



April 22, 2016

Steffi R. Zimmerman Trust
c/o Mr. Bill Mouat (Sent via E-mail to: bandsm1@comcast.net)
3289 Loma Verdes Place
Lafayette, CA 94549-1805

Subject: Fuel Leak Case No. RO0002936 and GeoTracker Global ID T0600183099,
Zimmerman Property, 3442 Adeline St., Oakland, CA 94608

Dear Mr. Mouat:

Alameda County Environmental Health's (ACEH) met with your consultant, AEI Consulting, Inc. (AEI) at our offices on March 15, 2016. The purpose of the meeting was to discuss our evaluation of the site data in reference to the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP), identify possible technical data gaps, and develop a path to case closure.

ACEH understands that redevelopment is not currently under consideration and commercial property usage as an indoor sports facility will continue for the foreseeable future. This requested clarification was in response to a December 2015 inquiry ACEH staff received regarding a potential parcel split. ACEH initially responded that a parcel split appeared unnecessary because the Local Oversight Program (LOP) case was associated with the parcel that housed the underground storage tank (UST). According to the Assessor Parcel map, the parcel in question was indicated by both the number 10 and APN 5-478-5-1. Upon further review, ACEH recognized that the extent of the parcel had been inadvertently identified, and that the dashed lines between the four parcels numbered 3, 8, 9, and 10 did comprise APN 5-478-5-1. In light of this finding, ACEH would require environmental assessment of all parcels prior to a potential parcel split.

ACEH staff has evaluated the case file including the following documents prepared on your behalf by AEI in conjunction with the case files, and LTCP:

- *Preferential Pathway Study and Data Gaps Investigation Work Plan*, dated December 13, 2013
- *Semi-Annual Groundwater Monitoring Report Second Quarter 2014*, dated May 21, 2014

Based on ACEH staff review, we have determined that the site does not meet the LTCP Media-Specific Criteria for Groundwater, Media-Specific Criteria for Vapor Intrusion to Indoor Air, or the Media-Specific Criteria for Direct Contact.

ACEH requests preparation of an Updated Site Conceptual Model and Data Gap Work Plan that is supported by an updated Site Conceptual Model (SCM) to address the identified data gaps discussed during our meeting.

TECHNICAL COMMENTS

1. **LTCP Media Specific Criteria for Groundwater** – To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites listed in the policy.

Our review of the case files indicate that the seven site groundwater monitoring wells, MW-1 through MW-7, injection well (IW-1), and back-fill wells (BF-1 and BF-5) installed in 2009, have been monitored and sampled on an approximately semiannual basis since their installation in 2009. The groundwater gradient direction from 2009 to 2016 appears to be predominantly to the west and west northwest. Groundwater monitoring wells MW-2, MW-3, and MW-7 have exhibited elevated and fluctuating benzene concentrations between 2009 and 2016 and are also located upgradient of the residences along the southern property line. Therefore, it appears that insufficient data and analysis has been presented to support the requisite characteristics of plume stability and length. Please present a strategy in the Updated Site Conceptual Model and Data Gap Work Plan discussed in Technical Comment 4 to determine groundwater plume stability and length.

- a. **Monitoring well accessibility:** Well MW-3 was last sampled in 2009 and has been inaccessible since 2009 and MW-7 was inaccessible during the December 2012 sampling event due to a parked car. It is critical to obtain groundwater samples during each groundwater sampling event from all site wells including MW-2, MW-3, and MW-7 due to elevated and fluctuating benzene and TPH concentrations in those wells. In the Data Gap Work Plan requested below, please propose steps to ensure accessibility of all wells for the sampling events including a proposal to permanently restore accessibility to MW-3.
 - b. **Rose Diagram:** Please prepare a rose diagram using data from all sampling events to confirm the groundwater gradient and please provide an updated rose diagram with the next semiannual groundwater monitoring report.
 - c. **Groundwater Concentration and Elevation Graphs:** Please provide graphs indicating groundwater concentrations and groundwater elevations together with each sampling event. Additionally, starting with the next Semiannual Groundwater Monitoring Report, please include a benzene isoconcentration figure;
 - d. **Baseline Analytical:** To establish a baseline, on a one-time and in the future, on an as needed basis, please analyze all groundwater samples for the full suite Volatile Organic Compounds (VOCs) and Semi Volatile Organic Compounds (SVOCs) and please ensure detection limits are below proposed cleanup levels;
 - e. **Well Survey Data:** Please submit the well survey data for the wells designated BF-1 and BF-5 to ACEH and upload to Geotracker.
 - f. **LTCP Plume Lengths:** To present another line of evidence supporting plume lengths, please prepare a figure indicating the average, 90th percentile, and maximum plume lengths for TPHg, benzene, and MTBE by referencing Table 1: *Plume Characteristics*, in the LTCP's *Technical Justification for Groundwater Media-Specific Criteria*.
2. **LTCP Media Specific Criteria for Vapor Intrusion to Indoor Air** – The LTCP describes conditions, including bioattenuation (unsaturated) zones, which if met will assure that exposure to petroleum vapors in indoor air will not pose unacceptable health risks to human occupants of existing or future site buildings, and adjacent parcels. Appendices 1 through 4 of the LTCP criteria illustrate four potential exposure scenarios and describe characteristics and criteria associated with each scenario.

Our review of the case files indicates that no soil samples collected between the 0 to 5 feet and 5 to 10 feet below ground surface (bgs) intervals across the site have been analyzed for naphthalene and ACEH notes that naphthalene is one of the contaminants that the LTCP uses to assess risk from vapor intrusion to indoor air. Due to the historically elevated benzene concentrations in wells MW-2, MW-3, and MW-7 in conjunction with unknown naphthalene concentrations in the top ten feet of soil, ACEH requests preparation of an Updated Site Conceptual Model and Data Gap Work Plan to assess potential vapor intrusion to indoor air to the current business and to the adjacent residences.

Please ensure that your sampling strategy is consistent with the field sampling protocols described in the Department of Toxic Substances Control's Final Vapor Intrusion Guidance (October 2011) and the updated February 22, 2016 San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels. Consistent with the guidance, please determine the depth of the foundations prior to vapor sample collection to ensure that vapor samples are collected at a depth of five feet below the bottom of the foundation. ACEH requires installation of permanent vapor wells to assess temporal and seasonal variations in soil gas concentrations. Please include the soil vapor investigation with the Updated Site Conceptual Model and Data Gap Work Plan requested below.

- 3. LTCP Media Specific Criteria for Direct Contact and Outdoor Air Criteria** – The LTCP describes conditions where direct contact with contaminated soil or inhalation of contaminants volatilized to outdoor air poses a low threat to human health. According to the policy, release sites where human exposure may occur satisfy the media-specific criteria for direct contact and outdoor air exposure and shall be considered low-threat if the maximum concentrations of petroleum constituents in soil are less than or equal to those listed in Table 1 for the specified depth bgs. Alternatively, the policy allows for a site specific risk assessment that demonstrates that maximum concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health, or controlling exposure through the use of mitigation measures, or institutional or engineering controls.

As discussed in Technical Comment 2, the collection and analysis of soil samples in the 0 to 5 feet and 5 to 10 feet bgs intervals will address vapor intrusion to indoor air and direct contact and outdoor air exposure concerns. Please present a strategy in the Data Gap Work Plan described in Technical Comment 4 to collect sufficient data to satisfy the LTCP direct contact and outdoor air exposure criteria. If soil sample collection is deemed necessary, soil samples should be collected within the 0 to 5 feet and 5 to 10 feet bgs intervals, at the groundwater interface, lithologic changes, and in areas of obvious impact. Please analyze all soil samples for TPHg, Total Petroleum Hydrocarbons as Diesel (TPHd), Total Petroleum Hydrocarbons as Motor Oil (TPHmo), BTEX, Methyl tert-butyl ether (MTBE), naphthalene, and oxygenates by EPA 8260.

Alternatively, please provide justification of why the site satisfies the Media-Specific Criteria for Direct Contact and Outdoor Air Exposure in the focused SCM described in Technical Comment 3 that assures that exposure to petroleum constituents in soil will have no significant risk of adversely affecting human health.

- 4. Data Gap Investigation Work Plan and Site Conceptual Model** – Please prepare a Data Gap Investigation Work Plan to address the technical comments listed above. Please support the scope of work in the Data Gap Investigation Work Plan with a focused 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 the sampling strategy is intended to apply to. If the sampling strategy includes data collection to support the proposed site redevelopment, a description of that redevelopment should be included in the Data Gap Investigation Work Plan to support your sampling strategy so that ACEH can verify the appropriateness of the proposed sample locations.

Please revise the Monitoring Well Construction Details Table to include tank back fill wells BF-1 and BF-5, including well survey data.

As a part of updating the SCM, please amend the Sensitive Receptor Study by reviewing Alameda County Public Works Agency (ACPWA) well data sources to determine if these sensitive receptors are present within a radius of 1,500 feet of the site. ACEH requests the identification and location on a site vicinity figure all active, inactive, standby, decommissioned (sealed with concrete), unrecorded, and abandoned (improperly decommissioned or lost) wells including irrigation, water supply, industrial, dewatering, and cathodic protection wells within a 1,500-foot radius of the site. Additionally, please identify on the same figure beneficial resources and other sensitive receptors including, but not limited to, groundwater classification, wetlands, surface water bodies, natural resources, structures with basements, schools, hospitals, day care centers, elder care facilities, etc. Please plot the numbered well locations on an aerial photography-based figure and provide a table listing the same numbered well locations and information similar to the example provided in Attachment 2, *Sample Well Survey and Table*. On a separate figure, please show the rose diagram and locations of houses and buildings that have basements in the immediate downgradient direction of the site similar to the example provided in Attachment 3, *Sample Adjacent Buildings with Basements Figure*.

5. **Request for information** - The ACEH case file for the subject site contains only the electronic files listed on our web site at <http://www.acgov.org/aceh/lop/ust.htm>. You are requested to submit electronic copies of all other reports including Phase I Reports, data, correspondence, etc. related to environmental investigations for this property not currently contained in our case file by the date specified in the Technical Report Request Section below. ACEH requests e-mail notification of, and a list of the documents uploaded to Geotracker by the date listed below.
6. **Electronic Submittal of Information (ESI) Compliance** - Site data and documents are maintained in two separate electronic databases – ACEH's ftp site and the SWRCB's GeoTracker database. Both databases act as repositories for regulatory directives and reports; however, only GeoTracker has the functionality to store electronic compliance data including analytical laboratory data for soil, vapor and water samples, monitoring well depth-to-water measurements, and surveyed location and elevation data for permanent sampling locations. Although the SWRCB is responsible for the overall operation and maintenance of the GeoTracker System, ACEH, as lead regulatory agency, is responsible to ensure the GeoTracker database is complete and accurate for sites regulated under ACEH's Environmental Cleanup Oversight Programs (SWRCB March 2011 document entitled *Electronic Reporting Roles and Responsibilities*).

A review of the case file and the State's GeoTracker database indicates that the site is not in compliance with California Code of Regulations, Title 23, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1, stating that beginning September 1, 2001, all analytical data, including monitoring well samples, submitted in a report to a regulatory agency as part of the UST or LUST program, must be transmitted electronically to the SWRCB GeoTracker system via the internet. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs, including the Site Cleanup Program (SCP) cases. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites was required in GeoTracker. At present missing data and documents include, but may not be limited to, EDF submittals, depth to groundwater data (GEO_WELL files), well data (GEO_XY, and GEO_Z files), work plans, and older reports (GEO_REPORT files).

Please upload requisite documents to GeoTracker. See Attachment 1 and the State's GeoTracker website for further details. ACEH requests e-mail notification of, and a list of, the documents uploaded to Geotracker. Please upload all submittals to GeoTracker and to ACEH's ftp website by the date specified below.

TECHNICAL REPORT REQUEST

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

- **June 21, 2016** – Updated Site Conceptual Model and Data Gap Work Plan
File to be named: RO2936_SCM_WP_YYYY-MM-DD
- **August 20, 2016** – Semi-Annual Groundwater Monitoring and Sampling Report
File to be named: RO2936_GWM_R_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.

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please send me an e-mail message at karel.detterman@acgov.org or call me at (510) 567-6708.

Karel Detterman, PG
Hazardous Materials Specialist

Enclosures: *Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations and Electronic Report Upload (ftp) Instructions*

Attachment 2, Sample Well Survey Sample Table and Figure

Attachment 3, Sample Adjacent Buildings with Basements Figure

cc: Adrian Angel, AEI Consultants (Sent via E-mail to: aangel@aeiconsultants.com)
Peter McIntyre, AEI Consultants (Sent via E-mail to: pmcintyre@aeiconsultants.com)
Dilan Roe, ACEH (Sent via E-mail to: dilan.roe@acgov.org)
Karel Detterman, ACEH (Sent via E-mail to: karel.detterman@acgov.org)
Electronic File, GeoTracker

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

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) require submission of reports in electronic form. The electronic copy replaces paper copies 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 all 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, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). 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, 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.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	REVISION DATE: May 15, 2014
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	SUBJECT: Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) 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)

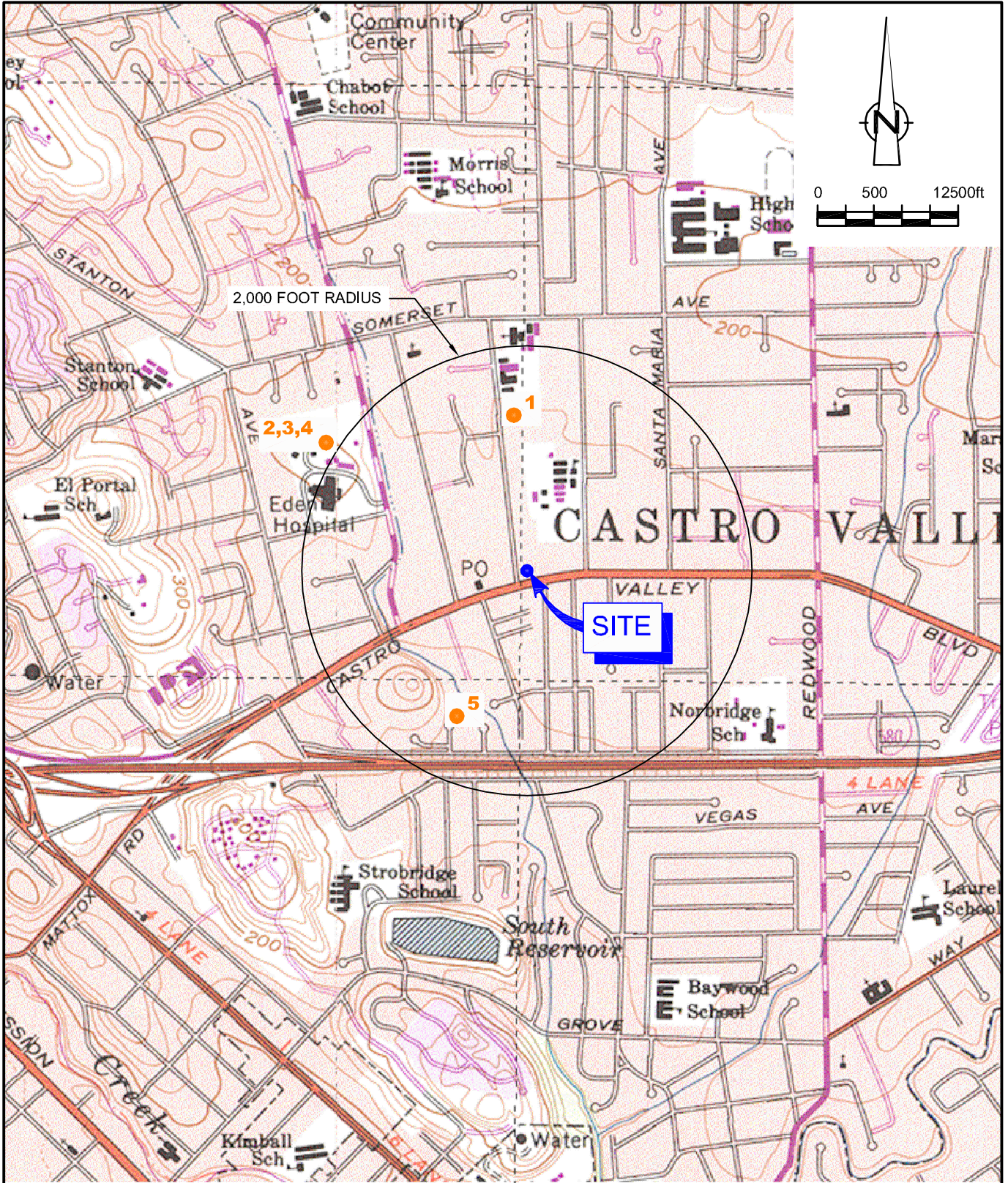
Submission Instructions

- 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 2

**WELL SURVEY RESULTS
CHEVRON STATION 9-6991
2920 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA**

<i>Well No./ Figure ID</i>	<i>Well Owner</i>	<i>Well Address Street</i>	<i>City</i>	<i>Total Well Depth (ft)</i>	<i>Date Installed</i>	<i>Distance/Direction from Site (ft) (approx)</i>	<i>Well Use</i>
1	Private	20036 Anita Avenue Lake Chabot Road	Castro Valley	51	2/19/1953	1,400 N	Domestic
2	Eden Township Hospital	1,000' south of Williams	Castro Valley	150	9/30/1953	2,000 NW	Test well
3	Eden Township Hospital	Eden Township Hospital	Castro Valley	250	9/9/1952	2,000 NW	Domestic
4	Eden Township Hospital	Eden Township Hospital	Castro Valley	60	7/11/1952	2,000 NW	Cooling system return
5	Sam Wallace	Tyee Court	Castro Valley	52	7/3/1953	1,400 S-SW	Domestic



SOURCE: TOPO! MAPS.

LEGEND

- APPROXIMATE WELL LOCATION



WELL SURVEY MAP
CHEVRON SERVICE STATION 9-6991
2920 CASTRO VALLEY BOULEVARD
Castro Valley, California

ATTACHMENT 3

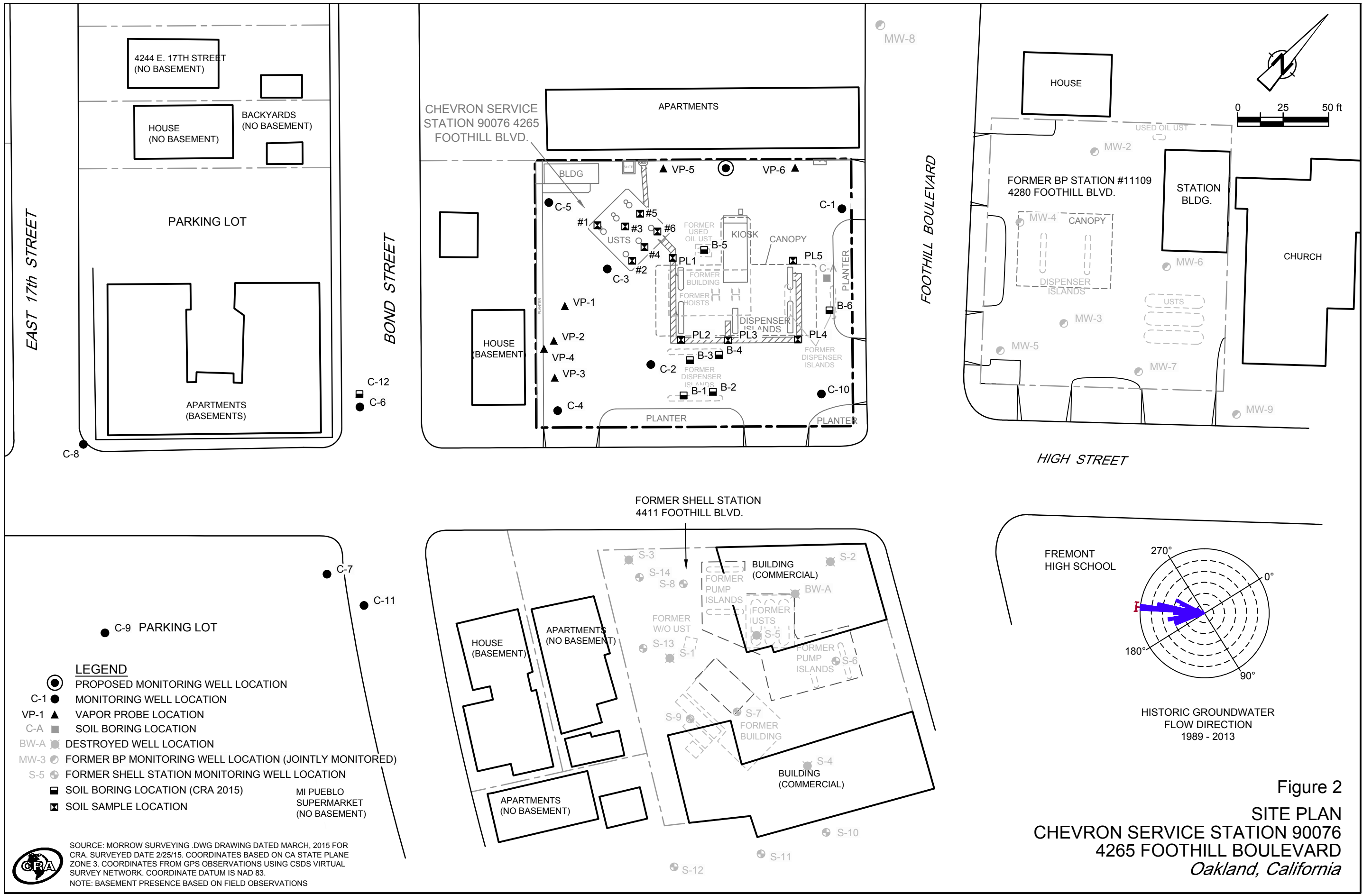


Figure 2
 SITE PLAN
 CHEVRON SERVICE STATION 90076
 4265 FOOTHILL BOULEVARD
 Oakland, California



SOURCE: MORROW SURVEYING .DWG DRAWING DATED MARCH, 2015 FOR CRA. SURVEYED DATE 2/25/15. COORDINATES BASED ON CA STATE PLANE ZONE 3. COORDINATES FROM GPS OBSERVATIONS USING CSDS VIRTUAL SURVEY NETWORK. COORDINATE DATUM IS NAD 83.
 NOTE: BASEMENT PRESENCE BASED ON FIELD OBSERVATIONS