

## Nowell, Keith, Env. Health

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**From:** Nowell, Keith, Env. Health  
**Sent:** Wednesday, July 09, 2014 3:55 PM  
**To:** Jeffrey L. Rubin (jrubin@portoakland.com)  
**Cc:** Katherine Brandt (Katherine.Brandt@arcadis-us.com); Roe, Dilan, Env. Health  
**Subject:** Fuel leak cases RO10/187 - 651 Maritime St., Oakland CA

Dear Mr. Rubin,

Thank you and Katherine Brandt of ARCADIS U.S. Inc. (ARCADIS) for participating in the conference call held today regarding the fuel leak cases located at the Port of Oakland Harbor Facility Complex, 651 Maritime St., Oakland CA, Alameda County Environmental Health (ACEH) case numbers RO10 and RO187. The conference call was organized to discuss the recently submitted document entitled *Work Plan for Natural Source Zone Depletion Study and LNAPL Assessment* (Work Plan), submitted in draft form, prepared by ARCADIS for the subject sites. During the introduction of the conference call, The Port of Oakland identified two additional recently submitted documents for the subject cases, prepared by ARCADIS, for review by ACEH- the *Response to ACEH Information Request*, dated January 31, 2014, and the *Soil and Groundwater Management Plan*, dated June 13, 2014. ACEH has received these documents and will review and respond to these documents in the near future.

ACEH stated it was in general agreement with the Work Plan; but requested clarification of technical comments regarding the Work Plan.

### Technical Comments

- The Work Plan stated bail down testing will only be performed in wells where LNAPL is present across the screened interval and has a thickness of 0.5 feet or greater. ACEH stated the thickness of free product in well RW-7 identified for the bail down test has demonstrated increasing product thickness since 2011 with the most recent event having a depth to product (DTP) of 8.47 feet with a top of well screen of 8.00 feet. ACEH is concerned the trend of increasing product thickness may submerge the well screen. ACEH requested the DTP in the well be determined prior to performing the bail down test to verify this well meet the bail down criteria.
- Slug tests were proposed for groundwater monitoring wells MW-9, MW-10, and MW-11. ACEH questioned how these well were selected as they appear to have their well screens submerged 100% of the time. As ACEH is concerned the free product plume has not been defined, ACEH recommended a slug test be performed in the area designated as consisting of clay/sensitive fines/silty clay to evaluate this area for hydraulic conductivity and transmissivity determination.
- As not expressly stated, ACEH inquired if the %-saturation of soils will be determined. ACEH believes %-saturation calculations will be instrumental in aiding plume evaluation when evaluating soil concentration data.
- The Work Plan stated that the effective solubility represents the maximum dissolved-phase equilibrium concentration of a constituent from a multi-component LNAPL mixture. ACEH comments that this is true of wells that are properly screened, otherwise there needs to be a dissolved fraction determination.
- The most recent groundwater monitoring report, dated January 23, 2014, recommends discontinuing analysis for monitored natural attenuation (MNA) parameters. In light of this Work Plan ACEH does not agree with discontinuing MNA parameter analysis. ACEH will review discontinuing the MNA analysis once the natural source zone depletion study and LNAPL assessments have been performed and reviewed. ACEH recommends that a well in the up gradient direction and down gradient of the free product plume be evaluated for MNA parameters.
- Wells selected for the natural source zone depletion study MNA analysis are identified as listed in Table 1; however, the table does not identify the wells proposed for MNA evaluation.
- ACEH questioned why wells proposed for "soil vapor" sampling include two wells – MW-3 and RW-3- in close proximity to each other. ACEH recommends that wells in the up gradient direction and down gradient of the free product plume be evaluated. ACEH indicated that MW-11 may not be sufficiently removed from the free product

plume and that MW-1 may be a more suitable up gradient well. ACEH is amenable to sample both MW-3 and RW-3 so long as up gradient and down gradient well are also sampled for "soil vapor" .

### Technical Report Request

Please address the technical comments above and upload technical report 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:

**July 18, 2014– Work Plan for Natural Source Zone Depletion Study and LNAPL Assessment** (file name: RO0000010\_WP\_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).

Sincerely,  
Keith Nowell

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PDF copies of case files can be reviewed/downloaded at:

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