



Matthew Rodriguez
Secretary for
Environmental Protection



Department of Toxic Substances Control

Deborah O. Raphael, Director
700 Heinz Avenue
Berkeley, California 94710-2721



Edmund G. Brown Jr.
Governor

May 20, 2013

Ms. Jenifer Beatty
ARCADIS US, Inc.
1410 Rocky Ridge Drive, Suite 330
Roseville, CA 95661

Dear Ms. Beatty:

The Department of Toxic Substances Control (DTSC) received the *Draft Groundwater Investigation Within and In the Vicinity of the BAPB at the University of California Richmond Field Station* (the Report) located in Richmond, California. The Report, dated December 18, 2012, was prepared by Terraphase Engineering on behalf of Zeneca Inc. The Report describes the methods used and results of additional groundwater investigations at the part of the biologically active permeable barrier (BAPB) located at the University of California, Richmond Field Station (RFS). The objectives of the investigation were:

- verify that certain existing groundwater monitoring wells are screened within the lateral and vertical extent of the BAPB;
- further assess the effectiveness of the BAPB; and,
- collect grab groundwater samples from locations upgradient, downgradient, and to the west of the BAPB to assess the distribution of dissolved metals and VOCs in groundwater.

DTSC has reviewed the Report and has the following comments:

1. Please provide the photographs of the soil cores collected from within the BAPB. The photos should be labeled indicating the core location, depth and date.
2. Section 3.2, Conclusions: The first bullet indicates that well MW-35 should not be used to assess the BAPB as the construction of the well may allow formation water with little or no residence time within the BAPB material to enter the screen interval of the well during sampling. In order to illustrate the intent of this recommendation please include MW-35 on Cross Section E-E'.
3. Based on our evaluation of the data collected, we agree that the geochemistry within the BAPB appears appropriate for treatment of metals in groundwater; however,

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uncertainties regarding the construction of the BAPB, the elevated concentrations of metals found upgradient and other uncertainties warrant further action. It is our understanding that the BAPB was installed as a polishing step for metals in groundwater and was not a primary remedy. In addition, the recently identified concentrations of metals in groundwater calls into question whether the BAPB will require regeneration on a more frequent schedule than was originally designed. Therefore, reconstruction of the BAPB to capture the vertical extent of the groundwater metals plume or evaluation and implementation of upgradient in situ groundwater treatment for metals in both the shallow and deeper zone need to be conducted. We understand that since the property is owned by the University of California (UC), discussions between you and UC will need to occur to determine the allocation of the work; therefore, within 30 days of the date of this letter, please submit a letter providing a plan indicating which party(ies) will be conducting the work, along with a schedule of deliverables. As the BAPB is located within a habitat area, which is not developable in the UC Site Characterization Report, this additional work can be incorporated into Phase IV of the UC site investigation, regardless of which party conducts the work. In addition, within 15 days of the date of this letter, please submit a revised document incorporating comments 1 and 2 above.

If you have any questions, please contact Lynn Nakashima at (510) 540-3839 or lnakashi@dtsc.ca.gov.

Sincerely,



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