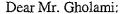
Mr. Amir Gholami, REHS Alameda County Department of Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

RECIENTES, 99

#### Re: Soil and Groundwater Investigation Report

2856 Helen Street Oakland, California 94608 Cambria Project #193-1521-1 STID: 170



On behalf of W. Taylor Partch, Cambria Environmental Technology, Inc. (Cambria) is submitting the results of the subsurface investigation for the above-referenced site. The objective of the subsurface investigation was to investigate soil and groundwater in the vicinity of the former underground storage tanks (USTs). The site background, investigation procedures, investigation results, low-risk soils case criteria, and our case closure justification and recommendations are resented below.

# SITE BACKGROUND

The following information has been compiled from a site visit, review of Mr. Partch's files, and our review of files for nearby sites available at the Alameda County Department of Environmental Health (ACDEH).

Site Description: The site is located on the east side of Helen Street, between 34th and 28th Streets, in a residential and light industrial area in Oakland, California. The site consists of a former mechanical contractor facility with a parking lot south of the building, and a vacant lot north of the building. Approximately three years ago a fire damaged the building, and the building was abandoned. Stockpiled soil and wood and miscellaneous debris are located in the southern parking area, while the northern lot is used for storage. The site owners recently began actively trying to sell the property.

August 1996 UST Removal and Sampling Results: On August 6, 1996, two 1,000-gallon underground storage tanks (USTs) were removed from the site by Bamer Construction of Castro Valley, California. According to site owner Mr Partch, the USTs were used for gasoline only and were last used in 1978. The UST and sampling locations and analytic results are included in Attachment A On June 14, 1999. Mr. Johnathon Bamer of Bamer Construction told Paul Waite of Cambria that the tank pit samples collected in 1996 were from the walls of the excavations at approximately 8 ft below the surface level. TPH-g and BTEX concentrations were detected in soil

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Cambria Environmental Technology, Inc.

1 44 6517 Street Suite B Cak and 04 91608 Tel (5/5) 420-0700 Fax (510) \_26-9 70

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samples from the southern UST excavation at maximum concentrations of 290, 6.5, 17, 1.5, and 7.6 ppm, respectively. Trace petroleum hydrocarbons were detected in soil beneath the northern UST, with a maximum TPHg concentration of 0.49 ppm. No TPHg or BTEX were detected in a grab water sample collected from the excavation pit for the southern UST. While no chain-of-custody was in the reviewed files, the analytic laboratory received the water sample on August 12, 1996. In a letter dated September 22, 1997, Bamer Construction stated that county inspector Brian Oliva authorized collection of the unwitnessed water sample collection - Mr. Oliva missed the scheduled sampling due to an emergency. No formal UST removal report was prepared, but tank disposal certifications were enclosed with the September 22, 1997 letter. The northern UST pit was backfilled up to grade while approximately 5 cubic yards of stockpiled soil remains adjacent to the southern UST.

*Groundwater:* To estimate the groundwater gradient at the site, Cambria reviewed available file information for sites located at 3455 Ettie Street, 3456 Ettie Street, and 327 34<sup>th</sup> Street. Site-specific groundwater elevation data was available for 3456 Ettie Street (a few blocks away) and 327 34<sup>th</sup> Street (much farther away and near Broadway and 580). According to groundwater elevation data from site wells at 3456 Ettie, the groundwater gradient is west-northwest at approximately 0.012 ft/ft. Depth to groundwater at the site was estimated to be approximately 8 ft below ground surface.

Surface Waters: The San Francisco Bay is approximately on-half mile northwest of the site

### **INVESTIGATION PROCEDURES**

The following work was performed in accordance with the May 10, 1999 Soil and Groundwater Investigation Workplan prepared by Cambria. Workplan approval was received from the ACDEH in a letter dated May 17, 1999, which stated that Cambria's workplan was "generally acceptable" and that additional soil and groundwater samples needed to be taken from the most perceived downgradient location at the site.

Our procedures for the subsurface investigation are summarized below. Analytic results for soil and groundwater are presented as Attachment A. Boring logs are presented as Attachment B. Our standard field procedures are presented as Attachment C.

### Soil Borings

Personnel Present: Cambria Engineer Paul Waite conducted the field sampling efforts, working

under the supervision of Professional Engineer Bob Clark-Riddell. Amir Gholami of the ACDEH was onsite to observe the sampling operations.

Drilling Company: Vironex, Inc. of Hayward, California (License C-57 705-927)

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Drilling Date:

May 24, 1999

Permits:

Alameda County Department of Public Works soil boring permit.

Sampling Methods:

Geoprobe hydraulic-push sampling system with a 2-inch diameter sampler.

Number of Borings:

Five soil borings (S-1, S-2, N-1, N-2, and N-3).

Water Sample Collection:

Cambria collected a grab groundwater sample from boring N-1 by installing a temporary 1-inch diameter well casing with a screen interval of 14-24 ft depth. Water samples were collected from the open boreholes of the other four borings.

Boring Locations and Depths: Borings S-1 and S-2 were installed to 16 and 20 ft depth, respectively, near the southern former tank location. Borings N-1 and N-2 were installed to 24 ft depth near the northern former tank location. At the request of Mr. Gholami, boring N-3 was installed to 24 ft depth near the northwest corner of the property in order to collect soil and groundwater from the farthest possible location

downgradient of the former tanks.

Sample Screening:

All samples were visually and physically screened in the field for the

presence of petroleum hydrocarbons.

Sediment Lithology:

Clayey silts were encountered in each of the soil borings through the entire

explored depth of 24 ft.

Chemical Analyses:

As proposed in the workplan, selected soil and groundwater samples were analyzed for:

- Total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015;
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020; and,
- Methyl tert-butyl ether (MTBE) by EPA Method 8020.

In addition, as requested by Mr. Gholami on May 24, 1999, selected soil and water samples were analyzed for lead by EPA Methods 6010/200.7 (soil) and 239.2 (water).

Waste Disposal:

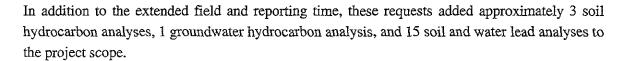
No soil cuttings were generated

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### Additional Scope of Work Investigation

As mentioned above, during his site visit on May 24, Mr. Gholami requested performance of several items in this investigation that were not proposed in Cambria's May 10, 1999 workplan. These items include:

- Soil and water sampling in the northwest corner of the site to investigate for migrating hydrocarbons;
- Completion of borings deeper than usual, and analysis of soil samples below the water table to investigate for sinking MTBE; and,
- Analysis of soil and water samples for lead.



### **INVESTIGATION RESULTS**

Hydrocarbon Concentrations in Soil: No TPHg, BTEX, or MTBE were detected in any of the soil samples collected from five borings on site. The maximum TTLC lead concentration detected in the soil samples was 39 mg/kg.

Hydrocarbon Concentrations in Groundwater: No TPHg, BTEX, or MTBE were detected in the five groundwater samples collected from the onsite borings. The maximum dissolved lead concentration detected in the groundwater samples was 0.43 mg/L.

### LOW-RISK SOILS CASE CRITERIA

The California Regional Water Quality Control Board - San Francisco Bay Region (RWQCB) released guidelines for clean-up of low-risk soil sites impacted by petroleum hydrocarbons. According to the RWQCB, a low-risk soils site has the following characteristics:

- The leak has stopped and the hydrocarbon source has been removed:
- The site is adequately characterized.
- No water wells or other sensitive receptors are likely to be impacted.



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• Little or no groundwater impact currently exists and no contaminants are found at levels above established MCLs or other applicable water quality objectives;

- The site presents no significant risk to human health; and
- The site presents no significant risk to the environment.

A discussion of site conditions relative to the RWQCB criteria for low-risk soil sites is presented below.



The leak has stopped and the hydrocarbon source has been removed: The two former 1,000-gallon gasoline USTs were removed in 1996 and had not been used since 1978.

The site is adequately characterized: No TPHg, BTEX, or MTBE were detected in soil and groundwater from five borings in the vicinity of the former tanks. Residual petroleum hydrocarbons, if still present, appear to be limited to the immediate tank pit areas.

No water wells or other sensitive receptors are likely to be impacted: No petroleum hydrocarbons were detected in the 1996 grab groundwater sample from the southern UST excavation, and none were detected in the five recent groundwater samples. Therefore, it is unlikely that groundwater or sensitive receptors in the area have been impacted.

The site presents no significant risk to human health: The residual gasoline compounds in the vicinity of the former USTs, if still present, do not represent a significant mass of petroleum hydrocarbons.

The site presents no significant risk to the environment: No potential exposure pathways that would adversely impact surface water, wetlands, or other sensitive receptors have been identified in the vicinity of the site. As such, the site does not pose a significant risk to the environment.

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### CASE CLOSURE JUSTIFICATION AND RECOMMENDATIONS

Based on our review of site conditions, we believe this site should be classified as a *low-risk soils* case and that full case closure should be granted. This recommendation is supported by the following considerations:

- The USTs have been removed;
- The site has been adequately characterized;
- The presence of residual hydrocarbons in soil in the former tank pits do not pose a significant health risk to either onsite occupants or the environment;
- No TPHg, BTEX, or MTBE were detected in the 1999 soil sampling;
- No TPHg, BTEX, or MTBE were detected in the 1996 or 1999 groundwater sampling.

We propose backfilling the southern tank pit with the previously excavated soil and closing the case. Since a potential property transaction is pending at this site, we would appreciate any efforts to expedite the review of this closure request. To further assist the ACDEH consideration for case closure, Cambria has submitted an electronic copy of a Case Closure Summary form, via e-mail, to Mr. Gholami (Attachment E). Bob Clark-Riddell, Principal Engineer at Cambria, has also discussed the case with Mr. Thomas Peacock of the ACDEH.



# CAMBRIA

Thank you for your continued assistance with this project. If you have any questions or comments regarding this report, please call Bob Clark-Riddell at (510) 420-3303.

Sincerely,

Cambria Environmental Technology, Inc.

Paul Waite

Project Engineer

Bob Clark-Riddell, P.E.

Principal Engineer

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Figures: 1 - Vicinity Map

2 - Site Map and Boring Locations

Table: 1 - Soil Sample Analytical Data

2 - Groundwater Analytical Data

Attachments: A - Standard Field Procedures for Soil Borings

B - Soil Boring Logs

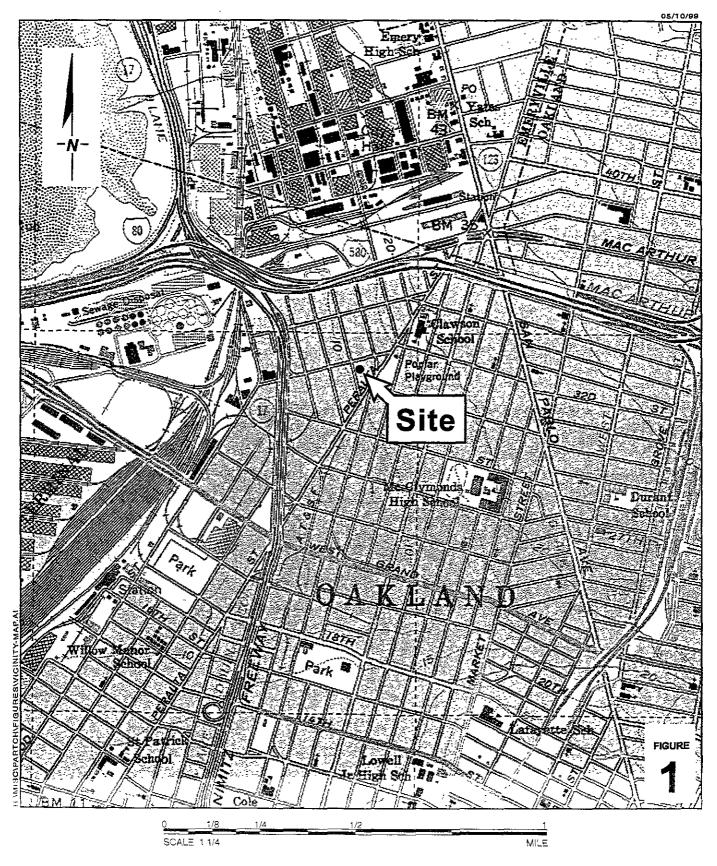
C - Laboratory Analytical Report

D - Permit

E - Case Closure Summary Form

cc: W. Taylor Partch, 2051 San Jose Avenue, Alameda, California 94501

Elizabeth McCune, 20068 Summerridge Drive, Castro Valley, California 94552

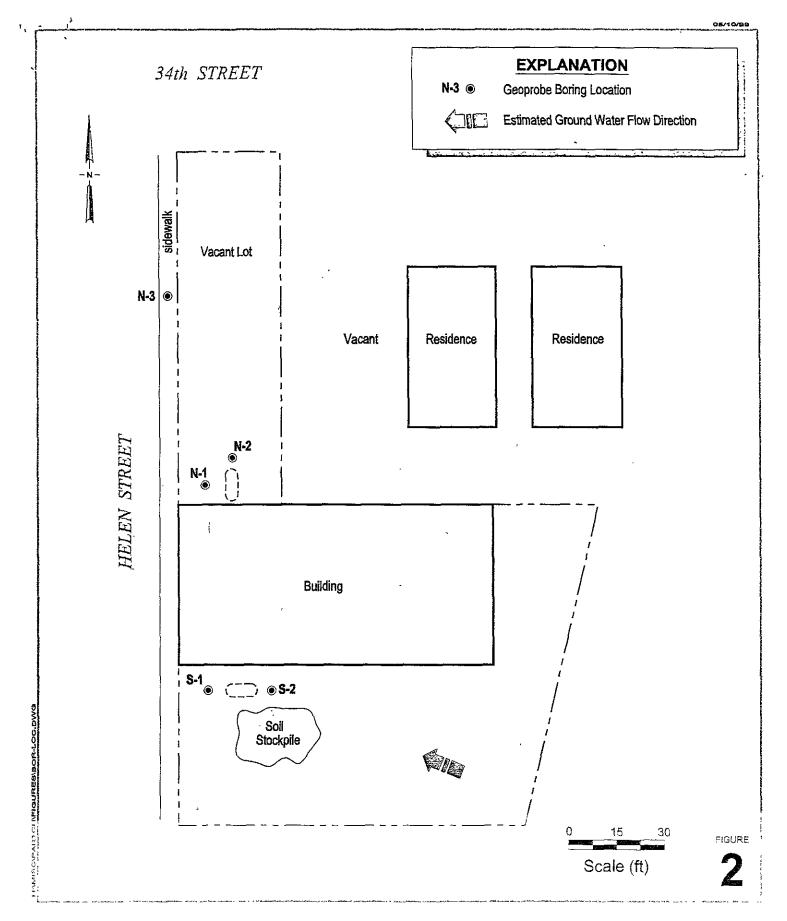


W.T. Partch

2862 Helen Street Oakland, California



Vicinity Map



W.T. Partch

2862 Helen Street Oakland, California



**Geoprobe Boring Locations** 

Table 1. Soil Sample Analytical Data - 2856 Helen Street, Oakland California 94608

Date	Sample D	Sample	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	TTLC Lead
		Depth (ft)			(Ail	concentrations reported	d in milligrams per kilogram)		<del></del>
Southern form	ner tank locatior	n, East e <b>nd</b>							
8/6/06	#1	8.0	200		2.4	12 0	0.2	0.7	4 7
7,11/40	5 2 5 6	5.0	< 1.0	< 0.05	< 0 005	< 0 005	< 0.005	< 0.005	5.2
273 (500)	S > 7.8	7.0	< 1.0	< 0.05	< 0 005	< 0 005	< 0.005	< 0 005	39
Southern forn	ner fank locatior	ı, West e <b>nd</b>							
8/6/96	и»	8.0	290		65	17 0	1.5	7.6	4.8
8/6/96	ИG	Stockpile Composite	10	*	0 14	0 88	0 29	0 61	11
< 21/00	54.56	5 0	< 1.0	< 0.05	< 0.005	< 0 005	< 0.005	< 0.005	4.5
5 21/00	\$ 1, 10 11	10.0	< 1.0	< 0 05	< 0 005	< 0 005	< 0.005	< 0.005	4 0
5/24/90	\$4 (9.20)	190	< 1.0	< 0.05	< 0.005	< 0 005	< 0.005	< 0 005	19
Northern form	ner tank locatron	, North e <b>nd</b>							
8/6/96	н 3	8.0	0.43		< 0.1	< 0 1	20	110	32
5/24/90	N 1 5 6	50	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	9.0
2.5 (100)	21 0 10	90	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	5.4
Northern form	ner tank location	, South e <b>nd</b>							
840,00	H \$	80	0.49		< 0.1	< 0.1	< 0.1	< 0.1	5.1
870/96	#8	Stockpole Composite	6.0		< 0.1	0.59	< 0.1	0.3	78
\$424/00	N > 18	7.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	4.0
Northwest cor	ner of property								
5 2 (79)	N 3 / 8	7.0	< 1.0	< 0.05	< 0.005	< 0.005	< 0.005	< 0.005	5 6
5/14/00	N 3, 13 14	23 0	< 10	< 0 05	< 0.005	< 0 005	< 0.005	< 0.005	6.6

Abbreviations and Notes:

- = Not Analyzed

TPHg Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

MTBL (Methylacit butylaciber) and BTFX by EPA Method 8020

ETLC lead by LPA Method 6010 or 7420

Below detection limit of x milligrams per kilogram

Table 2. Groundwater Analytical Data - 2856 Helen Street, Oakland California 94608

Sample ID	Date	Depth to Water	ТРНд	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Lead
		(ft)			All	concentrations in	μg/L (ppb)		
South Lank Pir	8/12/96	Surface of open pit	< 50		< 0.1	< 0.1	< 0.1	< 0.1	< 50 total
S 1	5/24/99	5.9	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	46 dissolved
8.5	5/34/99	7.2	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	430 dissolved
NI	5/24/99	10.4	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	71 dissolved
<b>V</b> )	5/24/99	9 2	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	210 dissolved
N- 3	5/24/99	9.0	< 50	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	120 dissolved

### Abbreviations and Notes

- Not Analyzed

TPHg - Total Petroleum Hydrocarbons as gasoline by modified EPA Method 8015

MTBP Methyl Lettary Butyl Ether by EPA Method 8020

B HEX by FPA Method 8020 Total Cad by FPA Method 7420

Dissolved Lead by FPA Method 239.2

 $p\bar{p}b$  - parts per billion equivalent to  $\boldsymbol{micrograms}$   $\boldsymbol{per}$  liter

Selow detection funct of x micrograms per liter

GW VIS Page 1 of 1



# Attachment A

Standard Field Procedures for Soil Borings



# STANDARD FIELD PROCEDURES FOR GEOPROBE® SAMPLING

This document describes Cambria Environmental Technology's standard field methods for GeoProbe® soil and ground water 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 Registered Geologist (RG) or a Certified Engineering Geologist (CEG). The following soil properties are noted for each soil sample:

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

Sampting tubes chosen for analysis are trimmed of excess soil and capped with Teflon<sup>7</sup> 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.

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# 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 Ground Water Sampling**

Ground water 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.

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Attachment B

Soil Boring Logs

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202				mL	Cisi alsand Grey lorange	01436	Soft			10	30	12		pr D	M-+
X				أخراص	£15 <sup>2</sup>	grey	film	Jeng		30	70			لون = الله	200
25					5281/13e) = 1/20 Sample for Contact w/C	7-10 2-10	1 Ft For	1/2	12.						
					- Cambria Environ	nental	Techr	rolog	y, Ind	c.				· · · · · · · · · · · · · · · · · · ·	

# CAMBRIA



# **Attachment C**

Laboratory Analytical Report

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560 Telephone: 925-798-1620 Fax: 925-798-1622 http://www.mccampbell.com E-mail: main@mccampbell.com

Cambria Environmental Technology	Client Project ID: #193-1521-3;	Date Sampled: 05/24/99
1144 65 <sup>th</sup> Street, Suite C	Partch 2856	Date Received: 05/26/99
Oakland, CA 94608	Client Contact: Paul Waite	Date Extracted: 05/26/99
	Client P.O:	Date Analyzed: 05/26/99

06/04/99

#### Dear Paul:

### Enclosed are:

- 1). the results of 15 samples from your #193-1521-3; Partch 2856 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.

Yours truly

Edward Hamilton, Lab Director

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560 Telephone: 925-798-1620 Fax: 925-798-1622 http://www.mccampbell.com E-mail: main@mccampbell.com

Cambria Environmental Technology	Client Project ID: #193-1521-3;	Date Sampled: 05/24/99
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	Client P.O:	Date Analyzed: 05/28-06/03/99

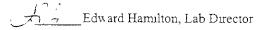
Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\*, with Methyl tert-Butyl Ether\* & BTEX\*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) <sup>+</sup>	MTBE	Benzene	Toluene	Ethylben- zene	Xylenes	% Recovery Surrogate
11939	S-1, 5-6	S	ND	ND	ND	ND	ND	ND	107
11941	S-1, 10-11	S	ND	ND	ND	ND	ND	ND	94
11946	S-1, 19-20	S	ND	ND	ND	ND	ND	ND	104
11947	S-1	w	ND,i	ND	ND	ND	ND	ND	107
11949	S-2, 5-6	s	ND	ND	ND	ND	NĐ	ND	101
11950	S-2, 7-8	S	ND	ND	ND	ND	ND	ND	100
11955	S-2	w	ND	ND	ND	ND	ND	ND	109
11957	N-1, 5-6	s	ND	ND	ND	ND	ND	ND	101
11959	N-1, 9-10	s	ND	ND	ND	ND	ND	ND	102
11967	N-1	w	ND,i	ND	ND	ND	ND	ND	106
11970	N-2, 7-8	s	ND	ND	ND	ND	ND	ND	101
11978	N-2	w	ND,i	ND	ND	ND	ND	ND	105
11981	N-3, 7-8	s	ND	ND	ND	ND	ND	ND	96
11988	N-3, 23-24	s	ND	ND	ND	ND	ND	ND	100
	g Limit unless se stated; ND	w	50 ug/L	5.0	0.5	0.5	0.5	0.5	
	detected above porting limit	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

<sup>\*</sup> water and vapor samples are reported in ug/L, wipe samples in ug/wipe soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

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 (?). f) one to a few isolated peaks present, g) strongly aged gasoline or doesel range compounds are significant, h) lighter than water immiscible sheen is present, i) liquid sample that contains greater than ~5 vol. % sediment, j) no recognizable pattern



<sup>&</sup>quot; cluttered chromatogram, sample peak coelutes with surrogate peak

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560 Telephone: 925-798-1620 Fax: 925-798-1622

http://www.mccampbell.com E-mail: main@mccampbell.com

Cambria Environmental Technology	Client Project ID: #193-1521-3;	Date Sampled: 05/24/99
1144 65 <sup>th</sup> Street, Suite C	Partch 2856	Date Received: 05/26/99
Oakland, CA 94608	Client Contact: Paul Waite	Date Extracted: 05/26/99
	Client P.O:	Date Analyzed: 05/28-06/03/99

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\*, with Methyl tert-Butyl Ether\* & BTEX\*

EPA methods 5030, modified 8015, and 8070 or 607. California RWOCR (SE Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)⁺	MTBE	Benzene	Toluene	Ethylben- zene	Xylenes	% Recovery Surrogate
11989	N-3	w	ND,i	ND	ND	ND	ND	ND	106
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			<u> </u>						
Reporting	g Limit unless se stated; ND	w	50 ug/L	5.0	0.5	0.5	0.5	0.5	
means not	detected above orting limit	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

<sup>\*</sup> water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts

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) ighter 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 (?), f) one to a few isolated peaks present, g) strongly aged gasoline or diesel range compounds are significant, h) lighter than water immiscible sheen is present i) liquid sample that contains greater than ~5 vol. % sed ment, j) no recognizable pattern

f cluttered chromatogram, sample peak coelutes with surrogate peak

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560 Telephone: 925-798-1620 Fax: 925-798-1622 http://www.mccampbell.com E-mail: main@mccampbell.com

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	Client P.O:	Date Analyzed: 06/01-06/04/99
Oakland, CA 94608	Client Contact: Paul Waite	Date Extracted: 05/26/99
1144 65 <sup>th</sup> Street, Suite C	Partch 2856	Date Received: 05/26/99
Cambria Environmental Technology	Client Project ID: #193-1521-3;	Date Sampled: 05/24/99

EPA analytical	methods 6010/200.7, 23	9.2+	Lead*		
Lab ID	Client ID	Matrix	Extraction °	Lead*	% Recovery Surrogate
11939	S-1, 5-6	s	TTLC	4.5	101
11941	S-1, 10-11	S	TTLC	4.0	102
11946	S-1, 19-20	S	TTLC	19	101
11947	S-1	w	Dissolved	0.046	NA
11949	S-2, 5-6	S	TTLC	5.2	101
11950	S-2, 7-8	S	TTLC	39	100
11955	S-2	W	Dissolved	0.43	NA
11957	N-1, 5-6	S	TTLC	9.0	97
11959	N-1, 9-10	S	TTLC	5.4	101
11967	N-1	w	Dissolved	0.071	NA
11970	N-2, 7-8	s	TTLC	4.0	101
11978	N-2	w	Dissolved	0.21	NA
11981	N-3, 7-8	S	TTLC	5.6	101
11988	N-3, 23-24	S	TTLC	6.6	101
Domontin - T		S	TTLC	3.0 mg/kg	
stated; ND me	imit unless otherwise ans not detected above	W	TTLC	0.005 mg/L	
the re	eporting limit		STLC,TCLP	0.2 mg/L	

<sup>\*</sup> so:l and sludge samples are reported in mg/kg, wipe samples in ug wipe and water samples and all STLC / SPLP 'TCLP extracts in mg/L 'Lead is analysed using EPA method 6010 (ICP) for soils, sludges, STLC & TCLP extracts and method 239 2 (AA Furnace) for water samples

<sup>&</sup>lt;sup>6</sup> EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices TTLC), 3050(solids,TTLC) STLC - CA Title 22 <sup>5</sup> surrogate driuted out of range, N A means surrogate not applicable to this analysis

<sup>&</sup>amp; reporting limit raised due matrix interference

<sup>1)</sup> liquid sample that contains greater than ~2 vol % sediment, this sediment is extracted with the liquid in accordance with EPA methodologies and car significantly effect reported metal concentrations



110 2nd Avenue South, #D7, Pacheco, CA 94553-5560 Telephone: 925-798-1620 Fax: 925-798-1622 http://www.mccampbell.com E-mail: main@mccampbell.com

Client P.O:	Date Analyzed: 06/01-06/04/99
Oakland, CA 94608 Client Contact: Paul Waite	Date Extracted: 05/26/99
Partch 2856  1144 65 <sup>th</sup> Street, Suite C	Date Received: 05/26/99
Cambria Environmental Technology Client Project ID: #193-1521-3;	Date Sampled: 05/24/99

Lead\*

EPA analytical methods 6010/200.7, 239.2<sup>+</sup>

Lab ID	Client ID	Matrix	Extraction °	Lead*	% Recovery Surrogate
11989	N-3	w	Dissolved	0.12	NA
				,	
	<u></u>	_			
	·	S	TTLC	3.0 mg/kg	
tated; ND mean	nit unless otherwise ns not detected above	w	TTLC	0.005 mg/L	
the rep	orting limit		STLC,TCLP	0.2 mg/L	

<sup>\*</sup> soil and sludge samples are reported in mg/kg, wipe samples in ug/wipe, and water samples and all STLC / SPLP / TCLP extracts in mg/L

<sup>&</sup>quot;Lead is analysed using EPA method 6010 (ICP) for soils, sludges, STLC & TCLP extracts and method 239 2 (AA Furnace) for water samples

ePA extraction methods 1311(TCLP), 3010 3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC), STLC - CA Title 22

<sup>&</sup>quot; surrogate driuted out of range, N A means surrogate not applicable to this analysis

<sup>&</sup>amp; reporting limit raised due matrix interference

i) hourd sample that contains greater than ~2 vol. % sediment, this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.

# QC REPORT FOR HYDROCARBON ANALYSES

Date: 05/28/99-05/29/99

Matrix: WATER

	Concent	ration	(ug/L)	-	% Reco	very	
Analyte	Sample			Amount			RPD
i I	(#12050) 	MS	MSD	Spiked 	MS	MSD	
TPH (gas)	0.0	106.2	103.5	100.0	106.2	103.5	2.6
Benzene	0.0	9.4	9.2	10.0	94.0	92.0	2.2
Toluene	0.0	9.8	9.5	10.0	98.0	95.0	3.1
Ethyl Benzene	0.0	9.9	9.7	10.0	99.0	97.0	20
Xylenes	0.0	29.8	29.1	30.0	99.3	97.0	24
	·		-	 			
TPH(diesel)	0.0	8954	8664	7500	119	116	3.3
TRPH (oil & grease)	N/A	N/A	n/A	N/A	N/A	N/A	N/A

% Rec.  $\approx$  (MS - Sample) / amount spiked x 100

 $RPD = (MS - MSD) / (MS + MSD) \times 2 \times 100$ 

### QC REPORT FOR HYDROCARBON ANALYSES

Date: 05/28/99-05/29/99 Matrix: SOIL

	Concent	ration	(mg/kg)		% Reco	very	
Analyte	Sample			Amount			RPD
	(#02399)	MS	MSD	Spiked	MS	MSD	
<del></del>							! 
TPH (gas)	0.000	2.169	2.130	2.03	107	105	1.8
Benzene	0.000	0.202	0.192	0.2	101	96	5.1
Toluene	0.000	0.208	0.198	0.2	104	99	4.9
Ethylbenzene	0.000	0.208	0.202	0.2	104	1.01	2.9
Xylenes	0.000	0.624	0.604	0.6	104	101	3.3
TPH(diesel)	0	269	271	300	90	90	0.7
TRPH (oil and grease)	0.0	23.0	22.6	20.8	111	109	1.8

<sup>%</sup> Rec. = (MS - Sample) / amount spiked x 100

 $RPD = (MS - MSD) / (MS + MSD) \times 2 \times 100$ 

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# QC REPORT FOR ICP and/or AA METALS

Date: 06/01/99

Matrix: WATER

Extraction:

DISSOLVED

	Concent	ration	(mg/L)		% Reco	very	
Analyte	  Sample 	MS	MSD	Amount	MS	MSD	RPD
Total Lead	0.00	4.48	4.57	5.00	90	91	2.1
Total Cadmium  Total Chromium	N/A   N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	A\N A\N	N/A N/A
Total Nickel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Zinc	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Copper	   N/A	N/A	N/A	N/A	N/A	N/A	N/A
  Total Organic Le	N/A	N/A	N/A	   N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD)  $\times 2 \times 100$ 

# QC REPORT FOR ICP and/or AA METALS

Date: 06/04/99-06/05/99 Matrix: SOIL

Extraction:

TTLC

]	Concentr	ation			% Reco	very	
Analyte	(mg   Sample	g/kg,mg/l MS	L) MSD	Amount Spiked	MS	MSD	RPD
Total Lead Total Cadmium Total Chromium Total Nickel Total Zinc	0.0 N/A N/A N/A N/A	5.17 N/A N/A N/A N/A	5.15 N/A N/A N/A N/A	5.0   N/A   N/A   N/A   N/A	103   N/A   N/A   N/A   N/A	103 N/A N/A N/A N/A	0.4 N/A N/A N/A N/A
Total Copper	N/A	N/A	N/A	N/A	   N/A	N/A	N/A
Organic Lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked  $\times$  100

 $RPD = (MS - MSD) / (MS + MSD) \times 2 \times 100$ 

153002C 24 CHAIN OF CUSTODY RECORD McCAMPBELL ANALYTICAL INC. 110 2<sup>nd</sup> AVENUE SOUTH, #D7 PACHECO, CA 94553 TURN AROUND TIME RUSH 24 HOUR 48 HOUR 5 DAY Fax: (925) 798-1622 Telephone: (925) 798-1620 Report To: Bob Schultz / g., / Waste Bill To: Cambria Analysis Request Other Comments Company: Cambria Environmental Technology Total Petroleum Oil & Grease (5520 E&F/B&F) 2/28 1144 65th Street, Suite C Oakland, CA 94608 EPA 625 / 8270 / 8310 Project Location: 2856 Helen St. Oakland CA
Sampler Signature: Total Petroleum Hydrocarbons (418.1) BTEX ONLY (EPA 602 / 8020) EPA 608 / 8080 EPA 608 / 8080 PCB's ONLY EPA 624 / 8240 / 8260 METHOD PRESERVED SAMPLING MÁTRIX CAM-17 Metals EPA 601 / 8010 SAMPLE ID LOCATION Water
Soil
Air
Air
Sludge
Other
Ice
HCl
HRO3 Time Date 5/24 9:45 VDAS ORG METALS OTHER PRESERVATION APPROPRIATE GOOD CONDITION Y CONTAINERS HEAD SPACE ABSENT Remarks Zou Dissolved Pb so waters 2023 Received By: Relinquished By. Date: Refinquished By: The Refinquished By. 5-1. 5-2 Date: Time: 269 10.32 Received By:
Lima Abuld

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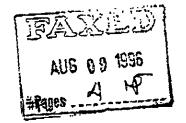
# CALCOAST ANALYTICAL

# Materials Chemistry.

Certified by
California Department of Health Services
City of Los Angeles, Dept. of Building & Safety

Mail 10 8/9/96 NO

August 9, 1996



Bamer Construction 3137 Castro Valley Blvd. Castro Valley, CA 94546

Attn: Mr. John Bamer

Ref: Lab File #0807-6A/F-96

### 1. SAMPLE(S):

Six (6) soil core samples from 2856 Helen St.; Oakland, CA., Project Nº 616 806 'O"

- A. #1: South Tank, East End
- E. #2; South Tank, West End
- C. #3; North Tank, North End
- D. #4; North Tank, South End
- E. #5; North Composite of Piles
- P. #6: South Composite of Piles

Received August 7, 1996

# ANALYSIS REQUIRED:

- A. Total lead (Pb) concentration by Atomic Absorption Spectroscopy (AAS).
- B. Total Petroleum Hydrocarbons gasoline (TPII-g) by Gas Chromatography (GC).
- C. Benzene, Toluene, ethylbenzene, and xylenes (BTEX) concentration by Gas Chromatography / Mass Spectrometry (GC/MS).

Page 3 of 3 Ref: Lab File #0807-6A/F-96

#### 4. RESULTS:(continued)

#### C. BTEX

PBIL

SAMPLE		CONCENTRATION (µg/kg)						
		BENZENE	Toluene.	ETHYLBENZENE	XYLENE			
Α.	#1, S. Tank / E. End	2,400	12,000	200	700			
B.	#2, S. Tank / W. End	6,500	17,000	1,500	7,600			
C.	#3, N. Tank / N. End	< 0.1 (ND)	< 0.1 (ND)	20	110			
D.	#4, N. Tank / S. End	< 0.1 (ND)	< 0.1 (ND)	< 0.1 (ND)	< 0.1 (ND)			
E.	#5, N. Composite	< 0.1 (ND)	590	< 0.1 (ND)	300			
F.	#6, S. Composite	140	880	290	610			
Meti	od Blank	< 0.1 (ND)	< 0.1 (ND)	< 0.1 (ND)	< 0.1 (ND)			
Mean Spike Recovery		109%	114%	102%	88%			

Ronald Shrewsbury Analytical Chemist

RS:ag

ALL SAMPLES SUBMITTOD FOR TESTING WILL BE HELD 30 DAYS FROM REPORT DATE AT WHICH TIME THEY WILL BE RETURNED TO CLIENT OR DESTROYED. CLIENT WILL BE RESPONSIBLE FOR ALL SHIPPING, HANDLING, AND DISPOSAL CHARGES. SAMPLES WILL BE STORED UPON WRITTEN INSTRUCTIONS AND FEE ARRANGEMENTS.

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Page 2 of 3 Ref: Lab File #0807-6A/F-96

### METHODS OF ANALYSIS:

- A. Sample Digestion EPA Method 3050; SW-846 AAS Analysis - EPA Method 7420; SW-846
- B. GC by EPA Method 8015; SW-846
- C. GC/MS by EPA Method 8240; SW-846

#### 4. RESULTS:

#### A. Total Lead

	Sample	TOTAL LEAD CONCENTRATION (mg/kg)
Α.	S. Tank / E. End	4.7
B.	S. Tank / W. End	4.8
C.	N. Tank / N. End	32
D.	N. Tank / S. End	5.1
E.	N. Composite	78
F.	S. Composite	11

Method Blank - < 5.0 mg/kg (none detected)
Mean Spike Recovery = 108%

#### B. TPH-g

Sample		TPH-G CONCENTRATION (mg/kg)
A.	#1, S. Tank / E. End	200
B.	#2, S. Tank / W. End	290
C.	#3, N. Tank / N. End	0.43
D.	#4, N. Tank / S. End	0.49
E.	#5, North Composite	6.0
F.	#6. South Composite	10

Method Blank = < 0.05 mg/kg (none netected

Mean Spike Recover; = 92%

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# CALCOAST ANALYTICAL

## Materials Chemistry

Certified by
California Department of Health Services
City of Los Angeles, Dept. of Building & Safety

August 13, 1996

Bamer Construction 3137 Castro Valley Blvd. Castro Valley, CA 94546

Atin: Mr. John Bamer

Ref: Lab File #0812-2A/C-96

#### 1. SAMPLE(S):

Three (3) vials of water from 2856 Helen St.; Oakland, CA. Project No. 616 806 "O". The three vials are to be analyzed as one sample.

Received August 12, 1996

#### 2. Analysis required:

- A. Total lead (Pb) concentration by Atomic Absorption Spectroscopy (AAS).
- B. Total Petroleum Hydrocarbons gasoline (TPH-g) concentration by Gas Chromatography (GC).
- C. Benzene, toluene, ethylbenzene and xylenes (BTEX) concentration by Gas Chromatography / Mass Spectrometry (GC/MS).

#### 3. METHODS OF ANALYSIS:

- A. Sample Digestion EPA Method 3005; SW-846
   AAS Analysis EPA Method 7420; SW-846
- B. GC by EPA Method 8015; SW-846
- C. GC/MS by EPA Method 8240; SW-846

COATINGS • BUILDING MATERIALS • HAZARDOUS WASTE SPECTROSCOPY • CHROMATOGRAPHY • MICROSCOPY

Page 2 of 2 Ref: Lab File #0812-2A/C-96

#### 4. RESULTS:

#### A. Total Lead

The submitted sample contained < 0.05 mg/l lead (none detected).

Method Blank = < 0.05 mg/l (none detected)
Mean Spike Recovery = 108%

#### B. TPH-g

The submitted sample contained < 0.05 mg/l TPH-g (none detected)

Method Blank = < 0.05 mg/l (none detected)
Mean Spike Recovery = 111%

#### C. BTEX

Sample	Concentration (µg/f)							
	Benzene	Toluene	Ethylbenzene	Xylene				
2856 Helen	< 0.1 (ND)	< 0.1 (ND)	< 0.1 (ND)	< 0.1 (ND)				
Method Blank	< 0.1 (ND)	< 0.1 (ND)	< 0.1 (ND)	< 0.1 (ND)				
Mean Spike Recovery	113%	104%	104%	109%				

Ronald Shrewsbury Analytical Chemist

RS:ag

ALL SAMPLES SUBMITTED FOR TESTING WILL BE HELD 30
DAYS FROM REPORT DATE AT WHICH TIME THEY WILL BE
RETURNED TO CLIENT OR DESTROYED. CLIENT WILL BE
RESPONSIBLE FOR ALL SHIPPING, HANDLING, AND
DISPOSAL CHARGES. SAMPLES WILL BE STORED UPON
WRITTEN INSTRUCTIONS AND PEE ARRANGEMENTS.

This report was made at the request of and for the use only of the purchaser of said report."

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# CAMBRIA



## Attachment D

Permit



# ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

951 TURNER COURT, SUITE 989, HAYWARD, CA 34545-1651

PRONE (510) 670-5875 ANDREAS GODEREY

(510) 670-6148 ALVIN KAN

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DRILLING PERMIT APPLICATION	
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FOR APPLICANT TO COMPLETE	FOR OFFICE USE
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OCATION OF PROJECT CA 94608	WELL NUMBER
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## CAMBRIA



## Attachment E

Case Closure Summary Form

#### AGHOLAMI@co.alameda, 06:14 PM 6/17/99 , Re: CLOSURE SUMMARY FORM

To: AGHOLAMI@co.alameda.ca.us

From: Paul Waite <pdwaite@cambria-env.com>

Subject: Re: CLOSURE SUMMARY FORM

Cc: BCR Bcc:

Attached: H:\MISC\Partch\CLOSSUMM.doc;

Amir

1 1

Thank you for sending me the electronic version of the Case Closure Summary form. I have input the available information into the form and attached it to this e-mail. Please let me know if the attachment does or does not work properly, or if you have any questions or comments on the information.

We will be submitting the subsurface investigation report soon. If you have any questions, please feel free to call me at (510) 420-3305.

Thank you for your continued assistance with this project.

Paul Waite

At 04:57 PM 6/8/99 -0700, you wrote: > <<CLOS SUMMARY.doc>> >Hi Paul:

>Here is a blank copy of the closure summary form which I need to fill in to >close any case in general. If you fill this out, it will expedite the >procedure as discussed. I also need to discuss this case with my colleagues >regarding the closure of this site.

>Thanks! > >Amir!

# CASE CLOSURE SUMMARY Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION Date: June 17, 1999

Agency name: Alameda County-HazMat Address: 1131 Harbor Bay Pkwy

City/State/Zip: Alameda, CA 94502 Phone: (510) 567-6700

Responsible staff person: Amir K. Gholami Title: Hazardous Materials Spec.

II. CASE INFORMATION

Site facility name: Partch Property

Site facility address: 2856 Helen Street, Oakland, California 94608

RB LUSTIS Case No: N/A Local Case No./LOP Case No.: STID #170

URF filing date: SWEEPS No: N/A

Responsible Parties: Addresses: Phone Numbers:

Mr. W. Taylor Partch 2051 San Jose Av., Alameda CA 94501 (510) 521-0926

 Tank
 Size in No:
 Contents:
 Closed in-place or removed?:
 Date:

 1 (S) 1,000
 Gasoline
 Removed
 8/6/96

 2 (N) 1,000
 Gasoline
 Removed
 8/6/96

#### III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Unknown Site characterization complete? YES Date approved by oversight agency:

Monitoring Wells installed? NO Number:

Proper screened interval?

Highest GW depth below ground surface: 5.9 ft Lowest depth: 10.4 ft

Flow direction: Assumed North-Northwest

Most sensitive current use: None

Are drinking water wells affected? **No**Aquifer name:

Is surface water affected? NO Nearest affected SW name:

Off-site beneficial use impacts (addresses/locations):

Report(s) on file? YES Where is report(s) filed? Alameda County Oakland Fire Dept

1131 Harbor Bay Pkwy and 1605 MLK Jr Dr Alameda, CA 94502 Oakland, CA 94612

#### Treatment and Disposal of Affected Material:

<u>Material</u>	Amount (include units)	Action (Treatment or Disposal w/destination)	<u>Date</u>
Tank Soil Groundwater Barrels	2	Disposed	8/6/96

Maximum Documented ( Contaminant	Contaminant Concentrations - Soil (ppm)	Before and After Cleanup Water (ppb)		
	Before After	Before After		
TPH (Gas)	290	< 50		
TPH (Diesel)		<b>Biba</b>		
Benzene	6.5	< 0.5		
Toluene	17	< 0.5		
Ethylbenzene	20	< 0.5		
Xylenes	110	< 0.5		
Oil & Grease		·		
Heavy metals				
Lead	39	430 dissolved		

#### Comments (Depth of Remediation, etc.):

The two 1,000 gallon gasoline tanks were last used in 1978 and were removed in 1996. No petroleum hydrocarbons were detected in the 1996 grab groundwater sample from the southern UST excavation, and none were detected in the five recent groundwater samples. No TPHg, BTEX, or MTBE were detected in soil and groundwater from five borings in the vicinity of the former tanks. Approximately 5 cubic yards of soil were overexcavated from the southern tank pit and remain stockpiled on site.

IV. CLOSURE

Does completed corrective action pro	tect existing beneficial uses per the
Regional Board Basin Plan?	
Does completed corrective action pro-	tect potential beneficial uses per the
Regional Board Basin Plan?	
Does corrective action protect public	health for current land use?
Site management requirements:	
Should corrective action be reviewed	If land use changes?
Monitoring wells Decommissioned:	
Number Decommissioned:	Number Retained:
List enforcement actions taken:	
List enforcement actions rescinded:	

#### V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Amir K. Gholami	Title: Haz Mat Specialist	
Signature:	Date:	

Reviewed by

Name: Title: Haz Mat Specialist

Signature: Date:

Name: Thomas Peacock Title: Supervisor

Signature: Date:

VI. RWQCB NOTIFICATION

Date Submitted to RB: RB Response:

RWQCB Staff Name: Chuck Headlee Title: EG

Signature: Date:

VII. ADDITIONAL COMMENTS, DATA, ETC.

In summary, case closure is recommended because:

- o the leak and ongoing sources have been removed;
- o the site has been adequately characterized;
- o the dissolved plume is not migrating;
- o no water wells, surface water, or other sensitive receptors are likely to be impacted; and,
- o the site presents no significant risk to human health or the environment.

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