November 3, 2003

Mr. Keith L. Matthews
Oakland Fire Department, Office of Emergency Services
1605 Martin Luther King, Jr. Way
Oakland, California 94612

Re: **Investigation Work Plan**
2834 East 7th Street
Oakland, California
Cambria Project No. 557-1000

Dear Mr. Matthews:

On behalf of Mr. Gunther Kitsch, Cambria Environmental Technology, Inc. (Cambria), is submitting this work plan for an additional investigation at the site referenced above (Figure 1). This workplan was requested by the Oakland Fire Department (OFD). The objective of the proposed work is to provide additional assessment of soil beneath the former underground storage tank (UST) at the site. The site background and our proposed investigation scope of work are described below.

SITE BACKGROUND

Cambria understands that the site had been owned and used by Hans and Gunther Roofing, Inc. since the early 1970's. Based on discussions with former owner Mr. Gunther Kitsch, the former UST at the site was approximately 820 gallons and had been used for gasoline storage at the site for approximately 4 years about 25 years ago during the gasoline crisis in the 1970's. The tank was removed about 2 years ago by the seller's neighbor, a contractor experienced with tank removal. During tank removal the tank looked clean with no holes and no contamination was observed in the native soil or excavation cavity. No documentation regarding the UST removal has been provided to Cambria.

Cambria conducted a subsurface investigation on July 28, 2003. Consistent with the Tri-Regional Guidelines for UST investigations for a UST less than 1,000 gallons in capacity, Cambria collected at least one soil sample from native soil (at 10.5 feet below grade surface(bgs)) just beneath the UST. Based on logged soil, the bottom of the former tank excavation was encountered at approximately 10 feet bgs. To exceed the recommendations of the Tri-Regional Guidelines, Cambria submitted a second soil sample for analysis (deeper soil at 14.5 ft bgs), and drilled deeper (to 28 ft bgs) to qualitatively assess soil conditions and to collect and analyze groundwater samples (although no groundwater was encountered). Cambria also exceeded the Tri-Regional Guidelines by analyzing soil for total petroleum hydrocarbons as diesel (TPHd) and motor oil (TPHmo), semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs) beyond oxygenates and EDB and 1,2-DCA, and LUFT metals beyond total lead. Investigation results presented in Cambria's *Subsurface Investigation Report* dated August 14, 2003 indicated that no TPHg, TPHd, TPHmo, VOCs, or

SVOCs were detected in the soil samples from beneath the former tank. Metal concentrations appear to represent background conditions.

An *Environmental Transaction Screen* dated May 27, 2003, was prepared by AEI Consultants of Walnut Creek. The transaction screen recommended investigation beneath the former UST, which Cambria conducted. Additional background data is presented in Cambria's August 14, 2003 report.

PROPOSED INVESTIGATION SCOPE OF WORK

Cambria's proposed scope of work for this investigation includes two borings beneath the former UST as described below.

Utility Location: Cambria will notify Underground Service Alert (USA) of our drilling activities. USA will have the utilities in the site vicinity identified and, if necessary, survey the location using a private line locating firm.

Site Health and Safety Plan: Cambria will prepare a site safety plan to protect site workers. The plan will be kept on site at all times and signed by all site workers.

Permits: We will obtain the necessary boring permits from the Alameda County Public Works Agency and the City of Oakland.

Boring and Sampling: Cambria will complete two soil borings at the site using direct push (Geoprobe™) technology. Cambria will advance two borings (one near each end of the former UST) to approximately 15 feet bgs. Soil samples will be collected from native soil immediately beneath the former UST (11 feet bgs) and from deeper native soil (15 feet bgs). A trained field geologist will log soil samples using the Unified Soil Classification System. Grab groundwater samples will be collected from the borings, if groundwater is encountered. All samples will be properly preserved and submitted to a state-certified laboratory under chain-of-custody control for analysis. For safety purposes, Cambria will clear all boring locations by hand augering to 5 ft bgs prior to boring with drilling.

Laboratory Analyses: Consistent with Tri-Regional Guidelines, Cambria will submit the four soil samples to a state-certified laboratory under chain of custody. The two 11-feet bgs samples will be analyzed for multiple-range petroleum hydrocarbons (total petroleum hydrocarbons as gasoline, diesel, and motor oil), oxygenates (such as MTBE and TBA), and gasoline lead scavengers EDB and DCA by EPA Method 8260 and total lead. If there are detections in the 11-feet bgs samples, the two 15-feet bgs samples will be analyzed to provide vertical delineation.

Reporting: After Cambria receives the analytical results, we will prepare a subsurface investigation report that, at a minimum, will contain:

- A summary of the site background and history;
- Descriptions of the drilling and soil sampling methods;
- Boring logs;
- Tabulated soil analytical results;
- Analytical reports and chain-of-custody forms;
- Soil and water disposal methods; and
- A discussion of the hydrocarbon distribution in soil.

SCHEDULE

Upon receiving written approval of our work plan from the OFD, Cambria will commence permitting and field work coordination.

Any efforts to expedite processing of this work plan are greatly appreciated since the property is currently on the market for sale. If you have any questions, please call me at (510) 420-3303.

Sincerely,
Cambria Environmental Technology, Inc.

Bob Clark-Riddell, P.E.
Principal Engineer

Attachments

Figure 1 - Proposed Soil Boring Location Map

Appendix A – Standard Field Procedures for Geoprobe Sampling

cc: Gunther Kitsch, 2325 Belvedere Avenue, San Leandro, CA 94577
Steve Oelschlaegel, 1432 Via Lucas, San Lorenzo, CA 94580

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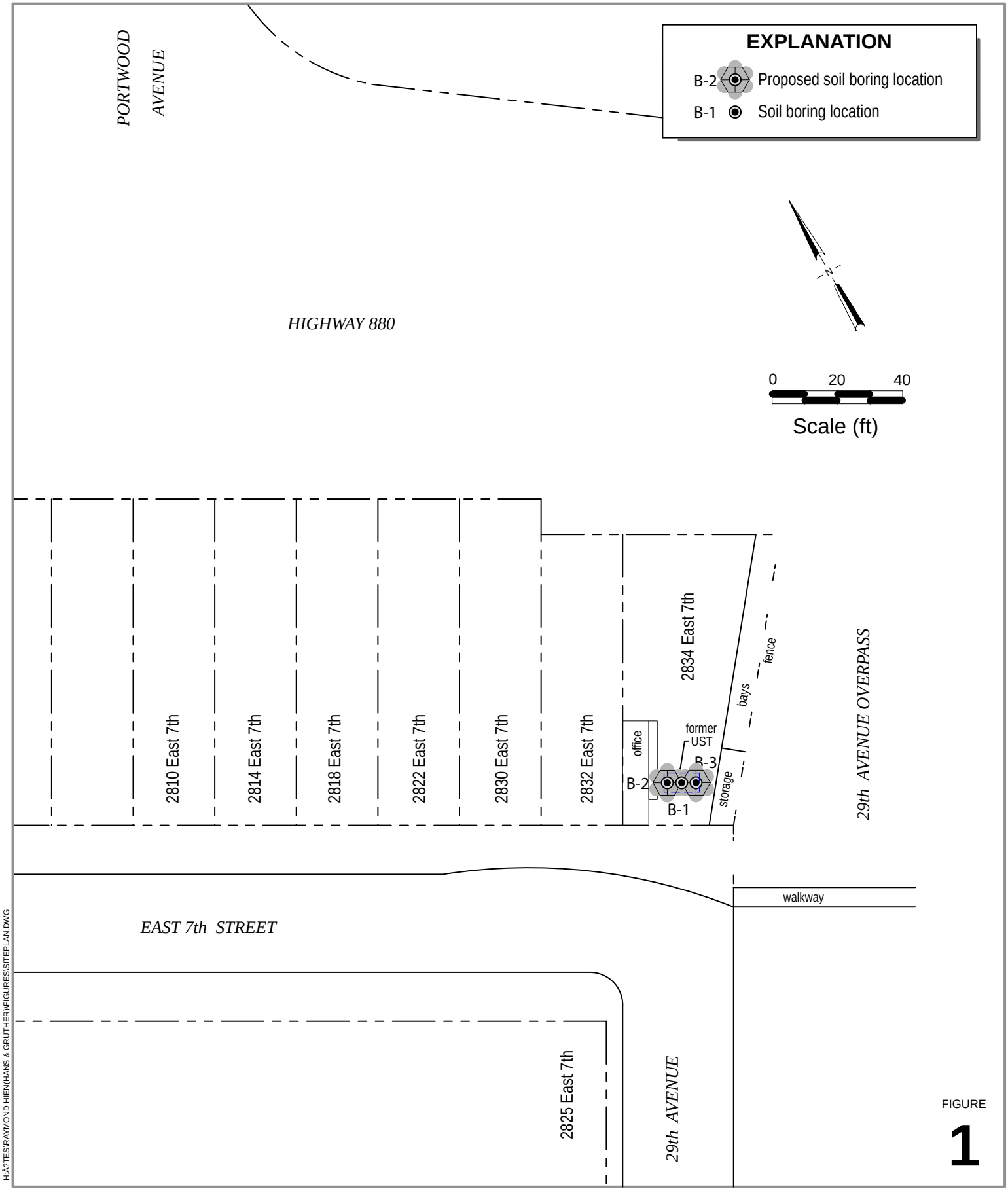

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FIGURE
1

Former Hans & Gunther Roofing
2834 East 7th Street
Oakland, California

CAMBRIA

Proposed Soil Boring Location Map

APPENDIX A

Standard Field Procedures for Geoprobe Sampling

CAMBRIA

STANDARD FIELD PROCEDURES FOR SOIL BORINGS AND GROUTING

This document describes Cambria Environmental Technology's standard field methods for drilling and sampling soil borings. 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:

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

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or hydraulic push technologies. At least one and one half ft of the soil column is collected for every five ft of drilled depth. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments beyond the bottom of the borehole. The vertical location of each soil sample is determined by measuring the distance from the middle of the soil sample tube to the end of the drive rod used to advance the split barrel sampler. All sample depths use the ground surface immediately adjacent to the boring as a datum. The horizontal location of each boring is measured in the field from an onsite permanent reference using a measuring wheel or tape measure.

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

Sample Storage, Handling and Transport

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

Field Screening

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

Water Sampling

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

Duplicates and Blanks

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

Grouting

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.

Waste Handling and Disposal

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

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