



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
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April 29, 2013

Ms. Catalina Espino Devine
Chevron Environmental
Management Company
6001 Bollinger Canyon Road
San Ramon, CA 94583
(sent via electronic mail to: espino@chevron.com)

Mr. Onsoni Ardavan
37 Victoria Drive
Atherton, CA 94027-4122

Frances & Louis Carnazzo
Carnazzo Land Co, Inc, et al.
P.O. Box 6031
Atascadero, CA 93423-6031

Ahmad & Shahla Mostofi
37 Victoria Drive
Atherton, CA 94027-4122

Subject: Request for Revised Data Gap Work Plan, LTCP Review, IRAP, and Path to Closure;
Fuel Leak Case No. RO0000185 (Global ID #T0600102298), Chevron #9-7127, I 580
and Grant Line Road, Tracy, CA

Dear Ladies and Gentlemen:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above referenced site including the *Additional Site Assessment Work Plan* (Work Plan), dated September 14, 2012, and the *Fourth Quarter 2012 Groundwater Monitoring Report*, dated February 1, 2013. The reports were prepared and submitted on your behalf by ARCADIS US, Inc. (ARCADIS). Thank you for submitting the reports.

ACEH has evaluated the data and recommendations presented in the above-mentioned reports in conjunction with the case files and the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP) criteria (see Attachment A). Based on ACEH's review we request that you address the following technical comments, and send us the documents requested below, including a Revised Data Gap Investigation Work Plan and Interim Remedial Action Work Plan.

TECHNICAL COMMENTS

1) Comments on Work Plan – According to ARCADIS, the purpose of the work plan is to collect additional data necessary to evaluate transport mechanisms for soil and groundwater that may be impacted by releases of petroleum hydrocarbons, identify potential data gaps in the existing information, and adequately characterize site impacts in support of risk-based closure at the site. The scope of work proposed includes advancement of eight soil borings to collect soil and groundwater samples and completion of a light non-aqueous phase liquids (LNAPL) bail down test.

ACEH is concerned that the work plan has not been developed within the context of the LTCP or supported by adequate Site Conceptual Model (SCM). ACEH is cognizant that the work plan was largely generated before implementation of the LTCP, and was submitted a month after policy implementation. However please note that under the LTCP a risk-based approach cannot be utilized to satisfy the Groundwater-Media Specific Criteria. Therefore ACEH requests the scope of work be revised to address the following comments:

- a. Existing Water Supply Well** – Recent plans call for the redevelopment of the subject site as a service station. Because the service station is not in the service area of a public water system it will require development of an onsite, or near site, water supply for domestic

- purposes. The work plan references a risk-based approach to closure of the site. This approach appears inappropriate for a site with an existing water supply well that has historically supplied groundwater for domestic purposes to the site. The well required carbon filtration due to the detection of petroleum hydrocarbons in well water. This well is currently within 40 feet of well MW-1 that has recently had 2.4 feet of LNAPL. If site groundwater is intended to be used to supply domestic water for the site, groundwater must meet MCL goals.
- b. Installation of Soil Bores** - ARCADIS proposes to install eight soil bores across the site with a sonic drill rig to gather data in support of a risk-based site closure, and to gather data to identify a remedial approach by characterizing LNAPL mobility and delineating the extent of LNAPL and dissolved-phased hydrocarbon plumes. ACEH is concerned that the placement of the soil bores / temporary wells may not adequately define the downgradient extent of the dissolved-phase plume due to the substantial distance between the bore locations. Additionally, although ARCADIS proposes to collect grab groundwater samples from temporary wells installed inside the borings to help delineate the dissolved-phase plume, ACEH recommends installation of permanent wells to collect data for use in establishing stable or declining groundwater trends.
 - c. Preservation of Soil Cores** - ARCADIS proposes the collection of intact soil cores from each bore location, collection of up to three soil samples per bore, freezing the intact core with dry ice, and the submittal of the intact cores to a laboratory for white light and ultraviolet light photography to identify LNAPL pathways and for further geotechnical characterization. ACEH is in agreement that the collection of this data may be useful; however, except for two or three bore locations, the bores are located far from, the former underground storage tank (UST) source zone(s) at the site where groundwater-phase LNAPL is present and where soil-phase LNAPL would be anticipated. ACEH notes that existing data (see soil bores B-3 and B-4, installed in 1987) appear to indicate at least one source remains in the vicinity of the former UST tank locations. The rationale for the collection of this additional data significantly outside the suspected source area(s) needs to be presented in within the context of a SCM.
 - d. Bail Down Test** - ARCADIS proposes to conduct a LNAPL bail-down test utilizing a well pump in well MW-1 and installation of four transducers in surrounding wells (MW-9, MW-10, MW-11, and MW-15). ACEH is not adverse to the collection of this data, but is concerned the surrounding wells may be located at too great of a distance (40 to 60 feet) to yield useful data, and therefore recommends installation of a well, or multiple wells, installed in closer spacing, such as at a point between MW-1 and MW-3 (wells with LNAPL). ACEH notes that a form of aquifer transmissivity was recorded by transducers in some of these same wells at the time of the vacuum extraction events in May 2010 and documents good connectivity of the aquifer between existing wells. With this in mind please provide justification for the collection of additional data as proposed.
- 2) Data Gap Investigation Work Plan and Site Conceptual Model (SCM)** – Please address the technical comments described in Item 1 above in a Revised Data Gap Investigation Work Plan by the date identified below. Additionally, please evaluate the site against the LTCP criteria and incorporate additional data collection activities to address identified data gaps. Please sequence activities to enable data collection in the fewest mobilizations possible in order to facilitate an efficient and cost effective path to site closure. ACEH staff utilizes a Data Gap Identification Tool (DGIT) while reviewing cases for compliance with the LTCP criteria and encourages you to also utilize this tool in developing your strategy. Use of the DGIT is anticipated to assist and expedite the ACEH review. ACEH will provide the DGIT as a PDF form via e-mail upon request.

Please support the scope of work in the Revised Data Gap Investigation Work Plan with an SCM and Data Quality Objectives (DQOs) that relate the data collection to each LTCP criteria. For example please clarify which scenario within each Media-Specific Criteria a sampling strategy is intended to apply to. If the sampling strategy includes data collection to support site redevelopment, a description of that redevelopment should be included in the Revised Data Gap Investigation Work Plan to support your sampling strategy so that ACEH can verify the appropriateness of the proposed sample locations.

In order to expedite review, ACEH requests the SCM be presented in a tabular format that highlights the major SCM elements and associated data gaps, and includes at a minimum the following elements:

- i. Local and regional plan view maps that illustrate the location of sources (former facilities, piping, tanks, etc.) extent of contamination, direction and rate of groundwater flow, potential preferential pathways, and locations of receptors;
 - ii. An updated preferential pathway study as detailed further in Attachment B;
 - iii. Geologic cross section maps that illustrate subsurface features, man-made conduits, and lateral and vertical extent of contamination;
 - iv. Plots of chemical concentrations versus time;
 - v. Plots of chemical concentrations versus distance from the source;
 - vi. Summary tables of chemical concentrations in different media (i.e. soil, groundwater, and soil vapor); and
 - vii. Well logs, boring logs, and well survey maps;
 - viii. Discussion of likely contaminant fate and transport.
- 3) Interim Remedial Action Plan** – In a letter dated July 27, 2012, ACEH requested submittal of a Feasibility Study/Corrective Action Plan (FS/CAP). Although ARCADIS states an FS/CAP may be necessary in the future for addressing impacted media at the site, argues that an effective remedial approach cannot be determined until the contamination at the site is more comprehensively defined. ACEH is in general agreement with this logic, however a review of site data indicates that identification and implementation of appropriate interim remedial actions will likely result in a reduction of LNAPL at the site, and will likely result in an ability to achieve the LTCP groundwater criteria sooner. Please submit an Interim Remedial Action Plan (IRAP) by the date identified below. Please support the IRAP with Data Quality Objectives.
- 4) Path to Closure Project Schedule** - The State Water Resources Control Board passed Resolution No. 2012-0062 on November 6, 2012 which requires development of a "Path to Closure Plan" by December 31, 2013 that addresses the impediments to closure for the site. The Path to Closure must have milestone dates tied to calendar quarters which will achieve site cleanup and case closure in a timely and efficient manner and minimizes the cost of corrective action. Please prepare a Path to Closure Schedule as detailed further in Attachment C. Please submit an electronic copy of the Path to Closure Schedule by the date listed below. ACEH will review the schedule to ensure that all key elements are included.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Mark Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with Attachment 1 and the specified file naming convention below, according to the following schedule:

- **May 3, 2013** – First Quarter 2013 Groundwater Monitoring Report
File to be named: RO185_GWM_R_YYYY-mm-dd
- **August 9, 2013** – Site Conceptual Model and Data Gap Investigation Work Plan
File to be named: RO185_SCM_WP_R_YYYY-mm-dd
- **August 16, 2013** – Second Quarter 2013 Groundwater Monitoring Report
File to be named: RO185_GWM_R_YYYY-mm-dd
- **August 30, 2013** - Interim Remedial Action Plan
File to be named: RO185_IRAP_R_YYYY-mm-dd
- **August 30, 2013** – Path to Closure Schedule
File to be named: RO185_IRAP_R_YYYY-mm-dd

- **November 15, 2013** – Third Quarter 2013 Groundwater Monitoring Report
File to be named: RO185_GWM_R_YYYY-MM-DD
- **60 Days After Site Conceptual Model and Data Gap Work Plan Approval** – Feasibility Study / Corrective Action Plan
File to be named: RO185_FSCAP_YYYY-MM-DD

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.

If your email address is not listed on the first page of this letter, ACEH is requesting your email address to help expedite communications and to help lower overall costs. Please provide that information in the next submittal.

Should you have any questions, please contact me at (510) 567--6876 or send me an electronic mail message at mark.detterman@acgov.org.

Sincerely,

Mark E. Detterman, PG, CEG
Senior Hazardous Materials Specialist

Enclosures: Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations and Electronic Report Upload (ftp) Instructions
Attachment A - GeoTracker LTCP Checklist
Attachment B – Preferential Pathway Study
Attachment C – Path to Closure Project Schedule

cc: Tonya Russi, ARCADIS US, Inc, 950 Glenn Drive, Suite 125, Folsom, CA 95630
(sent via electronic mail to Tonya.Russi@arcadis-us.com)

David Lay, ARCADIS US, Inc, 950 Glenn Drive, Suite 125, Folsom, CA 95630; (sent via electronic mail to: David.Lay@arcadis-us.com)

Donna Drogos, ACEH, (sent via electronic mail to donna.drogos@acgov.org)

Dilan Roe, ACEH, (sent via electronic mail to dilan.roe@acgov.org)

Mark Detterman, ACEH, (sent via electronic mail to mark.detterman@acgov.org)

Geotracker, Electronic File

Attachment 1

Responsible Party(ies) Legal Requirements/Obligations

REPORT/DATA REQUESTS

These reports/data are being requested pursuant to Division 7 of the California Water Code (Water Quality), Chapter 6.7 of Division 20 of the California Health and Safety Code (Underground Storage of Hazardous Substances), and Chapter 16 of Division 3 of Title 23 of the California Code of Regulations (Underground Storage Tank Regulations).

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (Local Oversight Program [LOP] for unauthorized releases from petroleum Underground Storage Tanks [USTs], and Site Cleanup Program [SCP] for unauthorized releases of non-petroleum hazardous substances) require submission of reports in electronic format pursuant to Chapter 3 of Division 7, Sections 13195 and 13197.5 of the California Water Code, and Chapter 30, Articles 1 and 2, Sections 3890 to 3895 of Division 3 of Title 23 of the California Code of Regulations (23 CCR). Instructions for submission of electronic documents to the ACEH FTP site are provided on the attached "Electronic Report Upload Instructions."

Submission of reports to the ACEH FTP site is in addition to requirements for electronic submittal of information (ESI) to the State Water Resources Control Board's (SWRCB) Geotracker website. In April 2001, the SWRCB adopted 23 CCR, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1 (Electronic Submission of Laboratory Data for UST Reports). Article 12 required electronic submittal of analytical laboratory data submitted in a report to a regulatory agency (effective September 1, 2001), and surveyed locations (latitude, longitude and elevation) of groundwater monitoring wells (effective January 1, 2002) in Electronic Deliverable Format (EDF) to Geotracker. Article 12 was subsequently repealed in 2004 and replaced with Article 30 (Electronic Submittal of Information) which expanded the ESI requirements to include electronic submittal of any report or data required by a regulatory agency from a cleanup site. The expanded ESI submittal requirements for petroleum UST sites subject to the requirements of 23 CCR, Division, 3, Chapter 16, Article 11, became effective December 16, 2004. All other electronic submittals required pursuant to Chapter 30 became effective January 1, 2005. Please visit the SWRCB website for more information on these requirements: (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

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, 7835, 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, late 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.

Alameda County Environmental Cleanup Oversight Programs (LOP and SCP)	REVISION DATE: July 25, 2012
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (petroleum UST and SCP) require submission of all reports in electronic form to the county's FTP site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single Portable Document Format (PDF) with no password protection.**
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

- 1) Obtain User Name and Password
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - i) Send an e-mail to deh.loptoxic@acgov.org
 - b) In the subject line of your request, be sure to include "**ftp PASSWORD REQUEST**" and in the body of your request, include the **Contact Information, Site Addresses,** and the **Case Numbers (RO# available in Geotracker) you will be posting for.**
- 2) Upload Files to the ftp Site
 - a) Using Internet Explorer (IE4+), go to <ftp://alcoftp1.acgov.org>
 - (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
 - b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
 - c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
 - d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
 - e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by **Report Upload.** (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
 - d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

ATTACHMENT A

LTCP Checklist

[GEOTRACKER HOME](#) | [MANAGE PROJECTS](#) | [REPORTS](#) | [SEARCH](#) | [LOGOUT](#)

CHEVRON #9-7127 (T0600102298) - [MAP THIS SITE](#)

OPEN - ASSESSMENT & INTERIM REMEDIAL ACTION

10 GRANT LINE
MOUNTAIN HOUSE , CA 94550
ALAMEDA COUNTY

[ACTIVITIES REPORT](#)
[PUBLIC WEBPAGE](#)

CLEANUP OVERSIGHT AGENCIES
ALAMEDA COUNTY LOP (LEAD) - CASE #: R00000185
CASEWORKER: [MARK DETTERMAN](#) - SUPERVISOR: DONNA DROGOS
SAN FRANCISCO BAY RWQCB (REGION 2) - CASE #: 010001

CUF Claim #: 8203 CUF Priority Assigned: D CUF Amount Paid: \$0

THIS PROJECT WAS LAST MODIFIED BY [MARK DETTERMAN](#) ON 3/25/2013 12:25:05 PM - [HISTORY](#)

THIS SITE HAS UNAPPROVED SUBMITTALS. CLICK [HERE](#) TO OPEN A NEW WINDOW WITH THE SUBMITTAL APPROVAL PAGE FOR THIS SITE.

CLOSURE POLICY **THIS VERSION IS FINAL AS OF 3/25/2013** **CHECKLIST INITIATED ON 3/25/2013** [CLOSURE POLICY HISTORY](#)

General Criteria - *The site satisfies the policy general criteria* - [CLEAR SECTION ANSWERS](#)

a. Is the unauthorized release located within the service area of a public water system? YES NO

b. The unauthorized release consists only of petroleum ([info](#)). YES NO

c. The unauthorized ("primary") release from the UST system has been stopped. YES NO

d. Free product has been removed to the maximum extent practicable ([info](#)).

Free Product Remaining: Measurable Free Product

Removal Methods Tried : HVDPE Skimmer Bailing Absorbant Materials

Did Not Try to Remove FP OTHER: vac. extraction

FP Not Encountered YES NO

e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed ([info](#)).

Description (Check all that Apply):

GW Not Evaluated

Groundwater Assessment Incomplete - Aerial Extent of Contamination Not Defined

Groundwater Assessment Incomplete - Depth of Contamination Not Defined

Hydrogeology Not Adequately Defined

Potential Receptors Not Identified

Soil Assessment Incomplete - Aerial Extent Not Defined

Soil Assessment Incomplete - Depth Unknown

Soil Vapor Not Evaluated

Other -

YES NO

f. Secondary source has been removed to the extent practicable ([info](#)).

Impediment to Removing Secondary Source (Check all that Apply):

Remediation Has Not Been Attempted

Remediation Was Designed Incorrectly

Remediation Was Shut Off Prematurely

Poor Remediation O&M

Other - Pilot Tests and vacuum recovery only

YES NO

g. Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15. Not Required YES NO

h. Does a nuisance exist, as defined by [Water Code section 13050](#).

Describe Nuisance Condition :

Free Phase remains within 40 feet of water supply well; 8,400 ug/l benzene within 20 feet; well previously w detectable BTEX

YES NO

1. Media-Specific Criteria: Groundwater - *The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent, and meets all of the additional characteristics of one of the five classes of sites listed below.* - [CLEAR SECTION ANSWERS](#)

EXEMPTION - Soil Only Case (Release has not Affected Groundwater - [Info](#)) YES NO

Does the site meet any of the Groundwater specific criteria scenarios? YES NO

ADDITIONAL QUESTIONS - Please indicate only those conditions that do not meet the policy criteria:

Plume Length (That Exceeds Water Quality Objectives) :
 ≥ 100 Feet and < 250 Feet ≥ 250 Feet and < 1,000 Feet ≥ 1,000 Feet Unknown

Plume is Stable or Decreasing in AREAL Extent :
 No Unknown

Free Product in Groundwater :
 Yes No Unknown

Free Product Has Been Removed to the Maximum Extent Practicable :
 No Unknown

For sites with free product, the Plume Has Been Stable or Decreasing for 5-Years ([info](#)) :
 No Unknown

For sites with free product, owner Willing to Accept a Land Use Restriction (if required) :
 No Unknown

Free Product Extends Offsite :
 Yes Unknown

Benzene Concentration :
 ≥ 1,000 µg/l and < 3,000 µg/l ≥ 3,000 µg/l Unknown

MTBE Concentration :
 ≥ 1,000 µg/l Unknown

Nearest Supply Well (From Plume Boundary) :
 ≤ 250 Feet > 250 Feet and ≤ 1,000 Feet Unknown

Nearest Surface Water Body (From Plume Boundary) :
 ≤ 250 Feet > 250 Feet and ≤ 1,000 Feet Unknown

2. Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air - *The site is considered low-threat for the vapor-intrusion-to-air pathway if site-specific conditions satisfy items 2a, 2b, or 2c* - [CLEAR SECTION ANSWERS](#)

EXEMPTION - Active Commercial Petroleum Fueling Facility YES NO

Does the site meet any of the Petroleum Vapor Intrusion to Indoor Air specific criteria scenarios? YES NO

ADDITIONAL QUESTIONS - Please indicate only those conditions that do not meet the policy criteria:

Soil Gas Samples :
 No Soil Gas Samples Taken Incorrectly

Exposure Type :
 Residential Commercial

Free Product :
 In Groundwater In Soil Unknown

TPH in the Bioattenuation Zone :
 ≥ 100 mg/kg Unknown Soil samples not taken at two depths within 5 ft. zone (only for Scenario 4 with BioZone)

Bioattenuation Zone Thickness :
 < 5 Feet (No BioZone) ≥ 5 Feet and < 10 Feet ≥ 10 Feet and < 30 Feet ≥ 30 Feet 30ft BioZone Compromised TPH > 100mg/kg Unknown

O2 Data in Bioattenuation Zone :
 No O2 Data O2 < 4% O2 ≥ 4%

Benzene in Groundwater :
 ≥ 100 µg/l and < 1,000 µg/l ≥ 1,000 µg/l Unknown

Soil Gas Benzene :
 ≥ 85 µg/m³ and < 280 µg/m³ ≥ 280 µg/m³ and < 85,000 µg/m³ ≥ 85,000 µg/m³ and < 280,000 µg/m³ ≥ 280,000 µg/m³ Unknown

Soil Gas EthylBenzene :
 ≥ 1,100 µg/m³ and < 3,600 µg/m³ ≥ 3,600 µg/m³ and < 1,100,000 µg/m³ ≥ 1,100,000 µg/m³ and < 3,600,000 µg/m³ ≥ 3,600,000 µg/m³ Unknown

Soil Gas Naphthalene :
 ≥ 93 µg/m³ and < 310 µg/m³ ≥ 310 µg/m³ and < 93,000 µg/m³ ≥ 93,000 µg/m³ and < 310,000 µg/m³ ≥ 310,000 µg/m³ Unknown

3. Media Specific Criteria: Direct Contact and Outdoor Air Exposure - The site is considered low-threat for direct contact and outdoor air exposure if it meets 1, 2, or 3 below. - [CLEAR SECTION ANSWERS](#) YES NO

EXEMPTION - The upper 10 feet of soil is free of petroleum contamination YES NO

Does the site meet any of the Direct Contact and Outdoor Air Exposure criteria scenarios? YES NO

ADDITIONAL QUESTIONS - Please indicate only those conditions that do not meet the policy criteria:

Exposure Type :
 Residential Commercial Utility Worker

Petroleum Constituents in Soil :
 ≤ 5 Feet bgs >5 Feet bgs and ≤10 Feet bgs Unknown

Soil Concentrations of Benzene :
 > 1.9 mg/kg and ≤ 2.8 mg/kg > 2.8 mg/kg and ≤ 8.2 mg/kg > 8.2 mg/kg and ≤ 12 mg/kg > 12 mg/kg and ≤ 14 mg/kg > 14 mg/kg Unknown

Soil Concentrations of EthylBenzene :
 > 21 mg/kg and ≤ 32 mg/kg > 32 mg/kg and ≤ 89 mg/kg > 89 mg/kg and ≤ 134 mg/kg > 134 mg/kg and ≤ 314 mg/kg > 314 mg/kg Unknown

Soil Concentrations of Naphthalene :
 > 9.7 mg/kg and ≤ 45 mg/kg > 45 mg/kg and ≤ 219 mg/kg > 219 mg/kg Unknown

Soil Concentrations of PAH :
 > 0.063 mg/kg and ≤ 0.68 mg/kg > 0.68 mg/kg and ≤ 4.5 mg/kg > 4.5 mg/kg Unknown

Area of Impacted Soil :
 Area of Impacted Soil > 82 by 82 Feet Unknown

Additional Information

This case should be closed in spite of NOT meeting policy criteria. YES NO

[SPELL CHECK](#)

LOGGED IN AS MARKDETT

[CONTACT GEOTRACKER HELP](#)

ATTACHMENT B

Preferential Pathway and Sensitive Receptor Study

Please conduct a study as a part of the SCM requested in order to (1) locate potential anthropogenic migration pathways on and in the vicinity of the site that could spread contamination through vertical and lateral migration, and (2) identify exposure scenarios and sensitive receptors that are linked to site contamination through these preferential pathways. The results of your study shall contain all information required by California Code of Regulations, Title 23, Division 3, Chapter 16, §2654(b) including but not limited to the following components, as applicable to the site:

- a. **Utility Survey** - An evaluation of all existing subsurface utility lines, laterals, and trenches including sewers, electrical, fiber optic cable, cable, water, storm drains, trench backfill, etc. within and near the site and plume area(s). Please include an evaluation of shallow utilities associated with current and historical site operations/processes including UST systems, remediation systems, parts cleaning, sumps, etc.
- b. **Updated Well Survey** – ACEH is aware of a May 1999 well survey for the site that identified vicinity water supply wells, and requests that well data sources (Alameda County Public Works Agency [ACPWA] and Department of Water Resources [DWR]) be reviewed for more recently installed vicinity water supply wells. ACEH requests the identification of all active, inactive, standby, decommissioned (sealed with concrete), unrecorded, and abandoned (improperly decommissioned or lost) wells including monitoring, remediation, irrigation, water supply, industrial, livestock, dewatering, and cathodic protection wells within a ¼-mile radius of the subject site. Please inspect all available Well Completion Reports filed with the DWR and ACPWA in your survey, and 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, which can act as contaminant migration pathways at or from your site.
- c. **Land Uses and Exposure Scenarios on the Facility and Adjacent Properties** – The surrounding land use appears to be predominately agricultural; however, redevelopment of the site as a service station has been planned. Consequently, the identification of existing and future land use on and in the vicinity of the site is requested, including:
 - o Beneficial resources (e.g., groundwater classification, wetlands, surface water bodies, natural resources, etc.)
 - o Subpopulation types and locations (e.g., schools, hospitals, day care centers, elder care facilities, etc.)
 - o Exposure scenarios (e.g. residential, industrial, recreational, farming) and exposure pathways including those identified in the Low Threat Underground Storage Tank Case Closure Policy General Criteria h – Nuisance Conditions, and Media-Specific Criteria for Groundwater, Vapor Intrusion to Indoor Air, and Direct Contact and Outdoor Air Exposure
- d. **Planned Development** – Future development activities are planned in the vicinity of the site. Please include an analysis of new utility corridors, building foundations, wells, and/or development activities that could significantly alter contaminant migration (i.e., covering of large areas of the site with pavement, etc.).

Please synthesize this information and discuss your analysis and interpretation of the results of the preferential pathway and sensitive receptor study and incorporate into the requested SCM. Please provide the following supporting documentation and data as applicable:

- Copies of current and historical maps, such as site maps, Sanborn maps, aerial photographs, etc., used when conducting the background study.
- DWR well logs, marked as confidential, uploaded to Alameda County Environmental Health's ftp site. For confidentiality purposes do not upload the DWR well logs to Geotracker. The well logs will be placed in our confidential file and will be available only to internal staff for review.
- Table with details of the well search findings including Map ID corresponding to well location on map, State Well ID, Well Owner ID, approximate distance from the site, direction from the site, use, installation date, depth (feet below ground surface [bgs]), screened interval (feet bgs), sealed interval (feet bgs), diameter (inches), and well location address.
- Maps and geologic cross-sections illustrating historical groundwater elevations and flow directions (rose diagram) at the site. Synthesize the data requested above and include the location and depth of all utility lines, trenches, UST pits and piping trenches, wells, surface water bodies, foundational elements, surface covering types (pavement, landscaped, etc.) within and near the site and plume area(s), and the location of potential receptors.

ATTACHMENT C

Path to Closure Project Schedule

The State Water Resources Control Board passed Resolution No. 2012-0062 on November 6, 2012 which requires development of a "Path to Closure Plan" by December 31, 2013 that addresses the impediments to closure for the site. The Path to Closure must have milestone dates tied to calendar quarters which will achieve site cleanup and case closure in a timely and efficient manner and minimizes the cost of corrective action. ACEH will review the schedule to ensure that all key elements are included.

Please submit an electronic copy that includes, but is not be limited to, the following key environmental elements and milestones as appropriate:

- Preferential Pathway Study
- Soil, Groundwater, and Soil Vapor Investigations
- Initial, Updated, and Final/Validated SCMs
- Interim Remedial Actions
- Feasibility Study/Corrective Action Plan
- Pilot Tests
- Remedial Actions
- Soil Vapor and Groundwater Monitoring Well Installation and Monitoring
- Public Participation Program (Fact Sheet Preparation/Distribution/Public Comment Period, Community Meetings, etc.)
- Case Closure Tasks (Request for closure documents, ACEH Case Closure Summary Preparation and Review, Site Management Plan, Institutional Controls, Public Participation, Landowner Notification, Well Decommissioning, Waste Removal, and Reporting.)

Please include time for regulatory and RP in house review, permitting, off-site access agreements, and utility connections, etc.

Please use a critical path methodology/tool to construct a schedule with sufficient detail to support a realistic and achievable Path to Closure Schedule. The schedule is to include at a minimum:

- Defined work breakdown structure including summary tasks required to accomplish the project objectives and required deliverables
- Summary task decomposition into smaller more manageable components that can be scheduled, monitored, and controlled
- Sequencing of activities to identify and document relationships among the project activities using logical relationships
- Identification of critical paths, linkages, predecessor and successor activities, leads and lags, and key milestones
- Identification of entity responsible for executing work
- Estimated activity durations (60-day ACEH review times are based on calendar days)