

## Nowell, Keith, Env. Health

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**From:** Nowell, Keith, Env. Health  
**Sent:** Tuesday, July 14, 2015 3:05 PM  
**To:** 'Jennifer.LeBeau@arcadis-us.com'  
**Cc:** Devery, Hugh  
**Subject:** Fuel Leak Case No. RO0000315 and Geotracker Global ID T0600100939, United Parcel Service, 8400 Pardee Dr., Oakland

Dear Ms. Halcomb-LeBeau:

Alameda County Environmental Health (ACEH) staff has reviewed the case file including the red-line document entitled *Expanded Work Plan for Free Product Delineation V.3 (Work Plan)*, prepared by Arcadis U.S., Inc. (Arcadis) and provided to ACEH as an email attachment on May 22, 2015. The Work Plan was prepared in response to comments made by ACEH regarding an earlier work plan submittal, discussed in a meeting held on February 11, 2015, and refined based on a phone conversation between myself and Mr. Hugh Devery of Arcadis held on March 17, 2015. The red-line document was prepared to provide a foundation to a final work plan (work plan) to be submitted to ACEH.

The Work Plan proposes to advance a minimum of 16 soiling borings to delineate both free product and dissolved phase petroleum hydrocarbons plumes. Thirteen of the proposed borings will be converted to monitoring wells.

### **TECHNICAL COMMENTS**

- 1. Monitoring Wells** – ACEH is in general agreement that a number of wells are likely to be useful; however, for clarity, ACEH requests preparation of a table for inclusion in the work plan listing all the proposed soil borings, a header for each area associated with the bore, and columns identifying if the soil bore is proposed to be converted in to a well and identifying whether soil sampling is proposed. If a potential step out boring is determined to be converted to a monitoring well, please describe the field criteria use to make the determination.
- 2. Soil Sample Collection** – The Sampling Procedures section, Page 8, states “no soil samples are planned for laboratory analyses”; however, the final paragraph of the page states “soil samples will be collected in two-foot intervals from below the pavement base to a depth of eight feet bgs (e.g., 0-2, 2-4, 4-6, 6-8). Soil samples will be analyzed for the Site COCs listed above.” The following page identifies 10 borings from which soil samples will be recovered.

ACEH requests that soil sampling be performed, that the work plan requested below be consistent, and reflect that soil samples will be collected and submitted for laboratory analysis.

Please note that soil sampling was requested by ACEH to meet the Media Specific criteria for Direct Contact presented in the State Water Resources Control Board’s (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP). The Direct Contact criteria includes recovery of soil samples from two different depths in the 0- to 5-foot zone, as measured from the ground surface, and from within the 5-to 10-foot zone. Please prepare a section for soil sampling which will meet the direct contact criteria.

Additionally, ACEH recommends that soil samples should be collected and analyzed in areas of obvious contamination, the soil/groundwater interface, and at significant changes in lithology. If staining, odor, or elevated PID readings are observed over an interval of several feet, a sufficient number of soil samples from this interval should be submitted for laboratory analyses to characterize the fuel hydrocarbon concentrations within this interval. Please ensure that the analytical results define the vertical and horizontal extent of TPH impacts at the site.

- 3. Sample Identification** – The *Delineation of the DPH Plume* section (Page 8) of the Work Plan states that two soil bores, identified as SB-15 and SB-16, will be advanced to the east and southeast of the IW-1 / MW-12 area. Boring locations SB-15 and SB-16 are shown located to the southeast of the former underground storage tank (UST) pit, situated

southwest of the IW-1 / MW-12 area. Clarification by Ms. Jennifer Halcomb-LeBeau, made in a phone conversation on July 13, 2015, indicated the Work Plan soil bores identified as SB-15 and SB-16 should be identified as FPB-15 and FPB-16. The locations of FPB-15 and FPB-16 are consistent with the description of the locations of bores SB-15 and SB-16 identified in the Work Plan.

Please update the *Delineation of the DPH Plume* section to reflect the correct sample identification.

4. **Scope of Analysis** – In addition to the scope of analysis presented in the *Sampling Procedures* section on Page 8, ACEH requests polycyclic aromatic hydrocarbons (PAHs) analysis and the inclusion of methane sampling. PAH analysis is specified on the cover letter but has not been included in the red-line Work Plan. Please add the PAH analysis to the scope of analysis in the work plan.
5. **Methane Screening** – ACEH requested methane sampling be added to Work Plan as the potential for methane gas generation associated with biogenesis of the undefined free product plume may pose an explosive hazard and needs to be evaluated.

The Arcadis Standard Operating Procedure (SOP) for methane screening was provided as an attachment to the May 22, 2015 email. The SOP addresses methane sampling at external and sub-slab monitoring points. Please elaborate on wellhead sampling methodology. Discuss if volatilized TPH or BTEX compounds will affect the detectable concentrations of methane. ACEH requests the SOP document be included as an attachment to the work plan.

6. **Methane Sampling Locations** – The Work Plan does not identify the sample locations for methane screening. Please include a discussion of the methane screening locations in the work plan.
7. **Figures and Tables** – The Work Plan includes several references to Figures and Tables. The red-line document provided for review did not contain any Figures or Tables. However, a Figure 10, entitled *Free Product Extent and Thickness Map*, depicts the proposed boring locations. The figure was submitted as a separate attachment entitled *Oakland Hub- Revised boring location plan*. ACEH is in general concurrence with the locations of the proposed borings.

Should you have any questions regarding this correspondence or this case, please call me at (510) 567-6764 or send an electronic mail message at [keith.nowell@acgov.org](mailto:keith.nowell@acgov.org).

Regards,  
Keith Nowell

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