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LETTER AND U S NAVY RESPONSES TO U S EPA REGION III RESPONSE TO COMMENTS REGARDING DRAFT SITE INSPECTION SAMPLING AND ANALYSIS PLAN PENNIMAN LAKE CHEATHAM ANNEX FISC WILLIAMSBURG VA
05/09/2011
CH2M HILL

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May 9, 2011

Ms. Susanne Haug
Remedial Project Manager
NPL/BRAC Federal Facilities Branch
United States Environmental Protection Agency, Region 3
1650 Arch Street (3HS11)
Philadelphia, PA 19103-2029

Subject: Responses to the "EPA's Responses to the Navy's Responses to Comments" submitted in a letter dated April 19, 2011 regarding the *Draft Site Inspection Sampling and Analysis Plan, Penniman Lake, Naval Weapons Station Yorktown Cheatham Annex, Williamsburg, Virginia*, November 2010

Dear Ms. Haug:

On behalf of the U.S. Department of the Navy's Naval Facilities Engineering Command (NAVFAC MIDLANT), CH2M HILL has prepared this letter in response to your letter dated April 19, 2011 that provided responses to the Response to Comments for the subject document. Comments received are shown in *italics*, followed by the Navy's response in blue.

- *Comment #1 – The response to comment #2 is not adequate. The comment indicates that because of the distance between sample locations (e.g. ~150-450 feet) and the variability of contaminant concentrations in different samples, it is uncertain there is sufficient spatial coverage of sediment within Penniman Lake. The response states "Sediment sample locations were selected to provide sufficient spatial coverage across the lake…." This response does not adequately address the comment.*

  The sample locations are adequate to determine the potential release of PCBs to Penniman Lake, which is the purpose of this step of the SI. The proposed sample locations within the lake were selected based on three lines of evidence: 1) prior detection, 2) possible depositional area, and/or 3) bias toward any discharge from nearby outfalls.

  USEPA was present during the May 2010 scoping session, and agreed to the proposed sampling strategy presented as part of the scoping session (see partnering minutes). Additionally, John McCloskey of BTAG will be attending a pre-sampling site visit to assist in verifying sample locations. Lastly, the sample locations presented on Figure 3 are for Step 1 of the Site Investigation. The purpose of Step 1 is to verify the presence of PCBs in Penniman Lake, and evaluate the potential PCB migration pathways to sediment of Penniman Lake. Results will be evaluated to determine whether further delineation efforts are warranted in the remaining steps of the SI or in a Remedial Investigation.

- *Comment #2* – *The response to comment #3 is too general. Please explain how the contractor/Navy defines the source, as used in the phrase "…the source of PCBs in Penniman Lake." "Source" may be defined generally, as in "the Navy"; or more specifically, as in building X or activity Y. The text does not indicate what the path forward will be if PCB sources are not identified, but unacceptable levels of PCBs are in Penniman Lake. This issue needs to be addressed.*

  In the Penniman Lake SI SAP, "source" is defined as any upgradient activity that has or is contributing PCBs to Penniman Lake. This definition has been added to the Release History on Worksheet #10. Potential sources within the watershed of Penniman Lake are on Navy Property.

  As stated in Worksheet #10 Environmental Question #4 and on Figure 8, in the event that unacceptable levels of PCBs are found in Penniman Lake, during Step 4 of the SI, data will be screened against human health and ecological screening criteria. If results of the screening indicate possible unacceptable risk, these results will be included in the SI report, and per the decision tree in Figure 8, the Partnering Team will reconvene for an Expanded Site Inspection or Remedial Investigation scoping session.

- *Comment #3* – *The response to comment #4 is unclear. PCBs have already been detected in sediment in Penniman Lake. Therefore, upgradient samples are already justified. The response states that as shown in the Step 1 decision tree (Figure 5), upgradient samples will be identified and collected if PCBs are detected in sediment. Therefore, there is no option but to collect upgradient samples based on the detection in sediment. A meeting of the partnering team is not necessary to address this decision point. The text on Worksheet #10 on page 37 should reflect the information in the decision tree.*

  Currently, upgradient samples are only justified in the northwest finger of the lake based on recent data, and upgradient samples in the northwest finger of the lake have been proposed to be collected as part of this initial effort (versus waiting until Step 2). While there have been detections in sediment in other portions of the lake, the results are sporadic and at least 8-10 years old; sample locations are proposed upgradient of these prior detections as well. Based on the samples collected during this step of the SI, additional upgradient locations will be identified to further define the source of PCB contamination.

  As part of the SAP process, the Partnering Team must agree to the proposed sample locations for all steps of the SI. While this does not need to be conducted at a meeting specific to Penniman Lake, an in-person meeting is the most efficient way to obtain Team agreement. The next scoping sessions can be conducted during regularly scheduled Partnering Team meetings. The text in Worksheet #10 has been updated to reflect the information in the decision tree.

- *Comment #4* – *The response to comment #5 raises an additional concern. According to the response, the sediment samples from the SI "will primarily be used to determine how the spatial distribution of PCBs relate to these source areas/transport pathways and if/how the concentrations and/or spatial distribution of PCBs in the lake have changed from the 2000 Pond Study…." It is not clear if the data planned for the collection can reasonably be used to show*

changes in PCB concentrations over a 10-11 year time frame. This has to do with sample locations as well as the variability of PCB concentrations between sediment samples. This needs to be re-addressed.

Surface sediment samples (0-4 inches bgs) are adequate during this step of the SI for the stated purposes and study objectives. Proposed sediment samples in the lake encompass most of the 2000 Pond Study surface sediment sample locations, which will allow for a qualitative comparison between the two studies both on a lake-wide basis as well as a location-specific basis where sample locations overlap. The limitations and uncertainties associated with such a comparison are recognized and will be discussed in the SI as appropriate. Deeper (subsurface) sediment samples would be included as part of the delineation of the extent of PCBs as part of an Expanded Site Inspection or a Remedial Investigation, if warranted.

- *Comment #5 – The response to comment #7 also raises an additional concern. The way(s) in which PCB Aroclor data can be used to determine source(s) needs to be more specifically detailed, particularly as it is being used to justify that PCB congener analysis is not needed in the SI.*

  Congener analysis is not needed for the SI because the purpose is limited to the identification of a source or sources of PCBs. Congener analysis may be needed during a quantitative risk assessment as part of a Remedial Investigation, should the results of the SI show that further, more detailed investigation is warranted. To that end, congener analysis is not justified at this preliminary step. Aroclor data is sufficient for a preliminary screening as part of this SI.

- *Comment #6 – In another study, involving another Superfund Site (Metal Bank) in EPA Region III, the Aroclor data was found to underestimate total PCB concentrations and a correction factor (1/0.6) was developed. If Aroclor data are to be used at Penniman Lake, a similar correction factor may need to be developed such that more accurate total PCB concentrations can be used for decision making.*

  Comment noted.

If you have any questions or comments regarding the above responses, please feel free to contact me at 757-671-6258, or Marlene Ivester at 757-873-1442, ext. 41634.

Sincerely,

CH2M HILL

Katie Tippin
Project Manager

cc: Ms. Krista Parra /NAVFAC MIDLANT
Mr. Wade Smith/VDEQ
Ms. Marlene Ivester/CH2M HILL