

## Detterman, Mark, Env. Health

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**From:** Detterman, Mark, Env. Health  
**Sent:** Tuesday, August 20, 2013 12:35 PM  
**To:** 'Sami Malaeb'; britpete@aol.com; reinlib@aol.com; LGRIFFIN@OAKLANDNET.COM; 'mrodarte@waterboards.ca.gov'  
**Cc:** Roe, Dilan, Env. Health  
**Subject:** RO2945; Chevron 9-8861; 2145 35th Ave, Oakland: Soil and Groundwater Investigation; Additional Soil Bores  
**Attachments:** Figure for Proposed Borings.pdf; Attachment A Preferential Pathway and Sensitive Receptor Survey.pdf

Sami,

Thanks for the packet of data from the most recent site investigation, including the revised aerial image of existing and proposed soil bore locations (attached). You have indicated that the aerial image provides the best depiction of soil bore locations due to the scale of the figure. As originally intended, after the submittal of the data packet it was anticipated that groundwater monitoring wells would be installed to provide downgradient delineation of the groundwater plume. While the recently installed soil bores detected potentially significant concentrations of TPH immediately offsite (up to 7,100 ug/l TPHg, 5,000 ug/l TPHss, 2,100 ug/l TPHd, and 8 ug/l benzene), they do not appear to have detected the downgradient extent of the groundwater contamination. Because the site is located in a stream valley and the subsurface is very granular, the possibility of natural preferential pathways (paleochannels such as buried stream segments) may be providing a natural conduit away from the site. ACEH is in agreement that it appears more appropriate to redirect site activities and install up to 5 additional soil bores in order to understand natural pathways in the subsurface beneath the site and vicinity. As such two limited soil bore transects have been proposed (infill of a line between BH18 and BH19, and a transect perpendicular to 35<sup>th</sup> Ave - BH19 to BH25). As discussed, due to the potential for these natural conduits, ACEH prefers soil bore transects with a spacing of no more than 20 feet in distance. ACEH understands that the bores in these two transects will be repositioned slightly in order to meet this requested spacing goal. It is understood that bores BH26 and BH27 may be repositioned to meet the spacing goal, or held in reserve in case indications of contamination are encountered in the other transects. Please note that the installation of groundwater monitoring wells has not been eliminated; it may still be appropriate to install wells downgradient of the site presuming an offsite soil or groundwater plume is identified.

While not previously requested it appears that an offsite utility conduit survey will be useful to understanding the potential downgradient extent of groundwater contamination at the site and vicinity. It is understood that approved costs may not include this scope or work. Because the information will likely prove useful, we can discuss when the work is best incorporated into the work flow. Groundwater appears to be located at depths that are coincident with typical utility installation depths and may also provide a manmade preferential pathway away from the site that may account for the apparent lack of an offsite groundwater plume. Thus the utilities should be accounted for in order to understand contaminant flow pathways. As a consequence, ACEH requests that a utility survey (location and depth) of utilities in the vicinity of the site be illustrated in future site plans. Please see Attachment A, Preferential Pathway and Sensitive Receptor Survey, but please be aware that a sensitive receptor survey is currently not requested as an offsite plume has not been documented at this time.

I've also set a delivery date for the report; however, should additional work, such as the installation of groundwater wells be needed, the date can and should be revised to allow sufficient time for the additional actions. Should that be required, please let me know.

### **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 the specified file naming convention below, according to the following schedule:

- **October 25, 2013**– Soil and Groundwater Investigation Report; with Revised Cross Sections; File to be named: RO2945\_SWI\_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.

Online case files are available for review at the following website: <http://www.acgov.org/aceh/index.htm>. If your email address does not appear on the cover page of this notification, ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

If you have any questions, please call me at (510) 567-6876 or send me an electronic mail message at [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org).

*Mark Detterman  
Senior Hazardous Materials Specialist, PG, CEG  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502  
Direct: 510.567.6876  
Fax: 510.337.9335  
Email: [mark.detterman@acgov.org](mailto:mark.detterman@acgov.org)*

*PDF copies of case files can be downloaded at:*

*<http://www.acgov.org/aceh/lop/ust.htm>*

- BH16 through BH22 are already drilled borings ●
- BH23 through BH27 are additional proposed borings ■

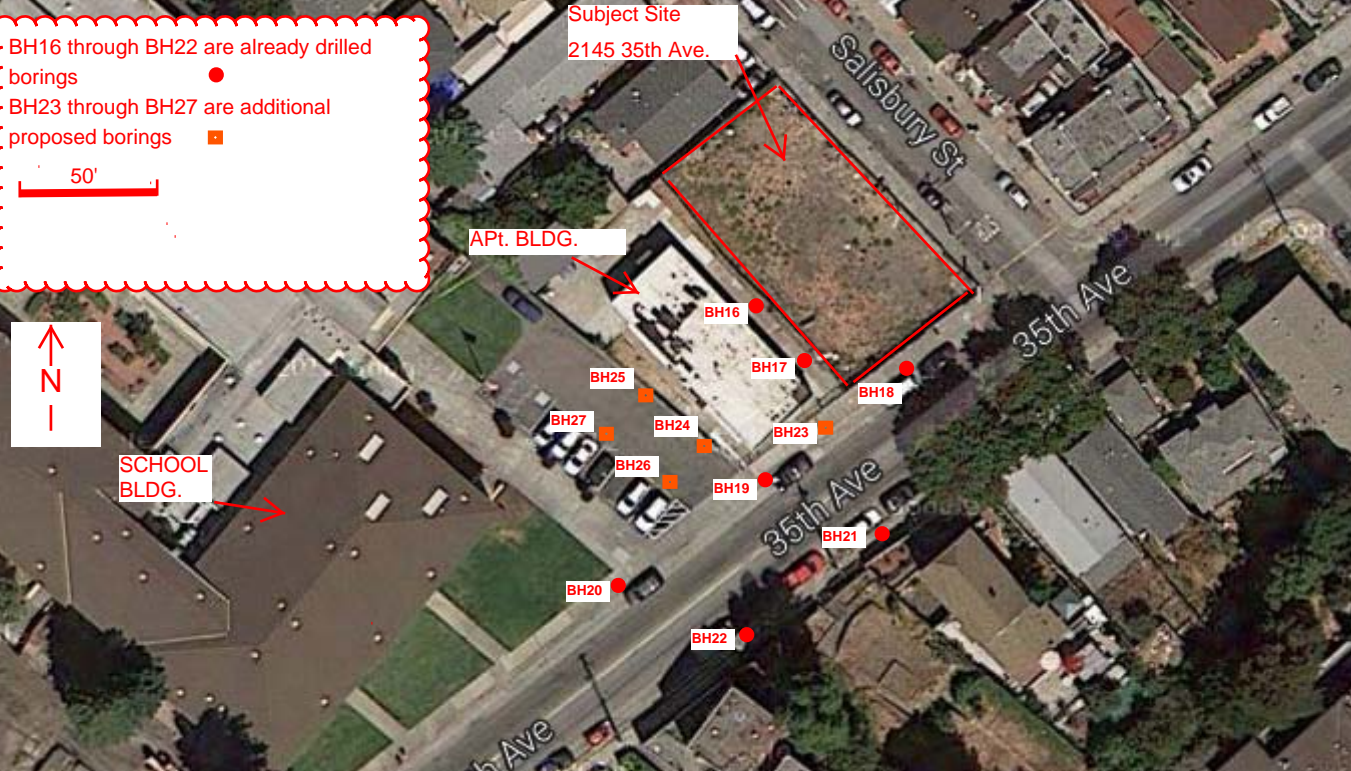
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Subject Site  
2145 35th Ave.

Apt. BLDG.

SCHOOL  
BLDG.

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## ATTACHMENT A

### Preferential Pathway and Sensitive Receptor Study

**Preferential Pathway and Sensitive Receptor Study** – Please conduct a study to (1) locate potential anthropogenic migration pathways on and in the vicinity of the site that could spread contamination through vertical and lateral migration, (2) determine the probability of nonaqueous phase liquid (NAPL) and/or contaminant plumes (groundwater and/or soil vapor) encountering anthropogenic preferential pathways, and (3) 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:

- I. **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 utilities associated with current and historical site operations/processes including UST systems, remediation systems, parts cleaning, sumps, etc.
- II. **Well Survey** – 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 Department of Water Resources (DWR) and Alameda County Public Works 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.
- III. **Building Evaluation** – Identification of existing and historical building foundational elements that can link potential receptors to the contaminant plumes and/or act as preferential pathways for contaminant migration. Include the age, type, and depth of element (e.g., slab on grade, grade beam, piers, basements, etc.), and associated engineering control systems (vapor barriers, etc).
- IV. **Land Uses and Exposure Scenarios on the Facility and Adjacent Properties** – Identification of existing and future land use on and in the vicinity of the site including:
  - Beneficial resources (e.g., groundwater classification, wetlands, surface water bodies, natural resources, etc.)
  - Subpopulation types and locations (e.g., schools, hospitals, day care centers, elder care facilities, etc.)
  - 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
- V. **Planned Development** – If future development activities are planned in the vicinity of the site, 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 an updated Conceptual Site Model. Please provide the following supporting documentation and data as applicable:

## ATTACHMENT A

- 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.