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NAB LITTLE CREEK
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EMAIL AND COMMENTS FROM BIOLOGICAL TECHNICAL ASSISTANCE GROUP
REGARDING BENTHIC INVERTEBRATE SEDIMENT WORK PLAN AND SAMPLING AND
ANALYSIS PLAN SOLID WASTE MANAGEMENT UNITS 3 AND 7B JEB LITTLE CREEK VA
08/18/2010
U S EPA REGION III

Monica Marrow

From: Boylan.Jeffrey@epamail.epa.gov
Sent: Wednesday, August 18, 2010 10:01 AM
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Subject: BTAG Comments on Benthic Invert Sediment Work Plan and SAP

Folks,

Please see the BTAG comments below. Based on these comments, I would like to have a conference call to discuss the path forward in implementing the SAP. Please provide availability.

In response to your recent request, representatives of the BTAG have completed the review of the subject document. The most critical issues identified pertaining to SWMU 3 are the lack of specified used and applications of the data that result from the proposed efforts. If the results of the benthic invertebrate sampling are only to be used to help inform decisions and apply the previously established PRGs in instances where the contaminant levels only slightly exceed the PRGs (e.g., <5%), then the proposed activities and approaches are acceptable.

However, if the results are used in any fashion which prevents clean-up of the sediment to the previously established PRGs, then a number of concerns must be addressed. These concerns are included in the comments presented below. It should be noted that the RI/FS and ecological risk assessment process at this site were “interrupted” due to the findings of the initial RI, SLERA, and Step 3 BERA. These findings included the elevated contaminant concentrations, presence of ABM, exceedances of ecological risk values, and observations of a highly impacted benthic community which correlated with the high levels of ABM and contaminants. As the path forward and PRGs that were agreed on based on the aforementioned findings are being revisited, the BTAG will also be reviewing the SLERA and BERA. This is necessary to ensure that any revised actions will still be protective of all of the other receptors that were previously assumed would be protected by the actions designed to protect the benthic community.

Comments pertaining to the proposed activities at SWMU 7B are also provided below.

- 1. It must be clearly established that the reference area has not been impacted by any of the CERCLA or removal sites at the installation (i.e., contaminated sediments / contaminants have not been transported there). Given the potential for past uncontrolled and unreported releases from pier-side operations, additional areas for reference stations should also be strongly considered. Also see Comment 7 for other considerations on the selection of reference locations.**
- 2. Worksheet 9-1 recounts a May 18, 2010 scoping session and indicates that “PRGs will not be changed but will be used in conjunction with benthic invertebrate data as part of a weight of evidence evaluation to determine if remedial action within each grid is the appropriate path forward. The Team agreed the establishment of a separate PRG for benthic invertebrates and subsequent re-evaluation of the need for remedial action may be necessary.” The previously established PRGs did consider benthic community metrics (i.e., lack of invertebrates) when they were developed. Establishing a new PRG does constitute a change in PRGs. A weight of evidence approach is applicable when assessing risk or causality for potential risk. It is not appropriate for applying a previously established PRG.**

3. **Worksheet 10-1, Environmental Questions Answered by this Project, indicates that contaminant analyses will only be performed for those grids where no data has been previously collected. Given the potential variability of contaminant concentrations in sediment, the potential significance of the data, the length of time that may have elapsed since the previous analyses were performed and the relatively low cost of the limited analyses, the surface sediment composite samples from each grid should be analyzed for the identified COCs.**
4. **SOP 011 does not provide a method to visually estimate the surface sediment ABM content within each grid using percentage diagrams for estimating composition by volume as indicated in the text. Furthermore, the SOP that does provide a procedure for estimating the percentage of gravels, sands and fines is for soil samples and is qualitative. While this procedure may be applicable with modification, it does not appear to specify the need for validation. Given the importance of this data, provisions should be made to quantify / verify the results of the estimates near the action level (i.e., 1% ABM).**
5. **Worksheet 10-1 (page 39) indicates that if ABM is identified in a selected location within Little Creek Cove an alternate location will be selected. If ABM is observed, then clearly the same site contaminants are present in the cove and the area is not suitable as a background location. The fact that it is even suspected that ABM may be present suggests that this may not be a suitable background / reference area. Comment 3 is also applicable to the background locations.**
6. **Worksheet 10-1 (page 39) poses the question “Based upon a weight-of-evidence evaluation of the refined PRGs, what action is required at SWMU 3 to meet the RAO and what is the spatial extent of such an action?” This “question to be answered” contradicts the earlier statement that the PRGs will NOT be changed. It should be noted that protection of the environment (i.e., reduction of ecological risk to acceptable levels) is a threshold criterion under CERCLA. Should it be decided that a removal action will not occur for reasons other than the sediment in the grid area in question does not pose an unacceptable risk, the area is still subject to evaluation in the remedial process.**
7. **The apparent intent of the decision tree (Figure 6) is to obviate the decisions made when the original PRGs were developed, rather than aid in their application.**
8. **The decision tree presented as Figure 6 for SWMU 3 notes that remedial alternatives will be evaluated as part of an EE/CA and a NEBA. It is critical to note that all of the remedial alternatives evaluated in the NEBA must be adequately protective and reduce ecological risk to an acceptable level. It should be noted that the EE/CA actually reviews removal alternatives. “Remedial” alternatives would be reviewed in a Feasibility Study. It is BTAG’s position that should an additional PRG be adopted that would circumvent clean up in an area that would have been cleaned up applying just the previously agreed on PRGs, that area, which would still pose an ecological risk, must be addressed via the remedial process (i.e., the RI and FS must be completed, including the completion of the risk assessments).**
9. **Ultimately, it must be recognized that the NEBA is not part of the CERCLA process. This being the case, it really should not factor into the decisions tree. It must be noted that if a NEBA is going to factor into the decision process, then the specific procedures that will be followed for the NEBA must be specified prior to the approval and use of the decision tree.**
10. **It should be noted that in the event a decision is made to leave contamination which poses ecological risk in place due to “reference” conditions (i.e., impaired benthic community elsewhere at the installation), long term monitoring must be conducted. Once causative agents that have negatively impacted the benthic community at reference locations have been addressed, remediation of SWMU 3 should proceed. This would apply under both removal and remedial scenarios. It must be emphasized**

that the previously established and agreed upon PRGs already considered background contaminant concentrations in accordance with both Navy and EPA guidance.

11. As the results of the benthic invertebrate sampling may have a significant impact on any actions being taken at SWMU 3, the approach taken to the study needs to be more robust. Sampling design and result analysis protocols must be specified and should be consistent with acceptable indices used in the area. Reference locations that more closely mirror the conditions at the site (including use, hydrology, physical conditions, etc.) must be selected. If the premise to be used is that the conditions in the area will not allow the recovery of a healthy benthic community, then the benthic community structure in an area not impacted by contaminants must be clearly established, especially in areas comparable to SWMU 3. It should be noted that as the PRGs already take background conditions into consideration and the ecological end use is not inconsistent with human end uses, the considerations which are either being implied or are allowed via the lack of specification are beyond and not consistent with CERCLA.

12. The noted health and composition of the benthic community is only one measure of the risk posed by the contaminants present in the sediment. The previous findings and path forward was deemed sufficient to move forward to evaluate remedial / removal strategies. The “new” PRG that is conceptually being proposed does not ultimately address the “health” of the sediment and the ecological risk posed by the contaminants that are present. As the wording of the document may be interpreted to propose that the original premise used to develop the previously agreed upon PRGs is no longer adequate, and other metrics are being considered, it would be even more appropriate to conduct site specific toxicity tests. PRGs that would result from these tests would provide more of a direct indication of the reduction of toxicity in the sediments and potential for recovery for the benthic community.

13. For SWMU 7B, it is unclear why an alternate sampling location will be selected if ABM is observed.

14. As CERCLA addresses uncontrolled waste sites and frequently must address site with unknown sources of contamination, the correlation analyses should not just look to see if the findings relate to known CERCLA releases, but they should also ensure that any negative impacts / elevated contaminant concentrations are related to known non-CERCLA releases. If impacted sediments can not be attributed to regulated / approved releases or a non-Navy site, then they will need to be addressed under a CERCLA action.

15. The decision tree is flawed in that it assumes that if an impacted benthic community is observed in both SWMU 7B and the reference location, the causative agents are the same. If the impacts at SWMU 7B are attributable to site contamination, then an action to reduce the risk associated with the site contaminants must still be evaluated. All of the concerns pertaining to the reference locations noted for SWMU 3 must also be addressed as they apply to SWMU 7B.

16. The proposal for SWMU 7B assumes that the only acceptable endpoint is the characterization of the benthic community. It fails to consider other measurement endpoints such as toxicity tests. It also places the existence of comparable benthic communities at SWMU 7B and the reference location above all other measurement endpoints.

17. At an absolute minimum, the decision tree for SWMU 7B must be revised to equally consider all appropriate lines of evidence.

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