. Samples should never be cooled due to the possibility of condensation within the canister.

Field Screening

After collecting a vapor sample for laboratory analysis, Cambria often collects an additional vapor sample for field screening using a portable photo-ionization detector (PID), flame-ionization detector (FID), or GasTech® combustible gas detector to measure volatile hydrocarbon vapor concentrations. These measurements are used along with the field observations, odors, stratigraphy and ground water depth to help select the best location for additional borings to be advanced during the field mobilization.

Grouting

The borings are filled to the ground surface with neat cement.

APPENDIX D

Soil Boring Logs
2006 Borings

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

BORING/WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	B-1
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	21-Dec-06
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	21-Dec-06
PROJECT NUMBER	129-0741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push		
BORING DIAMETER	2-inch	**SCREENED INTERVALS**	NA
LOGGED BY	C. McClelland	**DEPTH TO WATER (First Encountered)**	10.0 fbg (21-Dec-06) ▽
REVIEWED BY	M. Jonas	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	West side of former tank cavity		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT: 2-inches thick.	0.2	
							FILL: SAND with gravel: Light brown; damp; 10% clay, 10% silt, 60% coarse to fine grained sand, 20% gravel; low plasticity; moderate estimated permeability.		
0		B-1-5		5			@ 5-feet: moist.		
					ML		**Clayey SILT with sand:** Grey; moist; 25% clay, 60% silt, 15% sand; medium plasticity; low estimated permeability.	7.0	
							▽	10.0	◄ Portland Type I/II
0		B-1-10		10	SM		**Silty SAND:** Light brown; wet; 20% silt, 80% fine grained sand; non-plastic; high estimated permeability.	12.0	
							Clayey SAND with gravel: Light brown; moist; 20% clay, 60% medium coarse to coarse grained sand, 20% gravel; low plasticity; medium estimated permeability.		
0		B-1-15		15	SC		@ 15-feet: wet.		
0		B-1-19.5		20				20.0	Bottom of Boring @ 20 fbg

WELL LOG (PID) H:\GATZKE~1\GINTHOOSHI BORING LOGS DEC 2006.GPJ DEFAULT.GDT 1/26/07

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

BORING/WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	B-2
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	21-Dec-06
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	21-Dec-06
PROJECT NUMBER	129-0741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push		
BORING DIAMETER	2-inch	**SCREENED INTERVALS**	NA
LOGGED BY	C. McClelland	**DEPTH TO WATER (First Encountered)**	12.0 fbg (21-Dec-06) ▽
REVIEWED BY	M. Jonas	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	South side of former tank cavity, garage entrance		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT: 2-inches thick.	0.2	
							FILL: SAND with gravel: Light brown; damp; 10% clay, 10% silt, 60% coarse to fine grained sand, 20% gravel; low plasticity; moderate estimated permeability.		
							@ 3-feet: moist.		
0		B-2-5		5	ML		**Clayey SILT :** Brown; moist; 30% clay, 60% silt, 10% sand; low plasticity; low estimated permeability.	5.0	
								7.5	
					CL		**CLAY:** Light brown; moist; 60% clay, 40% silt; high plasticity; low estimated permeability.		
0		B-2-10		10					◄ Portland Type I/II
					GC		**Clayey GRAVEL :** Light brown; moist; 30% clay, 10% silt, 60% gravel; non-plastic; high estimated permeability. ▽	11.0	
					CL		**CLAY:** Brown; wet; 80% clay, 20% silt; high plasticity; low estimated permeability.	12.5 13.0	
							Clayey GRAVEL : Light brown; wet; 30% clay, 10% silt, 60% gravel; non-plastic; high estimated permeability.		
0		B-2-15		15	GC		@ 16-feet: 40% clay, 60% gravel; low plasticity; medium estimated permeability		
								18.0	
					ML		**Sandy SILT :** Light brown to grey; moist; 10% clay, 70% silt, 20% sand; medium plasticity; low estimated permeability.		
0		B-2-19.5		20				20.0	Bottom of Boring @ 20 fbg

WELL LOG (PID) H:\GATZKE~1\GINTHOOSHI BORING LOGS DEC 2006.GPJ DEFAULT.GDT 1/26/07

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

BORING/WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	B-3
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	21-Dec-06
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	21-Dec-06
PROJECT NUMBER	129-0741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push		
BORING DIAMETER	2-inch	**SCREENED INTERVALS**	NA
LOGGED BY	C. McClelland	**DEPTH TO WATER (First Encountered)**	6.0 fbg (21-Dec-06) ▽
REVIEWED BY	M. Jonas	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	East side of former tank cavity near canopy		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT: 2-inches thick.	0.2	
							FILL: SAND with gravel: Light brown; damp; 10% clay, 10% silt, 60% coarse to fine grained sand, 20% gravel; low plasticity; moderate estimated permeability.		
				5					
0		B-3-5 .5					▽	6.0	
							SILT with sand: Grey; wet; 10% clay, 60% silt, 30% sand; low plasticity; medium estimated permeability.		
					ML				Portland Type I/II
				10				10.0	
0		B-3-1 0			SC		**Clayey SAND:** Light brown; moist; 40% clay, 60% sand; medium plasticity; low estimated permeability.		
								12.0	
					SM		**SAND with silt :** Light brown; wet; 20% silt, 80% sand; non-plastic; high estimated permeability.		
								14.0	
				15	SC		**Clayey SAND with gravel:** Light brown to grey; moist; 20% clay, 60% sand, 20% gravel; low plasticity; high estimated permeability.		
0		B-3-1 5						16.0	
									Bottom of Boring @ 16 fbg

WELL LOG (PID) H:\GATZKE~1\GINT\HOOSHI BORING LOGS DEC 2006.GPJ DEFAULT.GDT 1/31/07

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

BORING/WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	B-4
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	21-Dec-06
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	21-Dec-06
PROJECT NUMBER	129-0741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push		
BORING DIAMETER	2-inch	**SCREENED INTERVALS**	NA
LOGGED BY	C. McClelland	**DEPTH TO WATER (First Encountered)**	5.0 fbg (21-Dec-06) ▽
REVIEWED BY	M. Jonas	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	North side of former tank cavity near driveway		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT: 2 inches thick.	0.2	
							FILL: SAND with gravel: Light brown; damp; 10% clay, 10% silt, 60% coarse to fine grained sand, 20% gravel; low plasticity; high estimated permeability.		
							@ 2-feet: moist.		
							@ 4-feet: wet; 30% clay, 60% sand, 10% gravel; medium plasticity; moderate estimated permeability. ▽	5.0	
				5			**Sandy CLAY:** Light brown; moist; 60% clay, 40% fine grained sand; medium plasticity; low estimated permeability.		
0		B-4-5 .5			CL				
								8.0	
							SAND with clay: Brown; damp; 40% clay, 60% sand; medium plasticity; low estimated permeability.		
0		B-4-1 0		10			@ 10-feet: Brown to red; damp; 20% clay, 60% sand, 20% gravel; low plasticity; high estimated permeability.		◄ Portland Type I/II
							@ 12-feet: Light brown; wet; 20% clay, 80% sand; non-plastic.		
					SC		@ 14-feet: Damp; 20% clay, 60% sand, 20% gravel; low plasticity.		
0		B-4-1 5		15			@ 16-feet: Wet; 20% clay, 75% sand, 5% gravel; non-plastic.		
							@ 18-feet: Light brown to grey; damp; 20% clay, 60% sand, 20% gravel; low plasticity.		
0		B-4-1 9.5		20				20.0	Bottom of Boring @ 20 fbg

WELL LOG (PID) H:\GATZKE~1\GINTHOOSHI BORING LOGS DEC 2006.GPJ DEFAULT.GDT 1/26/07

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

BORING/WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	B-5
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	22-Dec-06
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	22-Dec-06
PROJECT NUMBER	129-0741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push		
BORING DIAMETER	2-inch	**SCREENED INTERVALS**	NA
LOGGED BY	C. Hernandez	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	M. Jonas	**DEPTH TO WATER (Static)**	NA
REMARKS	Northeast corner of former tank cavity near canopy		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT: 2 inches thick.	0.2	
							FILL: SAND with gravel: Light brown; damp; 10% clay, 10% silt, 60% fine sand, 20% gravel; low plasticity; low to moderate estimated permeability.		
								3.0	
					ML		**Clayey SILT with sand:** Light brown; soft; moist; 25% clay, 55% silt, 20% fine grained sand; medium plasticity; low estimated permeability.		
				5			@ 4.5-feet: Light brown; soft; moist; 15% clay, 65% silt, 20% sand; low plasticity; low estimated permeability.		
0		B-5-5 .5						6.0	
					CL		**Sandy CLAY :** Light grey; stiff; damp; 60% clay, 10% silt, 30% fine to medium grained sand; medium plasticity; low estimated permeability.		
0		B-5-1 0		10					Portland Type I/II
								11.5	
					SC		**Clayey SAND with gravel:** Green-grey; dense; damp; 20% clay, 55% fine to coarse grained sand, 35% fine gravel; low plasticity to non-plastic; moderate estimated permeability.		
613		B-5-1 5		15			@ 14-feet: Moist; 10% clay, 60% fine to coarse grained sand, 30% fine gravel; non-plastic; high estimated permeability.		
								17.6	
					ML		**Clayey SILT with sand:** Dark brown-grey; wet to moist; 15% clay, 65% silt, 20% fine grained sand; low plasticity; low estimated permeability.	18.0	
					SC		**Clayey SAND with gravel:** Green-grey; moist; 10% clay, 60% fine to coarse grained sand, 30% fine gravel; non-plastic; high estimated permeability.		
15		B-5-1 9.5		20				20.0	
									Bottom of Boring @ 20 fbg

WELL LOG (PID) H:\GATZKE~1\GINTHOOSHI BORING LOGS DEC 2006.GPJ DEFAULT.GDT 1/26/07

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

BORING/WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	SG-1
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	20-Dec-06
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	20-Dec-06
PROJECT NUMBER	129-0741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger		
BORING DIAMETER	3-inch	**SCREENED INTERVALS**	5 to 5.5 fbg
LOGGED BY	C. Hernandez	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	M. Jonas	**DEPTH TO WATER (Static)**	NA

REMARKS West side of former tank cavity, adjacent to boring B-1

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT: 2-inches thick	0.2	Concrete
							FILL: SAND with gravel: Light brown; moist; 10% clay, 10% silt, 60% coarse to fine grained sand, 20% gravel; low plasticity; moderate estimated permeability.		Portland Type I/II
									Hydrated Granular Bentonite 1.5-3.5 fbg
									1/4-inch Nyflow tubing
							@ 3.5-feet: Brown; 75% silt, 25% sand; low estimated permeability.		Dry Granular Bentonite 3.5-4.5 fbg
				5					Monterey Sand #2/12
								5.5	1"-diam., 0.010" Slotted Schedule 40 PVC
									Bottom of Boring @ 5.5 fbg

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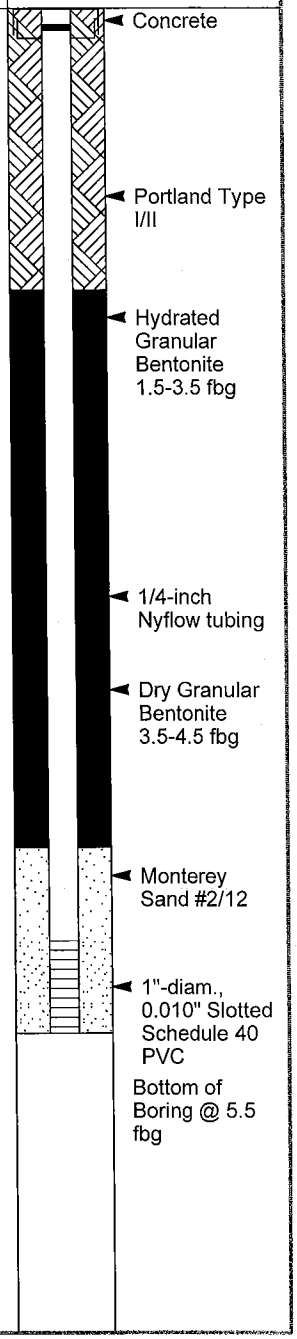
BORING/WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	SG-2
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	22-Dec-06
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	22-Dec-06
PROJECT NUMBER	129-0741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger		
BORING DIAMETER	3-inch	**SCREENED INTERVALS**	5 to 5.5 fbg
LOGGED BY	C. Hernandez	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	M. Jonas	**DEPTH TO WATER (Static)**	NA

REMARKS South side of former tank cavity, adjacent to boring B-2

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							ASPHALT: 2-inches thick.	0.2
							FILL: SAND with gravel: Light brown; damp; 10% clay, 10% silt, 60% coarse to fine grained sand, 20% gravel; low plasticity; moderate estimated permeability.	
							@ 3-feet: moist.	
				5	ML		**Clayey SILT :** Brown; moist; 30% clay, 60% silt, 10% sand; low plasticity; low estimated permeability.	5.0
								5.5

WELL DIAGRAM



WELL LOG (PID) H:\GATZKE~1\GINTHOOSHI BORING LOGS DEC 2006.GPJ DEFAULT.GDT 1/26/07

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Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME Naomi Gatzke
JOB/SITE NAME Hooshi's Auto Service
LOCATION 1499 MacArthur Blvd. Oakland, CA
PROJECT NUMBER 129-0741
DRILLER Vironex
DRILLING METHOD Hand Auger
BORING DIAMETER 3-inch
LOGGED BY C. Hernandez
REVIEWED BY M. Jonas
REMARKS East side of former tank cavity, adjacent to boring B-3

BORING/WELL NAME SG-3
DRILLING STARTED 21-Dec-06
DRILLING COMPLETED 21-Dec-06
WELL DEVELOPMENT DATE (YIELD) NA
GROUND SURFACE ELEVATION Not Surveyed

SCREENED INTERVALS 5 to 5.5 fbg
DEPTH TO WATER (First Encountered) NA
DEPTH TO WATER (Static) NA

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							ASPHALT: 2-inches thick.	0.2
							FILL: SAND with gravel: Light brown; damp; 10% clay, 10% silt, 60% coarse to fine grained sand, 20% subrounded medium coarse gravel; low plasticity; high estimated permeability.	
				5				5.5

WELL DIAGRAM

- Concrete
- Portland Type I/II
- Hydrated Granular Bentonite 1.5-3.5 fbg
- 1/4-inch Nyflow tubing
- Dry Granular Bentonite 3.5-4.5 fbg
- Monterey Sand #2/12
- 1"-diam., 0.010" Slotted Schedule 40 PVC

Bottom of Boring @ 5.5 fbg

WELL LOG (PID) H:\GATZKE~1\GINT\HOOSHI BORING LOGS DEC 2006.GPJ DEFAULT.GDT 1/26/07

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BORING/WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	SG-4
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	20-Dec-06
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	20-Dec-06
PROJECT NUMBER	129-0741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger		
BORING DIAMETER	3-inch	**SCREENED INTERVALS**	5 to 5.5 fbg
LOGGED BY	C. Hernandez	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	M. Jonas	**DEPTH TO WATER (Static)**	NA

REMARKS North side of former tank cavity, adjacent to boring B-4

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							ASPHALT: 2-inches thick.	0.2
							FILL: SAND with gravel: Light brown; damp; 10% clay, 10% silt, 60% coarse to fine grained sand, 20% subrounded medium coarse gravel; low plasticity; high estimated permeability.	
				5	ML		**Sandy SILT:** Dark brown; moist; 10% clay, 70% silt, 20% fine grained sand; low plasticity; high estimated permeability.	3.5
								5.5

WELL DIAGRAM

- Concrete
- Portland Type I/II
- Hydrated Granular Bentonite 1.5-3.5 fbg
- 1/4-inch Nyflow tubing
- Dry Granular Bentonite 3.5-4.5 fbg
- Monterey Sand #2/12
- 1"-diam., 0.010" Slotted Schedule 40 PVC

Bottom of Boring @ 5.5 fbg

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BORING/WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	SG-5
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	20-Dec-06
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	20-Dec-06
PROJECT NUMBER	129-0741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger		
BORING DIAMETER	3-inch	**SCREENED INTERVALS**	5 to 5.5 fbg
LOGGED BY	C. Hernandez	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	M. Jonas	**DEPTH TO WATER (Static)**	NA
REMARKS	East of canopy, adjacent to boring B-5		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT: 2-inches thick.	0.2	Concrete
							FILL: SAND with silt: Light brown; damp; 25% silt, 60% sand, 15% gravel; low plasticity; medium estimated permeability.		Portland Type I/II
							@ 1-foot: 5% clay, 35% silt, 60% fine to medium grained sand; low plasticity; low estimated permeability.		Hydrated Granular Bentonite 1.5-3.5 fbg
					SM		**Silty SAND with gravel:** Brown; damp; 10% silt, 60% fine to coarse grained sand, 30% fine gravel; non-plastic; high estimated permeability.	2.0	1/4-inch Nyflow tubing
									Dry Granular Bentonite 3.5-4.5 fbg
					ML		**Sandy SILT:** Dark grey; damp; 5% clay, 70% silt, 25% fine grained sand; low plasticity; low estimated permeability.	4.0	Monterey Sand #2/12
				5			@ 5-feet: Dark brown; moist; 70% silt, 30% fine sand.		1"-diam., 0.010" Slotted Schedule 40 PVC
								5.5	Bottom of Boring @ 5.5 fbg

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Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	SG-6
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	22-Dec-06
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	22-Dec-06
PROJECT NUMBER	129-0741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger		
BORING DIAMETER	3-inch	**SCREENED INTERVALS**	5 to 5.5 fbg
LOGGED BY	C. Hernandez	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	M. Jonas	**DEPTH TO WATER (Static)**	NA
REMARKS	West of former tank cavity, along fenceline		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT: 2-inches thick.	0.2	Concrete
							FILL: Silty SAND with gravel: Yellow-orange; 30% silt, 55% sand, 15% gravel; non-plastic; medium estimated permeability.		Portland Type I/II
							@ 1-foot: Dark grey; 20% clay, 65% silt, 15% fine to medium grained sand; medium plasticity; low esteimated permeability.		Hydrated Granular Bentonite 1.5-3.5 fbg
							@ 2-feet: Yellow-orange; non-plastic; moderate estimated permeability.		
							Sandy SILT: Yellow-orange; 5% clay, 70% silt, 25% fine grained sand; low plasticity; low estimated permeability.	3.0	1/4-inch Nyflow tubing
					ML				Dry Granular Bentonite 3.5-4.5 fbg
				5					Monterey Sand #2/12
								5.5	1"-diam., 0.010" Slotted Schedule 40 PVC
									Bottom of Boring @ 5.5 fbg

WELL LOG (PID) H:\GATZKE-1\GINTHOOSHI BORING LOGS DEC 2006.GPJ DEFAULT.GDT 1/31/07

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BORING/WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	SG-7
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	20-Dec-06
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	20-Dec-06
PROJECT NUMBER	129-0741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger		
BORING DIAMETER	3-inch	**SCREENED INTERVALS**	5 to 5.5 fbg
LOGGED BY	C. Hernandez	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	M. Jonas	**DEPTH TO WATER (Static)**	NA
REMARKS	Northwest corner of former remediation compound		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT: 2-inches thick.	0.2	Concrete
							FILL: Silty SAND with gravel: Yellow-orange; damp; 15% clay, 30% silt, 50% sand, 5% gravel; low plasticity; moderate estimated permeability.		Portland Type I/II
							@ 2-feet: 25% silt, 60% fine to coarse grained sand, 15% fine gravel.		Hydrated Granular Bentonite 1.5-3.5 fbg
				5					1/4-inch Nyflow tubing
									Dry Granular Bentonite 3.5-4.5 fbg
									Monterey Sand #2/12
								5.5	1"-diam., 0.010" Slotted Schedule 40 PVC
									Bottom of Boring @ 5.5 fbg

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BORING/WELL LOG

CLIENT NAME Naomi Gatzke
JOB/SITE NAME Hooshi's Auto Service
LOCATION 1499 MacArthur Blvd. Oakland, CA
PROJECT NUMBER 129-0741
DRILLER Vironex
DRILLING METHOD Hand Auger
BORING DIAMETER 3-inch
LOGGED BY C. Hernandez
REVIEWED BY M. Jonas
REMARKS South side of repair shop off of 14th Avenue, below former remediation compound

BORING/WELL NAME SG-8
DRILLING STARTED 22-Dec-06
DRILLING COMPLETED 22-Dec-06
WELL DEVELOPMENT DATE (YIELD) NA
GROUND SURFACE ELEVATION Not Surveyed
SCREENED INTERVALS 5 to 5.5 fbg
DEPTH TO WATER (First Encountered) NA
DEPTH TO WATER (Static) NA

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Surface: topsoil and grass 6-inches thick.		Concrete
								0.5	
							Sandy SILT: Dark brown; damp; 5% clay, 70% silt, 25% sand; low plasticity; low estimated permeability.		Portland Type I/II
									Hydrated Granular Bentonite 1.5-3.5 fbg
					ML				1/4-inch Nyflow tubing
							@ 3.5-feet: Light brown; 10% clay, 65% silt, 25% sand.		Dry Granular Bentonite 3.5-4.5 fbg
									Monterey Sand #2/12
				5				5.0	
					CL		**Sandy CLAY with gravel:** Yellow-orange; moist; 50% clay, 10% silt, 25% sand, 15% gravel; low plasticity; low estimated permeability.		1"-diam., 0.010" Slotted Schedule 40 PVC
								5.5	Bottom of Boring @ 5.5 fbg

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BORING/WELL LOG

CLIENT NAME	Naomi Gatzke	**BORING/WELL NAME**	SG-9
JOB/SITE NAME	Hooshi's Auto Service	**DRILLING STARTED**	22-Dec-06
LOCATION	1499 MacArthur Blvd. Oakland, CA	**DRILLING COMPLETED**	22-Dec-06
PROJECT NUMBER	129-0741	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Vironex	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger		
BORING DIAMETER	3-inch	**SCREENED INTERVALS**	5 to 5.5 fbg
LOGGED BY	C. Hernandez	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	M. Jonas	**DEPTH TO WATER (Static)**	NA

REMARKS South side of repair shop off of 14th Avenue, below auto repair shop

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Surface: topsoil and grass 6-inches thick.	0.5	Concrete
					ML		**Sandy SILT:** Dark brown; damp; 5% clay, 70% silt, 25% sand; low plasticity; low estimated permeability.		Portland Type I/II Hydrated Granular Bentonite 1.5-3.5 fbg 1/4-inch Nyflow tubing Dry Granular Bentonite 3.5-4.5 fbg Monterey Sand #2/12
				5			@ 3.5-feet: Light brown; moist; 10% clay, 65% silt, 25% sand.	5.0	
					CL		**Sandy CLAY with gravel:** Yellow-orange; damp; 50% clay, 10% silt, 25% sand, 15% gravel; low plasticity; low estimated permeability.	5.5	1"-diam., 0.010" Slotted Schedule 40 PVC Bottom of Boring @ 5.5 fbg

WELL LOG (PID) H:\GATZKE~1\GINT\HOOSHI BORING LOGS DEC 2006.GPJ DEFAULT.GDT 1/26/07

APPENDIX E

Permits

Alameda County Pu[illegible]c Works Agency - Water Resour[illegible] Well Permit

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

Application Approved on: 12/07/2006 By suel

Permit Numbers: W2006-1024 to W2006-1025
Permits Valid from 12/20/2006 to 12/22/2006

Application Id: 1164924952217
City of Project Site: Oakland
Site Location: Hooshi's Auto Service
1499 MacArthur Blvd. at 14th Ave.
Project Start Date: 12/20/2006
Completion Date: 12/22/2006

Applicant: Cambria Environmental Technology - Celina Hernandez
5900 Hollis Street, Suite A, Oakland, CA 94608
Phone: 510-420-3313

Property Owner: Naomi Gatzke
1545 Scenic View Drive, San Leandro, CA 94577
Phone: 510-483-9015

Client: ** same as Property Owner **

Contact: Celina Hernandez
Phone: 510-420-3313
Cell: 510-376-0115

Total Due: $400.00
Receipt Number: WR2006-0542 **Total Amount Paid:** $400.00
Payer Name : Cambria Environmental Technology, Inc. Paid By: CHECK
PAID IN FULL

Works Requesting Permits:

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 5 Boreholes
Driller: Vironex - Lic #: 705927 - Method: DP
Work Total: $200.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2006-1024	12/07/2006	03/20/2007	5	3.00 in.	20.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.

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

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Applicant shall contact James Yoo for an inspection time at 510-670-6633 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no

case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

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

Remedian Well Construction-Extraction - 9 Wells
Driller: Vironex - Lic #: 705927 - Method: other **Work Total: $200.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2006-1025	12/07/2006	03/20/2007	VP-1	3.00 in.	1.00 in.	5.00 ft	5.50 ft
W2006-1025	12/07/2006	03/20/2007	VP-2	3.00 in.	1.00 in.	5.00 ft	5.50 ft
W2006-1025	12/07/2006	03/20/2007	VP-3	3.00 in.	1.00 in.	5.00 ft	5.50 ft
W2006-1025	12/07/2006	03/20/2007	VP-4	3.00 in.	1.00 in.	5.00 ft	5.50 ft
W2006-1025	12/07/2006	03/20/2007	VP-5	3.00 in.	1.00 in.	5.00 ft	5.50 ft
W2006-1025	12/07/2006	03/20/2007	VP-6	3.00 in.	1.00 in.	5.00 ft	5.50 ft
W2006-1025	12/07/2006	03/20/2007	VP-7	3.00 in.	1.00 in.	5.00 ft	5.50 ft
W2006-1025	12/07/2006	03/20/2007	VP-8	3.00 in.	1.00 in.	5.00 ft	5.50 ft
W2006-1025	12/07/2006	03/20/2007	VP-9	3.00 in.	1.00 in.	5.00 ft	5.50 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

5. Applicant shall contact James Yoo for an inspection time at 510-670-6633 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).

7. Minimum surface seal thickness is two inches of cement grout placed by tremie

8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

PROGRAMS AND SERVICES

Well Standards Program

The Alameda County Public Works Agency, Water Resources is located at:
399 Elmhurst Street
Hayward, CA 94544
For Driving Directions or General Info, Please Contact 510-670-5480 or wells@acpwa.org
For Drilling Permit information and process contact James Yoo at
Phone: 510-670-6633
FAX: 510-782-1939
Email: Jamesy@acpwa.org

Alameda County Public Works is the administering agency of General Ordinance Code, Chapter 6.88 . The purpose of this chapter is to provide for the regulation of groundwater wells and exploratory holes as required by California Water Code. The provisions of these laws are administered and enforced by Alameda County Public Works Agency through its Well Standards Program.

Drilling Permit Jurisdictions in Alameda County: There are four jurisdictions in Alameda County.

Location: Agency with Jurisdiction Contact Number

Berkeley City of Berkeley Ph: 510-981-7460
Fax: 510-540-5672

Fremont, Newark, Union City Alameda County Water District Ph: 510-668-4460
Fax: 510-651-1760

Pleasanton, Dublin, Livermore, Sunol Zone 7 Water Agency Ph: 925-454-5000
Fax: 510-454-5728

The Alameda County Public Works Agency, Water Resources has the responsibility and authority to issue drilling permits and to enforce the County Water Well Ordinance 73-68. This jurisdiction covers the western Alameda County area of **Oakland**, **Alameda**,**Piedmont**, **Emeryville**, **Albany**, **San Leandro**, **San Lorenzo**, **Castro Valley**, and **Hayward** . The purpose of the drilling permits are to ensure that any new well or the destruction of wells, including geotechnical investigations and environmental sampling within the above jurisdiction and within Alameda County will not cause pollution or contamination of ground water or otherwise jeopardize the health, safety or welfare of the people of Alameda County.

Permits are required for all work pertaining to wells and exploratory holes at any depth within the jurisdiction of the Well Standards Program. A completed permit application *(30 Kb)** , along with a site map, should be submitted at least **ten (10) working days prior to the planned start of work**. Submittals should be sent to the address or fax number provided on the application form. When submitting an application via fax, please use a high resolution scan to retain legibility.

Fees
Beginning April 11, 2005 , the following fees shall apply:

A permit to construct, rehabilitate, or destroy wells, including cathodic protection wells, but excluding dewatering wells (*Horizontal hillside dewatering and dewatering for construction period only), shall cost $300.00 per well.

A permit to bore exploratory holes, including temporary test wells, shall cost $200 per site. A site includes the project parcel as well as any adjoining parcels.

Please make checks payable to: **Treasurer, County of Alameda**

Permit Fees are exempt to State & Federal Projects
Applicants shall submit a letter from the agency requesting the fee exemption.

Scheduling Work/Inspections:
Alameda County Public Works Agency (ACPWA), Water Resources Section requires scheduling and inspection of permitted work. All drilling activities must be scheduled in advance. Availability of inspections will vary from week to week and will come on a first come, first served bases. To ensure inspection availability on your desired or driller scheduled date, the following procedures are required:

Please contact **James Yoo at 510-670-6633** to schedule the inspection date and time (You must have drilling permit approved prior to scheduling).

Schedule the work as far in advance as possible (at least 5 days in advance); and confirm the scheduled drilling date(s) at least 24 hours prior to drilling.

Once the work has been scheduled, an ACPWA Inspector will coordinate the inspection requirements as well as how the Inspector can be reached if they are not at the site when Inspection is required. Expect for special circumstances given, all work will require the inspection to be conducted during the working hours of 8:30am to 2:30pm., Monday to Friday, excluding holidays.

Request for Permit Extension:
Permits are only valid from the start date to the completion date as stated on the drilling permit application and Conditions of Approval. To request an extension of a drilling permit application, applicants must request in writing prior to the completion date as set forth in the Conditions of Approval of the drilling permit application. Please send fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. There are no additional fees for permit extensions or for re-scheduling inspection dates. You may not extend your drilling permit dates beyond 90 days from the approval date of the permit application. **NO refunds** shall be given back after 90 days and the permit shall be deemed voided.

Cancel a Drilling Permit:
Applicants may cancel a drilling permit only in writing by mail, fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. If you do not cancel your drilling permit application before the drilling completion date or notify in writing within 90 days, Alameda County Public Works Agency, Water Resources Section may void the permit and No refunds may be given back.

Refunds/Service Charge:
A service charge of $25.00 dollars for the first check returned and $35.00 dollars for each subsequent check returned.

Applicants who cancel a drilling permit application **before** we issue the approved permit(s), will receive a **FULL** refund (at any amount) and will be mailed back within two weeks.

Applicants who cancel a drilling permit application **after** a permit has been issued will then be charged a service fee of $50.00 (fifty Dollars).

To collect the remaining funds will be determined by the amount of the refund to be refunded (see process below).

Board of Supervisors Minute Order, File No. 9763, dated January 9, 1996, gives blanket authority to the Auditor-Controller to process claims, from all County departments for the refund of fees which do not exceed $500 (Five Hundred Dollars)(with the exception of the County Clerk whose limit is $1,500).

Refunds over the amounts must be authorized by the Board of Supervisors Minute Order, File No. 9763 require specific approval by the Board of Supervisors. The forms to request for refunds under $500.00 (Five Hundred Dollars) are available at this office or any County Offices. If the amount is exceeded, a Board letter and Minute Order must accompany the claim. Applicant shall fill out the request form and the County Fiscal department will process the request.

Enforcement
Penalty. Any person who does any work for which a permit is required by this chapter and who fails to obtain a permit shall be guilty of a misdemeanor punishable by fine not exceeding Five Hundred Dollars ($500.00) or by imprisonment not exceeding six months, or by both such fine and imprisonment, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such

violation is committed, continued, or permitted, and shall be subject to the same punishment as for the original offense. (Prior gen. code §3-160.6)

Enforcement actions will be determined by this office on a case-by-case basis
Drilling without a permit shall be the cost of the permit(s) and a fine of $500.00 (Five Hundred Dollars).

Well Completion Reports (State DWR-188 forms) must be filed with the Well Standards Program within 60 days of completing work. Staff will review the report, assign a state well number, and then forward it to the California Department of Water Resources (DWR). Drillers should not send completed reports to DWR directly. Failure to file a Well Completion Report or deliberate falsification of the information is a misdemeanor; it is also grounds for disciplinary action by the Contractors' State License Board. Also note that filed Well Completion Reports are considered private record protected by state law and can only be released to the well owner or those specifically authorized by government agencies.

See our website (www.acgov.org/pwa/wells/index.shtml) for links to additional forms.

Hernandez, Celina

From: wells@acpwa.org
Sent: Thursday, November 30, 2006 2:16 PM
To: Hernandez, Celina
Subject: Alameda County PWA Permits Application Confirmation

Thank you for your Permit Application.
Your Application Confirmation Id is: 1164924952217
Submit Date is: Thu Nov 30 14:15:52 PST 2006
Project Site City/Location: Oakland / Hooshi's Auto Service 1499 MacArthur Blvd. at 14th Ave.
Project Start Date: 12/20/2006 Completion Date: 12/22/2006

NOTE: This only confirms receipt of the application, this is NOT an approved Permit.
REMINDER: We must receive a site map from you or your permit will not be approved.
If you have already submitted your site map and required documents, please disregard the reminder.
You will be notified separately once the receipt of your map is logged.

You've selected to pay by check. Please mail in your check payment for amount of $ 400.00 to the following address with your Application Confirmation ID Number written on front of check:
Alameda County Public Works Agency
Water Resources Section
399 Elmhurst Street
Hayward, CA 94544-1395

If any required documents are missing, you will be contacted by the Water Resources Unit.

To view application status, go to the Tracking page.
***If above 'Tracking' link does not work for you, copy and paste this url directly to browser:*
https://www.acgov.org/pwapermitsecomm_app/TrackAppServlet?email=chernandez@cambria-env.com&appid=1164924952217

If you have questions, contact us at wells@acpwa.org, please include your application confirmation number.

Thank you,
Public Works Agency - Water Resources

Your Application:

Project Information

City of Project Site: Oakland
Site Location: Hooshi's Auto Service 1499 MacArthur Blvd. at 14th Ave.
Start Date: 12/20/2006
Completion Date: 12/22/2006

Applicant Information

Business / Name: Cambria Environmental Technology - Celina Hernandez
Phone Number: 510-420-3313
Address: 5900 Hollis Street
Suite A
Oakland, CA 94608

Works Applying for Permit

Work Type	Driller	# of Wells	Fees	Cost
Borehole(s) for Geo Probes-Sampling 24 to 72 hours only	Vironex - Lic# 705927	5	$ 200.00 per site	$ 200.00
Remedian Well Construction-Extraction	Vironex - Lic# 705927	9	$ 200.00 per site	$ 200.00

Chk # 2091 & 2090 dated 12/1/06

APPENDIX F

Analytical Laboratory Report

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Cambria Env. Technology	Client Project ID: #129-0741-67; Hooshi	Date Sampled: 12/21/06
5900 Hollis St, Suite A		Date Received: 12/22/06
Emeryville, CA 94608	Client Contact: Celina Hernandez	Date Reported: 01/03/07
	Client P.O.:	Date Completed: 01/03/07

WorkOrder: 0612558

January 03, 2007

Dear Celina:

Enclosed are:

1). the results of **4** analyzed samples from your **#129-0741-67; Hooshi project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

cete 0612558

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

GeoTracker EDF ☒ PDF ☐ Excel ☐ Write On (DW) ☐

☐ Check if sample is effluent and "J" flag is required

Report To: Celina Hernandez Bill To: Celina Hernandez

Company: Cambria Environmental Technology
5900 Hollis Street, Suite A
Emeryville, CA 94608

E-Mail: chernandez@cambria-env.com

Tele: (510) 420-3313 Fax: ( )

Project #: 129-0741-67 Project Name: Hoosh

Project Location: 1499 MacArthur Blvd, Oakland

Sampler Signature: [illegible]

	Sample ID	Location/Field Point Name	Sampling Date	Sampling Time	# Containers	Type Containers	Matrix: Water	Matrix: Soil	Matrix: Air	Matrix: Sludge	Matrix: Other	Method Preserved: ICE	Method Preserved: HCL	Method Preserved: HNO_3	Method Preserved: Other	Other: TPHg, BTEX & MTBE by 8260	Other	Other
30	B-1-gw	B-1	12/21/06	1630	5	VOA	X					X				X		
40	B-2-gw	B-2	12/21/06	1400	4	VOA	X					X				X		
50	B-3-gw	B-3	12/21/06	1500	5	VOA	X					X				X		
6C	B-4-gw	B-4	12/21/06	1255	5	VOA	X					X				X		

Analysis Request (no entries marked):

Sample ID	BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	MTBE / BTEX ONLY (EPA 602 / 8021)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)
B-1-gw																
B-2-gw																
B-3-gw																
B-4-gw																

Comments: Filter Samples for Metals analysis: Yes / No

Relinquished By:	Date:	Time:	Received By:
Celina [illegible]	12/21/06	1750	Secured Location
[illegible]	[illegible]	215	[illegible]
[illegible]	[illegible]	500	[illegible]

ICE/t° 5.2
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

PRESERVATION: VOAS O&G METALS pH<2 OTHER

COMMENTS: UNPRESERVED

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0612558 **ClientID: CETE**

☑ EDF ☐ Fax ☑ Email ☐ HardCop ☐ ThirdPart

Report to:
Celina Hernandez
Cambria Env. Technology
5900 Hollis St, Suite A
Emeryville, CA 94608

Email: chernandez@cambria-env.com
TEL: (510) 420-070 FAX: (510) 420-917
ProjectNo: #129-0741-67; Hooshi
PO:

Bill t
Accounts Payable
Cambria Env. Technology
5900 Hollis St, Ste. A
Emeryville, CA 94608

Requested TAT: 5 days

Date Received **12/22/2006**
Date Printed: **12/27/2006**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0612558-001	B-1-gw	Water	12/21/2006	☐	A	B	A									
0612558-002	B-2-gw	Water	12/21/2006	☐	A	B										
0612558-003	B-3-gw	Water	12/21/2006	☐	A	B										
0612558-004	B-4-gw	Water	12/21/2006	☐	A	B										

Test Legend:

1	G-MBTEX_W	2	MBTEX-8260B_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Rosa Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

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Telephone: 877-252-9262 Fax: 925-252-9269

Cambria Env. Technology	Client Project ID: #129-0741-67; Hooshi	Date Sampled: 12/21/06
5900 Hollis St, Suite A		Date Received: 12/22/06
Emeryville, CA 94608	Client Contact: Celina Hernandez	Date Extracted: 12/29/06-01/03/07
	Client P.O.:	Date Analyzed 12/29/06-01/03/07

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0612558

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	B-1-gw	W	13,000,a,i	---	37	32	380	1100	10	115
002A	B-2-gw	W	40,000,a,i	---	1100	1300	990	6400	200	99
003A	B-3-gw	W	300,a,i	---	1.9	1.0	0.76	0.62	1	97
004A	B-4-gw	W	7600,a,i	---	110	32	470	520	10	109

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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"When Quality Counts"

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Cambria Env. Technology	Client Project ID: #129-0741-67; Hooshi	Date Sampled: 12/21/06
5900 Hollis St, Suite A		Date Received: 12/22/06
Emeryville, CA 94608	Client Contact: Celina Hernandez	Date Extracted: 12/27/06-01/04/07
	Client P.O.:	Date Analyzed 12/27/06-01/04/07

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0612558

Lab ID	0612558-001B	0612558-002B	0612558-003B	0612558-004B	Reporting Limit for DF =1	
Client ID	B-1-gw	B-2-gw	B-3-gw	B-4-gw		
Matrix	W	W	W	W		
DF	33	100	1	20	S	W
Compound	**Concentration**				ug/kg	µg/L
Benzene	28	1100	3.2	87	NA	0.5
Ethylbenzene	520	840	1.4	520	NA	0.5
Methyl-t-butyl ether (MTBE)	ND<17	ND<50	ND	ND<10	NA	0.5
Toluene	ND<17	1300	0.98	22	NA	0.5
Xylenes	1300	5900	1.2	450	NA	0.5
Surrogate Recoveries (%)						
%SS1:	101	99	101	100		
%SS2:	103	101	98	99		
%SS3:	100	81	97	100		
Comments	i	i	i	i		

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0612558

EPA Method SW8021B/8015Cm Extraction SW5030B BatchID: 25399 Spiked Sample ID: 0612566-005A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	105	99.3	5.52	103	95.5	7.80	70 - 130	30	70 - 130	30
MTBE	ND	10	108	104	4.24	106	105	0.935	70 - 130	30	70 - 130	30
Benzene	ND	10	99.8	98.6	1.26	99	99.8	0.727	70 - 130	30	70 - 130	30
Toluene	ND	10	90	93	3.24	90.1	89.7	0.489	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	99.2	99.4	0.269	97.5	89	9.05	70 - 130	30	70 - 130	30
Xylenes	ND	30	90.7	91.3	0.733	90.3	86.7	4.14	70 - 130	30	70 - 130	30
%SS:	96	10	104	104	0	109	105	3.88	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 25399 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612558-001	12/21/06 4:30 PM	1/03/07	1/03/07 2:49 AM	0612558-002	12/21/06 2:00 PM	12/29/06	2/29/06 11:19 PM
0612558-003	12/21/06 3:00 PM	1/03/07	1/03/07 3:22 AM	0612558-004	2/21/06 12:55 PM	1/03/07	1/03/07 3:54 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

DHS ELAP Certification N° 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0612558

EPA Method SW8260B	Extraction SW5030B				BatchID: 25396			Spiked Sample ID: 0612546-012B			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Benzene	ND	10	123	122	0.810	120	123	2.03	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	102	103	1.09	99.4	106	5.98	70 - 130	30	70 - 130	30
Toluene	ND	10	96.6	105	7.58	103	107	4.64	70 - 130	30	70 - 130	30
%SS1:	103	10	98	99	1.24	105	108	2.85	70 - 130	30	70 - 130	30
%SS2:	98	10	93	99	6.16	102	104	2.60	70 - 130	30	70 - 130	30
%SS3:	92	10	97	99	1.63	103	101	2.22	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 25396 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612558-001	12/21/06 4:30 PM	12/28/06	2/28/06 11:33 PM	0612558-002	12/21/06 2:00 PM	12/29/06	12/29/06 8:53 AM
0612558-003	12/21/06 3:00 PM	12/27/06	12/27/06 4:08 PM	0612558-004	2/21/06 12:55 PM	12/31/06	2/31/06 12:33 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

DHS ELAP Certification N° 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Cambria Env. Technology	Client Project ID: #129-0741-67; Hooshi	Date Sampled: 12/20/06
5900 Hollis St, Suite A		Date Received: 12/22/06
Emeryville, CA 94608	Client Contact: Celina Hernandez	Date Reported: 01/04/07
	Client P.O.:	Date Completed: 01/04/07

WorkOrder: 0612565

January 04, 2007

Dear Celina:

Enclosed are:

1). the results of **20** analyzed samples from your **#129-0741-67; Hooshi project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0612565 **ClientID: CETE**

☑ EDF ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Requested TAT: **5 days**

Report to:
Celina Hernandez
Cambria Env. Technology
5900 Hollis St, Suite A
Emeryville, CA 94608

Email: chernandez@cambria-env.com
TEL: (510) 420-0700 FAX: (510) 420-9170
ProjectNo: #129-0741-67; Hooshi
PO:

Bill to:
Accounts Payable
Cambria Env. Technology
5900 Hollis St, Ste. A
Emeryville, CA 94608

Date Received: **12/22/2006**
Date Printed: **12/27/2006**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
0612565-001	B-1-5	Soil	12/21/06 3:40:00	☐	A		A		A							
0612565-002	B-1-10	Soil	12/21/06 3:45:00	☐	A		A									
0612565-003	B-1-15	Soil	12/21/06 3:50:00	☐	A		A									
0612565-004	B-1-19.5	Soil	12/21/06 4:00:00	☐	A		A									
0612565-005	B-2-5	Soil	12/21/06 1:20:00	☐	A		A									
0612565-006	B-2-10	Soil	12/21/06 1:30:00	☐	A		A									
0612565-007	B-2-15	Soil	12/21/06 1:40:00	☐	A		A									
0612565-008	B-3-5.5	Soil	12/21/06 2:30:00	☐	A		A									
0612565-009	B-3-10	Soil	12/21/06 2:40:00	☐	A		A									
0612565-010	B-3-15	Soil	12/21/06 2:50:00	☐	A		A									
0612565-011	B-4-5.5	Soil	12/21/06 12:15:00	☐	A		A									
0612565-012	B-4-10	Soil	12/21/06 12:20:00	☐	A		A									
0612565-013	B-4-15	Soil	12/21/06 12:30:00	☐	A		A									
0612565-014	B-4-19.5	Soil	12/21/06 12:40:00	☐	A		A									
0612565-015	B-5-5.5	Soil	12/22/06 9:21:00	☐	A		A									

Test Legend:

1	G-MBTEX_S	2	G-MBTEX_W	3	MBTEX-8260B_S	4	MBTEX-8260B_W	5	PREDF REPORT
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0612565 **ClientID: CETE**

☑ EDF ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty

Report to:
Celina Hernandez
Cambria Env. Technology
5900 Hollis St, Suite A
Emeryville, CA 94608

Email: chernandez@cambria-env.com
TEL: (510) 420-0700 FAX: (510) 420-9170
ProjectNo: #129-0741-67; Hooshi
PO:

Bill to:
Accounts Payable
Cambria Env. Technology
5900 Hollis St, Ste. A
Emeryville, CA 94608

Requested TAT: **5 days**

Date Received: **12/22/2006**
Date Printed: **12/27/2006**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0612565-016	B-5-10	Soil	12/22/06 9:40:00	☐	A		A									
0612565-017	B-5-15	Soil	12/22/06 9:50:00	☐	A		A									
0612565-018	B-5-19.5	Soil	12/22/06 10:00:00	☐	A		A									
0612565-019	B-5-GW	Water	12/20/06 10:25:00	☐		A		B								
0612565-020	B-2-19.5	Soil	12/22/06 11:00:00	☐	A		A									

Test Legend:

1	G-MBTEX_S	2	G-MBTEX_W	3	MBTEX-8260B_S	4	MBTEX-8260B_W	5	PREDF REPORT
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

McCAMPBELL ANALYTICAL, INC.

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PITTSBURG, CA 94565-1701
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Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY
GeoTracker EDF ☒ PDF ☐ Excel ☐ Write On (DW) ☐
☐ Check if sample is effluent and "J" flag is required

Report To: Celina Hernandez Bill To: Celina Hernandez

Company: ~~Cambria Environmental Technology~~
5900 Hollis Street, Suite A
Emeryville, CA 94608
E-Mail: chernandez@cambria-env.com
Tele: (510) 420-3313 Fax: ( )
Project #: 129-0741-67 Project Name: Hooth
Project Location: 1499 MacArthur Blvd, Oakland
Sampler Signature: Celina

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: ICE	HCL	HNO_3	Other
B-1-5	B-1	12/21/06	1540	1	(Core)	X					X			
B-1-10			1545	1		X					X			
B-1-15			1550	1		X					X			
B-1-19.5			1600	1		X					X			
B-2-5	B-2		1320	1		X					X			
B-2-10			1330	1		X					X			
B-2-15			1340	1		X					X			
B-3-5.5	B-3		1430	1		X					X			
B-3-10			1440	1		X					X			
B-3-15			1450	1		X					X			
B-4-5.5	B-4		1215	1		X					X			
B-4-10			1220	1		X					X			
B-4-15			1230	1		X					X			
B-4-19.5			1240	1	✓	X					X			

Analysis Request

BTEX & TPH as Gas (602 / 8021 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	MTBE / BTEX ONLY (EPA 602 / 8021)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Arochlors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	Other	Comments
																TPH-g, BTEX & MTBE only	Filter Samples for Metals analysis: Yes / No
																X	
																X	
																X	
																X	
																X	
																X	
																X	
																X	
																X	
																X	
																X	
																X	
																X	

Relinquished By:	Date:	Time:	Received By:
	12/21/06	1750	Secured location
	12/26/06	0770	
	12/27/06	0800	

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

PRESERVATION	VOAS	O&G	METALS	OTHER
			pH<2	

McCAMPBELL ANALYTICAL, INC.
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PITTSBURG, CA 94565-1701
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Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

GeoTracker EDF ☒ PDF ☐ Excel ☐ Write On (DW) ☐
☐ Check if sample is effluent and "J" flag is required

Report To: Celina Hernandez Bill To: Celina Hernandez
Company: Cambria Environmental Technology
5900 Hollis Street, Suite A
Emeryville, CA 94608 E-Mail: chernandez@cambria-env.com
Tele: (510) 420-3313 Fax: ( )
Project #: 129-0741-67 Project Name: Hooshi
Project Location: 1499 MacArthur Blvd, Oakland
Sampler Signature: Celina

Analysis Request columns: BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE; TPH as Diesel (8015); Total Petroleum Oil & Grease (1664 / 5520 E/B&F); Total Petroleum Hydrocarbons (418.1); EPA 502.2 / 601 / 8010 / 8021 (HVOCs); MTBE / BTEX ONLY (EPA 602 / 8021); EPA 505/ 608 / 8081 (Cl Pesticides); EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners; EPA 507 / 8141 (NP Pesticides); EPA 515 / 8151 (Acidic Cl Herbicides); EPA 524.2 / 624 / 8260 (VOCs); EPA 525.2 / 625 / 8270 (SVOCs); EPA 8270 SIM / 8310 (PAHs / PNAs); CAM 17 Metals (200.7 / 200.8 / 6010 / 6020); LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020); Lead (200.7 / 200.8 / 6010 / 6020)

Other: TPHg, BTEX, MTBE by 8260

Comments: Filter Samples for Metals analysis: Yes / No

SAMPLE ID	LOCATION/ Field Point Name	Date	Time	# Containers	Type Containers	Matrix	Method Preserved	TPHg, BTEX, MTBE by 8260	Comments
B-5-5.5	B-5	12/22/06	921	1	Macro core	Soil	ICE	X	
B-5-10	B-5	↓	940	↓	↓	↓	↓	X	
B-5-15	B-5	↓	950	↓	↓	↓	↓	X	
B-5-19.5	B-5	↓	1000	↓	↓	↓	↓	X	
B-5-GW	B-5	12/22/06	1025	4	VOAs	Water	ICE	X	UNPRESERVED
B-2-49.5		12/22	11:00					X	

Relinquished By:	Date:	Time:	Received By:
Celina	12/22/06	1105	G. McClelland
G. McClelland	12/22/06	11:30	Secure holding location
A. Avina	12/22/06	220	

12/22/06 500 110 1400

ICE/t° ______
GOOD CONDITION ______
HEAD SPACE ABSENT ______
DECHLORINATED IN LAB ______
APPROPRIATE CONTAINERS ______
PRESERVED IN LAB ______

COMMENTS:

PRESERVATION VOAS O&G METALS pH<2 OTHER

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Telephone: 877-252-9262 Fax: 925-252-9269

Cambria Env. Technology	Client Project ID: #129-0741-67; Hooshi	Date Sampled: 12/20/06-12/22/06
5900 Hollis St, Suite A		Date Received: 12/22/06
Emeryville, CA 94608	Client Contact: Celina Hernandez	Date Extracted: 12/22/06-12/30/06
	Client P.O.:	Date Analyzed 12/23/06-12/30/06

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method SW5030B Analytical methods SW8015Cm Work Order: 0612565

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001A	B-1-5	S	ND	1	102
002A	B-1-10	S	ND	1	104
003A	B-1-15	S	ND	1	85
004A	B-1-19.5	S	ND	1	101
005A	B-2-5	S	ND	1	94
006A	B-2-10	S	3.3,a	1	98
007A	B-2-15	S	140,a	20	116
008A	B-3-5.5	S	ND	1	102
009A	B-3-10	S	ND	1	90
010A	B-3-15	S	ND	1	89
011A	B-4-5.5	S	ND	1	94
012A	B-4-10	S	ND	1	99
013A	B-4-15	S	15,b,m	2	112
014A	B-4-19.5	S	ND	1	94
015A	B-5-5.5	S	ND	1	86
016A	B-5-10	S	ND	1	88
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50		µg/L
		S	1.0		mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Cambria Env. Technology	Client Project ID: #129-0741-67; Hooshi	Date Sampled: 12/20/06-12/22/06
5900 Hollis St, Suite A		Date Received: 12/22/06
Emeryville, CA 94608	Client Contact: Celina Hernandez	Date Extracted: 12/22/06-12/30/06
	Client P.O.:	Date Analyzed 12/23/06-12/30/06

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method SW5030B Analytical methods SW8015Cm Work Order: 0612565

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
017A	B-5-15	S	560,a	100	115
018A	B-5-19.5	S	4.2,b,m	1	96
019A	B-5-GW	W	72,000,a,h	200	104
020A	B-2-19.5	S	ND	1	94

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	1.0	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis; p) see attached narrative.

DHS ELAP Certification N° 1644

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Cambria Env. Technology	Client Project ID: #129-0741-67; Hooshi	Date Sampled: 12/20/06-12/22/06
5900 Hollis St, Suite A		Date Received: 12/22/06
Emeryville, CA 94608	Client Contact: Celina Hernandez	Date Extracted: 12/22/06-01/03/07
	Client P.O.:	Date Analyzed 12/29/06-01/03/07

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0612565

Lab ID	0612565-001A	0612565-002A	0612565-003A	0612565-004A	Reporting Limit for DF =1	
Client ID	B-1-5	B-1-10	B-1-15	B-1-19.5		
Matrix	S	S	S	S		
DF	1	1	1	1	S	W
Compound	**Concentration**				mg/kg	µg/L
Benzene	ND	ND	ND	ND	0.005	0.5
Ethylbenzene	ND	ND	ND	ND	0.005	0.5
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	0.005	0.5
Toluene	ND	ND	ND	ND	0.005	0.5
Xylenes	ND	ND	0.011	ND	0.005	0.5
Surrogate Recoveries (%)						
%SS1:	94	92	94	91		
%SS2:	99	97	96	98		
%SS3:	89	92	90	91		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

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Telephone: 877-252-9262 Fax: 925-252-9269

Cambria Env. Technology	Client Project ID: #129-0741-67; Hooshi	Date Sampled: 12/20/06-12/22/06
5900 Hollis St, Suite A		Date Received: 12/22/06
Emeryville, CA 94608	Client Contact: Celina Hernandez	Date Extracted: 12/22/06-01/03/07
	Client P.O.:	Date Analyzed 12/29/06-01/03/07

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0612565

Lab ID	0612565-005A	0612565-006A	0612565-007A	0612565-008A	Reporting Limit for DF =1	
Client ID	B-2-5	B-2-10	B-2-15	B-3-5.5		
Matrix	S	S	S	S		
DF	1	1	40	1	S	W
Compound	**Concentration**				mg/kg	µg/L
Benzene	ND	0.043	0.54	ND	0.005	0.5
Ethylbenzene	ND	ND	0.83	ND	0.005	0.5
Methyl-t-butyl ether (MTBE)	ND	0.010	ND<0.20	ND	0.005	0.5
Toluene	ND	ND	0.74	ND	0.005	0.5
Xylenes	ND	ND	6.1	ND	0.005	0.5
Surrogate Recoveries (%)						
%SS1:	93	93	89	90		
%SS2:	98	96	96	98		
%SS3:	91	91	89	92		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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Cambria Env. Technology	Client Project ID: #129-0741-67; Hooshi	Date Sampled: 12/20/06-12/22/06
5900 Hollis St, Suite A		Date Received: 12/22/06
Emeryville, CA 94608	Client Contact: Celina Hernandez	Date Extracted: 12/22/06-01/03/07
	Client P.O.:	Date Analyzed 12/29/06-01/03/07

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0612565

Lab ID	0612565-009A	0612565-010A	0612565-011A	0612565-012A	Reporting Limit for DF =1	
Client ID	B-3-10	B-3-15	B-4-5.5	B-4-10		
Matrix	S	S	S	S		
DF	1	1	1	1	S	W
Compound	**Concentration**				mg/kg	µg/L
Benzene	ND	ND	ND	ND	0.005	0.5
Ethylbenzene	ND	ND	ND	ND	0.005	0.5
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	0.005	0.5
Toluene	ND	ND	ND	ND	0.005	0.5
Xylenes	ND	ND	ND	ND	0.005	0.5
Surrogate Recoveries (%)						
%SS1:	90	89	89	93		
%SS2:	98	98	98	99		
%SS3:	90	91	91	90		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

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Telephone: 877-252-9262 Fax: 925-252-9269

Cambria Env. Technology	Client Project ID: #129-0741-67; Hooshi	Date Sampled: 12/20/06-12/22/06
5900 Hollis St, Suite A		Date Received: 12/22/06
Emeryville, CA 94608	Client Contact: Celina Hernandez	Date Extracted: 12/22/06-01/03/07
	Client P.O.:	Date Analyzed 12/29/06-01/03/07

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0612565

Lab ID	0612565-013A	0612565-014A	0612565-015A	0612565-016A	Reporting Limit for DF =1	
Client ID	B-4-15	B-4-19.5	B-5-5.5	B-5-10		
Matrix	S	S	S	S		
DF	10	1	1	1	S	W
Compound	**Concentration**				mg/kg	µg/L
Benzene	ND<0.050	ND	ND	ND	0.005	0.5
Ethylbenzene	1.2	0.0057	ND	ND	0.005	0.5
Methyl-t-butyl ether (MTBE)	ND<0.050	ND	ND	ND	0.005	0.5
Toluene	0.060	ND	ND	ND	0.005	0.5
Xylenes	2.7	0.0097	ND	ND	0.005	0.5
Surrogate Recoveries (%)						
%SS1:	96	92	100	88		
%SS2:	90	96	100	99		
%SS3:	88	86	91	98		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

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Cambria Env. Technology	Client Project ID: #129-0741-67; Hooshi	Date Sampled: 12/20/06-12/22/06
5900 Hollis St, Suite A		Date Received: 12/22/06
Emeryville, CA 94608	Client Contact: Celina Hernandez	Date Extracted: 12/22/06-01/03/07
	Client P.O.:	Date Analyzed 12/29/06-01/03/07

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0612565

Lab ID	0612565-017A	0612565-018A	0612565-019B	0612565-020A	Reporting Limit for DF =1	
Client ID	B-5-15	B-5-19.5	B-5-GW	B-2-19.5		
Matrix	S	S	W	S		
DF	200	1	200	1	S	W
Compound	**Concentration**				mg/kg	µg/L
Benzene	ND<1.0	ND	850	0.026	0.005	0.5
Ethylbenzene	9.6	0.017	2800	ND	0.005	0.5
Methyl-t-butyl ether (MTBE)	ND<1.0	ND	ND<100	ND	0.005	0.5
Toluene	3.2	ND	3100	ND	0.005	0.5
Xylenes	69	0.12	16,000	ND	0.005	0.5
Surrogate Recoveries (%)						
%SS1:	99	90	96	90		
%SS2:	92	97	100	100		
%SS3:	91	87	99	91		
Comments			h			

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0612565

EPA Method SW8015Cm **Extraction SW5030B** **BatchID: 25399** **Spiked Sample ID: 0612566-005A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	105	99.3	5.52	103	95.5	7.80	70 - 130	30	70 - 130	30
MTBE	ND	10	108	104	4.24	106	105	0.935	70 - 130	30	70 - 130	30
Benzene	ND	10	99.8	98.6	1.26	99	99.8	0.727	70 - 130	30	70 - 130	30
Toluene	ND	10	90	93	3.24	90.1	89.7	0.489	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	99.2	99.4	0.269	97.5	89	9.05	70 - 130	30	70 - 130	30
Xylenes	ND	30	90.7	91.3	0.733	90.3	86.7	4.14	70 - 130	30	70 - 130	30
%SS:	96	10	104	104	0	109	105	3.88	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 25399 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612565-019	2/20/06 10:25 AM	12/30/06	12/30/06 3:35 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

DHS ELAP Certification N° 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0612565

EPA Method SW8015Cm	Extraction SW5030B				BatchID: 25404			Spiked Sample ID: 0612556-008A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	86.6	107	21.3	106	105	0.940	70 - 130	30	70 - 130	30
MTBE	ND	0.10	96.8	100	3.33	106	100	5.23	70 - 130	30	70 - 130	30
Benzene	ND	0.10	101	97.6	3.92	108	101	6.63	70 - 130	30	70 - 130	30
Toluene	0.0052	0.10	78.4	74.8	4.40	88.5	82.3	7.22	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	99.4	94.6	4.89	103	98	4.61	70 - 130	30	70 - 130	30
Xylenes	0.0093	0.30	87.6	83.9	4.13	94.7	90.7	4.32	70 - 130	30	70 - 130	30
%SS:	90	0.10	108	108	0	106	113	6.39	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 25404 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612565-001	12/21/06 3:40 PM	12/22/06	2/23/06 11:28 PM	0612565-002	12/21/06 3:45 PM	12/22/06	2/23/06 11:58 PM
0612565-003	12/21/06 3:50 PM	12/22/06	12/29/06 3:08 AM	0612565-004	12/21/06 4:00 PM	12/22/06	12/24/06 3:22 AM
0612565-005	12/21/06 1:20 PM	12/22/06	12/24/06 4:20 AM	0612565-006	12/21/06 1:30 PM	12/22/06	12/27/06 6:27 PM
0612565-007	12/21/06 1:40 PM	12/22/06	2/27/06 10:53 PM	0612565-008	12/21/06 2:30 PM	12/22/06	12/24/06 6:45 AM
0612565-009	12/21/06 2:40 PM	12/22/06	12/28/06 4:44 AM	0612565-010	12/21/06 2:50 PM	12/22/06	12/29/06 2:03 AM
0612565-011	2/21/06 12:15 PM	12/22/06	2/28/06 10:20 AM	0612565-012	2/21/06 12:20 PM	12/22/06	12/28/06 6:11 AM
0612565-013	2/21/06 12:30 PM	12/22/06	12/28/06 7:11 PM	0612565-014	2/21/06 12:40 PM	12/22/06	2/29/06 11:22 AM
0612565-015	12/22/06 9:21 AM	12/22/06	12/28/06 9:10 AM	0612565-016	12/22/06 9:40 AM	12/22/06	2/28/06 10:49 AM
0612565-017	12/22/06 9:50 AM	12/22/06	12/28/06 3:45 AM	0612565-018	2/22/06 10:00 AM	12/22/06	2/28/06 12:05 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

DHS ELAP Certification N° 1644

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil | QC Matrix: Soil | WorkOrder 0612565

EPA Method SW8015Cm	Extraction SW5030B				BatchID: 25413			Spiked Sample ID: 0612563-016A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	108	109	1.15	114	107	6.65	70 - 130	30	70 - 130	30
MTBE	ND	0.10	103	93.7	9.11	91.3	94.4	3.28	70 - 130	30	70 - 130	30
Benzene	ND	0.10	98.8	89.7	9.62	109	92.4	16.3	70 - 130	30	70 - 130	30
Toluene	ND	0.10	88.2	82	7.24	97.6	83.9	15.2	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	92.9	91.6	1.39	101	91.6	9.25	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	95.7	90.7	5.37	100	91.3	9.06	70 - 130	30	70 - 130	30
%SS:	94	0.10	86	91	5.65	96	88	8.70	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 25413 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612565-020	12/22/06 11:00 AM	12/22/06	12/30/06 2:42 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0612565

EPA Method SW8260B	Extraction SW5030B				BatchID: 25408			Spiked Sample ID: 0612565-015A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Benzene	ND	0.050	111	113	2.05	116	116	0	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	93.4	97.4	4.15	100	97.7	2.79	70 - 130	30	70 - 130	30
Toluene	ND	0.050	82.3	87	5.53	103	97.4	5.39	70 - 130	30	70 - 130	30
%SS1:	100	0.050	105	106	0.676	107	105	2.34	70 - 130	30	70 - 130	30
%SS2:	100	0.050	88	92	3.91	102	97	4.96	70 - 130	30	70 - 130	30
%SS3:	91	0.050	101	104	2.69	99	97	2.11	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 25408 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612565-001	12/21/06 3:40 PM	12/22/06	12/29/06 3:52 AM	0612565-002	12/21/06 3:45 PM	12/22/06	12/29/06 4:36 AM
0612565-003	12/21/06 3:50 PM	12/22/06	12/29/06 5:21 AM	0612565-004	12/21/06 4:00 PM	12/22/06	12/29/06 6:05 AM
0612565-005	12/21/06 1:20 PM	12/22/06	12/29/06 6:49 AM	0612565-006	12/21/06 1:30 PM	12/22/06	12/29/06 7:33 AM
0612565-007	12/21/06 1:40 PM	12/22/06	12/29/06 8:17 AM	0612565-008	12/21/06 2:30 PM	12/22/06	12/29/06 9:01 AM
0612565-009	12/21/06 2:40 PM	12/22/06	12/29/06 9:45 AM	0612565-010	12/21/06 2:50 PM	12/22/06	12/29/06 10:29 AM
0612565-011	12/21/06 12:15 PM	12/22/06	12/29/06 11:13 AM	0612565-012	12/21/06 12:20 PM	12/22/06	12/29/06 11:58 AM
0612565-013	12/21/06 12:30 PM	12/22/06	1/03/07 1:58 PM	0612565-014	12/21/06 12:40 PM	12/22/06	12/29/06 10:04 AM
0612565-015	12/22/06 9:21 AM	12/22/06	1/02/07 1:34 PM	0612565-016	12/22/06 9:40 AM	12/22/06	12/30/06 8:44 AM
0612565-017	12/22/06 9:50 AM	12/22/06	1/03/07 3:31 PM	0612565-018	12/22/06 10:00 AM	12/22/06	12/29/06 5:12 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0612565

EPA Method SW8260B	Extraction SW5030B				BatchID: 25412			Spiked Sample ID: 0612563-016A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Benzene	ND	0.050	129	128	0.948	128	128	0	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	109	105	3.73	109	107	1.79	70 - 130	30	70 - 130	30
Toluene	ND	0.050	110	103	6.49	107	100	6.63	70 - 130	30	70 - 130	30
%SS1:	89	0.050	108	104	3.26	105	103	1.53	70 - 130	30	70 - 130	30
%SS2:	92	0.050	100	97	2.95	101	95	5.97	70 - 130	30	70 - 130	30
%SS3:	90	0.050	98	98	0	101	100	1.16	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 25412 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612565-020	2/22/06 11:00 AM	12/22/06	12/29/06 4:28 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0612565

EPA Method SW8260B	Extraction SW5030B					BatchID: 25406			Spiked Sample ID: 0612561-006B			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Benzene	ND	10	119	118	1.55	129	127	1.22	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	99.2	97.2	1.98	111	104	6.24	70 - 130	30	70 - 130	30
Toluene	ND	10	103	100	2.51	110	102	7.53	70 - 130	30	70 - 130	30
%SS1:	98	10	109	107	2.12	105	102	2.84	70 - 130	30	70 - 130	30
%SS2:	90	10	101	98	2.88	101	96	4.59	70 - 130	30	70 - 130	30
%SS3:	89	10	97	99	1.57	101	101	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 25406 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612565-019	2/20/06 10:25 AM	12/29/06	2/29/06 10:19 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

DHS ELAP Certification N° 1644

QA/QC Officer

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- Laboratory Narrative;
- Results; and
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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0701320

Work Order Summary

CLIENT:	Ms. Celina Hernandez Cambria Environmental Technology, Inc. 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Ms. Celina Hernandez Cambria Environmental Technology, Inc. 5900 Hollis Street Suite A Emeryville, CA 94608
PHONE:	510-420-3313	**P.O. #**	129-0741-068
FAX:	510-420-9170	**PROJECT #**	129-0741-068 Hooshi - Oakland
DATE RECEIVED:	01/22/2007	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	02/02/2007		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.
01A	SG-5	Modified TO-15/TICs	5.0 "Hg
02A	SG-3	Modified TO-15/TICs	5.0 "Hg
03A	SG-6	Modified TO-15/TICs	5.0 "Hg
04A	SG-1	Modified TO-15/TICs	5.0 "Hg
05A	SG-1-DUP	Modified TO-15/TICs	5.0 "Hg
06A	SG-2	Modified TO-15/TICs	3.5 "Hg
06AA	SG-2 Duplicate	Modified TO-15/TICs	3.5 "Hg
07A	SG-7	Modified TO-15/TICs	4.0 "Hg
08A	SG-7-DUP	Modified TO-15/TICs	3.5 "Hg
09A	SG-9	Modified TO-15/TICs	3.5 "Hg
10A	SG-8	Modified TO-15/TICs	3.5 "Hg
11A	Lab Blank	Modified TO-15/TICs	NA
12A	CCV	Modified TO-15/TICs	NA
13A	LCS	Modified TO-15/TICs	NA

CERTIFIED BY: Linda J. Fruman DATE: 02/02/07

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/06, Expiration date: 06/30/07
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
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LABORATORY NARRATIVE
Modified TO-15
Cambria Environmental Technology, Inc.
Workorder# 0701320

Ten 1 Liter Summa Canister samples were received on January 22, 2007. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

Method modifications taken to run these samples are summarized in the below table. Specific project requirements may over-ride the ATL modifications.

Requirement	*TO-15*	*ATL Modifications*
Daily CCV	+- 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

Dilution was performed on sample SG-9 due to the presence of high level non-target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-5

Lab ID#: 0701320-01A

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	4.0%	12 N J
Butane	106-97-8	64%	33 N J

Client Sample ID: SG-3

Lab ID#: 0701320-02A

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	38%	1300 N J
Butane	106-97-8	59%	27 N J
Propane	74-98-6	9.0%	130 N J

Client Sample ID: SG-6

Lab ID#: 0701320-03A

No Detections Were Found.

Client Sample ID: SG-1

Lab ID#: 0701320-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	1.3	3.9	4.2

Client Sample ID: SG-1-DUP

Lab ID#: 0701320-05A

No Detections Were Found.

Client Sample ID: SG-2

Lab ID#: 0701320-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.1	2.0	3.6	6.4

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-2

Lab ID#: 0701320-06A

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	36%	180 N J
Butane	106-97-8	59%	6.9 N J
Propane	74-98-6	9.0%	19 N J

Client Sample ID: SG-2 Duplicate

Lab ID#: 0701320-06AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.1	2.0	3.6	6.5

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	38%	180 N J
Butane	106-97-8	7.0%	6.4 N J
Propane	74-98-6	9.0%	19 N J

Client Sample ID: SG-7

Lab ID#: 0701320-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	1.4	3.7	4.4

Client Sample ID: SG-7-DUP

Lab ID#: 0701320-08A

No Detections Were Found.

Client Sample ID: SG-9

Lab ID#: 0701320-09A

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Propane	74-98-6	9.0%	170 N J

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-9

Lab ID#: 0701320-09A

Propane, 2-methyl-	75-28-5	38%	9800 N J
Butane	106-97-8	72%	7200 N J

Client Sample ID: SG-8

Lab ID#: 0701320-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.1	4.7	3.6	15

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Propane	74-98-6	9.0%	8.3 N J
Propane, 2-methyl-	75-28-5	9.0%	62 N J
Butane	106-97-8	50%	35 N J

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-5

Lab ID#: 0701320-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012310	Date of Collection:	1/18/07
Dil. Factor:	2.42	Date of Analysis:	1/23/07 07:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	Not Detected	3.9	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	4.0%	12 N J
Butane	106-97-8	64%	33 N J
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: SG-3

Lab ID#: 0701320-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012311	Date of Collection:	1/18/07
Dil. Factor:	2.42	Date of Analysis:	1/23/07 08:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	Not Detected	3.9	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	38%	1300 N J
Butane	106-97-8	59%	27 N J
Propane	74-98-6	9.0%	130 N J

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-6

Lab ID#: 0701320-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012312	Date of Collection:	1/18/07
Dil. Factor:	2.42	Date of Analysis:	1/23/07 08:57 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	Not Detected	3.9	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	NA	Not Detected
Butane	106-97-8	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-1

Lab ID#: 0701320-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012313	Date of Collection:	1/18/07
Dil. Factor:	2.42	Date of Analysis:	1/23/07 09:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	1.3	3.9	4.2

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	NA	Not Detected
Butane	106-97-8	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	101	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-1-DUP

Lab ID#: 0701320-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012314	Date of Collection:	1/18/07
Dil. Factor:	2.42	Date of Analysis:	1/23/07 10:30 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	Not Detected	3.9	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	NA	Not Detected
Butane	106-97-8	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-2

Lab ID#: 0701320-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012315	Date of Collection:	1/19/07
Dil. Factor:	2.29	Date of Analysis:	1/23/07 11:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.1	2.0	3.6	6.4

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	36%	180 N J
Butane	106-97-8	59%	6.9 N J
Propane	74-98-6	9.0%	19 N J

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-2 Duplicate

Lab ID#: 0701320-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012316	Date of Collection:	1/19/07
Dil. Factor:	2.29	Date of Analysis:	1/24/07 12:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.1	2.0	3.6	6.5

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	38%	180 N J
Butane	106-97-8	7.0%	6.4 N J
Propane	74-98-6	9.0%	19 N J

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	100	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-7

Lab ID#: 0701320-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012317	Date of Collection:	1/19/07
Dil. Factor:	2.33	Date of Analysis:	1/24/07 01:00 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.2	1.4	3.7	4.4

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	NA	Not Detected
Butane	106-97-8	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	99	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-7-DUP

Lab ID#: 0701320-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012318	Date of Collection:	1/19/07
Dil. Factor:	2.29	Date of Analysis:	1/24/07 01:40 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.1	Not Detected	3.6	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	NA	Not Detected
Butane	106-97-8	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	99	70-130

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-9

Lab ID#: 0701320-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012320	Date of Collection:	1/19/07
Dil. Factor:	45.8	Date of Analysis:	1/24/07 03:24 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	23	Not Detected	73	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Propane	74-98-6	9.0%	170 N J
Propane, 2-methyl-	75-28-5	38%	9800 N J
Butane	106-97-8	72%	7200 N J

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: SG-8

Lab ID#: 0701320-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012319	Date of Collection:	1/19/07
Dil. Factor:	2.29	Date of Analysis:	1/24/07 02:30 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	1.1	4.7	3.6	15

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Propane	74-98-6	9.0%	8.3 N J
Propane, 2-methyl-	75-28-5	9.0%	62 N J
Butane	106-97-8	50%	35 N J

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	100	70-130

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0701320-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012308	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 1/23/07 05:24 PM	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.50	Not Detected	1.6	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Isobutane	75-28-5	NA	Not Detected
Butane	106-97-8	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	99	70-130

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0701320-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012302	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 1/23/07 10:08 AM	

Compound	%Recovery
Benzene	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0701320-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	1012303	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 1/23/07 10:49 AM	

Compound	%Recovery
Benzene	92

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	101	70-130

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CHAIN-OF-CUSTODY RECORD

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Page ____ of ____

Project Manager: Mark Jonas
Collected by: (Print and Sign) Celina Hernandez
Company: Cambria Email: ____
Address: 5900 Hollis St City: Emeryville State: CA Zip: 94611
Phone: 510 420-3313 Fax: 510 420-9170

Project Info:
P.O. # 129-0741-068
Project # Same
Project Name: Hooshi - Oakland

Turn Around Time:
☒ Normal
☐ Rush
____ specify

Lab Use Only
Pressurized by: VHR
Date: 1/23/07
Pressurization Gas: (N$_2$) He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	SG-5	3307	1/18/07	1251	TO15 - benzene	-26	-5	5.0" Hg	15.0 psi
02A	SG-3	1434	1/18/07	1343	+ isobutane, butane	-28	-5	5.0" Hg	↓
03A	SG-6	3207	1/18/07	1448	+ propane	-28	-5	5.0" Hg	↓
04A	SG-1	743	1/18/07	1532	↓	-27.5	-5	5.0" Hg	↓
05A	SG-1-DUP	373	1/18/07	1551	↓	-27	-5	5.0" Hg	↓
06A	SG-2	785	1/19/07	1135	↓	-27	-5	3.5" Hg	↓
07A	SG-7	644	1/19/07	1211	↓	-27	-5	4.0" Hg	↓
08A	SG-7-DUP	700	1/19/07	1236	↓	-29	-5	3.5" Hg	↓
09A	SG-9	2731	1/19/07	1403	↓	-29	-5	3.5" Hg	↓
10A	SG-8	2709	1/19/07	1450	↓	-30	-5	3.5" Hg	↓

Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
Celina [signature] 1/19/07 1605	Secured Location
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
	T. [signature] - ATL 1/22/07 0905
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	DHL	1972880705 5	N/A	good	Yes No (None)	0701320

APPENDIX G

Soil Vapor Sampling Data Sheets

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SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: ~~VR1~~ SG-1

Project Name: Hooshi
Project No: 129-0741-068
Site Address: 1499 MacArthur Blvd.

Date: 1/18/07
Sampler: C. Hernandez
PM: M. Jonas

Purge Volume

Calculated Purge Volume: 3 purge volumes per DTSC

Time	Flow Rate	Volume	Comments
1513			1/10 1L tedlar bag

Sample Collection

Flow Control Setting: FC00829 100 mL/min
Summa Canister ID: 743
Summa Canister Size: 1L
Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
~~1515~~ 1522	27.5	1532	-5	

Notes:

Soil Vapor Sampling Point ID: ~~VR2~~ SG-1-DUP

Project Name: Hooshi
Project No: 129-0741
Site Address: 1499 MacArthur Blvd. Oakland

Date: 1/18/07
Sampler: C Hernandez
PM: M. Jonas

Purge Volume

Calculated Purge Volume:

Time	Flow Rate	Volume	Comments
1541			1/10 1L tedlar bag

Sample Collection

Flow Control Setting: 100mL/min
Summa Canister ID: 373
Summa Canister Size: 1L
Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
1543	27	1551	-5	

Notes:

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SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: SG-2

Project Name: Hooshi **Date:** 1/19/07

Project No: 129-0741-068 **Sampler:** C. Hernandez

Site Address: 1499 MacArthur Blvd. **PM:** M. Jonas

Purge Volume

Calculated Purge Volume: 3 purge volumes per DTSC

Time	Flow Rate	Volume	Comments
1120			1/10 1L tedlar bag

Sample Collection

Flow Control Setting: FC00121 100mL/min Summa Canister ID: 785

Summa Canister Size: 1L Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
1127	-27	1135	-5	

Notes:

Soil Vapor Sampling Point ID: SG-~~6~~ 7-DP

Project Name: Hooshi **Date:** 1/19/07

Project No: 129-0741-068 **Sampler:** C. Hernandez

Site Address: 1499 MacArthur Blvd Oakland **PM:** M. Jonas

Purge Volume

Calculated Purge Volume: No purge since sampled SG-7; this is a duplicate sample

Time	Flow Rate	Volume	Comments

Sample Collection

Flow Control Setting: FC00243 100mL/min Summa Canister ID: 700

Summa Canister Size: 1L Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
1227	-29	1236	-5	

Notes:

CAMBRIA

SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: ~~VP-3~~ SG-3

Project Name: Hooshi
Project No: 129-0741-068
Site Address: 1499 MacArthur Blvd. Oakland

Date: 1/10/07
Sampler: C. Hernandez
PM: M. Jonas

Purge Volume

Calculated Purge Volume: 3 purge volumes per DTSC

Time	Flow Rate	Volume	Comments
1352			1/0 tedlar bag (1L)

Sample Collection

Flow Control Setting: FC00631 100 mL/min
Summa Canister ID: 1434
Summa Canister Size: 1L
Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
1334	-28	1343	1L	~~1343~~ 9 min

Notes:

Soil Vapor Sampling Point ID: ~~VP-4~~ SG-4

Project Name: Hooshi
Project No: 129-0741-068
Site Address: 1499 MacArthur Blvd, Oakland

Date: 1/10/07
Sampler: C. Hernandez
PM: M. Jonas

Purge Volume

Calculated Purge Volume: 3 purge volumes per DTSC

Time	Flow Rate	Volume	Comments
1418			1/0 tedlar bag (1L)

Sample Collection

Flow Control Setting:
Summa Canister ID:
Summa Canister Size:
Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time

Notes: Standing water in well box, purge water w/ cup; dry surface w/ towel. While purging, water was in tube. Stop purging. No sampling

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SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: ~~VP-5~~ SG-5

Project Name: Hooshi
Project No: 129-0741-068
Site Address: 1499 MacArthur Blvd.

Date: 1/18/07
Sampler: C. Hernandez
PM: M. Jonas

Purge Volume

Calculated Purge Volume: 3 purge volumes per DTSC

Time	Flow Rate	Volume	Comments
1235			1/10 1L tedlar bag

Sample Collection

Flow Control Setting: FC 00843 100mL/min
Summa Canister ID: 3307
Summa Canister Size: 1L
Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
1241	~~NL~~ -26	1251	-5	1251

Notes: Depth to water in adjacent well MW-6 = 6.80. ~~FIELD~~
odor while purging.
No moisture in tubing, connected blow out to prevent water from entering system

Soil Vapor Sampling Point ID: ~~VP-6~~ SG-6

Project Name: Hooshi
Project No: 129-0741-068
Site Address: 1499 MacArthur Blvd Oakland

Date: 1/18/07
Sampler: C. Hernandez
PM: M. Jonas

Purge Volume

Calculated Purge Volume: 3 purge volumes per DTSC

Time	Flow Rate	Volume	Comments
1433			1/10 tedlar bag (1L)

Sample Collection

Flow Control Setting: FC 00419 100mL/min
Summa Canister ID: 3207
Summa Canister Size: 1L
Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
1435	-28	~~1447~~ 1448	-5	

Notes:

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SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: ~~VMW~~ SG-7

Project Name: Hooshi
Project No: 129-0741-068
Site Address: 1499 MacArthur Blvd. Oakland

Date: 1/19/07
Sampler: C. Hernandez
PM: M. Jonas

Purge Volume

Calculated Purge Volume: 3 purge volumes per DTSC

Time	Flow Rate	Volume	Comments
1155			1/10 1L tedlar bag

Sample Collection

Flow Control Setting: FC00631 100ml/min
Summa Canister ID: 644
Summa Canister Size: 1L
Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
1203	-27	1211	-5	

Notes:

Soil Vapor Sampling Point ID: ~~VMW~~ SG-8

Project Name: Hooshi
Project No: 129-0741-068
Site Address: 1499 MacArthur Blvd. Oakland

Date: 1/19/07
Sampler: C. Hernandez
PM: M. Jonas

Purge Volume

Calculated Purge Volume: 3 purge volumes per DTSC

Time	Flow Rate	Volume	Comments
1420			1/10 1L tedlar bag

Sample Collection

Flow Control Setting: FC00177 100ml/min
Summa Canister ID: 2709
Summa Canister Size: 1L
Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
1433	-30	1450	-5	

Notes:

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SOIL VAPOR SAMPLING DATA SHEET

Soil Vapor Sampling Point ID: ~~[illegible]~~ SG-9

Project Name: Hooshi **Date:** 1/19/07

Project No: 129-0741-068 **Sampler:** C. Hernandez

Site Address: 1499 MacArthur Blvd. **PM:** M. Jonas

Purge Volume

Calculated Purge Volume: ~~[illegible]~~ 3 purge volumes per DTSC

Time	Flow Rate	Volume	Comments
1342			1/10 1L tedlar bag

Sample Collection

Flow Control Setting: FC 05587 100 mL/min Summa Canister ID: 2734

Summa Canister Size: 1L Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time
1349	-29	1403	-5	

Notes:

Soil Vapor Sampling Point ID:

Project Name: **Date:**

Project No: **Sampler:**

Site Address: **PM:**

Purge Volume

Calculated Purge Volume:

Time	Flow Rate	Volume	Comments

Sample Collection

Flow Control Setting: Summa Canister ID:

Summa Canister Size: Analysis:

Time - Begin Sampling	Canister Vacuum	Time - End Sampling	Canister Vacuum	Sampling Time

Notes: