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LETTER AND ATTACHED U S EPA REGION III RESPONSES TO THE U S NAVY
RESPONSE TO COMMENTS ON THE TIER II SAMPLING AND ANALYSIS PLAN FOR SITE 4
REMEDIAL INVESTIGATION WILLIAMSBURG FISC VA
8/1/2012
U S EPA REGION III

From: [Susanne Haug](#)
To: scott.park@navy.mil
Cc: Wade.Smith@deq.virginia.gov; [Ivester, Marlene/VBO](#); [Sawyer, Stephanie/VBO](#)
Subject: Site 4 SAP RTC comments
Date: Wednesday, August 01, 2012 3:15:24 PM
Attachments: [CAX Site 4 SAP EPA RTC.pdf](#)

Hi Scott,

We reviewed the responses to the comments on the Site 4 SAP. There are still a few comments we need to discuss. I suggest you take a look at the comments and we get everyone on the phone to resolve them. I think if we have everyone together we can work these out. I know we are running short on time since the sampling has to take place in September/October.

Let me know if you have any questions.

Sue

Susanne Haug, P.E.
Remedial Project Manager
US EPA Region III (3HS11)
215-814-3394 (phone)



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

August 1, 2012

Mr. Scott Park
NAVFAC MIDLANT, Building N-26, Room 3208
Attention: Code OPHE3, Mr. Scott Park
9742 Maryland Avenue
Norfolk, VA 23511-3095

Subject: Tier II Sampling and Analysis Plan, Site 4 – Remedial Investigation, Naval Weapons Station Yorktown Cheatham Annex, Williamsburg, VA

Mr. Park:

Thank you for your responses to our comments regarding the subject document. Responses are acceptable except for those listed below. After you've reviewed the comments below, I suggest we have a conference call to resolve these remaining comments.

EPA Tox Comment 2: EPA supports using a 95th percent Upper Tolerance Limit (UTL) to represent the upper end of background. This is not a conservative approach for estimating background conditions, at all; in fact, the 95th percent UTL allows for a great deal of leniency in defining background. At this site, where an on-site concentration exceeds the 95th percent UTL of the background dataset, the Navy proposes to default to the maximum background concentration as the comparison value. This type of point comparison alone simply is not good science. [RPM note: I also forwarded this comment/response to our statistician. If there are any changes or additions to this comment I will let you know within 1 week.]

EPA RPM Comment 1: The response indicates that Appendix B was added to the SAP and includes figures showing soil, groundwater, sediment, and surface water exceedances. It would be helpful if these figures also showed all sample locations within each of these media so we can see the distribution of samples.

EPA RPM Comment 2: The response is vague. It states that "the SAP was revised to include discussion of this agreement in an Action Items and Results section of the November 2011 Scoping Session". Was just the discussion documented in the SAP or will the number be revised to 50 ppb?

EPA RPM Comment 5: Based on results shown in the 2001 Pond Study, Jones Mill Pond and Cheatham Pond indicate COPCs. Because these ponds have received contaminants, they cannot be used as reference ponds.

EPA RPM Comment 7: I don't understand the use of reference pond data and how it relates to Site 4. Why would finding high levels chemical constituents (e.g., PCB's, explosives) in the reference pond change the conclusions drawn from Site 4 results? These are not naturally occurring substances.

EPA RPM Comment 8: See Tox Comment 2.

EPA BTAG Comment 2: The response indicates that one additional surface and subsurface sediment sample is needed to determine if site related contaminants from Site 4 are migrating into Youth Pond. Without an understanding of the spatial variability of sediment concentrations in Youth Pond, one sediment sample is insufficient to make this determination. Either additional samples should be collected as part of this investigation or the investigation of this pathway should be deferred to the study of Youth Pond.

EPA BTAG Comment 3: The response indicates the lateral extent of the buried debris required further delineation and the team agreed that two test pits across the pond would address this data gap. The report does not indicate that the debris on the south side of the Upstream Pond would be the same as the debris that has been identified on the north side of the Upstream Pond. The Upstream Pond is not being sampled for debris. Again, the two debris test pits on the south side of this pond will not definitively address the existence of debris, or not.

EPA BTAG Comment 6: The response indicates "...the Navy technical folks feel two soil samples for hexavalent chromium are sufficient and that no groundwater samples are needed unless there is a known source." Support for this is needed to justify the decision reached. Section 2.1.3 appears to be related to human health only. Chromium can also impact ecological receptors. It is not clear that these two samples for hexavalent chromium would be adequate to assess ecological risk. In addition, if groundwater discharges to surface water (e.g., into the Upstream Pond, Youth Pond, or the York River) then multiple forms of chromium that would/could adversely impact ecological receptors need to be included in the analysis.

EPA BTAG Comment 9: The response states "...maximum HQ exceeds one..." This needs to change to "...maximum HQ is equal to or exceeds one..." It is not clear that this response can be applied to invertebrates and plants because the maximum HQ and the mean HQ will be used to describe the range of risk for these ecological receptors. Also, because contaminant concentrations in soil can be highly variable, using frequency of detection, frequency of exceedance, as well as spatial distribution of exceedances may not be a good indicator of the spatial extent of the ecological risk. The uncertainty of using these variables will need to be adequately addressed in the report given the potential for concentrations to be spatially variable (e.g., site related contamination not uniformly distributed). BTAG does not support the unqualified use of the magnitude of the HQ exceedance as an indicator of risk.

EPA BTAG Comment 14: The response states that one surface and subsurface sediment sample will be used to determine if and what site related contaminants are migrating from Site 4 into Youth Pond. Making this determination based upon a single sample is highly questionable and uncertain. Currents within Youth Pond, resulting from groundwater discharge and storms, can redistribute contaminants which will not be identified by a single sample. Finally, no meaningful statistics can be applied to a single sample.

EPA BTAG Comment 16: The response indicates the use of a single test organism (*Hyaella azteca*) is appropriate. The uncertainty of using one species to assess toxicity to invertebrates should be addressed in the report.

EPA BTAG Comment 17: The response indicates that the top two feet of soil is the standard depth of invertebrates that has been established for CAX. A number of previous comments have been made asking for support for this depth range as appropriate, but no adequate responses have been provided that pertain to the biology/habits of soil invertebrates. The question/concern is still valid and needs to be addressed in this report.

EPA BTAG Comment 19: The comment indicated that background data from the same soil types found at Site 4 will need to be used. The response was "Comment noted." This response needs to confirm that background soil data from the same soil types that are at Site 4 will be used.

EPA BTAG Additional comments on Figure 5:

- a. It is not clear why the complete Burial Area 1 is not contained within the Burial Investigation Area 1. In both Burial Investigation Areas, there are areas included which are outside of the two identified Burial Areas. The text needs to adequately explain why there are no samples in these areas.
- b. The SAP needs to clearly document why the sample locations proposed on this figure were selected. There appears to be a large amount of area in the burial areas where sampling will not occur, and the rationale for this needs to be provided.

Please contact me at 215-814-3394 if you have any questions.

Sincerely,



Susanne Haug, P.E.
NPL/BRAC Federal Facilities Branch

cc: Wade Smith, VDEQ