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U S NAVY RESPONSE TO VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY COMMENTS TO VAPOR INTRUSION MONITORING SAMPLING AND ANALYSIS PLAN SITE 21 ST JULIENS CREEK ANNEX CHESAPEAKE VA
8/18/2011
CH2M HILL

Responses to Comments
Draft Site 21 Vapor Intrusion Monitoring UFP-SAP
St. Juliens Creek Annex
Chesapeake, Virginia

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Comments from VDEQ, provided 10 August 2011

1. ***Comment:*** The SAP should include an SOP for identifying potential indoor sources of contamination. The list of potential contaminants is long and varied (ranging from air fresheners to even some hand soaps), and the removal of these items is particularly critical to obtaining accurate data regarding indoor air quality. Workers using the list provided in Appendix C from the "Conducting Building Surveys for Vapor Intrusion Evaluation" (Section 6.12, page 4 of 5) may not be able to adequately identify all potential sources. Given the consequences of an inaccurate sample (additional analysis, increased uncertainty, potential remobilization, etc.), developing an SOP for identifying these potential contaminants could prevent significant project costs and delays.

   Response: The building surveys will be conducted by a field team that has vapor intrusion experience and the team will compile a comprehensive list of activities performed and products used in the buildings. These lists will be provided to the vapor intrusion senior technical consultant for identification of activities and products that have the potential to generate the COIs included in this monitoring. The requested list of activities to avoid and/or products to remove from the building during the indoor air monitoring and sampling will be provided to the building representatives, who will coordinate with the building occupants; however, it should be noted that logistics may make it infeasible to follow all of the requests. Additionally, attempts will be made to conduct the monitoring and sampling during the weekend when activities and personnel in the building are limited. Because it may not be feasible to identify and/or remove potential indoor air sources of the COIs, if indoor air COI concentrations exceed the indoor air PALs, indoor air, subslab vapor, and outdoor air will be collected to help determine the source of indoor air COIs during the multiple lines of evidence evaluation. Therefore, it is believed that an SOP specific to identification of potential indoor air COI sources is not necessary and has not

been added, but these details on how the indoor air sources will be identified has been added to the third bullet under "building Surveys" on Worksheet 14.

2. ***Comment:*** Worksheet #11, footnote 1: Given that there is only one round of data and the variability of the low detection analytical methods used, building specific attenuation factors should be based on the most conservative measurements from each building if they are used. Therefore, attenuation factors for Building 1556 and Building 47 should be 0.03 and 0.008 respectively.

   Response: The Navy feels that the attenuation factor of .0003 is more representative of the actual attenuation factor for Building 1556 when the subslab vapor concentrations are taken into consideration. The COIs detected at SV01 and SV03 were less than 100 times the reporting limit, resulting in a biased attenuation factor of 0.03 at location SV03. The attenuation factor of 0.03 likely does not accurately reflect site conditions because when there are low contaminant concentrations in the subslab vapor and indoor air concentrations are directly correlated with subslab concentration, attenuation factors are biased high, as discussed during the May 2010 SJCA partnering meeting. This logic is consistent with the EPA 2008 attenuation factor database document which states, "...the empirical attenuation factor is most likely to represent the attenuation due to vapor intrusion when the indoor air concentration from vapor intrusion is substantially greater than the background indoor air concentration, which is most likely to occur when subsurface vapor concentrations are high." However, because limited data are available, the attenuation factor of 0.03 will be used initially and may be revised, with Team consensus, when additional data becomes available. The following sentence has been added to the end of footnote 1, "The most conservative empirical attenuation factors calculated in the RI and FS Addendum report will be used initially but may be revised, with Team consensus, when additional data become available."

3. ***Comment:*** Worksheet 9-1: The sentence below the bullets appears to be an environmental question to be answered. If so, please format as bulleted text.

   Response: The sentence below the bullets was one of the environmental questions to be answered; therefore, it has been bulleted.

4. ***Comment***: Worksheet 9-3, last paragraph: Underline "Forward"

   Response: The requested revision has been made.

5. ***Comment:*** Worksheet 14, Demobilization: The tasks listed for demobilization do not appear to be associated with demobilization. Please correct if necessary.

   Response: Because both of the bulleted items under "Demobilization" are actually conducted during the monitoring and/or sampling activities, the "Demobilization" section has been removed from Worksheet 14. The first bullet that was listed under the "Demobilization" section was moved to the first paragraph of Worksheet 14. The second bullet that was listed under the "Demobilization" section was removed from the worksheet because it is a data

management activity and is discussed in the Navy CLEAN Data Management Plan provided as Attachment E.

6. ***Comment:*** Figure 6, Box 10: Please clarify what "building contributions" is referring to in this box

   Response: The "building contributions" is referring to activities that are being conducted, or products that are being used, within the buildings that may be background sources of COIs in the indoor air. Note 5 has been added to Box 10 on Figure 6 and reads, "Building contributions are activities that are being conducted, or products that are being used, within the building that may be background sources of COIs in indoor air."

7. ***Comment:*** Attachment A: The inclusion of draft decision trees in this attachment is confusing and needs additional explanation. Perhaps inserting a page prior to the decision trees explaining that they are draft, or labeling the figures as draft would reduce confusion.

   Response: The titles of the decision trees included in Attachment A have been revised to indicate that they are preliminary decision trees and include the date of the scoping session with which they are associated (e.g., "Attachment A1 – Preliminary Decision Tree: September 2010").