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ST JULIENS CREEK
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U S NAVY RESPONSE TO COMMENTS ON DRAFT EXPANDED SITE INSPECTION
REPORT MUNITIONS RESPONSE PROGRAM AREA UNEXPLODED ORDNANCE 1 (UXO 1)
ST JULIENS CREEK ANNEX VA
4/17/2013
CH2M HILL

Response to Comments
Draft Expanded Site Inspection Report
Munitions Response Program
Area UXO 1
St. Juliens Creek Annex
Chesapeake, Virginia

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DATE: April 17, 2013

Comments from VDEQ, provided 25 March 2013

General Comments

1. **Comment #1:** Please indicate how the ecological risk PAL for 2,4,6-TNT of 0.13 was derived. It is not clarified in the SAP.

Response: The value of 0.13 mg/kg was the fresh water ecological screening value from Talmage and Opresko, 1996. After further review of the Virginia Administrative Code, it has been determined that the Southern Branch of the Elizabeth River is defined as an estuarine water to which marine criteria should be applied, rather than fresh water. This determination was made from information contained within 9VAC25-260-410 and 9VAC25-260-140. The ESI Report has been revised to use the marine ecological screening value for explosives rather than the PAL in the SAP. The marine ecological screening value for 2,4,6-TNT is 20 mg/kg, which is based on the following document - Naval Facilities Engineering Command (NAVFAC). 2007. Ecological risk assessment Tier 1 screening, Supplemental RI at Operable Unit 2, Jackson Park Housing Complex/Naval Hospital Bremerton, Bremerton, Washington. Draft. April. This change is consistent with Worksheet #11 of the SAP, which indicates that evaluation of data may include alternate screening values and more realistic exposure scenarios.

Use of the marine ecological screening values is also supported by historical salinity data collected within the Southern Branch of the Elizabeth River in the vicinity of Area UXO 1 in 2004 in association with the Blows Creek Baseline Ecological Risk Assessment. Salinity values ranged from 1.20% to 1.29%, which is indicative of a marine environment.

2. **Comment #2:** VDEQ does not agree that NFA is appropriate regarding MC for the site at this time. The three detections of TNT were localized at samples 8, 9, and 10 which included one exceedance of the PAL and another detection just under it. Since sampling was performed by collecting sediment from debris extracted from the riverbed floor, it is difficult to know if these sediment data are representative of surface or subsurface conditions at the site. Given the localized detections around Wharf 1, there is significant potential for a more significant release than what has been detected. VDEQ requests

additional characterization of the sediments surrounding Wharf 1 to determine if a release has occurred.

Response: As the Southern Branch of the Elizabeth River is defined as an estuarine water to which marine screening criteria are applicable, the concentrations of 2,4,6-TNT detected in site sediment (0.0998J mg/kg, 0.123J mg/kg, and 0.266J mg/kg) are approximately two orders of magnitude less than the ecological screening value of 20 mg/kg. The maximum hazard quotient for 2,4,6-TNT at the site is <0.1. Based on this revised ecological screening value, the 2,4,6-TNT concentrations detected at the site do not pose a potential risk to ecological receptors, and no additional site characterization is proposed in accordance with Worksheet #11 of the SAP (“If chemical concentrations in sediment are detected at concentrations that indicate the site does not pose a potential risk to human or ecological receptors, then analytical sampling can be discontinued.”).

Specific Comments

3. **Comment #3:** Section 2.1 - Can more information be provided about the specific site and its setting? Only three sentences of this section refer to this site specifically while the rest is focused on SJCA as a whole. General information such as site acreage, estimated volume of ordnance that went through the wharfs in question, etc. and any gaps in knowledge about the site history should be identified.

Response: Section 2.1 has been modified to include additional information specific to Area UXO 1.

4. **Comment #4:** Figure 2-5 – The intent of the “Location 4” label on this figure is not clear.

Response: The “Location 4” label is not relevant to the data presented on Figure 2-5. This label has been removed.

5. **Comment #5:** Section 4.5, first bullet – Did the partnering team approve of the location modifications? Please indicate this in the text since there were no sampling locations adjacent to the northern wharf in this text since there were no sampling locations adjacent to the northern wharf area near the “Magnetic Anomaly Concentration Areas” depicted in Figure 2-3 and there appears to be a data gap.

Response: The first bullet in Section 4.5 has been modified to clarify that the partnering team was notified prior to investigation of the alternate sample locations. No comments were received from the regulators regarding concerns with the alternate sample locations. The SAP included a provision to adjust locations based on field conditions and did not require team approval.

In response to the data gap question in the vicinity of the 1996 Magnetic Anomaly Concentration Areas, the 2012 investigation locations were jointly selected by the Partnering Team, during which the need to investigate the “Metallic Anomaly Concentration Areas” was not identified; therefore, not having sampling locations in that area is not believed to be a data gap. The 1996 data was based on a limited geophysical survey of the northern wharf area. A more comprehensive geophysical survey was performed at the site in 2010 (results presented on Figure 4-1). The 2012 investigation locations were selected based on the results of the 2010 geophysical

survey to focus on areas with high anomaly concentrations located near the wharf loading areas. When Locations 1, 2, and 3 were modified during the investigation, the partnering team was notified by email of the alternative locations.

6. **Comment #6:** Section 4.5, Page 4-3, last bullet: It is unclear as to how this bullet represents a deviation from the Work Plan or provides any relevant information to the investigation. Please remove this bullet.

Response: The last bullet in Section 4.5 has been removed as requested.

7. **Comment #7:** Section 5 - Please include a discussion evaluating the investigation's ability to meet the DQOs identified in the SAP.

Response: As stated in Section 4 of the ESI Report, the site investigation was performed in accordance with the ESI work plan and the SAP. The investigation approach proposed within these documents was developed and approved by the partnering team to meet the project objectives stated within the SAP. No modifications to the text have been made in response to this comment.