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ST JULIENS CREEK
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RESPONSE TO U S NAVY COMMENTS TO VAPOR INTRUSION MONITORING SAMPLING
AND ANALYSIS PLAN SITE 21 ST JULIENS CREEK ANNEX CHESAPEAKE VA
11/1/2011
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 NAVFAC Mid-Atlantic, provided 17 October 2011

1. **Comment:** Worksheet 10, Occupied Buildings Description first paragraph (Building 47). The SAP states that "Based on new knowledge, it is believed the building foundation may also include pilings. Additional foundation details have been requested and will be incorporated upon receipt." A review of available Building 47 drawings found no conclusive evidence of foundation construction on pilings. However, it is known that Building 1556 foundation is constructed on pilings and this is not mentioned in Worksheet 10 and does not appear to affect the investigation approach. I am unclear as to why the presence of pilings is pertinent to a vapor intrusion investigation at either building. If it is pertinent, please explain in the response to comments. If it is not pertinent, strike the two sentences quoted above from the worksheet.

Response: The sixth sentence of the second paragraph under "Occupied Buildings Description" on Worksheet 10 acknowledges the Building 1556 piles. Although the Building 47 drawing that was provided was inconclusive as to whether or not piles are present at Building 47, the potential for their presence has been included in the foundation description for consistency with Building 1556 and to prevent potential misunderstanding of the building characteristics in the future. The first sentence referenced in the comment has been changed to "Based on the understanding of site geotechnical conditions, it is believed the building foundation may also include piles." Because a building drawing for Building 47 was received, the second sentence referenced in the comment has been removed from the worksheet.

2. **Comment:** Worksheet 11, PAL table. Please provide an example conversion from 5,000 ppmv to $\mu\text{g}/$ assuming 25 degrees C for CH₄ and H₂S. This may be provided in the responses to comments as information only.

Response: The following formula can be used to convert CH₄ and H₂S from ppmv to $\mu\text{g}/$, assuming 25 degrees C and atmospheric pressure of 1: [(X

ppmv][molecular weight]/24.45) (1,000) = Y µg/. Thus, CH₄ at 5,000 ppmv converts to 3,280,000 µg/ and H₂S at 5,000 ppmv converts to 6,969,000 µg/. No change has been made to the SAP.

3. **Comment:** Worksheet 11, p. 49 of 114, "Types of data needed" question/ Air inhalation risk category/last bullet. "Hydrogen samples collected..." should be "Hydrogen Sulfide samples collected..."

Response: The requested revision has been made.

4. **Comment:** Worksheet 14, Field Investigation Activities, "Building Surveys". Please add a fourth bullet: "Building surveys will be conducted when indicated by Figures 6 and 7. After a singular event that may affect building integrity (such as an earthquake greater than 4.0 (Richter scale) that is reported to be felt by the general population in Hampton Roads) a building survey will be conducted and the decision-making process will start with Box 17 of Figure 6."

Response: The requested bullet has been added.

5. **Comment:** Worksheet 15-1. Please explain the source of the PQL goals. The scoping session indicated the team agreed to the same PQL goals as in the RI vapor intrusion investigation SAP (Worksheet 19-1 p. 35 top paragraph, last sentence). However, the basis for calculating PQL goals is 1/3 of the most conservative PQL in the RI vapor intrusion investigation but appears to be 1/2 in the current investigation. Please add a reference note under Worksheet 15-1 to explain the origin of the PQL goals.

Response: Establishment of PQL goals varies by project. For consistency with the vapor intrusion investigation conducted for the RI and FS Addendum, the PQL goals have been changed to 1/3 of the most conservative PAL for each constituent. A footnote explaining the origin of the PQL goals has been added to the worksheet.