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U S NAVY RESPONSES TO MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL  
PROTECTION COMMENTS ON DRAFT FINAL FEASIBILITY STUDY REPORT BUILDING 81  
NAS SOUTH WEYMOUTH MA  
2/19/2013  
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**NAVY RESPONSES TO MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION  
(MASSDEP) COMMENTS DATED FEBRUARY 19, 2013  
DRAFT FINAL FEASIBILITY STUDY – BUILDING 81  
FORMER NAVAL AIR STATION (NAS) SOUTH WEYMOUTH, MASSACHUSETTS**

The Navy's responses to the MassDEP comments on the Building 81 Draft Final Feasibility Study (dated January 2013) are presented below. The MassDEP's comments are presented first (in italics) followed by the Navy's responses.

***Comment 1, Table 3-1:*** *The rationale for eliminating excavation from consideration (“...most of the mass is in the bedrock...”) is inconsistent with the analysis provided in Appendix C, which indicates that 62 percent of the sorbed mass resides in the overburden. This inconsistency should be resolved in the revised FS report.*

**Response:** As discussed at the March 11, 2013 BRAC Cleanup Team (BCT) meeting, the Appendix C contaminant mass calculations included in the draft final FS indicate that 60 percent of the PCE mass is in the overburden and 40 percent is in the bedrock. Table 2-5, Estimated Mass of COCs in Groundwater, has been revised to be consistent with Appendix C and to separately show the estimated overburden and bedrock mass for each grouping of PCE isoconcentration lines. As discussed at the April 8, 2013 BCT meeting this technology will remain eliminated in the remedial technologies screening in Section 3 of the FS.

The Table 3-1 comment explaining why soil excavation is eliminated for consideration has been revised as follows: “Eliminate. Limited excavation of saturated soil in the source area would reduce the contaminant mass in the overburden but would not be cost effective and would not reduce the contaminant mass in the bedrock. See further evaluation in Appendix H.”

***Comment 2, Appendix H:*** *The revised evaluation of soil excavation indicates that the technical effectiveness, implementability, and cost effectiveness of soil excavation are much greater than suggested in the draft report, casting doubt on the conclusion that excavation should not be included with the other technologies carried through the feasibility study:*

- *The revised evaluation indicates that approximately 60 percent (increased from 40 percent in draft report) of the source zone could be completely removed from the site upon completing an excavation that removed the overburden portion of the source zone. The removal efficiencies of the source zone technologies carried through the FS (MNA, In Situ Bioremediation, and ISCO) are relatively uncertain due to inherent geologic limitations on delivering fluids and would not be known for approximately 10 years.*

**Response:** The excavation area evaluated in Appendix H would not remove the entire mass of contaminants in the overburden. The small source area evaluated in the appendix, with a footprint of 20 feet by 20 feet and a depth of 18 feet (top of bedrock), would remove approximately 10 percent of the PCE mass in the overburden. This is equivalent to 6 percent of the estimated 6.3 pounds of the PCE mass in site groundwater.

- *Excavation is a proven technology that is readily implementable, and site conditions do not pose any unusual or non-routine impediments to implementation.*

**Response:** The Navy agrees that excavation is a proven technology but notes that implementation would be difficult to the 18 ft. bgs depth assumed in Appendix H since the depth to the water table is approximately 5 ft. bgs. As discussed at recent BCT meetings, source area excavation is not expected to either have an impact on the shallow and deep bedrock contamination that the Navy will still need to treat or to substantially accelerate completion of the remedy at Building 81.

- *The estimated cost for excavation appears to be reasonable considering the advantages (complete removal of overburden source zone in a short time) and the relative costs of the*

*technologies carried through the FS. For example, if an excavation component is added to the active alternatives presented in the FS, costs for the alternatives would increase by less than 50 percent. Eliminating overburden components of these alternatives would reduce costs further.*

**Response:** The estimated capital cost for the soil excavation evaluated in Appendix H should be compared to the capital cost rather than the NPW because the excavation expenditure would occur over a very short period of time. Thus, the \$1,500,000 capital cost estimate for soil excavation is comparable to the capital costs of Alternatives G-3 and G-4, which are \$1,200,000 and \$1,677,000, respectively. If soil excavation were included in either Alternative G-3 or G-4, the capital cost increase would be on the order of 100 percent.

- *Including an excavation component in the remedial alternatives may provide additional long-term time and cost savings by reducing the risk of remedy failure. For example, excavating the overburden source zone to complete overburden source remediation at the beginning of the remedial action would be more time and cost effective than implementing MNA, In Situ Bioremediation, or ISCO for a decade, finding that the implemented action did not adequately cleanup the overburden, and subsequently performing excavation as a follow-on remedial action.*

**Response:** As discussed at recent BCT meetings and summarized in the responses above, a soil excavation component will not be added to the remedial alternatives.

- *The FS report does not indicate that any of the existing injection wells would be used to implement the alternatives carried through the FS. Thus, there is no apparent reason to defer excavation in order to preserve the existing injection wells for future use (also wells that won't be used in the future should be abandoned to eliminate preferential pathways).*

**Response:** The number of injection wells and the possible use of existing injection wells needed for Alternatives G-3 and G-4 would be determined during the remedial design. However, soil excavation remains eliminated in the screening of remedial alternatives as discussed at recent BCT meetings and in the responses above.