Staszak, Janna/VBO

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Sent: Tuesday, October 07, 2008 12:54 PM

To: Tim Reisch; Staszak, Janna/VBO; Henderson, Kimberly/VBO; Walter Bell; Jones, Adrienne/VBO; John Burchette

Subject: Site 2 ERI - VDEQ responses to RTCs

Team –

Prior to our conference call today, one VDEQ comment required team resolution.

VDEQ comment:

4. Comment: Section 9 – Risk Management Considerations

- *Chloroform* – The method detection limit exceeded the MCL in eleven samples, therefore, it is unknown if the MCL has been exceeded at locations other than MW10S. Continued monitoring using appropriate detection limits is recommended in order to evaluate actual chloroform levels.
- *Methylene chloride* – The method detection limit exceeded the MCL in sixteen samples, therefore, it is unknown if the MCL has been exceeded at locations other than MW07S. Continued monitoring using appropriate detection limits is recommended in order to evaluate actual methylene chloride levels.

Navy response:

- Chloroform and methylene chloride - The grab groundwater and piezometer samples were analyzed by SW846 8260B by an onsite laboratory. Due to high concentrations of TCE, many of the samples were screened at dilution in order to identify the appropriate dilution needed for TCE to obtain a concentration within the linear range of the instrument. As a result of sample dilution for TCE, the reporting limits for non-detected compounds were subsequently raised to account for the dilution factor. Sample dilution was necessary in order to prevent instrument damage and possible onsite laboratory shutdown which would have caused delays to the real-time decision making used to delineate the TCE plume.

  Because of high TCE concentrations in many of the monitoring well samples, a low concentration VOC method, which would have yielded lower reporting limits was not utilized. It is not appropriate to use the low concentration method for samples with expected concentrations greater than 25 µg/L, and since average concentrations within the plume exceed 25 µg/L, the low concentration method was not used. For monitoring wells located on the perimeter of the plume, the low concentration VOC method was used as contaminant concentrations in these wells were expected to be low.

  Therefore, chloroform and methylene chloride reporting limits were elevated due to dilution of the samples because of elevated concentrations of TCE and its daughter products. Although the reporting limits exceeded the MCLs for chloroform in 12 samples and methylene chloride in 20 samples, a total of 72 groundwater samples have been analyzed at the site and the majority of the samples had reporting limits below the MCLs. Chloroform and methylene chloride were never identified as site COCs and there is no reason to believe there is a plume associated with these constituents. All instances of reporting limits above the MCLs in individual samples have subsequent samples, co-located samples, or downgradient samples with low reporting limits that do not exceed the MCLs, see attached Figures 1 and 2. Furthermore, because samples collected using DPT may have turbidity issues and because site-wide permanent monitoring well data was available, the monitoring well data was used in the HHRA and no human health risks from exposure to chloroform and methylene chloride were identified. Therefore, it is believed that the extent of the contaminants has been adequately characterized.

  Uncertainties associated with reporting limits above the MCLs will be addressed in Sections 5.1.6, 7.5, and 9.1 of the text. Notes will also be added to figures where appropriate.

Based on team discussion during the call, VDEQ requests that chloroform and methylene chloride be retained as COCs.

Resolution of other VDEQ comments will be verified upon receipt of the Final Site 2 ERI.

Regards,

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