Environmental Management Company
6001 Bollinger Canyon Rd, K2256
P.O. Box 6012
San Ramon, CA 94583-2324
Tel 925-842-1589
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Karen Streich
Project Manager

RO138

ChevronTexaco

September 15, 2004
(date)

Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Chevron Service Station # 9-0517

Address: 3900 Piedmont Avenue, Oakland, CA

I have reviewed the attached report titled *Investigation Workplan* and dated September 15, 2004.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Cambria Environmental Technology, Inc., upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

Karen Streich
Project Manager

Enclosure: Report

CAMBRIA

September 15, 2004

Mr. Barney Chan
Alameda County Health Care Service Agency (ACHCS)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Re: **Investigation Workplan**
Former Chevron # 9-0517
3900 Piedmont Avenue
Oakland, CA

Dear Mr. Chan:

On behalf of Chevron Environmental Management Company (ChevronTexaco), Cambria Environmental Technology, Inc. (Cambria) is submitting this workplan to further define the lateral and up-gradient distribution of hydrocarbons in groundwater at the above referenced site. Presented below is the site background and Cambria's proposed scope of work.

SITE DESCRITION AND BACKGROUND

The site is located on the eastern corner of Piedmont Avenue and Montell Street in Oakland, California. The property is currently used for commercial purposes and bound by Piedmont Avenue to the northwest, Montell Street to the southwest, an apartment building to the southeast and a commercial property (restaurant) to the northeast. Local topography gently slopes to the south-southwest. A USGS topographic map, with the site centered on the map, is presented in Figure 1. A map illustrating the current and former site features is shown in Figure 2.

The site was a Chevron service station until 1978. At least four underground storage tanks (USTs) were located at the subject site including two used-oil tanks located along the eastern site boundary, and a 7,500-gallon fuel tank and one other tank of an unknown size and contents located further to the west (bordering Montell Street). After the service station was demolished in October 1978, a commercial building was constructed on the eastern portion of the property along Piedmont Avenue and the western portion of the property was converted into a parking lot. Before 1998, the building was used by Homestead Federal Savings Association. PCS Smart Mart (Pacific Bell mobile service agent) occupied the building before 2003. Currently, the site is occupied by a Cingular Wireless store.

Cambria Environmental Technology, Inc.

4111 Citrus Avenue
Suite 9
Rocklin, CA 95677
Tel (916) 630-1855
Fax (916) 630-1856

Site Geology: This site is located at the western edge of the Piedmont Hills, approximately 2 miles east of San Francisco Bay and 1 mile north of Lake Merritt. The soil in the site vicinity consists of Late Pleistocene alluvium consisting of weakly consolidated, slightly weathered, poorly sorted, irregularly interbedded clay, silt, sand and gravel. Coarser grained materials (clayey gravel and sandy to gravelly silt) were generally encountered immediately below ground surface. These materials extended to depths ranging from 4 to 15.5 fbg and were underlain by clay and sandy clay. The nearest surface water is Glen Echo Creek located approximately 400 feet east southeast of the site.

Groundwater Direction, Depth Trends and Gradient Trend: Historically, depth to groundwater has varied from 4.49 fbg (MW-2) to 12.92fbg (MW-4). The groundwater flow direction fluctuated between southwest, west and northwest, at gradients ranging from 0.005 to 0.04. A rose diagram showing the flow direction and gradient for various quarters between 2000 and February 2004 is presented in Figure 2.

PROPOSED SCOPE OF WORK

The purpose of this investigation is to define the lateral distribution of hydrocarbons in soil and groundwater. Based on historical groundwater flow directions and known locations of former potential source areas (USTs and dispenser islands), Cambria proposes one groundwater monitoring well, MW-5, and two soil borings, SB-1 and SB-2, to further define hydrocarbons in groundwater and soil. Groundwater monitoring well MW-5 will be located in Piedmont Avenue, west of monitoring well MW-4, to determine down-gradient hydrocarbon concentrations in groundwater. SB-1 will be installed southwest of the property across Montell Street. SB-2 will be located cross-gradient of MW-4 across Piedmont Avenue. The proposed boring and well locations are presented in Figure 2.

Site Health and Safety Plan: Cambria will prepare a site safety plan to inform site workers of known hazards and to provide health and safety guidance. The plan will be kept on-site at all times and signed by all site workers.

Underground Utility Location: Cambria will review the new owner's as-built site plans and piping diagrams to assist in well placement. All borings will be cleared to 8 fbg prior to drilling activities.

Permits: Cambria will obtain boring/well installation permits from the ACHCS Agency and an encroachment permit from the City of Oakland prior to beginning field operations. A minimum of 72-hours notice will be given to the ACHCS Agency prior to field work.

Soil Borings: SB-1 and SB-2 will be completed to approximately 20 fbg, or 10 feet below groundwater, using 8-inch diameter hollow-stem augers. A grab-groundwater sample will be collected from each boring. Cambria's standard field procedure for borings and well installation is presented as Attachment A.

Well Installation: The monitoring well boring will be advanced to approximately 20 fbg using 8-inch diameter hollow-stem augers. The boring will be converted into a 2-inch diameter groundwater monitoring well (MW-5). The screened interval of the well casing will be constructed from approximately 5 to 20 fbg, using 0.020-inch slotted screen and #2/20 filter sand. Actual well construction will may be modified in the field based on boring lithology and groundwater elevations. Cambria's standard field procedure for borings and well installation is presented as Attachment A.

Soil Sampling: At a minimum, soil samples will be collected at five foot intervals beginning at 10 fbg, at obvious lithologic changes, and immediately above the water table. Samples will be collected using split-barrel samplers lined with clean brass sampling tubes driven into undisturbed sediments ahead of the drill bit. Sediments encountered will be recorded in a boring/well log.

Soil Screening: Soil samples will be screened using a photoionization detector (PID). PID readings, evidence of discoloration, stratigraphic location, depth to groundwater, and the collection depth of previous samples containing hydrocarbons will be used to select soil samples for laboratory analysis.

Well Development and Groundwater Sampling: The wells will be developed using surge block agitation and evacuation prior to setting the sanitary seal. Gettler-Ryan (GR) will monitor and sample the wells during the routine quarterly monitoring at the site.

Chemical Analysis: The grab-groundwater samples and select soil samples will be analyzed for TPHg by EPA Method 8015M; and benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl ethyl ether (TAME), tertiary butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), and ethyl dibromide (EDB) by EPA Method 8260B.

Well Elevation Survey: The top of casing elevation of new wells will be surveyed to mean sea level datum by a California licensed land surveyor. The survey will use a nearby benchmark as a reference datum. Horizontal well coordinates will be measured in compliance with AB2886 (Geotracker). The results of the survey and depth to groundwater measurements will be used to estimate the groundwater gradient and flow direction.

Soil and Water Disposal: Soil cuttings will be temporarily stockpiled and covered with plastic or placed in sealed DOT-approved drums on-site. Rinseate water will be stored in drums on-site pending proper disposal. The waste will be transported to an appropriate Chevron-approved disposal facility following receipt of sample analytical results.

Reporting: Upon completion, Cambria will document all field activities and analytical results in a report, will contain, at a minimum:

- A brief summary of the site background and history,
- A description of the drilling technique,
- Sampling methodology and well locations,
- Tabulated soil sample analytical results,
- A figure illustrating the location of the borings and wells and former site features,
- Boring logs,
- Analytic reports and chain-of-custody forms,
- Soil and water disposal methods,
- A discussion of hydrocarbon distribution, and
- Conclusions and recommendations.

CLOSING

Cambria will coordinate and perform the above activities after receiving written approval of this work plan from the ACHCS Agency. We will submit our investigation report approximately six to eight weeks after completion of field activities. Please contact Ms. Sara Giorgi (ext. 103) or Mr. Bruce Eppler (ext. 102) at (916) 630-1855 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.

Sara Giorgi
Senior Staff Geologist

Roger Nommensen, R.G.
Project Geologist

cc: Ms. Karen Streich, Chevron Environmental Management Company, P.O. Box 6012, K2256, San Ramon, CA 94583

Figures: Figure 1 – Vicinity Map
Figure 2 – Site Plan

Attachments: A - Standard Field Procedures for Soil Boring and Monitoring Well Installations

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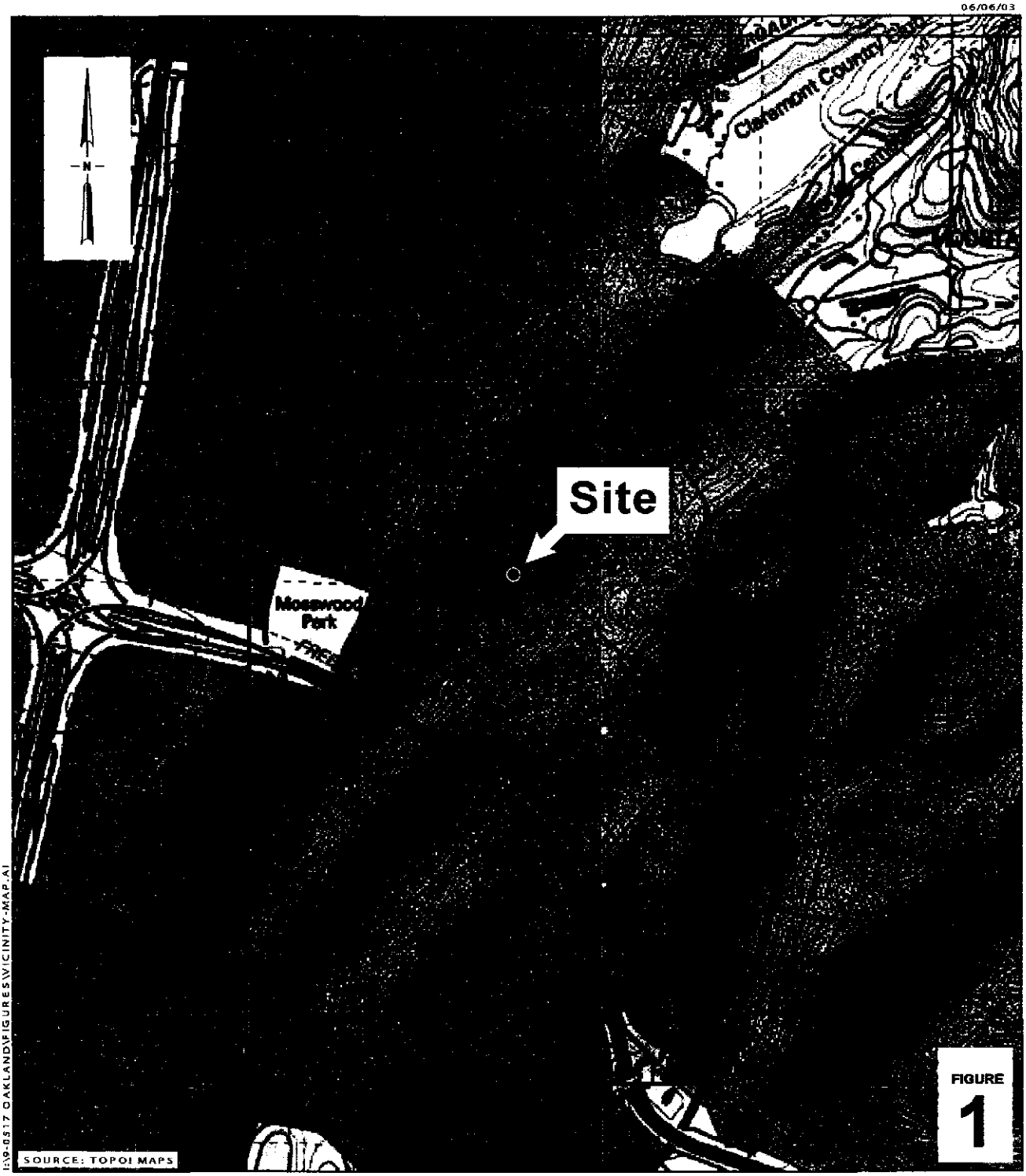


0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

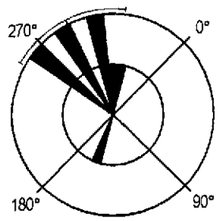
Former Chevron Station 9-0517

3900 Piedmont Avenue

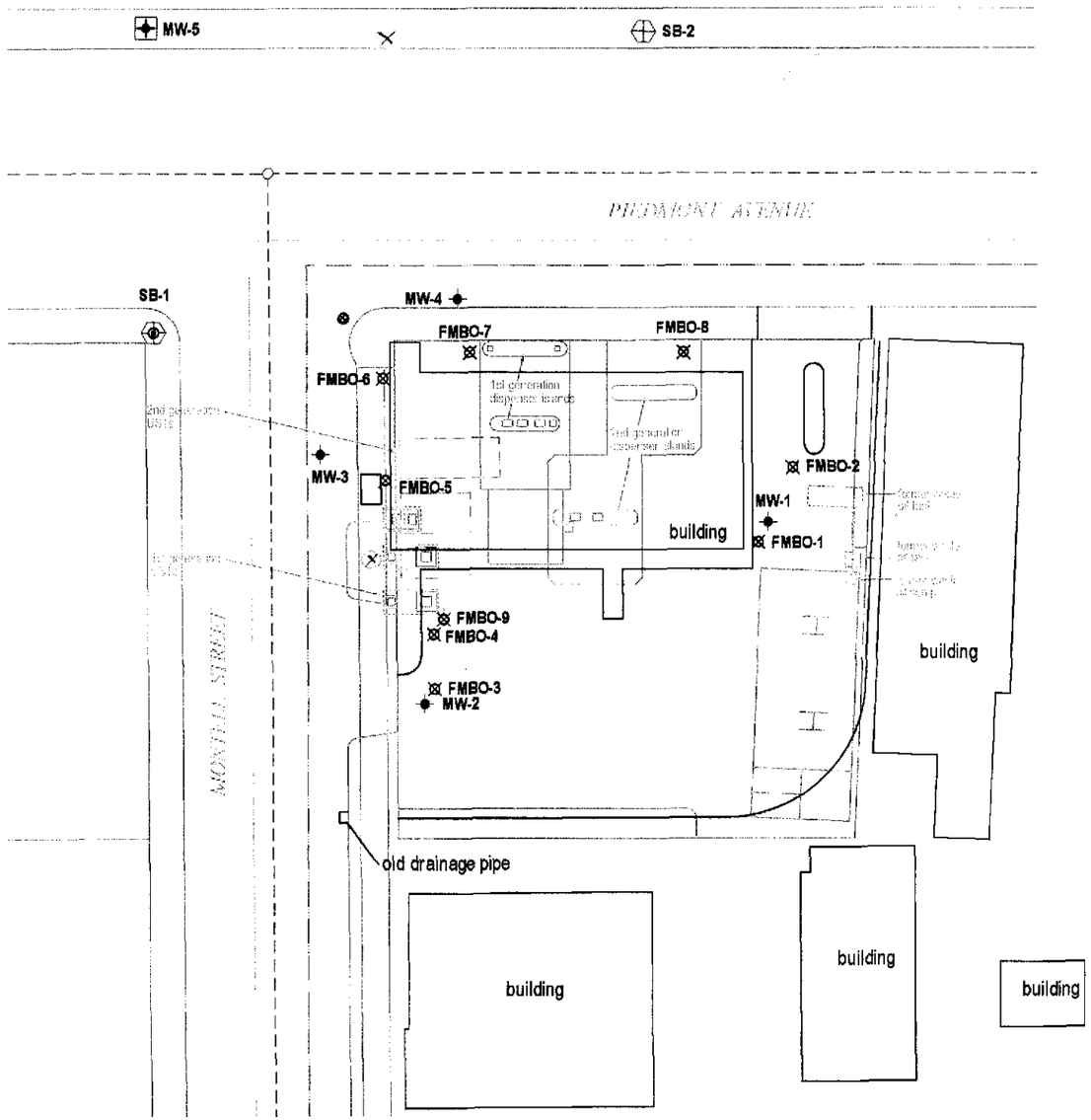
Oakland, California

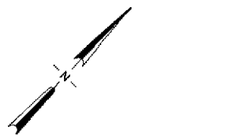
CAMBRIA

Vicinity Map



Historical Groundwater Flow Direction
Varous Quarters from 2000, 2001 and 2004





0 15 30 60

Scale (ft)

EXPLANATION

- Proposed monitoring well location
- Proposed soil boring location
- MW-1 Monitoring well location
- FNBO-1 Abandoned soil boring
- Sanitary sewer line
- Water line
- Gas line
- Storm drain

Site Plan and Proposed Well and Boring Locations

CAMBRIA

Former Chevron Service Station 9-0517
3900 Piedmont Avenue
Oakland, California

FIGURE
2

I:\9-0517 OAKLAND\FIGURES\PROPOSEDBORING.DWG

ATTACHMENT A

Standard Field Procedures for Soil Borings and Monitoring Well Installations

STANDARD FIELD PROCEDURES FOR MONITORING WELL INSTALLATION

This document presents standard field methods for drilling and sampling soil borings and installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

DRILLING AND SAMPLING

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Registered Geologist (RG).

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Prior to drilling, the first 8 ft of the boring are cleared using an air or water knife and vacuum extraction. This minimizes the potential for impacting utilities.

Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. 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 at the bottom of the borehole.

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 Analysis

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 4o 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 volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and groundwater 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 groundwater 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 4oC, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

Groundwater monitoring wells are installed to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 fee below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two feet above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I,II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and 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 4oC, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite and covered by plastic sheeting. At least three individual soil samples are collected from the stockpiles and composited at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples in addition to any analytes required by the receiving disposal facility. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Groundwater removed during development and sampling is typically 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. Upon receipt of analytic results, 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.