

May 16, 1995

Mr. Mark Lewis  
Environmental Analyst 2  
Connecticut Department of  
Environmental Protection  
Bureau of Water Management - PERD  
79 Elm Street  
Hartford, CT 06106-5127

RE: Installation Restoration Program - Naval Submarine Base - New London  
Proposed Plan for Area A Landfill  
Response to Comments Dated March 30, 1995  
Atlantic Project No. 2072-01-03

Dear Mr. Lewis:

The U.S. Navy has prepared the following responses to the Connecticut Department of Environmental Protection (CTDEP) comments of March 30, 1995 regarding the draft Proposed Plan for the Area A Landfill at the Naval Submarine Base - New London (NSB-NLON).

Regarding your first general comment, the Navy shares your concerns for protecting groundwater quality and is committed to performing the necessary monitoring and further remedial actions necessary to achieve this goal. The Navy is fully aware that the actions proposed in the proposed plan are not final and are an interim source-control remedy.

Your second general comment pertains to the format of the proposed plan. When the plan was prepared, it was formatted to what EPA described as a strict format which should not be altered. Your concern for providing the public an understandable document is well founded. To address this concern, the Navy proposes to prepare a four-page fact sheet regarding the proposed plan, rather than reformatting the existing plan. This fact sheet will be mailed at the same time as the public notice of the proposed plan.

Attached to this letter are the Navy's responses to your specific comments.

If you have any questions regarding these responses, please feel free to contact Mark Evans at (610) 595-0567 or me.

Sincerely,

ATLANTIC ENVIRONMENTAL  
SERVICES, INC.



Barry L. Giroux, P.E.  
Project Manager

BLG:jmb  
Attachment

cc: Mark Evans - NORDIV Environmental  
Kymberlee Keckler - U.S. EPA  
Jean-Luc Glorieux - Halliburton NUS

Response to CTDEP Comments of March 30, 1995  
Draft Proposed Plan for Area A Landfill dated February 1995  
Naval Submarine Base - New London  
Groton, Connecticut

1. Page 2, Written Comments: There should be a “)” after the words “. . .comment period.”

*Response: The “)” will be added.*

2. Page 3, Site History: The third paragraph, which discusses the time frame when the landfill was used and the nature of wastes deposited, is confusing. The plan says the landfill opened before 1957, and after the base incinerator closed in 1963, the landfill received all non salvageable wastes. This implies that prior to 1963, the landfill received incinerator ash. Is this the case? Were other wastes, in addition to incinerator ash, deposited before 1963? The proposed plan does not state what type of waste is presumed to be predominantly present in the landfill. Is the landfill a municipal solid waste landfill, an industrial waste landfill, or a mixed waste landfill?

In the last paragraph, it should be noted that bituminous concrete is synonymous in everyday usage with “asphalt.” We suggest that you insert the word “asphalt” in parentheses following “bituminous concrete.”

*Response: The proposed plan will be revised to better define the types of waste disposed in the landfill, and the word “asphalt” will be used instead of “bituminous concrete.”*

3. Page 5, Remedial Investigations to Date: In the next to the last sentence, you may want to use a word such as “estimate” in place of “calculate.” “Calculate” implies a level of certainty not present in this case.

Focused Feasibility Study: In the last sentence, the acronym “FSS” should be replaced with “FFS.” This is repeated in various places throughout the document and requires a global change.

*Response: The suggested wording changes will be made.*

4. Page 6, ¶ 2, Focusing on Contaminated Soils: The term “operable unit” should be defined in the glossary. This term should also be used in a consistent manner throughout the document, and in a manner which is consistent with its use at other sites on the Subase. We suggest that each of the separate sites on the Subase (i.e., Area A Landfill, DRMO, Building 31, Goss Cove Landfill, etc.) should be considered separate Operable Units. The way in which operable units are defined has important legal implications under CERCLA.

*Response: The term “operable unit” will be added to the glossary and used consistently throughout the document.*

5. ¶ 4, Interim Source Control Remedies: This paragraph is very confusing, particularly to the lay reader. It does not clearly explain how this is a final remedial action for the soil and landfill contents, yet it is not final for Area A as a whole. It should state more explicitly that it is an interim source control remedy which focuses on contaminated soil hot spots and landfill contents. The final remedy will be required to comply with all ARARs and address all remaining issues, including groundwater contamination and management of migration.

Also, if more source control work is going to be required, how might that conflict with capping? What other source control measures might be required, beyond those currently proposed?

*Response: The plan will be revised to more explicitly define interim source control remedies.*

*Additional source control measures, if necessary, would most likely include a dewatering system such as groundwater withdrawal wells to lower the elevation of groundwater. Vertical barriers such as sheet piles could also be used in conjunction with the dewatering system to enhance its efficiency. Either of these systems could be installed through the cap; however, penetration points would have to be properly sealed to maintain the effectiveness of the cap. Such additional source control measures are compatible with the proposed cap. Adding this discussion which is contained in the FFS will confuse rather than enhance the understandability of the proposed plan. For this reason it will not be included in the revised proposed plan.*

6. Page 7, Soil Contamination at the Area A Landfill: In the paragraphs on specific soil contaminants, the first sentence of the paragraph on dioxin, the word “a” should be inserted between the words “at” and “low.” In the paragraph on lead, second sentence, the word “and” should be inserted between the words “mercury” and “nickel.”

In the second sentence of the paragraph on lead, the word “levels” is used redundantly.

*Response: The suggested wording changes will be made.*

7. Page 7, Proposed Cleanup Objectives: The text concerning remedial action objectives text explains what RAOs are designed to protect but does not explain clearly what they are. Also, RAOs are designed to protect not just human health, but also environmental receptors.

*Response: This section will clarify that RAOs will also address environmental receptors.*

8. Page 8, Target Remedial Levels: At the end of the fourth line, the word “at” should be replaced with the word “on.”

The second paragraph of this section should define the term “accessible” subsurface soils. The term is defined on page 10. However, it should be defined the first time it is used. It might also be helpful to include this term in the glossary. It should be noted

that on page 4 of the Department's December 1994 Proposal for the Connecticut Cleanup Standard Regulations, inaccessible soils are defined as those soils which are "(1) more than four feet below grade, and where practical, separated from the soil above by a textile or other barrier, or (2) beneath a building."

The final section on this page should contain a definition of surface soils and subsurface soils.

*Response: The suggested wording change will be made. Regarding the terms accessible soil, surface soil, and subsurface soil, these terms will not be used in the revised proposed plan as the preferred alternative has been changed as described in the Navy's letter to you of May 11, 1995.*

9. Page 10, the Navy's Preferred Alternative, Section 1: Under the Department's proposed Soil Cleanup Standards, the cleanup criterion for PCBs in soil will be 2 ppm for both direct contact risks and risks posed to groundwater by soil contaminants. This section of the Proposed Plan indicates that all identified surface soil hot spots containing PCBs in excess of 10 ppm will be excavated and removed to a hazardous waste landfill. This is acceptable to the Department, providing that all soils containing PCBs in excess of 2 ppm are consolidated beneath the cap. The proposed plan also indicates that between the depths of 1 foot and 10 feet, all soils containing PCBs in excess of 50 ppm would be removed. The Department would prefer that the 10 ppm standard be used for soils below a depth of 1 foot, as well as for surface soils.

*Response: This point is now moot as the preferred alternative has been changed as described in the Navy's letter of May 11, 1995.*

10. Page 10, The Navy's Preferred Alternative, Section 2: Lines 6 and 7 state that "the cap would be engineered to allow continuation of current Area A Landfill operations. . ." This statement implies that the area is still being used as a landfill. Also, the last paragraph of this section discusses the proposed groundwater interception trench. The proposed plan previously emphasized that this is a soil remedy only; further explanation of the purpose of the groundwater interception trench should be provided prior to this paragraph. The proposed plan should also note that, if necessary, the groundwater collected by the interception trench will be treated to comply with applicable discharge requirements.

The proposed plan should include schematic diagrams of the cap design, including a cross section and a plan view depicting the limits of the cap and landfill waste. A figure similar to Figure 4-2 of the Revised Draft Focused Feasibility Study would accomplish this purpose. This would help to reduce the confusion caused by the fact that several different versions of the cap design have been proposed over the past year, and by the uncertainty of whether or not a "temporary" construction road will be built over the landfill. Although detailed design drawings were submitted on May 2, 1994, and the Design Analysis/Basis of Design and Calculations report was submitted on June 28, 1994, we understand that these plans are no longer current.

The Department is concerned that the landfill cap must include a sufficient thickness of cover material to prevent frost damage to the underlying impermeable layer. Previous plans, including the detailed plans dated May 1994, and schematic diagrams included in the Focused Feasibility Study and presented at our February 16, 1995 meeting, have not included a sufficiently thick layer of cover material. In addition, the Department wishes to ensure that the final cover is designed to accommodate any subsidence which may occur. The geotechnical properties of the final cover should also be examined to ensure that the cap can accommodate its own weight, and the additional surcharge which would be added by proposed activities such as salt storage, deployed parking, crane weight storage, and the temporary construction road.

We understand that the detailed plans presented at the March 9, 1995 meeting represent the most current cover design. These plans appeared to include a greater thickness of cover material than previous plans. In addition, during the discussion, Jim Briggs of North Div. stated that according to the manufacturer, the proposed HDPE geomembrane/geosynthetic clay layer is not subject to freeze/thaw damage. However, the Department is unable to evaluate the proposed design as a copy of these plans has not yet been forwarded to us for review. Please submit a copy of these plans as soon as possible.

The Proposed Plan indicates that the entire 13-acre landfill would be capped. However, during subsequent discussions, the Navy has drawn a distinction between the western portion of the landfill, which is known to contain landfill wastes, and the eastern portion. The Navy has stated that the eastern portion appears to be clean fill, and does not appear to contain landfill wastes. For this reason, the Navy suggested it would not be necessary to include the eastern portion beneath the RCRA Subtitle C Cap. U.S. EPA has stated that the entire landfill should be considered one unit, which should be covered entirely with a RCRA Subtitle C Cap. If the Navy wishes to close the eastern portion to a less stringent standard, they would bear a substantial burden of proof that landfill wastes are not present in this area, and that this would not otherwise compromise soil and groundwater quality. The Department agrees with EPA's position.

Previous plans have indicated that existing buildings would remain in place on the landfill. This is a source of concern because of the technical difficulties in joining the foundation of the building with the surrounding liner. Although the roof and floor of the building would prevent direct contact with landfill contents and would greatly reduce infiltration of precipitation, they would not comply with the standards of RCRA Subtitle C. Cracks in the floor would present a significant potential route for entry of methane into buildings. In general, it is the Department's policy that buildings shall not be allowed to remain on closed landfills, and that landfills shall be capped in their entirety. There have been ongoing problems with methane migration into buildings on top of the Old Southington Landfill National Priorities List Site in Southington, Connecticut. The Old Southington Landfill is a former municipal solid waste landfill which is to be closed using the capping presumptive remedy. The remaining buildings at Old Southington Landfill will be removed from the site.

*Response: The issue regarding landfill use will be clarified and a detail of the cap will be provided. The other issues you raise are all legitimate concerns; however, their technical depth exceeds the scope of a proposed plan. The Navy will address all of the concerns you raised during design of the final cap and would like to further discuss these issues with you.*

11. Page 12, Risks Associated With This Alternative: In the fourth line of the second paragraph, the word “would” should be inserted between the words “they” and “become inaccessible.”

*Response: The suggested wording change will be made.*

12. Page 13, Alternative 4: No Action: In the paragraph on risks associated with this alternative, the proposed plan states that this alternative “allows for further migration of contaminated soils.” This should be stated differently.

*Response: This sentence will be reworded.*

13. Page 14, The Navy’s Rationale for Selecting the Proposed Alternative: In the second paragraph, the preferred alternative is described as “much more cost effective than the other alternatives considered.” This statement is misleading, as the preferred alternative is more cost effective than only one of the other three alternatives described in the proposed plan.

*Response: The section will indicate that the preferred alternative is “more” effective than the other alternatives, except for the No Action alternative.*

14. Page 14, Glossary: Contaminant — A contaminant is not necessarily something that has an adverse effect. The dictionary defines a contaminant as an impurity, with no implication of adverse effect.

*Response: Contaminant will be redefined as “any physical, chemical, biological, or radiological substance or matter that, at certain levels, could have an adverse affect on human health or the environment.”*

15. Page 15, Glossary: PAHs — This definition should note that PAHs are one type of semivolatile organic compound.

*Response: This change will be made to the PAH definition.*

16. Page 16, Glossary: TBCs — TBCs are not necessarily numerical values. They may also be policies, criteria, guidance, or standards which have not been formally adopted as laws or regulations, or are proposed as laws or regulations but not yet in effect.

Volatile Organic Compounds — The word “ground” should be replaced with the word “group.”

Response: *The definition of TBC will be revised to read as follows: "to-b-considered standards are based on any state or federal guidance that may be useful in evaluating site chemical concentrations or developing a cleanup remedy. Although final decisions include a consideration of TBCs, more weight is given to ARARs and health and environmental risk assessments," and the word "ground" will be replaced with "group."*