R0342

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March 2, 2004

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

Re: **Workplan for Subsurface Investigation**
Chevron Station 9-4800
1700 Castro St.
Oakland, California

Dear Mr. Hwang:

Cambria Environmental Technology, Inc. (Cambria) is submitting this workplan on behalf of Chevron Environmental Management Company (ChevronTexaco) to pre-profile soil prior to excavation and site upgrade activities. ChevronTexaco intends to upgrade the site facilities, including removing the underground storage tanks (USTs), piping and dispenser islands, and install two new USTs in a different location (Figure 1). The purpose of the pre-profile sampling program will determine whether soil excavated from the new UST installation can be reused on-site as part of the grading operations or if it needs to be properly disposed of at an off-site waste facility. To facilitate installation of the new USTs, Cambria intends to advance four soil borings at the outer limits of the proposed UST location and collect soil samples for chemical analyses. A brief discussion of the site description, proposed development and proposed subsurface investigation are discussed below.

Site Description

The site is an active Chevron service station located on the southeast corner of Castro and 18th Streets in Oakland, California. The current facility consists of a kiosk, five dispenser islands and four gasoline USTs that share a common excavation in the northern portion of the site. Presently, there are six (6) monitoring wells installed on the site and one well (1) northwest of the property to monitor groundwater conditions related to a past hydrocarbon release. Locations of pertinent site features are shown on Figure 1.

Proposed Redevelopment

As currently planned, the existing structures will be razed and replaced with a mini-mart, five dispenser islands and two UST's (one 15,000 gallon and one 20,000 gallon). The two new USTs

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will be located in the southern portion of the site (Figure 1). It is estimated that approximately 1,200 cubic yards of soil will be excavated as part of the installation of the new USTs. As part of the reconstruction plans the existing monitoring wells will not be removed.

Subsurface Assessment

To pre-profile the soil for reuse on-site or proper disposal off-site, Cambria proposes to drill four GeoProbe® borings in the area of the new USTs (Figure 1). Specific tasks are presented below.

Site Health and Safety Plan: We will prepare a comprehensive site safety plan to protect site workers prior to conducting field work. The plan will be kept on site during field activities and signed by each site worker.

Utility Location: Cambria will notify Underground Service Alert of our drilling activities to identify utilities in the site vicinity.

Permits: Cambria will obtain boring permits from the Alameda County Public Works Agency (ACPWA) before beginning field operations. A minimum of 72-hours notice will be given to the Alameda County Environmental Health Services before the commencement of field work.

GeoProbe® Borings: Cambria plans to advance approximately four soil borings using hydraulic-push (GeoProbe®) technology. Prior to drilling, Cambria will clear the boring locations with a vacuum truck and air/water knife, or equivalent equipment, to 8 feet below grade (fbg). This minimizes the potential for impacting underground utilities. At 4 fbg one grab soil sample will be collected from soil debris lifted from each air knife boring. The proposed boring locations are shown on Figure 1.

Three discrete soil samples will be collected from each boring at 8, 12, and 16 fbg using a drive sampler lined with a brass tube for lithologic description and chemical analyses. The ground surface immediately adjacent to the borings will be used to measure sample depth. The horizontal location of each boring will be measured relative to on-site features using a measuring wheel or tape measure. Cambria's standard field procedures for GeoProbe® sampling are presented in Attachment A.

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Chemical Analysis: The four samples from each boring will be combined into one composite sample for each boring to meet pre-profiling requirements (one four-part composite sample per 500 cubic yards of soil). Each composite sample will be analyzed for:

- Benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8020,
- TPHg by modified EPA Method 8015 and
- Total lead by EPA Method 6010B.

Soil Disposal: Soil cuttings produced during field activities will be temporarily stored on-site. Following review of analytical results, the soil will be reused on-site as part of the grading operations or transported to an appropriate facility for disposal if needed.

Reporting

Upon completion of field activities and review of the analytical results, we will prepare an investigation/exposure evaluation report that, at a minimum, will contain:

- Descriptions of the drilling and sampling methods;
- Boring logs;
- Tabulated soil analytic results;
- Analytic reports and chain-of-custody forms;
- Soil disposal methods.

Schedule

Cambria will proceed with the proposed scope of work on March 5, 2004. We anticipate submitting a completed report within four to six weeks of receiving analytical results.

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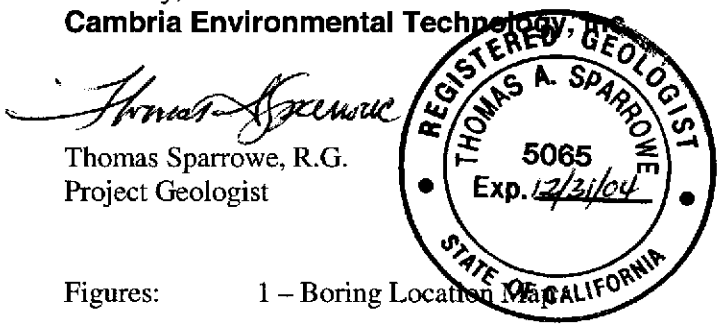
Closing

Please call Mr. Thomas Sparrowe at (510) 420-3301 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.

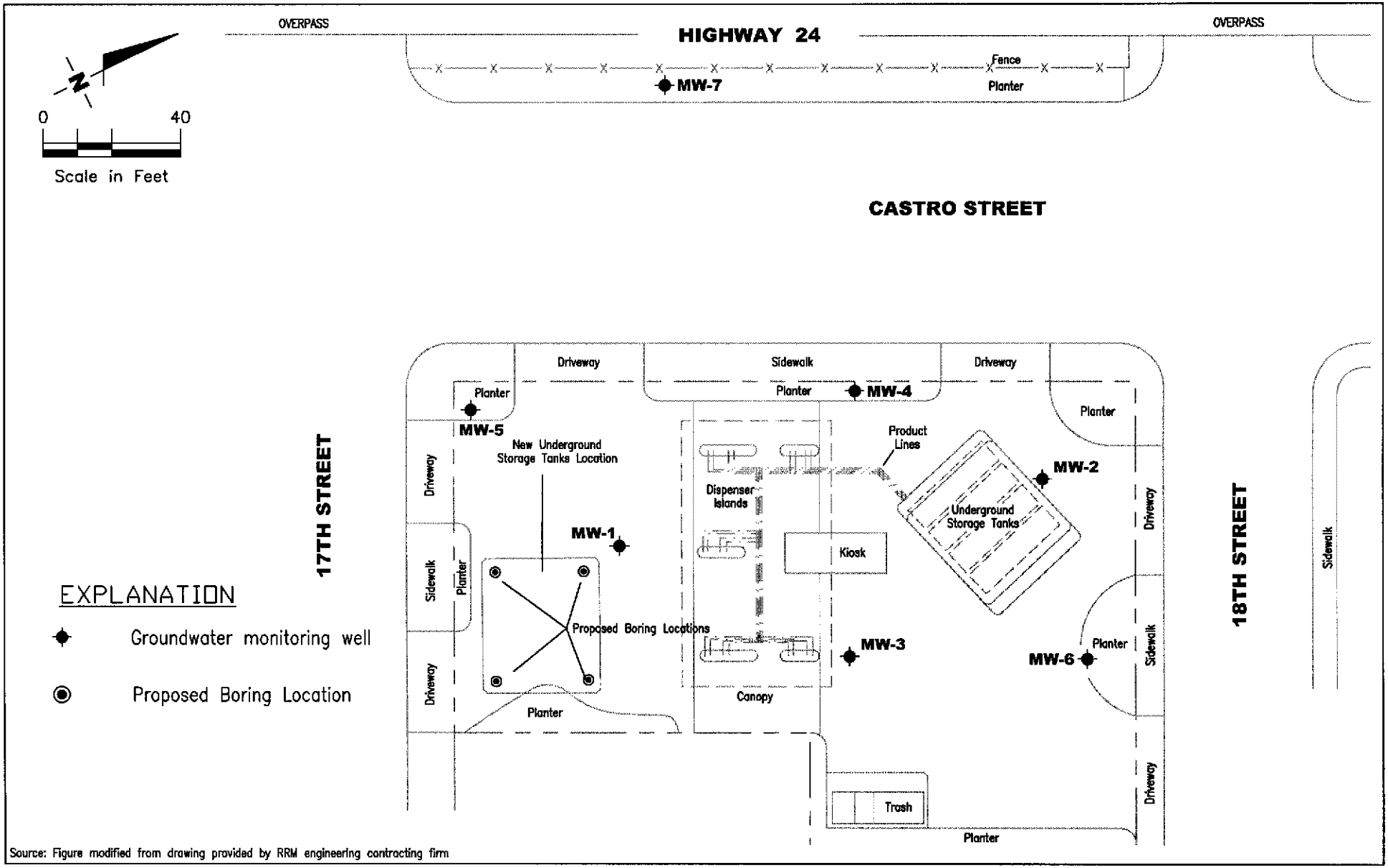


Thomas Sparrowe, R.G.
Project Geologist

Figures: 1 – Boring Location Map

Attachments: A – Standard Field Procedures for GeoProbe® Sampling

cc: Ms. Karen Streich, Chevron Products Company, P.O. Box 6012, San Ramon, CA



Source: Figure modified from drawing provided by RRM engineering contracting firm

BORING LOCATION MAP
Chevron Service Station #9-4800
1700 Castro Street
Oakland, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
386383		March 1, 2004	

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ATTACHMENT A

Standard Field Procedures for GeoProbe® Sampling

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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

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 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.