



ENVIRONMENTAL  
PROTECTION  
00 FEB -5 PM 4:31

29 January 2001

Mr. Scott O. Seery  
Alameda County Environmental Health Services  
1131 Harbour Bay Parkway  
Alameda, Ca 94502-6577

**RE: Preliminary Site Assessment Workplan  
Former Freedom ARCO Station  
15101 Freedom Ave.  
San Leandro, California**

Dear Mr. Seery,

Please find the enclosed copy of the Preliminary Site Assessment Workplan for the site referenced above.

If you have any questions, please call our office at (530) 342-1333.

Thank you,

A handwritten signature in black ink, appearing to read 'Peter Oblander', is written over the typed name.

Peter Oblander  
Project Geologist

cc: Mr. Hosseinyoun

# C A M B R I A

September 25, 2000

Mr. Mohammed Pazdel  
35840 Alcazar Ct.  
Fremont CA 94536

Re: **Preliminary Site Assessment Workplan**  
Former Freedom ARCO Station  
15101 Freedom Ave.  
San Leandro, California

Dear Mr. Pazdel:



Cambria Environmental Technology, Inc. (Cambria) has prepared this *Preliminary Site Assessment Workplan* for the above-referenced site as requested by the Alameda County Health Care Services Agency (ACHCSA) in their letter, dated January 3, 2000, to yourself and Mr. Hamid Khatri. The objective of the proposed work is to perform preliminary assessment of the extent and magnitude of soil contamination resulting from former operation of three underground storage tanks (USTs) at the subject site. A site description and Cambria's proposed scope of work are presented below.

## **SITE DESCRIPTION**

Summaries of the site setting, hydrogeology, and historical analytical results are presented below.

### **Site Setting**

The site is located on the southwest corner of the intersection of Freedom Avenue and 151<sup>st</sup> Avenue, adjacent to Fairmont Avenue and to California State Highway 580, in San Leandro, California. The site consists of a non-operating former service station comprised of three fueling islands and a "minimart" retail building. The nearest surface water is Lake Chabot, approximately 1.25 miles northeast of the site.

### **Site Hydrogeology**

**Lithology:** Based on the Alameda County Department of Environmental Health Hazardous Material Inspection Form, dated May 13, 1992, fractured claystone and siltstone with a fine-grained silt-to-clay matrix underlie the site to the maximum explored depth of 24.5 ft below ground surface (bgs).

Oakland, CA  
San Ramon, CA  
Sonoma, CA


**Cambria  
Environmental  
Technology, Inc.**

1144 65th Street  
Suite B  
Oakland, CA 94608  
Tel (510) 420-0700  
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**Groundwater Depth and Flow Direction:** Previous excavation to 24.5 ft bgs encountered no groundwater. The regional groundwater flow direction is southeastward; however, due to the proximity of the Hayward fault, the local groundwater flow direction is unknown.

## Site Background



**May 1992 Waste Oil UST Removal:** On May 13, 1992, one 350-gallon waste oil tank was removed by Timmerman Engineering Construction of Walnut Creek, California, (Timmerman) from directly in front of the site retail building (sample location S-5, Figure 1). The waste oil tank was excavated and inspected for any evidence of leakage. Although Timmerman observed several through-going holes along the tank's bottom, no leakage was apparent. No petroleum hydrocarbons, volatile organic compounds (VOCs) or polychlorinated biphenyls (PCBs) were detected in soil samples collected from below the excavation, from beneath the service bay, or from beneath the remote fill line. The excavation was backfilled with native soil and clean, imported pea gravel.

**May 20, 1999 Gasoline UST Removal:** Per ACHCSA documents, three 10,000-gallon gasoline USTs were removed from the site on May 20, 1999. During the tank removal activities, the ACHCSA noted a corrosion hole in the bottom of the central tank. The analytical laboratory detected 4,000 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg) and 28 ppm benzene in soil samples collected from the base of the UST excavation. This information was collected from ACHCSA documents; the ACHCSA files for the subject site did not contain a tank removal report documenting the gasoline UST removal activities.

## Historical Analytical Results

Based on ACHCSA documents, maximum petroleum hydrocarbon concentrations of 4,000 ppm total petroleum hydrocarbons as gasoline (TPHg) and 28 ppm benzene were detected in samples collected from beneath the former gasoline USTs. Beneath the former waste oil UST, no Oil and Grease was detected by EPA Method 5520E; no VOCs were detected by EPA methods 8020 and 8010; no PCBs were detected by EPA Method 8080; no TPHd was detected by the DHS Extraction Method; and no semi-volatile organic compounds (SVOCs) Detected metals concentrations (zinc, cadmium, lead, nickel, and chromium) were consistent with expected background concentrations for Bay Area soils<sup>1</sup>. Since no chemicals of concern were detected in samples collected beneath the former waste oil tank and associated piping, and since no report covering the gasoline UST removal activities was located in the ACHCSA files for the subject site, a table of analytical results can not be prepared for the subject site at this time.

<sup>1</sup> Protocol for Determining Background Concentrations of Metals in Soil at Lawrence Berkeley National Laboratory, Lawrence Berkeley National Laboratory, University of California, August 1995.

# C A M B R I A

## PROPOSED SCOPE OF WORK

Based on our current understanding of the site background and site work performed to date, the scope of work described below will preliminarily assess the extent and magnitude of soil contamination that may have resulted from former operation of three gasoline USTs at the subject site. Cambria will collect and analyze soil and groundwater samples and prepare a report for submittal to the ACHCSA. The tasks included as part of the subsurface investigation are outlined below. Cambria's standard procedures for soil borings are included as Attachment A.

**Site Reconnaissance:** Cambria will visit the site to inspect for drilling equipment access and to mark the site for Underground Service Alert, prior to performing any drilling or subsurface investigation. Underground utility locations noted during Cambria's site reconnaissance visit will be included in a subsequent investigation report.

**Permits:** Cambria will obtain soil boring permits to cover all proposed borings from the Alameda County Public Works Agency (ACPWA).

**Health and Safety Plan:** Cambria's site-specific health and safety plan will be signed by all site workers and kept onsite at all times during the site examination. This plan is included in this document as Attachment B.

**Soil Borings:** Cambria proposes to advance three (3) direct-push technique (DPT) soil borings to groundwater or to a maximum depth of 50 ft bgs. If groundwater is not encountered at less than 50 ft bgs, Cambria will evaluate soil analytical data only and does not plan to collect groundwater samples – due to the proximity of the subject site to the Hayward Fault, groundwater conditions are not predictable. Soil boring locations are shown on Figure 2. If groundwater is not encountered in boring SB-1, and if field conditions permit, Cambria will angle-advance borings SB-2 and SB-3 to collect soil samples from beneath the former tank cavity. Pavement surfaces surrounding the borings will be flattened if mounded by drilling, and patched as required to match the surrounding pavement. No soil cuttings will be generated.

**Lithologic Profiling:** Cambria will collect continuous soil cores, and log a minimum of 18 inches per every 5 ft of soil core. We will screen samples in the field using a photo-ionization detector (PID) and log them according to the Unified Soils Classification System.

**Groundwater Sampling:** If groundwater is encountered, Cambria will collect one grab groundwater sample from each boring where it occurs.

**Chemical Analyses:** Cambria intends to analyze six (6) soil samples for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tert-butyl ether (MTBE) by EPA Methods 8015/8020. Positive MTBE results will be

# C A M B R I A

confirmed by re-analysis via EPA Method 8260. We will use the results of PID sample screening and observations of staining and odor to help determine which soil samples are recommended for analysis. One grab groundwater sample will be analyzed from each boring, assuming water is encountered at a depth of 50 ft bgs or less. If groundwater is encountered within the upper 30 ft of the proposed soil borings, Cambria may analyze three (3) soil samples instead of six. We will properly preserve and submit all samples to a state-certified laboratory under chain of custody control for analysis.

**Reporting:** Cambria will present the results of the investigation to the ACHCSA on behalf of Mr. Pazdel. The report will contain:



- A summary of the site background and history;
- Descriptions of the drilling, and soil sampling methods;
- Scaled figures illustrating the soil boring locations;
- Tabulated soil and groundwater analytical results;
- Soil boring logs;
- Analytical reports and chain-of-custody forms, and;
- A discussion of the distribution of contaminants beneath the site.

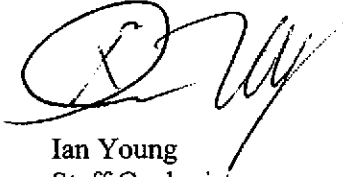
Based on the subsurface investigation, Cambria will recommend a course of action for this site.

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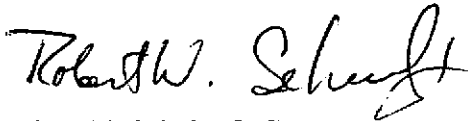
## CLOSING

If you have any questions or comments regarding this workplan, please call Bob Schultz at (510) 420-3341.

Sincerely,  
**Cambria Environmental Technology, Inc.**



Ian Young  
Staff Geologist

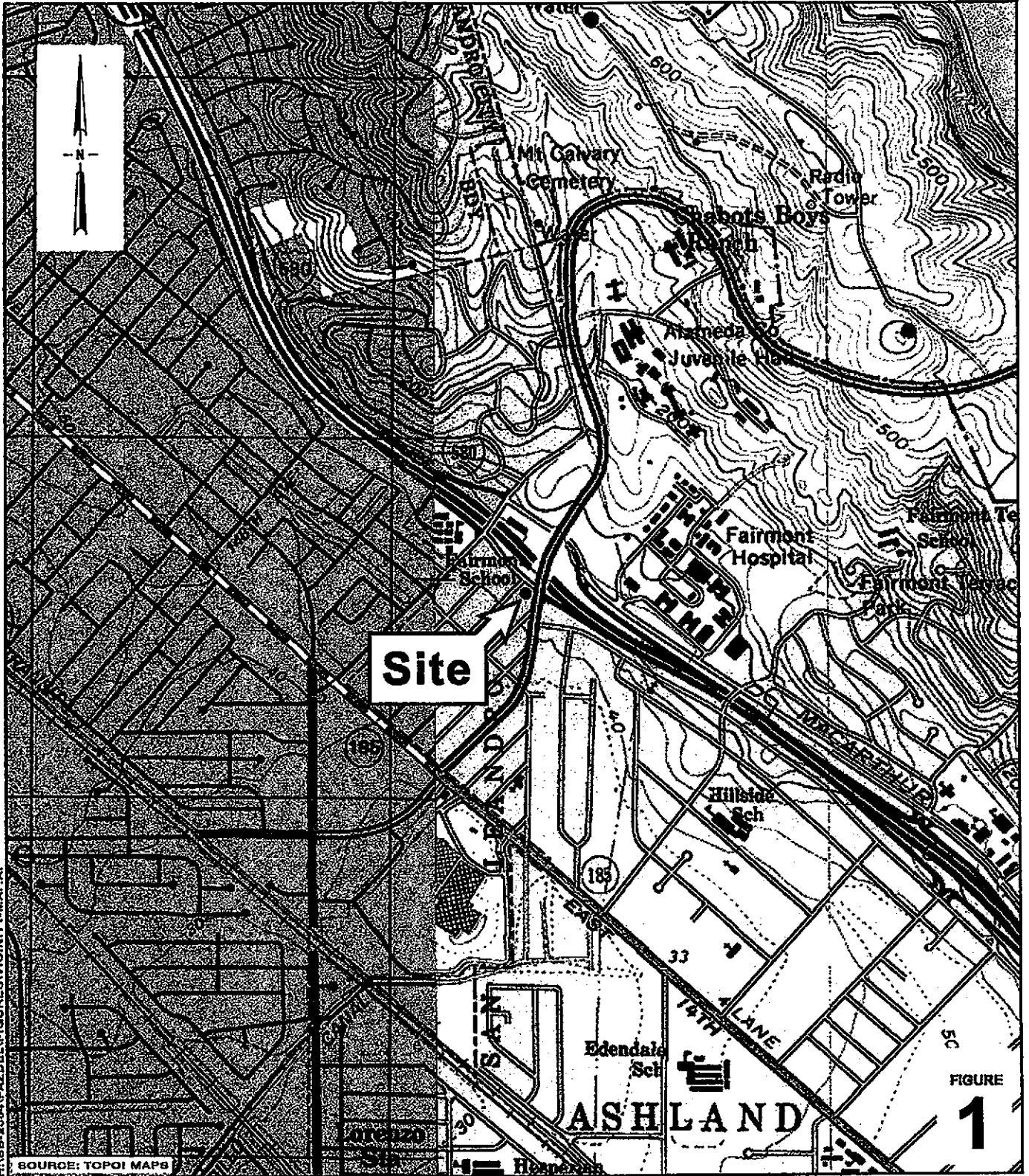


Robert W. Schultz, R.G.  
Project Geologist

Figures:           1 – Vicinity Map  
                      2 – Site Map

Attachments:   A – Standard Field Procedures for Soil Borings and Monitoring Wells  
                      B – Health and Safety Plan for Soil Boring And Sampling

cc:           Jeffrey S. Lawson, Esq., 99 Almaden Blvd., 8<sup>th</sup> Floor, San Jose CA 95113



H:\BB-2004\PAZDELFIGURE\VICINITY-MAP\AI

SOURCE: TOPOI MAPS

0 1/8 1/4 1/2 1  
 SCALE : 1" = 1/4 MILE

### Former Freedom ARCO Station

15101 Freedom Avenue  
 San Leandro, California

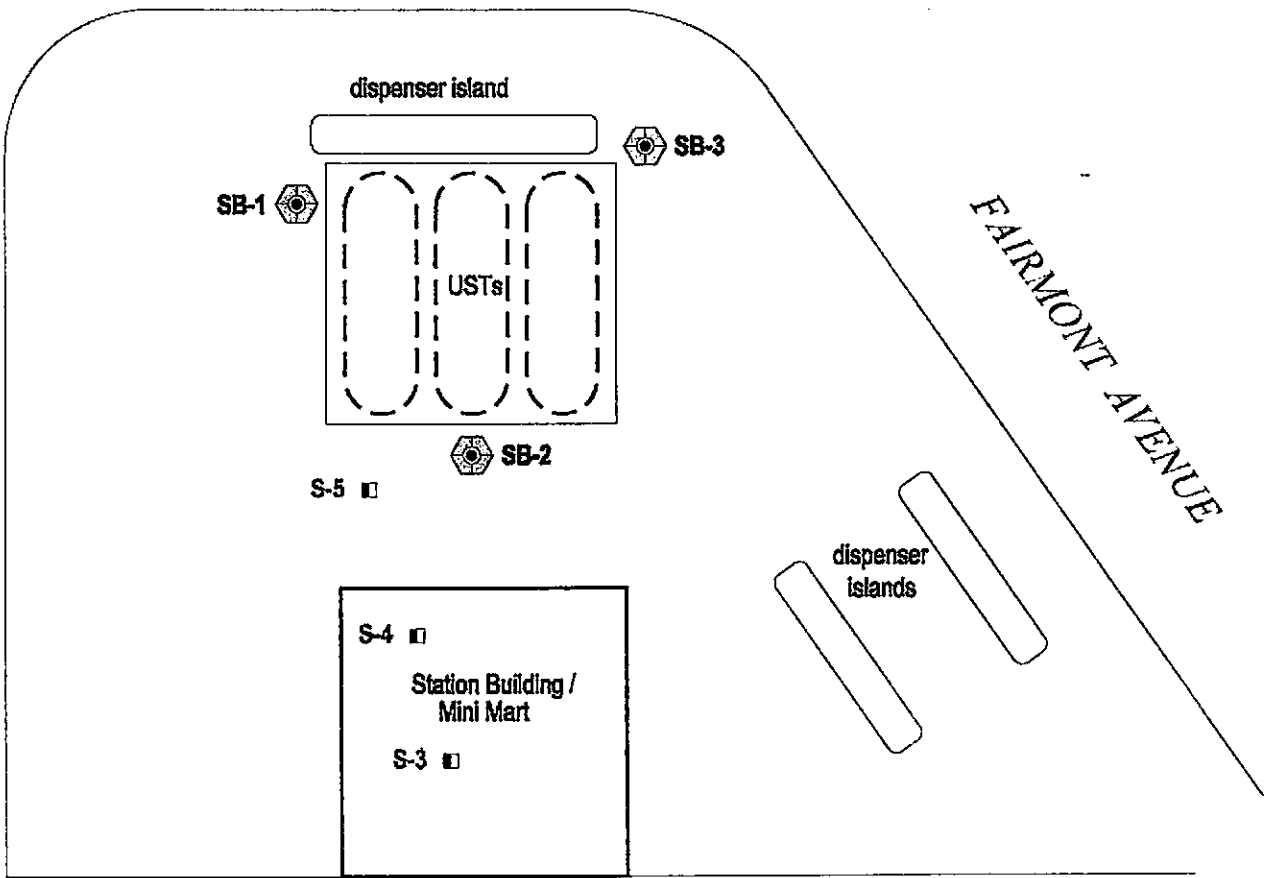


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### Vicinity Map

# FREEDOM AVENUE

151st AVENUE



### EXPLANATION

- SB-1  Proposed soil boring location
- S-3  Soil sample location

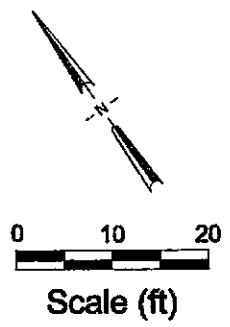


FIGURE  
**2**

M:\SB-2004\PAZDEL\FIGURES\BATTPLAN.DWG

**Former Freedom ARCO Station**  
 15101 Freedom Avenue  
 San Leandro, California



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**Proposed Soil Boring Locations**



**ATTACHMENT A**

Standard Field Procedures for Soil Borings

# CAMBRIA

## STANDARD FIELD PROCEDURES FOR SOIL BORINGS

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:

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

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## **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 licenced waste haulers and disposed in secure, licenced 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 licenced 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.



The required personal protective equipment level is:      A,  B,  C,  D.

Specific protective equipment required:

Protective clothing required: hard hat, steel toe and steel shank boots, work clothes

Respiratory equipment required:

Cartridge type:

This cartridge is expected to provide protection for \_\_\_\_\_ hrs

All site personnel have been trained in the use of protective equipment

#### DECONTAMINATION PROCEDURES

Personnel and equipment shall be decontaminated as follows: Wash and rinse all exposed skin and equipment.

Other: Remove and dispose of nitrile gloves before leaving site.

#### HEAT STRESS MONITORING

The anticipated air temperature is 60 degrees F.

Adjusted air temperature [ $T_{adj} = T_{air}(fo) + (13 \times \% \text{ Sunshine})$ ] is not expected to exceed 73 degrees F.

A Health Alert Warning (temperature over 95 degrees F) has been issued by the weather service.

Workers are trained to recognize and treat heat stress symptoms. The site safety officer will monitor pulse and temperature of workers showing signs of heat stress. No person shall work with a temperature exceeding 100 degrees F.

Drinking water is available at: Geologist's vehicle.

#### EMERGENCY PROCEDURES

**Injury:** The Site Safety Officer and Project Team Leader should evaluate the injury and contact an ambulance and/or the designated medical facility as needed. An incident report form should be filed for any injury.

**Fire/Explosion:** All personnel should immediately move to a safe location away from threat of fire and/or explosion. Sound alarm if available and call fire department.

**Emergency escape route and meeting place:** Evacuate site, recongregate across 151<sup>st</sup> Ave. from site.

#### EMERGENCY MEDICAL FACILITIES

**Hospital name and location:** Fairmont Hospital, 15400 Foothill Blvd. See attached map.

**Hospital phone number:** 911

A map to the hospital is attached.

A first aid kit, eye wash and other emergency equipment is located in the Site Safety Officer's vehicle.

**Police Number:** 911

**Office Number:** 510-420-3300

**Fire Number:** 911

**Client Number:** (510) 794-1877

Any injury sustained while working are covered under Worker's Compensation insurance. Any injured Cambria employee should inform the medical care facility that this is a Worker's Compensation claim and that our insurance policy is \_\_\_\_\_ . Copies of the doctor's report on the injury should be forwarded to our insurance carrier at \_\_\_\_\_ . Cambria employees must notify \_\_\_\_\_ on the same day so that we can properly file this claim.

Any injured sub-contractor or sub-contractor employee will be covered under their employer's policy.

Emergency medical treatment due to chemical exposure to compounds anticipated to be at the site is presented on the attached MSDS forms.

All site workers have read the plan and are familiar with and will abide by its provisions.

Name	Signature
Project Team Leader	<hr/>
Site Safety Officer	<hr/>
Field Team Leader	<hr/>
Field Team Member	<hr/>
Field Team Member	<hr/>