Chevron Environmental Management Company
6001 Bollinger Canyon Rd, K2236
P.O. Box 6012
San Ramon, CA 94583-2324
Tel 925-842-9559
Fax 925-842-8370

Dana Thurman
Project Manager

2438

September 19, 2005
(date)

ChevronTexaco

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

Re: Chevron Service Station # 9-2029

Address: 890 West MacArthur Boulevard, Oakland, California

I have reviewed the attached report titled Investigation Workplan and dated September 19, 2005.

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,

Dana Thurman
Project Manager

Enclosure: Report

CAMBRIA

September 19, 2005

Mr. Barney Chan
Hazardous Materials Specialist
Alameda County Environmental Health (ACEH)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Re: **Investigation Workplan**
Chevron Service Station 9-2029
890 West MacArthur Boulevard
Oakland, California 94608
RO#0002438

Dear Mr. Chan:

On behalf of Chevron Products Company (Chevron), Cambria Environmental Technology, Inc. (Cambria) is submitting this workplan for the referenced site. The workplan has been prepared to address technical comments presented in a letter from the ACEH dated August 26, 2005 (Attachment A). Presented below are the site background and Cambria's proposed scope of work.

SITE BACKGROUND

The site is located at the northeast intersection of West MacArthur Boulevard and Market Street in a mixed commercial and residential area of Oakland, California (Figure 1). Chevron began operation, under a ground lease agreement, in 1956 and operated a service station continuously at the site until June 2004. According to Chevron records, facilities were constructed prior to 1956, indicating station operations existed prior to Chevron's site involvement. Two of three site parcels were subsequently purchased by Chevron in 1957, followed by the third parcel in 1984.

In 1984, the site was reconstructed into its most recent configuration (Figure 2). Product dispenser replacement and UST upgrades were conducted in 1997. The former site facilities consisted of a kiosk and five dispenser islands beneath a common canopy. Three gasoline USTs, in a common pit, were located directly east of the kiosk. The previous generation of USTs were located in the same excavation. A former used-oil UST was located northeast of the kiosk and adjacent to the northeast dispenser island. A former station building, housing hydraulic lifts, was located immediately north of the current kiosk.

Previous Investigations and Remedial Activities

In April 1981, Smith and Denison conducted a tank integrity test, which included the advancement of two borings. The test indicated the tanks were corroded, but had no holes. Gasoline hydrocarbons were reported in three of the four soil samples collected.

Cambria Environmental Technology, Inc.

4111 Citrus Avenue
Suite 12
Rocklin, CA 95677
Tel (916) 630-1855
Fax (916) 630-1856

In March 1991, Environmental Health Consultants conducted ambient air monitoring and sampling when a strong hydrocarbon odor was noted in the service station building. The results indicated hydrocarbons were present in air entering the station building from the crawl space beneath the building.

In February, 1997 Gettler-Ryan Inc. (G-R) conducted a soil investigation during the product dispenser replacement and UST upgrade. The existing dispensers were removed and the soil in the immediate vicinity of each dispenser island was excavated. Soil samples were collected at the base of the each excavation at approximately three feet below grade (fbg.). The results presented in the GR *Soil Sampling During Product Dispenser Investigation Report, dated October 31, 2000* reported the presence of total petroleum hydrocarbons as gasoline (TPHg), methyl tertiary butyl ether (MTBE) and benzene in soil underneath the dispenser islands.

In October 2001, G-R advanced ten soil borings (B-1 through B-10). The ten borings were drilled on-site to depths between 16.5 and 19 fbg. Based on analytic results, hydrocarbon impact appeared to be limited to the central and southern portion of the site. Initial groundwater samples collected from the borings indicated maximum TPHg, benzene, and MTBE concentrations were 33,000 µg/L (B3), 1,200 µg/L (B3) and 820 µg/L (B1), respectively.

In March 2002, Delta Environmental Consultant Inc. (Delta) installed four monitoring wells (MW-1 through MW-4). No hydrocarbons were reported in soil from MW-1 and MW-2. MW-3, located in the southern portion of the site, reported the highest hydrocarbon concentrations down-gradient of the source area. Since well installation, hydrocarbon concentrations in MW-3 and MW-4 have fluctuated, but have not decreased significantly.

In April 2005, Chevron contracted Musco Excavators Inc. to remove all station facilities, USTs, dispenser islands and associated piping. Cambria collected compliance samples in the UST cavity, and beneath the disperser islands and associated product piping. Approximately 54 tons of soil was excavated during facility removal and approximately 16,400 gallons of groundwater was pumped out of the tank cavity. Results from these activities was reported in Cambria's *June 17, 2005, Underground Storage Tank/Product Piping Removal and Compliance Sampling Report.* Soil was subsequently excavated from the site as an additional remedial alternative. Approximately 5,080 tons of soil was excavated across the entire site to a depth of approximately 12 fbg. Due to depth of groundwater approximately 25,486 gallons of groundwater were pumped from the excavated areas.

Site Hydrogeology

The site is built on Holocene alluvium of unconsolidated, plastic, moderately to poorly sorted carbonaceous silt and clay overlaying medium-grained alluvium of unconsolidated, moderately sorted, permeable fine sand, silt, and clayey silt with a few beds of coarse sand. Sediments encountered during previous investigations have been characterized as clay containing varying amounts of silt, sand and gravel to approximately 21 or 22 fbg. The silt, sand and gravel is underlain by well and poorly graded sand to the total depth explored of 25 fbg. Groundwater typically occurs between 10 to 14 fbg and flows toward the southwest.

The site is located on the East Bay Plain, approximately 1¼ mile east of San Francisco Bay and approximately 1½ mile north of Lake Merritt. The site is relatively flat at an elevation of approximately 50 feet above mean sea level. The nearest surface water body is Glen Echo Creek, located approximately 1 mile southeast of the site, draining into Lake Merritt. Based on topography and previous data, shallow groundwater beneath the site appears to flow to the southwest.

PROPOSED SCOPE OF WORK

In order to address technical comments presented by the ACEH (Attachment A), Cambria proposes advancing eight Geoprobe® borings down-gradient of MW-3 and MW-4 creating transects to define the lateral down-gradient extent of the TPHg, benzene and MTBE plumes in groundwater (Figure 2). Seven borings are proposed in transects down-gradient of MW-3 and MW-4. One boring is proposed on-site down-gradient of the former USTs, in the vicinity of the highest soil concentrations from the over-excavation, to confirm MTBE vertically in soil and groundwater. Each Geoprobe® location will have three depth discrete groundwater samples collected to determine the three-dimensional characteristics of the plume. Our specific work scope and procedures are presented below.

Underground Utility Location: Cambria will notify Underground Service Alert prior to drilling to clear boring locations with utility companies. All well locations will be cleared to 8 fbg using an airknife vacuum truck or hand auger prior to drilling.

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 during field activity and signed by all site workers.

Permits: Cambria will obtain a drilling permit from Alameda County Public works and an encroachment permit from the City of Oakland.

Soil Boring and Well Installation: Cambria proposes advancing eight Geoprobe® borings down-gradient of MW-3 and MW-4. After clearing each location to 8 fbg, the borings will be advanced using direct push technology. Each boring will be advanced to approximately 25 fbg. Dual wall sampling consists of an outer casing of approximately 2-inches in diameter with an inner split spoon /hydropunch sampler approximately 1.4-inches in diameter. A dual wall sampling system will be used to maintain the integrity of the hole and minimize cross-contamination for hydropunch sampling. Cambria's Standard Field Procedures are presented in Attachment B.

Soil Samples: Grab-soil samples will be collected periodically in each boring for description and screening for hydrocarbons using a photo-ionization detector (PID).

Groundwater Samples: Groundwater samples will be collected at three depth discrete intervals of approximately 10, 17, and 25 fbg. A dual wall sampling system will be used to minimize cross-contamination between each discrete water sample zone.

GeoTracker Upload: Once all of the analytical data are received, the data will be uploaded to the State Water Resources Control Board GeoTracker database as required in sections 2729 and 2729.1 of the California Code of Regulations for USTs.

Chemical Analyses: The groundwater samples will be analyzed on a standard turn around time for:

- TPHg by N. CA. LUFT Method, and
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) and MTBE by EPA Method 8260B.

Soil and Water Disposal: Soil cuttings and any water produced during field activities will be temporarily stored on-site. Soil cuttings will be stockpiled on plastic and covered with plastic on- site or in drums. Following review of laboratory analytical results, the soil and water will be transported to a Chevron approved facility for disposal/recycling.

Reporting: After all analytical results are received, Cambria 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 sampling methods,
- Boring logs,
- A figure illustrating the boring locations,
- Analytical reports and chain-of-custody forms,
- Waste disposal methods,
- A conduit study including a well survey of current and historical area wells and

utilities in the vicinity of the site,

- A discussion of the hydrocarbon distribution, and
- Our conclusions and recommendations.

SCHEDULE

Cambria will perform this investigation after receiving written approval from the ACEH. We will submit our investigation report approximately six to eight weeks after receiving analytical results.

CLOSING

We appreciate the opportunity to work with you on this project. Please contact David Herzog at (916) 630-1855 ext. 112 if you have any questions or comments regarding this investigation.

Sincerely,
Cambria Environmental Technology, Inc.

Sara Giorgi
Senior Staff Geologist

David W. Herzog, P.G. #7211
Senior Project Geologist

Figures: 1 – Vicinity Map
2 – Site Map with Proposed Well Locations

Attachment: A – Regulatory Correspondence
B – Standard Field Procedures

cc: Mr. Dana Thurman, Chevron Environmental Management Company, P.O. Box 6012, K2256, San Ramon, CA 94583

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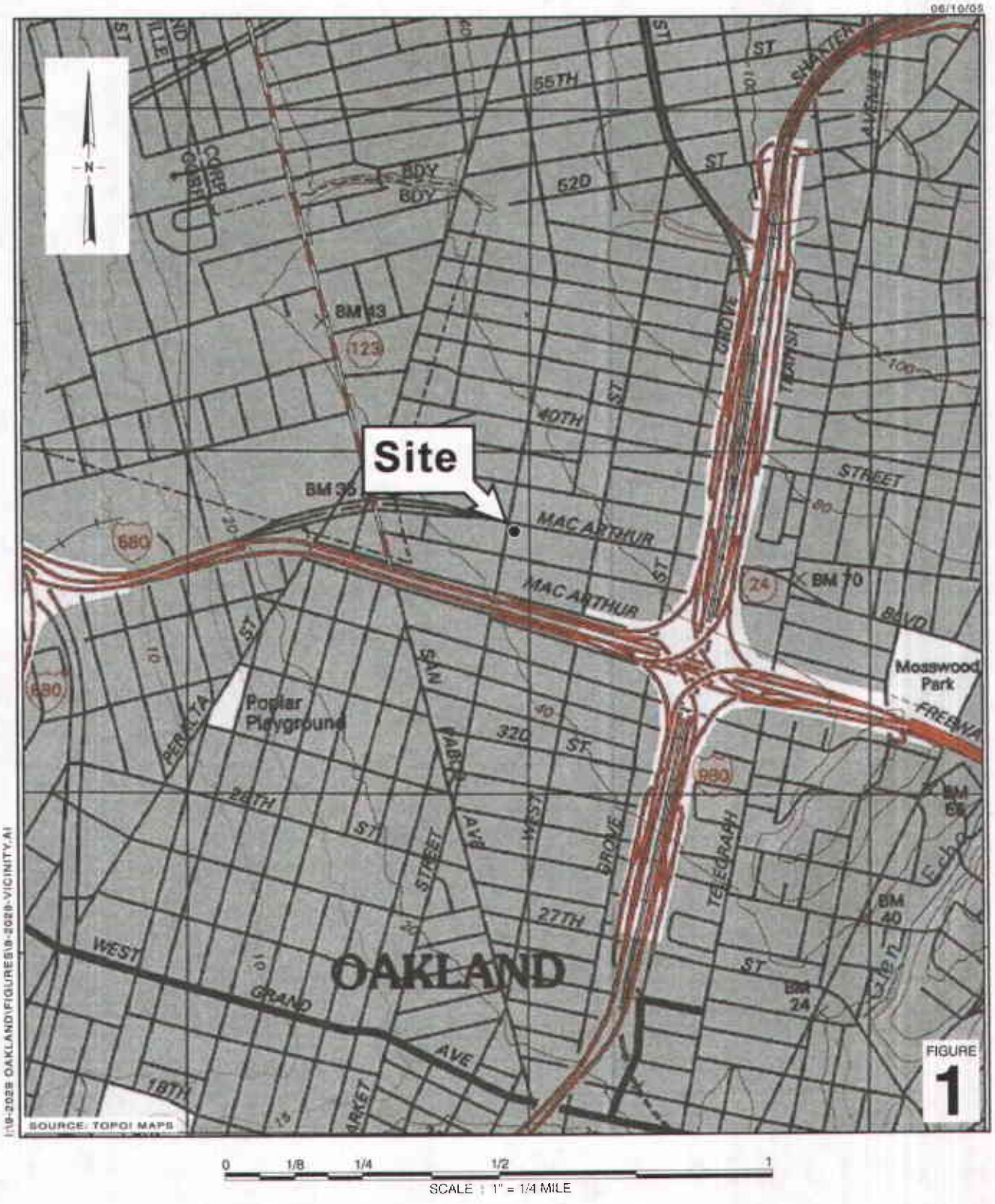

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Chevron Service Station 9-2029

890 West MacArthur Boulevard

Oakland, California

CAMBRIA

Vicinity Map

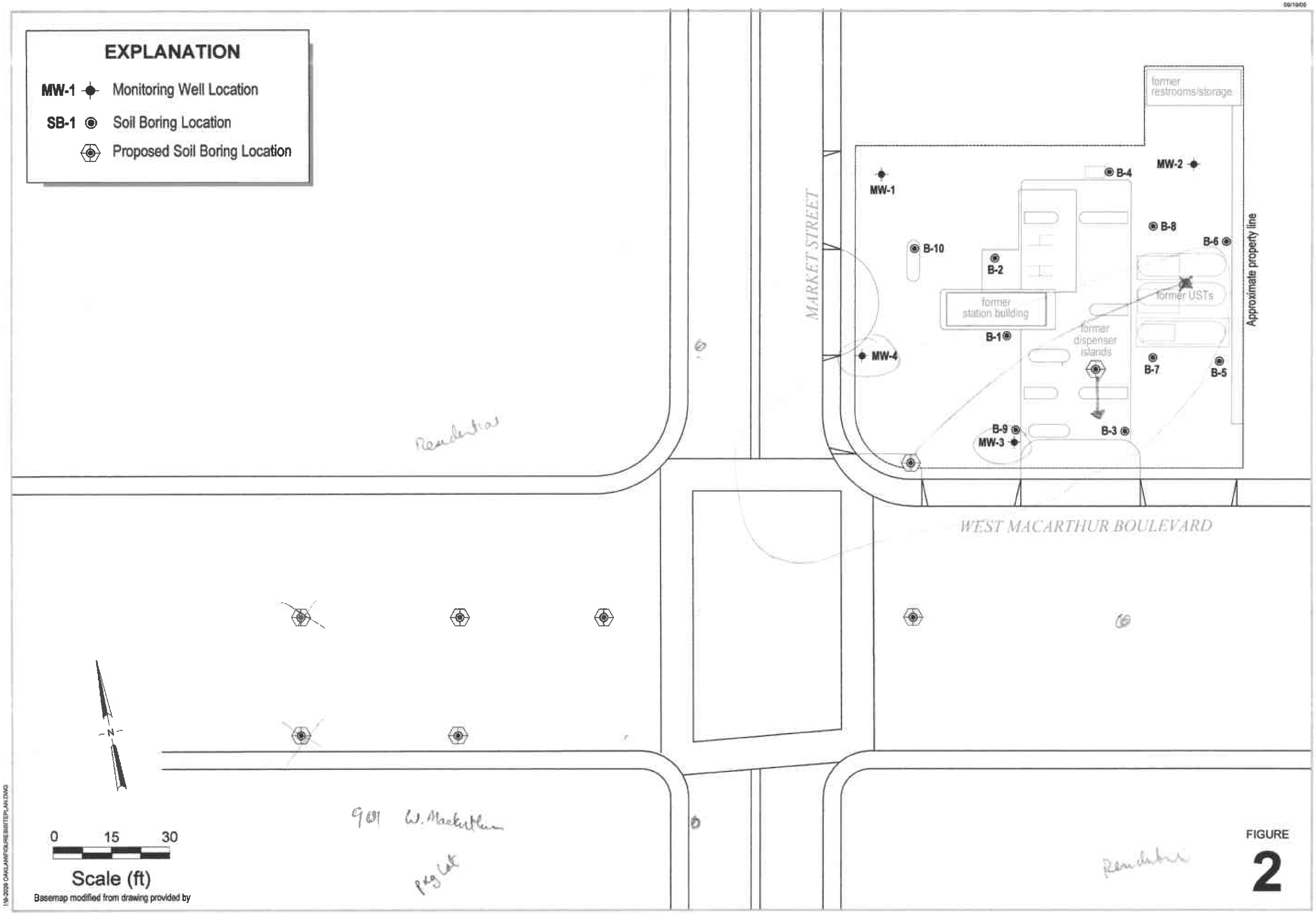

FIGURE
2

Proposed Soil Borings Site Plan

CAMBRIA

Former Chevron Station 9-2029
890 W. MacArthur Boulevard
Oakland, California

ATTACHMENT A

Regulatory Correspondence

August 26, 2005

Mr. Dana Thurman
Chevron Environmental Management Co.
6001 Bollinger Canyon Rd., K2236
P.O. Box 6012
San Ramon, CA 94583-2324

Dear Thurman:

Subject: Fuel Leak Case No. RO0002438, Chevron #9-2029, 890 West MacArthur Blvd., Oakland, CA 94608

Alameda County Environmental Health (ACEH) staff has recently reviewed the June 17, 2005, Underground Storage Tank/Product Piping Removal and Compliance Sampling Report, the July 6, 2005 Remedial Excavation Report and the May 5, 2005 Request for Reduction in Groundwater Sampling letter, prepared by Cambria Environmental. We request that you address the following technical comments, perform the proposed work, and send us the technical reports requested below.

TECHNICAL COMMENTS

1. Conduit Study

The purpose of the conduit study is to locate potential migration pathways and potential conduits and determine the probability of the plume encountering preferential pathways and conduits that could spread the contamination. Of particular concern is the identification of abandoned wells and improperly-destroyed wells that can act as conduits to deeper water bearing zones.

We request that you perform a conduit study that details the potential migration pathways and potential conduits (utilities, storm drains, etc.) that may be present in the vicinity of the site. Provide a map showing the location and depth of all utility lines and trenches including sewers and storm drains within and near the plume area.

The conduit study shall include a detailed well survey of all wells (monitoring and production wells: active, inactive, standby, destroyed (sealed with concrete), abandoned (improperly destroyed); and dewatering, drainage, and cathodic protection wells) within a ½ mile radius of the subject site. As part of your detailed well survey, please perform a background study of the historical land uses of the site and properties in the vicinity of the site. Use the results of your background study to determine the existence of unrecorded/unknown (abandoned) wells, such as old deep agricultural wells, that can act as pathways for migration of contamination at and/or from your site. Please review historical maps such as Sanborn maps, aerial photos, etc., when performing the background study. Provide a map(s) showing the location of all wells identified in your study. We have previously authorized this action by signing a DWR form. Please submit your study as requested below.

2. Contaminant Plume Definition

The purpose of contaminant plume definition is to determine the three-dimensional extent of contamination in soil and groundwater from the unauthorized release at your site. The extent of contamination in groundwater at your site is undefined. The results of recent groundwater monitoring indicate the presence of high levels of dissolved gasoline, benzene and MTBE near MW-3 and MW-4, likely extending beyond the property boundary.

We request that you perform a detailed, expedited site assessment using depth discrete sampling techniques on borings installed along transects to define and quantify the full three-dimensional extent of MTBE, TPHg and benzene in groundwater. Please submit a work plan for this assessment as requested below.

3. Groundwater Monitoring

Quarterly groundwater monitoring should continue at this site to observe the effects of the recent remediation activities. However, since results indicate wells MW-1 and MW-2 have not been impacted by petroleum hydrocarbons since their installation, 3/02, we concur with the elimination of sampling and analysis from these wells. You should continue to take groundwater elevation readings to generate your groundwater contour figure.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health according to the following schedule:

- September 30, 2005- Conduit Study
- September 30, 2005- Contaminant Plume Definition Work Plan

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) now request submission of reports in electronic form. The electronic copy is intended to replace the need for a paper copy and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of

monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all reports is required in Geotracker (in PDF format). Please visit the State Water Resources Control Board for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6765.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

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Mr. David Herzog, Cambria Environmental, 4111 Citrus Ave., Suite 9, Rocklin, CA 95677
8_26_05 890 WMacArthur

ATTACHMENT B

Standard Field Procedures

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 Professional Geologist (PG).

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 feet 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 feet 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. Following sample collection, if the boring is not being converted to a monitoring well, then the boring will be abandoned by backfilling with neat cement placed by tremie pipe if necessary and finished to grade with concrete, asphalt patch, or native material to match surface.

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 analytical 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.

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 feet 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 foot 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 analytical 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.

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 analytical 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.