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EMAIL AND COMMENTS FROM U S EPA REGION III REGARDING DRAFT SITE
INSPECTION SAMPLING AND ANALYSIS PLAN PENNIMAN LAKE CHEATHAM ANNEX FISC
WILLIAMSBURG VA
01/05/2011
U S EPA REGION III

Monica Marrow

Subject: FW: Penniman SAP comments
Attachments: CAX Penniman draft SAP EPA comments.doc

From: Haug.Susanne@epamail.epa.gov [<mailto:Haug.Susanne@epamail.epa.gov>]
Sent: Wednesday, January 05, 2011 9:30 AM
To: christopher.r.murray@navy.mil; krista.parra@navy.mil
Cc: Ivester, Marlene/HRO; Sawyer, Stephanie/VBO; wade.smith@deq.virginia.gov
Subject: Penniman SAP comments

Chris,

Comments on the Penniman SAP are attached. Like I mentioned in my previous e-mail, the answers you provided are acceptable except you have to add to the comment about what happens if no PCBs are found in this sampling event. I put some of those same comments in this letter just so that they are all together for the records. I deleted parts of some comments so look at them before you copy/paste your previous answers.

Let me know if you have any questions.

Susanne Haug, P.E.
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Date: January 5, 2011

Mr. Christopher Murray
NAVFAC MIDLANT, Code OPHREV4
9742 Maryland Avenue, Bldg N-26
Norfolk, VA 23511-3095

Re: Review of Draft Site Inspection Sampling and Analysis Plan, Penniman Lake; Naval Weapons Station Yorktown Cheatham Annex, Williamsburg, Virginia; November 2010

Dear Mr. Murray:

The U.S. Environmental Protection Agency has reviewed the above referenced document and would like to submit the following comments.

1. The Executive Summary should clearly indicate if PCBs were the only contaminants detected in Penniman Lake during the previous sampling event.
2. Worksheet #10 on page 37 includes the statement that "Sample locations were selected to provide sufficient spatial coverage across the lake and at potential discharge areas to the lake." Given the unknown uses of this lake and the variability of contaminants within the sediment, it is not certain that there is sufficient spatial coverage, particularly considering that most of the lake sediment sample locations are about 150 to 450 feet apart.
3. On Worksheet #10 on page 37 the fourth environmental question is "If releases to sediment of Penniman Lake are confirmed, what is the appropriate next step?" Previous sampling showed total PCB concentrations ranging from 4,000 to 15,000 $\mu\text{g}/\text{kg}$. Considering the isolated nature of this lake, it is unclear what other sources of PCBs, or other contaminants, there would be other than those attributable to the Navy.
4. Worksheet #10 on page 37 states that "Surface soil and sediment samples will be collected during Step 2 of the SI upgradient from detected concentrations observed in sediment of the lake, pending partnering team concurrence that additional upgradient samples are warranted." It is unclear how the partnering team will decide whether upgradient samples are needed. Clarification on this issue should be provided. BTAG recommends that samples be collected upgradient of all areas where PCBs are detected in the lake.
5. Worksheet #11 on page 39 indicates that sediment samples will be collected at a depth of 0-4 inches bgs. Given the potential length of time that contaminants have been sequestered in this lake, sediment cores need to be collected and analyzed for contaminants.

6. Worksheet #11 on page 39 states that PCB data will be compared to human health and ecological risk-based screening levels. The ecological risk-based screening levels listed are the surface soil and sediment BTAG screening levels. These levels address direct toxicity to invertebrates and plants. Because PCBs are known to be highly bioaccumulative and cause impacts to higher trophic level receptors, the food chain pathway also needs to be addressed.
7. Worksheet #11 on page 40 states “The data will be of the quantity and quality necessary to provide technically sound and defensible assessments of possible sources of PCBs and the associated potential risks.” The text needs to explain analysis for PCB Aroclors is sufficient and PCB congener data is not needed. In addition, the text needs to define the complete list of potential contaminants of concern.
8. Worksheet #11 on page 41 there is a reference to “...Figures 5 through 8.” However, these figures are not included (only Figures 1 through 4 are provided).
9. Worksheet #14 on page 47 and Worksheet #18 on pages 57 to 59 state that surface sediment samples will be collected from 0 to 6 inches below sediment surface. This is different from information provided on Worksheet #11 on page 39 and Worksheet #17 on page 55 which state that surface sediment will be collected from 0 to 4 inches below sediment surface. This issue should be clarified. BTAG recommends that surface sediment samples be collected from 0 to 4 inches below sediment surface.
10. Figure 3 shows the proposed soil and sediment sampling locations. The figure shows all samples collected from the lake as sediment and all samples collected from upgradient creeks and ditches as soil. Clarification should be provided on how it was determined that all creek and ditch samples were best characterized as soil. This issue is important for the evaluation of ecological risk since this will determine the screening levels to which the data will be compared. Intermittent and perennial creeks and ditches may be best evaluated as sediment, however, the determination of the appropriate screening values will ultimately be determined by the receptors using the area. It is conceivable that materials from these types of environments would support terrestrial biota during some periods of the year (warranting comparison with soil values) and aquatic biota, and at potentially sensitive life stages, at other times of the year (warranting comparison with sediment values).
11. Page 41, second bullet says that samples supporting step 1 and a portion of step 2 samples will be collected during one field mobilization event. What portion of step 2? Page 37 and the decision tree on Figures 5 and 6 imply that only the lake will be sampled in step 1 and then step 2 will be another sampling event that will take place if PCBs are found in the lake.
12. The figures show that if no PCBs are found in the sediments there will be no further action, however, we know they are there from the Pond Study so we still need to do something.
13. Figure 7 – the “no” response still should lead to “Prepare Technical Memo...”

14. Shapes on figure 5-8 seem to have been used at random. The start and end are typically ellipses, decisions are diamonds and tasks are rectangles, etc.

If you have any questions, please call me at (215) 814-3394.

Sincerely,

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

Cc: Wade Smith (VaDEQ, Richmond)