CAMBRIA

September 8, 2006

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

Re: **Response to Technical Comments**
Chevron Station #9-6991
2920 Castro Valley Blvd
Castro Valley, California

Dear Mr. Chan:

Cambria Environmental Technology, Inc. (Cambria) has prepared this *Response to Technical Comments* on behalf of Chevron Environmental Management Company (Chevron) as requested in a letter from the ACHCS dated August 8, 2006 (Attachment A). The following comments in ***bold italics*** were included in the original ACHCS letter and Cambria's response follow.

## Technical Comments

***1. Residual contamination from within the existing tank pit should be evaluated. This can be done by installing and sampling from an observation well within the tank pit.***

Monitoring well MW-7 is located immediately down-gradient of the existing USTs. This well is impacted by TPHd, TPHg, and MTBE, but significant BTEX and ethanol concentrations are not present, indicating that residual impact is likely from an older rather than newer source. Sampling from an existing tank pit well will probably not yield substantially different results, and installing a new well within the area of the existing, active fueling facilities is not safe and is not warranted given current conditions. Cambria is preparing a site conceptual model (SCM) and will further evaluate the need for additional assessment adjacent to the existing USTs.

***2. The down-gradient extent of the plume should be better characterized. The temporary soil and groundwater results and the existing off-site well data should be evaluated to determine if off-site sampling is necessary to evaluate the size and strength of the contaminant plume.***

Cambria will prepare isoconcentration maps which depict the approximate extent of the hydrocarbon plume to determine if additional off-site groundwater monitoring appears warranted. The maps will be submitted along with all historical and current groundwater data in a SCM.

**Cambria Environmental Technology, Inc.**

2000 Opportunity Drive
Suite 110
Roseville, CA 95678
Tel (916) 677-3407
Fax (916) 677-3687

***3. The likelihood of a MTBE release migrating beyond the monitoring well network should be examined. We request you re-evaluate or perform an additional 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 previous 4/2002 Soil Boring Utility Trench Investigation report results were inconclusive.***

***The conduit study shall also include a detailed well survey of all wells…within a ¼ mile radius of the subject site.***

Utility maps provided in Cambria's recently submitted reports as well as the *Soil Boring Utility Trench Investigation Report* prepared by Gettler-Ryan (G-R) show the approximate locations of all known utility lines and trenching. All depth to lines, where the information is available, has been reported on the maps along with the approximate diameter of the utility lines. Cambria believes these maps provide an adequate representation of current utility lines which should be considered for possible hydrocarbon migration and an additional utility investigation at this time does not appear necessary. Additionally, G-R's report concluded that the utility trenches appeared to be creating a barrier for hydrocarbon migration south and west of the site. G-R further recommended the installation of two monitoring wells near the location of soil boring SB-5 and to the south of the site, across Castro Valley Boulevard to fully define the hydrocarbon plume.

Cambria will prepare geologic cross-sections and isoconcentration maps as part of a SCM to determine the necessity of additional off-site investigation. Additionally, Cambria will perform a Department of Water Resources (DWR) well survey. Results from the well survey will be presented in a tabular form and summarized in the SCM. A site plan depicting utility line depths and diameters are presented as Figure 2.

***4. The area near former boring SB-5 should be investigated. Separate phase hydrocarbon was detected in the boring during the 4/2002 investigation and a monitoring well was proposed south of this boring location by Delta Environmental.***

Cambria will prepare a SCM which will include discussions on separate phase hydrocarbons (SPH) detected in soil boring SB-5. Based on conclusions made from the SCM, Cambria will make recommendations on the necessity of additional investigations in the area of SB-5.

***5. Although we do not disapprove of the proposed surfactant remediation pilot test, in order to be appropriate remediation we believe it must be shown that the area of proposed treatment is the sole source area. Please provide your explanation and site conceptual model that supports MW-7 is the sole source area.***

Further site evaluation will determine the need and/or effectiveness of the proposed surfactant remediation. Following completion of the SCM Cambria will make a final recommendation as to the effectiveness in using a surfactant for remediation and whether the use of monitoring well MW-7 will target residual hydrocarbons.

## CLOSING

Cambria will complete a thorough SCM, which will include a DWR well survey, and will make final recommendations as to the need for additional on or off-site investigations and any remedial options which should be used to target residual hydrocarbon masses. Cambria anticipates the submittal of the SCM during the fourth quarter 2006. Please contact David Herzog (ext. 112) or Christene Sunding (ext. 109) at (916) 677-3407 (ext 112), if you have any questions or comments.

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

Christene M. Sunding
Senior Staff Geologist


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

Figures: 1 – Site Map

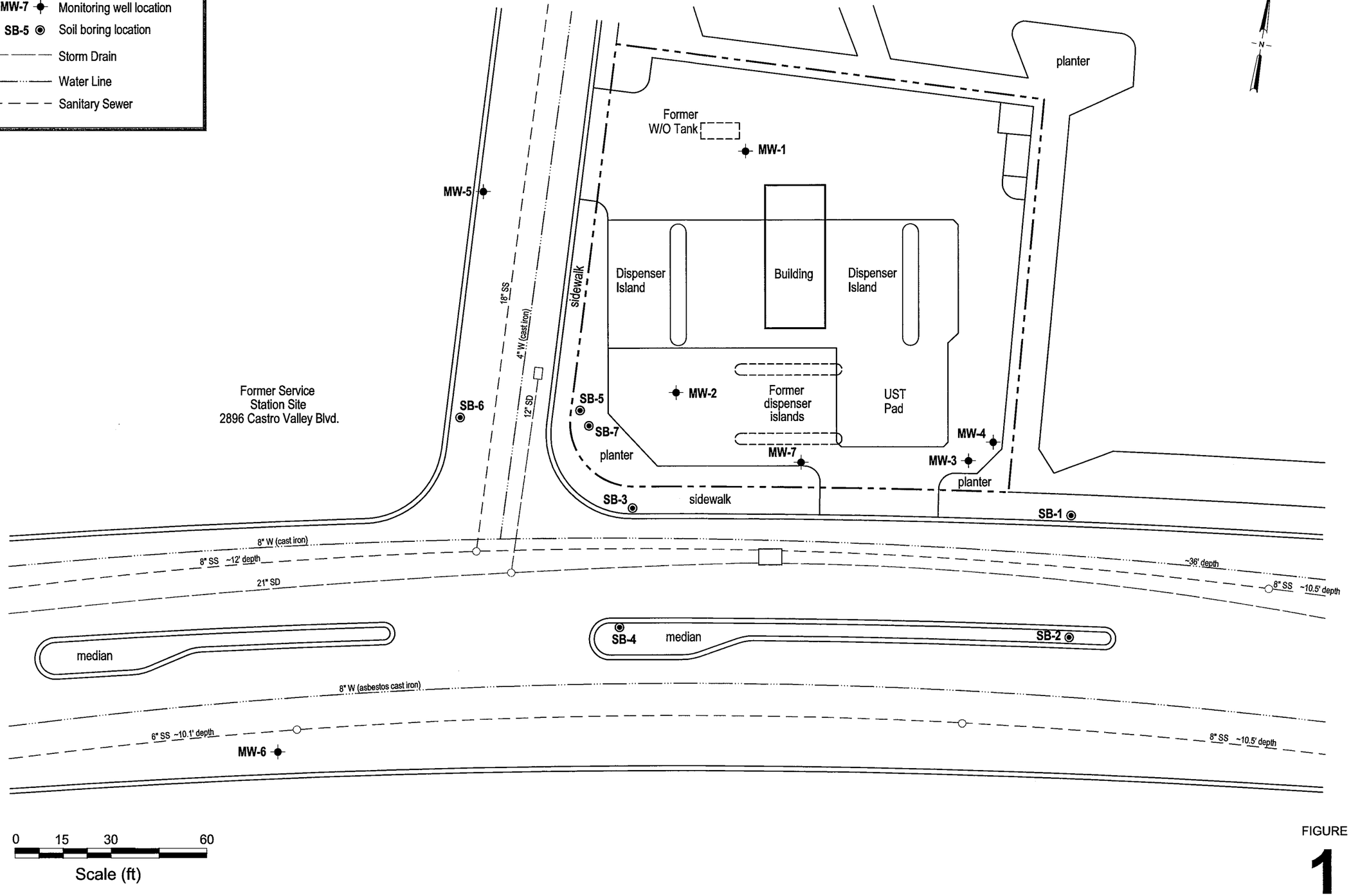
Attachment: A – Regulatory Correspondence

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

09/16/03

## EXPLANATION

- MW-7 ✦ Monitoring well location
- SB-5 ◉ Soil boring location
- Storm Drain
- Water Line
- Sanitary Sewer




0 15 30 60

Scale (ft)

FIGURE

1

# Site Plan

CAMBRIA

**Chevron Service Station 9-6991**

2920 Castro Valley Boulevard

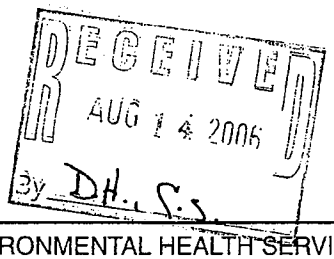
Castro Valley, California

I:\9-6991 CASTRO VALLEY\FIGURES\SITEPLAN.DWG

# ATTACHMENT A

## Regulatory Correspondence

ALAMEDA COUNTY
**HEALTH CARE SERVICES**
AGENCY
DAVID J. KEARS, Agency Director




ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

August 8, 2006

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

Dear Mr. Thurman:

Subject: Fuel Leak Case RO0000475, Chevron Station # 9-6991, 2920 Castro Valley Blvd., Castro Valley, CA 94546

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the subject site including the May 9, 2006 Workplan for Remedial Pilot Test by Cambria. The work plan proposes performing a surfactant pilot test in monitoring well MW-7. The assumption is that residual contamination is located in this area and once removed, groundwater concentrations will decline. As you are aware, the County concerns are the effectiveness of the surfactant/vacuum recovery process, the radius of influence of the treatment and determining a way to monitor the treatment process. A site conceptual model has not been submitted, though it appears that there is the assumption that contamination is localized. Historical data indicates that "old" releases came from the form waste oil tank, from the UST pit and the southern dispenser island area. Elevated MTBE has been detected in groundwater samples from wells MW-2, MW-7 and MW-3, therefore the residual plume could extend this length. The persistent petroleum concentration detected in MW-7 may indicate that residual source remains in the tank pit or dispenser area, some of which was not sampled during the initial tank removal. Although the calculated volume of surfactant will be that which should reach a radius of at least 10' from the test well, there is no way proposed to verify this will be the case.

Please address the following technical comments prior to performing the proposed work.

TECHNICAL COMMENTS

1. Residual contamination from within the existing tank pit should be evaluated. This can be done by installing and sampling from an observation well within the tank pit.
2. The down-gradient extent of the plume should be better characterized. The temporary soil and groundwater results and the existing off-site well data should be evaluated to determine if additional off-site sampling is necessary to evaluate the size and strength of the contaminant plume.
3. The likelihood of a MTBE release migrating beyond the monitoring network should be examined. We request that you re-evaluate or perform an additional 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 previous 4/2002 Soil Boring Utility Trench Investigation Report results were inconclusive.

The conduit study shall also 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 1/4 mile radius of the subject site.

4. The area near former boring SB-5 should be investigated. Separate phase hydrocarbon was detected in the boring during the 4/2002 investigation and a monitoring well was proposed just south of this boring location by Delta Environmental.
5. Although we do not disapprove of the proposed surfactant remediation pilot test, in order to be appropriate remediation we believe it must be shown that the area of proposed treatment is the sole source area. Please provide your explanation and site conceptual model that supports that MW-7 is the sole source area.

TECHNICAL REPORT REQUEST

Please provide the technical report requested according to the following schedule:

- September 8, 2006- response to technical comments

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. 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.

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

Sincerely,

Barney M. Chan

Barney M. Chan
Hazardous Materials Specialist

cc: files, D. Drogos
Mr. David Herzog, Cambria Environmental, 2000 Opportunity Drive, Ste. 110.
Roseville, CA 95678

8_8_06 2920 Castro Valley Blvd