Environmental Management Company
6001 Bollinger Canyon Rd, K2256
P.O. Box 6012
San Ramon, CA 94583-2324
Tel 925-842-1589
Fax 925-842-8370

J. Mark Inglis
Project Manager

6-13-06
(date)

ChevronTexaco

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

Re: Chevron Service Station # 9-5607

Address: 5269 Crow Canyon Rd. Castro Valley CA.

I have reviewed the attached report titled Subsurface Investigation Workplan and dated June 13, 2006.

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,

J. Mark Inglis
Project Manager

Enclosure: Report

CAMBRIA

June 13, 2006

Mr. Barney Chan
Alameda County Environmental Health Services (ACEHS)
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

RE: Subsurface Investigation Workplan
Former Chevron Service Station #9-5607
5269 Crow Canyon Road
Castro Valley, California
Cambria Project No. 31J-1950

Dear Mr. Chan;

Cambria Environmental Technology, Inc. (Cambria) has prepared this *Subsurface Investigation Workplan* on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. Our objective is to assess current soil conditions near the former underground storage tank (UST) complex and at the down-gradient property boundary prior to installing a two-phase extraction remediation system (Figure 1). Presented below is a summary of the site history and details of the investigation.

SITE DESCRIPTION AND SUMMARY

According to property owner Kevin Hinkley, the site operated as a Chevron service station between 1963 and 1990. In February 1985, an inventory discrepancy was detected, indicating a leak in the product storage and delivery system. Subsequent review of inventory records indicated that an estimated loss of approximately 670 gallons of gasoline had occurred since September 1984. The suspected leaking UST had been installed in September 1971 and was removed along with the associated product lines in April 1985 after failing a tank tightness test. According to Chevron's leak report, no light non-aqueous phase liquids (LNAPL) were observed in the tank excavation or on the water table. Since 1985, at total of 18 groundwater wells have been installed on and off site (17 groundwater monitor wells and one recovery well). Of these 18 wells, three have subsequently been abandoned. When station operations ceased in 1990, the remaining product USTs, fuel dispensers and associated piping were excavated and removed. An automobile repair garage currently occupies the site and utilizes one underground used-oil storage tank.

Site Background

Wells C-1 through C-8 were installed in March 1985, to investigate the extent of petroleum hydrocarbon impacts to the subsurface. LNAPL was observed in wells C-1, C-3, and C-6. Data

Cambria Environmental Technology, Inc.

5900 Hollis Street
Suite A
Emeryville, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

gathered from frequent monitoring and sampling activities indicated that LNAPL was contained on the station property, but a dissolved hydrocarbon plume was migrating toward an adjacent residential development, the Forest Creek Townhomes.

In May 1985, recovery well RW-1 was installed near C-6 and a remediation system, consisting of groundwater extraction and treatment, was installed to inhibit offsite migration of the dissolved plume. Well C-9 was installed down-gradient of the recovery well to monitor the effectiveness of remediation. Groundwater monitoring was performed weekly from May to September 1985.

A soil-gas investigation was conducted in September 1989. Sixteen exploratory probes were installed and soil vapor data were collected from depths between 8 and 20 feet below grade (fbg). Detected hydrocarbons ranged from <1 to 505 parts-per-million volume (ppmv). Benzene, toluene, ethylbenzene and xylene (BTEX) vapor concentrations indicated hydrocarbons in the soil, extending from the tank complex in the "down-gradient" direction.

Bi-weekly groundwater monitoring continued until September 1989. Laboratory analysis from September 1989 indicated dissolved total petroleum hydrocarbon as gasoline (TPHg) concentrations ranging from 310 (C-5) to 60,000 (C-3) parts per billion (ppb). BTEX ranged from non-detect to 21,000 ppb (C-4).

In February 1990, wells C-10A, C-10B and C-11 through C-16 were installed to investigate groundwater conditions further down- and cross-gradient. TPHg was detected in soil samples from borings C-12 and C-15 at 200 and 10 parts per million (ppm), respectively. Benzene was detected in C-12 at 1.7 ppm.

Chemical Processors, Inc. (Chempro) took over monthly compliance sampling and reporting of treatment system operation in April 1990. In June of 1990, Alton Geoscience (Alton) began quarterly groundwater monitoring at the site.

Three five-year-old 10,000 gallon USTs were removed in October 1990. Six compliance soil samples were collected from beneath the USTs at depths ranging from 15 to 18 fbg. TPHg concentrations ranged from non-detect to 440 ppm and benzene concentrations ranged from 0.27 to 3.9 ppm, in compliance samples.

Weiss Associates (Weiss) took over treatment system operation, sampling and reporting in April 1996. Weiss also proposed the collection of site-specific soil, groundwater and soil vapor samples to analyze potential risks to human health.

A Corrective Action Plan (CAP) was submitted in May 2000. The CAP recommended bailing LNAPL, installing oxygen reducing compound (ORC) socks in wells located along the plume

axis and quarterly groundwater monitoring. The plume length was estimated to be approximately 200 feet and plume axis wells were identified as C-3, C-6, C-9, and C-15. The discharge of benzene in groundwater to Crow Creek, if occurring, has likely fluctuated at concentrations near the MCL of 0.001 milligrams per liter (mg/L).

Wells C-10A and C-10B were destroyed in July 2001, to facilitate the sale of County owned property down gradient of subject site.

Delta submitted reports addressing the LNAPL source area, dissolved plume and remedial action in September and November 2002. Delta proposed a short-term high vacuum two-phase extraction event performed on well C-3 as the most cost effective remedial alternative available. Dissolved benzene and TPHg concentrations up-gradient, cross-gradient and down-gradient of the source area, with the exception of well C-3, had shown decreasing trends, indicating that the plume was attenuating. Delta also proposed monitored natural attenuation.

Remediation History

Three USTs and associated product lines were removed and replaced in 1985. In 1990, three 10,000-gallon USTs and associated product lines were removed and soil was sampled. A 550 gallon used-oil UST tank remains onsite.

Recovery well RW-1 was installed in 1985 and LNAPL was bailed on a bi-weekly basis. In May 1985, a groundwater extraction system was implemented in well RW-1 consisting of a submersible pump and carbon treatment. By September 1987, at least 32 gallons of hydrocarbons had been recovered from LNAPL bailing. LNAPL appeared to be localized in the vicinity of well C-3 between 23-32 fbg, based on a correlation with fluctuating groundwater.

Due to the clay soils underlying the site, the system's effectiveness was limited. The overall extraction rate averaged 0.2 gallons per minute.

In October, 2003, Cambria conducted a two-phase extraction (TPE) pilot test. The pilot test was originally scheduled to be performed for five days at the site. However, the test was extended to a total of twelve days to collect additional system performance data to evaluate possible full-scale TPE system installation. TPE pilot test equipment consisted of a 400 cubic foot per minute (CFM) thermal/catalytic oxidizer, operating in thermal mode.

Site Conditions

Site Lithology: The site is underlain by interbedded clays, silts, clayey sands and clayey gravels to a depth of approximately 34.5 fbg. Shale to silty sandstone bedrock was noted at approximately 48 fbg onsite. Bedrock has been identified as shallow as 18 fbg in offsite borings.

Groundwater: Quarterly monitoring has been conducted at the site since 1985. Groundwater has historically occurred between 4 and 21 fbg, depending on well location, and generally flows southwesterly at a gradient between 0.09-0.2.

Hydrocarbon concentrations in groundwater: The highest hydrocarbon concentrations in groundwater are present west (down-gradient) of the former USTs and dispenser island. Recent groundwater sampling performed by Getter-Ryan (GR) in January 2006 detected 0.06 feet of LNAPL in on-site well C-3 and 50,000 ppb of TPHg and 21,000 ppb of benzene in off-site well C-11. A sample collected from off-site well C-15, located approximately 45 feet east of Crow Creek, and contained 400 ppb TPHg and 5 ppb methyl tertiary butyl ether (MTBE) during most recent sampling event.

PROPOSED WORK

Our objective is to investigate current soil conditions in the vicinity of the former UST complex and at the down-gradient property boundary to determine vertical delineation of hydrocarbon impact prior to design and installation of a two-phase extraction remediation system. Specific procedures are presented below.

Proposed Scope of Work

Cambria proposes to advance six soil borings to depths of approximately 40 fbg or until bedrock is encountered. A boring will be advanced adjacent to well C-6 and another adjacent to RW-1. The remaining four will be located along each side of the former UST complex. Proposed soil boring locations are shown on Figure 2.

Underground Utility Location: Cambria will contact Underground Service Alert to identify all utilities and to clear all proposed boring locations. Utility maps, if available, will be obtained from the property owner and reviewed to assist in the identification of subsurface features. An air-knife assisted vacuum rig will be used to clear all boring locations to a depth of eight fbg.

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

Permits: Cambria will obtain boring permits from the Alameda County Department of Public Works (ACDPW) prior to field activities. Cambria will also secure any necessary encroachment permits from the City of Castro Valley and verify that the access agreement with the Forest Creek Townhome Association is still valid.

Traffic Control: Borings will be advanced on both private property and in the City right of way. An appropriate traffic control plan will be developed and implemented to drill these borings safely.

Site Investigation: Working under the supervision of a California Professional Geologist, a Cambria geologist will direct the borings. Borings will be advanced using a direct push drill rig or auger rig and will be logged continuously to provide detailed lithologic descriptions. Standard field procedures for soil sampling are presented in Attachment A.

Sampling Protocol: At a minimum, soil samples will be collected at 5 foot intervals, where staining or hydrocarbon odor is present, at the saturated zone of the soil/groundwater interface, and at the maximum depth of each boring. Samples will be collected in a 6-inch sleeve and sealed using Teflon strips and plastic caps. Each sample will be logged onto a chain of custody form, properly preserved on ice and delivered to a state certified and Chevron-approved laboratory for analysis.

Chemical Analysis: Selected soil samples will be analyzed for TPHg by EPA method 8015, BTEX and MTBE by modified EPA Method 8260B.

Soil and Water Disposal/Recycling

Soil and rinseate water produced during field activities will be temporarily stored on site in properly labeled 55-gallon drums. Following review of analytic results, the soil and water will be transported to an appropriate Chevron-approved facility for disposal.

REPORTING

Upon completion of field activities and review of the analytic results, Cambria will prepare an investigation report that, at a minimum, will contain:

- Descriptions of the drilling and sampling methods;
- Boring logs;
- Tabulated analytic results for soil;

- A discussion of hydrocarbon distribution in soil;
- Analytic reports and chain-of-custody forms;
- Waste disposal methods and
- Conclusions and recommendations.

SCHEDULE

Cambria will begin preparations to conduct the investigation once approval of this workplan is received. An investigation report will be submitted approximately 60 days after the fieldwork is completed.

CLOSING

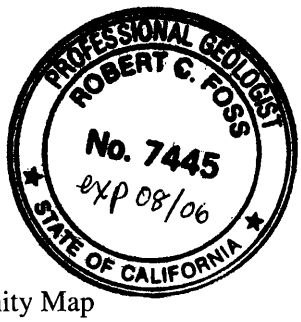
If you have any questions regarding the scope of work outline in this workplan, please call Laura Genin at (510) 420-3367.

Sincerely;
Cambria Environmental Technology, Inc.

Laura Genin
Project Geologist

Robert Foss

Robert Foss, P.G. #7445
Associate Geologist



Figures: 1 – Site Vicinity Map
2 – Site Plan

Attachments: A – Standard Operating Procedures for Soil Sampling

cc: J. Mark Inglis, Chevron, 6001 Bollinger Canyon Road, San Ramon, CA 94583
Satya Sinha, Chevron, 6001 Bollinger Canyon Road, San Ramon, CA 94583
Kevin Hinckley, 5269 Crow Canyon Road, Castro Valley, CA

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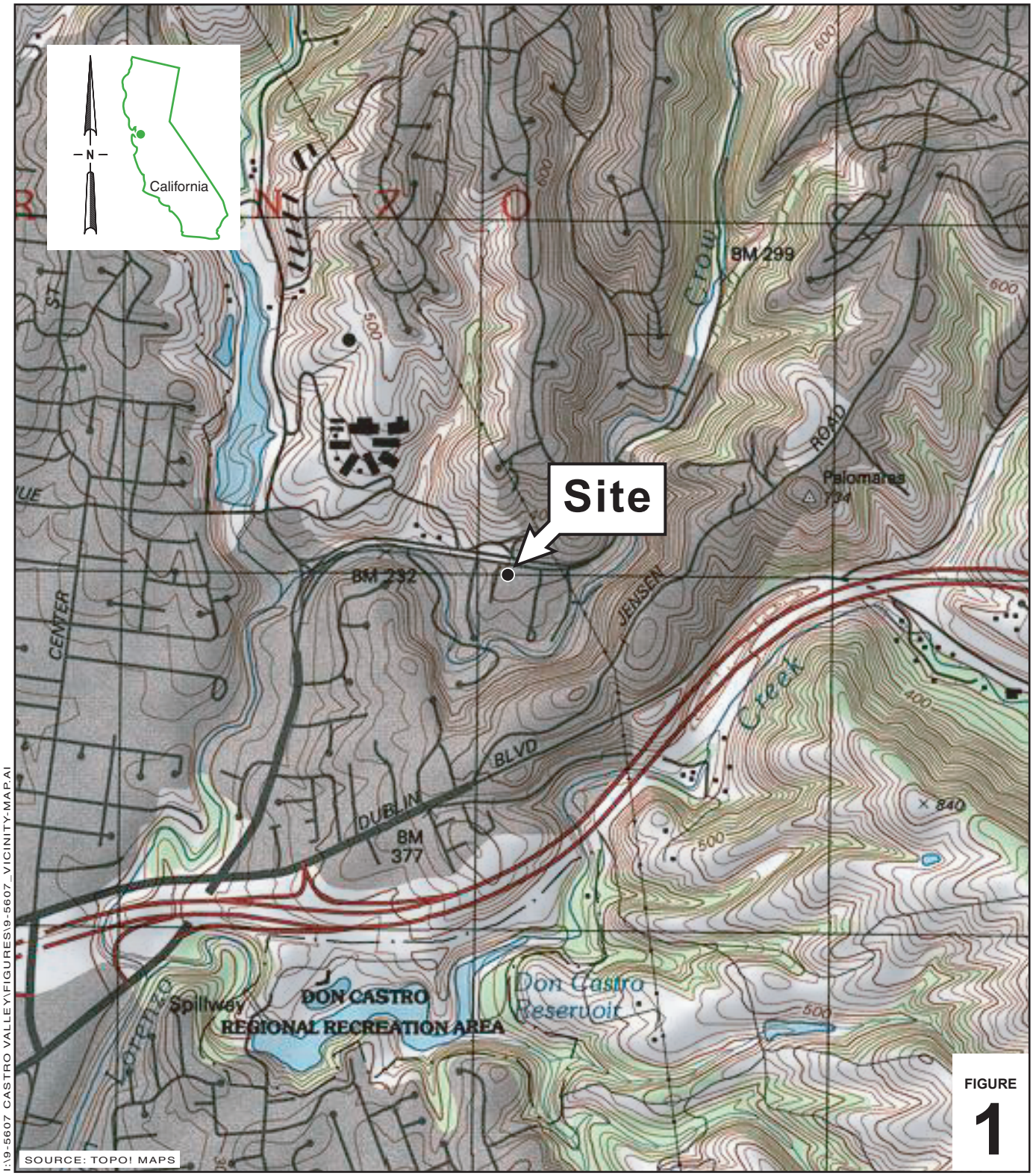

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FIGURE
1

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Chevron Service Station 9-5607

5269 Crow Canyon Road

Castro Valley, California

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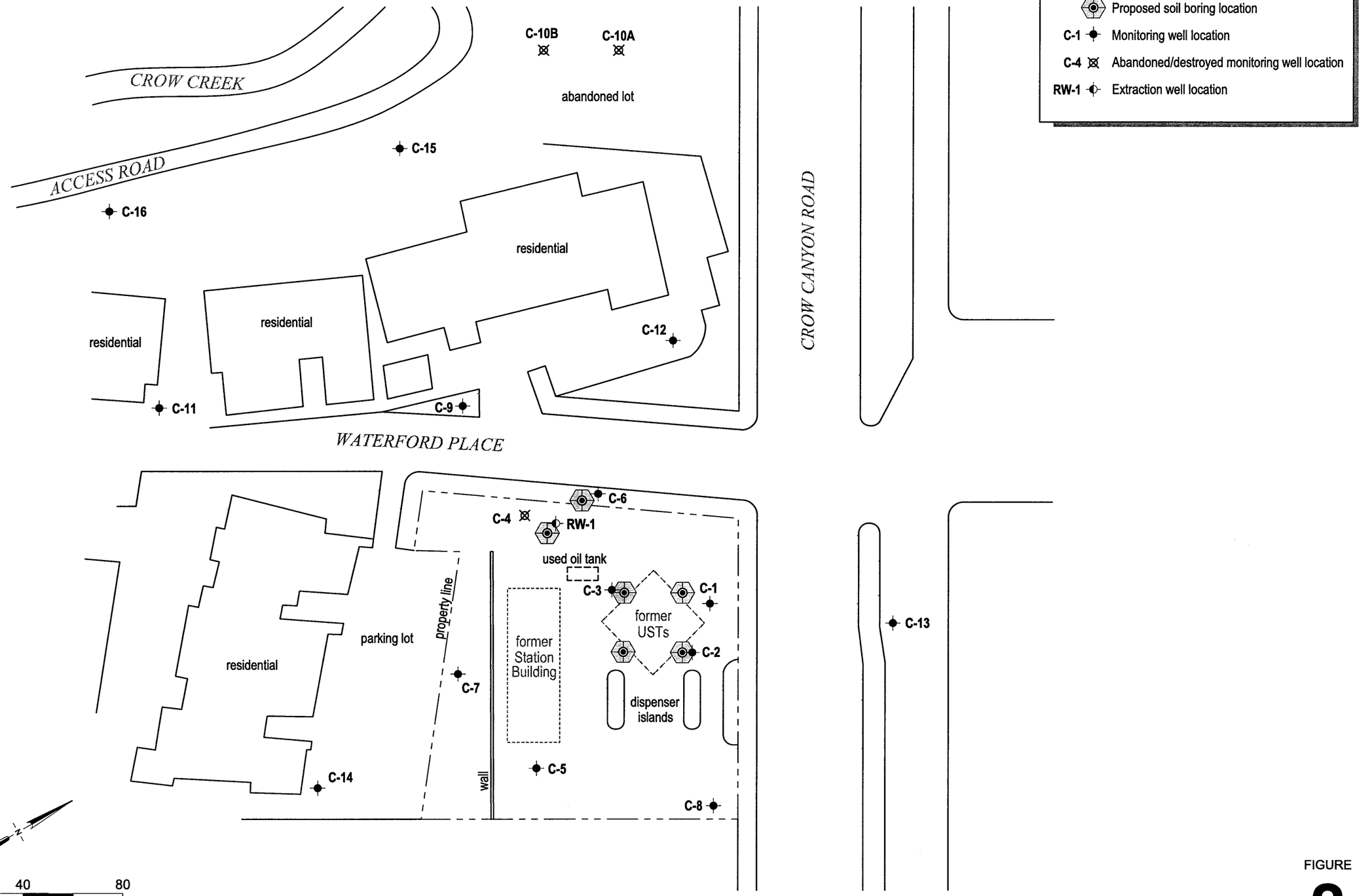
Vicinity Map

04/27/06



Basemap modified from drawing provided by Gettler-Ryan, Inc.

I:\9-5607 CASTRO VALLEY\FIGURES\9-5607_EXP-SITEPLAN.DWG

Site Plan with
Proposed Soil Boring Locations

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Former Chevron Station 9-5607
5269 Crow Canyon Road
Castro Valley, California

FIGURE
2

APPENDIX A

Standard Procedures for Soil Boring and Well Installation

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STANDARD FIELD PROCEDURES FOR SOIL BORING AND MONITORING WELL INSTALLATIONS

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.

SOIL BORINGS

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®. 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 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 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 4°C, 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.

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.

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 ft below and 5 ft 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 ft 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 ft above the well screen. A two ft 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 4°C, 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.

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