DEPARTMENT OF THE NAVY
NORTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
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OCT 10 1997

Ms. Kymberlee Keckler
Remedial Project Manager
U.S. Environmental Protection Agency
J.F.K. Federal Building (HBT)
Boston, MA 02203-2211

SUBJ: RESPONSES TO USEPA LETTER OF AUGUST 28, 1997 ON THE DRAFT FINAL FEASIBILITY STUDY FOR AREA A DOWNSTREAM/OBDA

Dear Ms. Keckler:

Thank you for reviewing the Draft Final Feasibility Study for the Area A Downstream/OBDA site at the Naval Submarine Base New London. Please find attached the Navy's responses to the comments in your August 28, 1997 letter.

If you have any other questions or comments please do not hesitate to contact me at (610) 595-0567 ext. 162.

Sincerely,

Mark Evans

Mark Evans
Remedial Project Manager
By direction of the
Commanding Officer

Copy to: Mr. Mark Lewis, CTDEP
Mr. Andy Stackpole, NSB-NLON
Mr. Jean-Luc Glorieux, Brown & Root - Pittsburgh

RESPONSES TO
USEPA's AUGUST 28, 1997 LETTER OF COMMENTS
ON
DRAFT FINAL FS REPORT, JULY 1997
AREA A DOWNSTREAM/OBDA
NAVAL SUBMARINE BASE-NEW LONDON
GROTON, CONNECTICUT

October 10, 1997

GENERAL COMMENTS (COVER LETTER)

1. Cover Letter, 2nd paragraph

Comment:
"I am concerned that the FS maintains that Alternative 2 meets ARARs and TBCs. Alternative 2 involves a permeable soil cap and leaves contaminated soils and sediments on-site. Since there is an upward groundwater gradient in some areas (e.g., Lower Pond), it is possible for contaminants to migrate into the surface water under this alternative. Therefore, it is not clear whether Connecticut water quality standards will be met. As a result, it cannot be stated that Alternative 2 meets ARARs and cannot be considered a permanent remedy. Please revise the FS to reflect this."

Response:
The Navy has already reassessed meeting of Connecticut water quality standards under Alternative 2 in this version of the FS. Upon USEPA's suggestion, B&R Environmental personnel contacted the Army Corps (Tom Fredette) to obtain information on their experience with contaminant migration through permeable caps on contaminated sediments. Mr Fredette felt that the data from that site might not be relevant because groundwater influx was not of concern at that site, unlike the Area A Downstream/OBDA. However, B&R Environmental personnel have researched appropriate sources on the internet (as suggested by Mr. Fredette) and summarized the information under Long-term Effectiveness and Permanence of Alternative 2, on pg 4-22 of the Draft Final version of the FS. In summary, available information indicates that permeable capping of contaminated sediments can be effective through various mechanisms (such as physical entrapment of contaminated particulates, retardation of diffusion and adsorption/ion exchange of dissolved contaminants, etc.) for protecting surface water from further degradation. As discussed in Section 1.3.4.1 of the Draft Final FS, the exceedances of water quality criteria are mainly associated with particulates. These particulate sediments are likely to have been resuspended by the flow of surface water or, as the comment notes above, from an upward groundwater gradient into the ponds. The use of a clean soil cover of adequate thickness should minimize such resuspension and also act as a passive filter for the particulates that could be forced by the upward gradient of groundwater.

The Navy agrees that this technology is not proven to be a permanent remedy, but available information indicates that maintenance of the cover is a critical component for its permanence. Accordingly, the Draft Final FS has included a long-term annual cap maintenance and monitoring cost. Moreover, the USEPA's concern is addressed in the comparative analysis of alternatives which clearly indicates (on pg 5-3, Draft Final FS), that this alternative is less effective and less likely to be a permanent solution than Alternatives 3 and 4.

Therefore, the Navy maintains that Alternative 2 can meet water quality ARARs, with appropriate caveats on the permanence of this alternative. A telecon note with the Army Corps contact has been included in Appendix C of the Draft Final FS. The internet site addresses will be included in the references of the Final version of this FS. The Navy believes that adequate research has been conducted into the effectiveness of this alternative and no additional revisions will be required in response to this comment.

2. Cover Letter, 3rd paragraph

Comment:
"The revised FS should clearly state that a restoration wetland plan and environmental monitoring program will be developed after the remedial alternative is selected."

Response:
The final version of the FS will state the following under the description of Alternatives 2, 3 and 4 on pages 4-14, 4-29 and 4-42, respectively: " A wetland restoration plan and an environmental monitoring program would be developed during remedial design."

SPECIFIC COMMENTS (ATTACHMENT A)

3. p. ES-3

Comment:
The Executive Summary has not been revised as requested in EPA's January 7, 1997 letter. Please change "met to the extent possible" to "met".

Response:
The change will be made as requested.

4. p. 1-11, Section 1.2.8.2

Comment:
Although a sentence has been added to the text regarding the reclassification, other sentences in the paragraph were not revised and therefore, the text is contradictory. It is stated that Area A Downstream is within the northern portion of the site designated as "GA" and is within the "GB" designated portion of the site. The first sentence in Section 1.2.8.2 on page 1-11 should be changed to: "The groundwater beneath the northern portion of NSB-NLON had been previously classified by CTDEP as GA but is now classified as GB." This sentence could be followed by. "The groundwater at most portions of the NSB-NLON including Area A Downstream was reclassified in March 1997".

Response:
The changes will be made as requested. Also, a definition of GB classification will be included in the same paragraph.

5. Section 1.3.5

Comment:
The revised text and tables address the comment adequately. However, Table 1-13, Summary of Chemical Specific RME Risk Drivers, presented in the previous version of the FS has been

excluded. This table's presentation of the percentage of risk attributable to each chemical complements the discussion of chemical specific exceedances.

Response:
Table 1-13 was deleted because it focused only on non-carcinogenic risk drivers. Carcinogenic risk-drivers were not considered at that time because the cumulative incremental cancer risk was within the U.S. EPA target risk range of 1E-06 to 1E-06 and CTDEP requirements were not adequately addressed. However, subsequent to CTDEP's comments requiring that the ICR not exceed 1E-05, it has been decided to include carcinogenic risk drivers in the new version of this table, to provide a comprehensive summary of human health risks. It is expected that this new table will be more useful in complementing the discussion in Section 1.3.5.

6. p. 1-69, Section 1.3.7

Comment:
The reference of the Functions and Values document is not correct. Also, please include this reference in the reference section.

Response:
The typographical error in the reference will be corrected. Also, the reference will be cited in the reference section of the document.

7. p. 3-23, Section 3.4

Comment:
The numerical standards have been deleted without a replacement

Response:
The numerical standards were inadvertently deleted. They will be replaced as before, as noted below:

- 80 percent or greater removal of gross particulate matter
- 1.0 μg/L or less concentrations of each of the following: DDD, DDE and DDT.

8. p. 4-29, paragraph 3

Comment:
Please rewrite the last sentence to state, "The site would be restored to allow regrowth of wetland flora".

Response:
The sentence will be included as requested.

9. p. 4-29, paragraph 1, Section 4.2.3

Comment:
The reference to top soils should indicate that clean borrow fill material will have a similar organic content to the soils that are excavated. Not only will similar tree species be replanted but shrubs and emergent vegetation will also be replanted to restore the wetland areas.

Response:
The following sentences will be added to page 4-29 and page 4-42: "The top soil would be amended, if necessary, to have a similar organic content as that currently existing in the soil at the site."; and " Shrubs and vegetation would also be replanted to restore the wetland areas."