

## Nowell, Keith, Env. Health

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**From:** Nowell, Keith, Env. Health  
**Sent:** Wednesday, August 27, 2014 4:07 PM  
**To:** Reed Westphal (Reed.Westphal@balcoproperties.com)  
**Cc:** mjones@trihydro.com; Roe, Dilan, Env. Health  
**Subject:** Fuel leak Case RO378 - Wareham Property Development, 2855 Mandela Parkway, Oakland

Dear Mr. Westphal,

Alameda County Environmental Health (ACEH) staff has reviewed the case file including the *Work Plan for Additional Investigation* (WP) dated August 14, 2012, and the *Focused Site Conceptual Model* (SCM), dated March 11, 2014. Both reports were prepared by Trihydro Corporation (Trihydro) for the subject site. The review was performed against the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP).

The WP proposes using an ultraviolet optical screening tool (UVOST) advanced using direct push technology to evaluate the distribution of petroleum hydrocarbons around the perimeter of the building. Fourteen boring locations are proposed with the recovery of grab groundwater (GGW) samples from the UVOST locations not containing light non-aqueous phase petroleum hydrocarbons (LNAPL). ACEH is of the opinion the use of UVOST may be appropriate to evaluate the distribution of petroleum hydrocarbons beyond the outside of the building footprint in conjunction with GGW sampling. Analysis of the sampling beneath the waste oil (WO) underground storage tank (UST) and of the contents of the WO UST revealed the presence of naphthalene; hence, ACEH concurs that sampling for volatile organic compounds (VOCs), including naphthalene, should be included in the GGW scope of analysis.

The SCM presents several data gaps and addresses several items as not needing further investigation. Data gaps identified in the SCM include:

- Identifying the current extent of the LNAPL plume;
- Identifying the fate of the soil excavated during the 1991 UST removal of the 350-gallon gasoline and 250-gallon WO USTs;
- A fuel dispensing pump may have been present in the eastern portion of the site near the intersection of Mandela Parkway and Willow Street;
- Indoor air investigation performed while motor vehicles operating inside the building, resulting in suspect indoor air analytical results;
- Limited sampling for naphthalene for soil, groundwater and soil gas.

The 2014 SCM indicated the data gaps identified in the SCM are addressed in the 2012 WP. ACEH generally concurs with the data gap identification and implementation of the proposed field investigation activities presented in the WP given that Technical Comments #1 and #2 are addressed and incorporated into the scope of work. ACEH requests this expanded scope of investigation to aid in moving the case toward closure.

In addition to the proposed scope of work in the 2012 WP and amended by Technical Comment #1, ACEH requests preparation of a separate work plan to address Technical Comments #3, #4, and #5 addressed below.

### Technical Comments

1. ACEH is concerned that the contaminant plume may not be defined to the east. Please identify a sufficient number of additional UVOST/GGW sampling locations to define the plume along Mandela Parkway opposite 2607 Mandela Parkway. Present the proposed additional UVOST/GGW sampling locations on a draft figure to the attention of Keith Nowell ([keith.nowell@acgov.org](mailto:keith.nowell@acgov.org)), cc'ing Dilan Roe ([dilan.roe@acgov.org](mailto:dilan.roe@acgov.org)), for ACEH review and

approval. Upon approval of the sampling locations, ACEH will authorize the implementation of the WP in a directive letter. Please submit the draft figure in accordance with the following schedule identified below.

2. Please include sampling and analysis of the sites' groundwater monitoring well network to establish current conditions of the LNAPL and groundwater contaminant plumes.
3. ACEH is of the opinion that appears to be a disconnect between the results of sub slab soil vapor and soil gas sample analyses collected from outside the building perimeter. Please perform sampling of the fixed point sub slab soil gas ports. Analyze the subslab soil gas samples for benzene, toluene, ethylbenzene, and xylenes (BTEX) by test method TO-15, naphthalene by test method TO-17, and the biogenic gases oxygen, carbon dioxide and methane, using test method ASTM-1946, to evaluate the biodegradation of the LNAPL plume. Additionally the sub slab soil gas samples should be analyzed for the trace gas used for leak detection. ACEH requires the sub slab soil gas sampling be conducted following the guidelines presented in the *Active Soil Gas Investigations* prepared by Cal/EPA, LARWQCB, and San Francisco RWQCB, dated April 2012. The Cal/EPA Department of Toxic Substances Control (DTSC) guidance documents can be reviewed at the following web addresses: [http://www.dtsc.ca.gov/AssessingRisk/upload/Final\\_VIG\\_Oct\\_2011.pdf](http://www.dtsc.ca.gov/AssessingRisk/upload/Final_VIG_Oct_2011.pdf) and [http://www.dtsc.ca.gov/SiteCleanup/upload/VI\\_ActiveSoilGasAdvisory\\_FINAL\\_043012.pdf](http://www.dtsc.ca.gov/SiteCleanup/upload/VI_ActiveSoilGasAdvisory_FINAL_043012.pdf). Please include the proposal for subslab soil gas sampling and analysis in the work plan requested below.
4. Due to elevated benzene concentrations in groundwater in TR-10, an LNAPL well, and the shallow depth to product, 8.98- to 12.02 feet below the ground surface (bgs), please evaluate the potential risk of vapor intrusion to indoor air at 2607 Mandela Parkway in the work plan requested below.
5. A well survey was conducted to a distance of one-quarter mile which included a review of Alameda County Public Works Agency (ACPWA) and Department of Water Resources (DWR) databases. Figure 2 of the SCM includes a rose diagram depicting a highly variable groundwater flow direction and, as indicated by the WP, the plume is currently undefined. ACEH requests definition of the plume to demonstrate the one-quarter mile search radius is adequate distance as the well search radius; alternatively, use a search distance of the maximum plume length, as identified in the SWRCB LTCP *Technical Justification for Groundwater Plume Length, Indicator Constituents, Concentrations, Buffer Distances (Separation Distances) to Receptors* (LTCP Guidance; SWRCB 2012) plus a 1,000-foot buffer. Please incorporate the results of the revised well search evaluation in the groundwater and soil gas investigation report to be prepared following approval of the work plan.

## Technical Reports

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

- **September 30, 2014** – Draft figure showing proposed boring locations (email only)
- **October 14, 2014** – **Work Plan for Groundwater Monitoring and Soil Vapor Evaluation** (file name: RO0000378\_WP\_R\_yyyy-mm-dd)
- **November 29, 2014- Soil and Groundwater Investigation** (file name: RO0000378\_SWI\_R\_yyyy-mm-dd)

Thank you for your cooperation. ACEH looks forward to working with you and your consultants to advance the case toward closure. Should you have any questions regarding this correspondence or your case, please call me at (510) 567-6764 or send an electronic mail message at [keith.nowell@acgov.org](mailto:keith.nowell@acgov.org).

Respectfully,  
Keith Nowell

Keith Nowell PG, CHG  
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PDF copies of case files can be reviewed/downloaded at:

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