

January 31, 1995

Ms. Kimberlee Keckler, RPM  
U.S. Environmental Protection Agency - Region I  
Waste Management Division - HAN-CAN1  
J.F.K. Federal Building  
Boston, MA 02203-2211

RE: Revised Draft Focused Feasibility Study (FFS)  
for the Area A Landfill  
Naval Submarine Base - New London (NSB-NLON)  
Atlantic Project No.: 2072-01-02

Dear Ms. Keckler:

This letter is to summarize the Navy's responses to EPA-written comments of December 22, 1994. The responses reflect discussions during a meeting held in your office on January 4, 1995. This meeting was attended by representatives of the EPA, Navy and CTDEP.

The establishment of remedial action objectives in the FFS will be clarified. Also, the FFS will emphasize the fact that the proposed remedial action is an interim source control measure. Atlantic, when revising the FFS, will make sure that the text can be understood by a non-technical reviewer, especially regarding the establishment of remedial action objectives.

### *Ecological Effects at the Area A Wetland*

Once it is determined that filling or disturbance of the wetlands is necessary to implement a remedy at this site, the Navy will start discussions with the EPA to establish the necessary mitigation measures prior to initiation of any remedial actions. If the samples recently collected at the landfill/wetland interface indicate that the wetlands are not contaminated the landfill cap will be redesigned to eliminate any filling of the wetland. If this is the case wetland mitigation will not be necessary.

The FFS report section regarding ecological risk will be revised so that it only briefly discusses these risks in more of a qualitative manner, and so that it only discusses risks at the landfill itself and the adjoining wetland.

If it is determined that disturbance of the wetland is necessary, the evaluation of alternatives will discuss how each alternative complies with State and federal ARARs regarding wetlands, however actual mitigation measures will not be selected in the FFS. The evaluation of alternatives presently discusses how each alternative reduces erosion and infiltration which are the two mechanisms contributing to ecological risk. The connection between these mechanisms and ecological risks will be described.

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*Comments to be Addressed During Remedial Design*

The draft FFS does propose a RCRA Subtitle C cap. It is the Navy's understanding that the only outstanding issue regarding the cap is protection from frost damage. The Navy has previously supplied the EPA with technical information regarding this issue and is awaiting a response from EPA whether or not they agree that the cap as proposed will not be damaged by frost.

The Navy agrees that further investigation of the eastern portion of the landfill is justified to conclusively determine if hazardous wastes have been disposed in this area. As we discussed during the meeting and in subsequent telephone conversations, the site history, based on a review of aerial photographs and all soil testing performed to date, indicate that hazardous wastes have not been disposed in this area. Regardless, the Navy agrees to revise the FFS to show the cap extending over the entire eastern limits of the landfill. The Navy plans to further investigate the eastern end of the landfill to verify if hazardous waste have been disposed. If they have not, the cap limits will be revised.

As we discussed, the drain trench is really no more than a means of collecting shallow groundwater that is not contaminated to prevent it from contacting landfill materials. Its elevation is high enough that it is not possible that it will collect leachate from the landfill. Based on discussions during our meeting there was a general consensus that the drain trench will not intercept contaminants from the landfill.

The Navy agrees that dewatering the dredge spoils has the potential to cause undesirable amounts of settlement, which could damage a cap. Dewatering to lower groundwater below the level of the dredge spoils is not believed to be a potential alternative because there are no wastes below this elevation and because the dredge spoils seem to be acting as a semi-confining layer. As a result, lowering the groundwater below the depth of the dredge spoils is not necessary to contain this source of contamination.

The design analysis will not be included as an appendix to the draft final FFS. Rather each section will be briefly summarized in the appropriate section of the FFS.

The following are the Navy's responses to specific comments made in Attachment A to your letter of December 22, 1994. These responses reflect our discussions during the January 4, 1995 meeting.

<u>Page</u>	<u>Comment</u>
<i>p. 9, 7th bullet</i>	The suggested wording change will be made and the date that all parties signed the FFA will be provided.
<i>p. 10, ¶4</i>	The two suggested explanations regarding the Thames River will be added to the FFS.
<i>p. 13, ¶1</i>	The FFS will indicate that all wastes generated include radioactive wastes and medical wastes from the hospital, industrial wastes from ship repair and maintenance facilities, commercial/residential wastes from housing and office facilities, and bulky wastes from construction activities. There are no records indicating the volume of any type of waste disposed in the landfill.
<i>p. 13, ¶2</i>	These are terms common to solid waste management facility operators and will be defined in this section of the report so that this section can be understood by a wider audience.
<i>p. 13, ¶3</i>	There are no written records regarding storage of materials on the concrete pad. All available information which is based on interviews with Subase personnel has been provided in the FFS.
<i>p. 31, ¶1</i>	An explanation of a slug displacement test will be provided. The slug tests were specified in the Phase I RI Work Plan and are a common method used to estimate hydraulic conductivity. The tests involve removing a slug of water from, or adding a slug or solid mass of material to, the monitoring well. The recovery of the water level to its original elevation is then measured in relation to time. This data is then used to determine the hydraulic conductivity of the aquifer materials.
<i>p. 30 and 32</i>	The elevations and date of measurement will be added to the figures showing groundwater contours. As we are trying to focus this study on soils/landfill contents, and as the Phase II RI which includes an area wide map will soon be complete, it was decided that an area wide map would not be necessary in this report.

<u>Page</u>	<u>Comment</u>
<i>p. 33, ¶7 and top of p. 35</i>	The significance of the buried objects will be provided. These objects should not affect settlement unless they contain large voids or liquids. Any liquids contained also represent a source of contamination which should be removed prior to placement of the cap. As we discussed this issue will be addressed prior to commencement of remedial actions in the design. The design plans and specifications for remedial actions will provide for test pitting in these areas and removal of any observed materials which could either constitute a significant source of contamination or collapse in the future causing settlement of the cap.
<i>p. 35, ¶7</i>	The suggested wording change will be made.
<i>p. 35, ¶8</i>	A definition of the lower explosive limit will be provided and the purpose of performing the methane gas survey will be provided.
<i>p. 36</i>	This discrepancy will be corrected. The table in the appendix is correct.
<i>p. 39</i>	This section will be revised to separately discuss surface and subsurface contamination; potential impacts the surficial soils may have on downgradient receptors will be provided.
<i>p. 39, ¶2</i>	The suggested wording change will be made.
<i>p. 39</i>	A table providing the requested information will be provided. The text will also discuss the contaminants detected in light of the standards in the table.
<i>p. 41</i>	The explanations described in the comment will be added to this section of the report.
<i>p. 42, Supplemental Sample Results, ¶2</i>	The statement regarding laboratory artifacts will be deleted.
<i>p. 43</i>	This figure will be rechecked and corrected. There is an error in this figure at location 2LMW9S/D.
<i>p. 48, ¶2 and p. 57, ¶4</i>	Levels based on the highest value detected during the April sampling mission will be used rather than the value presented. As we discussed, these values are acceptable to EPA as representative of background.

<u>Page</u>	<u>Comment</u>
<i>p. 48, ¶1</i>	The requested explanation will be provided. Basically the levels detected are below screening values that have been developed to protect human health and the environment.
<i>p. 48, ¶3</i>	This issue has been responded to the Navy's previous response on page 2.
<i>p. 49, ¶2</i>	The suggested wording change will be made.
<i>p. 49, ¶3</i>	The explanation described will be provided in this section.
<i>p. 55, last sentence</i>	The suggested wording change will be made.
<i>p. 59 1st bullet</i>	The suggested wording change will be made.
<i>p. 59, ¶4, 14th sentence</i>	The suggested wording change will be made.
<i>p. 60</i>	This section will include a discussion of the cap's effectiveness in protecting groundwater and will refer to the new tables. Whether or not the cap will result in a significant reduction in contaminant concentrations in groundwater cannot be determined at this time.
<i>p. 60, last sentence</i>	The suggested wording change will be made.
<i>p. 61, ¶1</i>	An explanation regarding the forthcoming Thames River ecological assessment and its inclusion in the Phase II RI will be added to the FFS.
<i>p. 61, Surface Water and Sediments, ¶2</i>	The text will be revised to indicate that the referenced pond is west of the Upper Pond.
<i>p. 62</i>	The section number reference will be corrected to 1.8.6
<i>p. 63, ¶1</i>	Elevated levels for the most part refer to levels detected above background. This explanation will be added.
<i>p. 63, Section 1.8.4 p. 76, Section 2.2.1.1</i>	A qualitative discussion regarding risks to a child trespasser will be added to this section.
<i>p. 64, ¶5</i>	The text will be revised to reflect current EPA guidance as stated in EPA's comment.

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<i>p. 64, ¶6</i>	The last sentence will be deleted and a discussion of the cap's effectiveness regarding minimizing contaminant migration to groundwater will be provided.
<i>p. 65 and p. 76, ¶3</i>	Actual risk values as presented in the Phase I RI will be added and the text will be revised to indicate that a cap is also required because hazardous wastes are present in the landfill.
<i>p. 67, Soil Invertebrates</i>	The acronym and reference will be corrected.
<i>p. 70, ¶2</i>	The sentence stating that contaminants are ubiquitous will be deleted.
<i>p. 72, ¶2</i>	The missing references will be added to the reference section.
<i>p. 73, top of page</i>	The referenced sentence will be deleted and this section will be revised to remove references to fish.
<i>p. 73, Summary</i>	The summary will be revised to only discuss ecological risks at the landfill.
<i>p. 76, last ¶ and table on p. 78</i>	This section will be clarified. The 10 ppm standard applies to the 0 to 1 foot range and the 50 ppm standard applies to the 1 to 10 foot range.
<i>p. 77, Section 2.2.1.2, last ¶</i>	The Navy agrees that a lower cleanup standard for PCB may be required to reduce ecological risks for soils that will not be under the landfill cover.
<i>p. 79</i>	The 50 ppm standard is a regulation and is an ARAR applicable to soils after they have been excavated. The 50 ppm standard determines the type of disposal required; however, it is not a cleanup standard.
<i>p. 84, Table 2-3, Executive Order 11990</i>	The Navy agrees that, depending on the results of the sampling at the landfill/wetland interface, filling or disturbance of the wetlands may be required. If filling or disturbance is required this table will be revised to indicate that mitigation is required.
<i>p. 91</i>	The explanation in EPA's comment will be added to this section.
<i>p. 92, last ¶</i>	The Navy agrees. The first sentence will be deleted and "remediation" will be changed to "partial excavation".

<u>Page</u>	<u>Comment</u>
<i>p. 122</i>	The term "deed restrictions" will be changed in the text and figures to "institutional controls" and the referenced sentence will be deleted.
<i>p. 147, ¶3</i>	The term "deed restrictions" will be changed in the text and figures to "institutional controls" and the referenced sentence will be deleted.
<i>p. 148</i>	This figure does accurately portray the relationship between the drain trench and the landfill. As we discussed, the drain trench is the small pipe south of the larger storm drain trench. The design of this collection trench is being re-evaluated and may be revised to consist of a single open channel for collection of surface water and shallow overburden groundwater. The storm drain trench, if not properly designed and constructed, could intercept landfill leachate; however, this pipe is solid and will be designed not to intercept landfill leachate. Presently it is proposed to have an impervious liner surround this pipe trench and to install concrete collars to prevent any migration in the pipe trench.
<i>p. 163, ¶2</i>	The term "deed restrictions" will be changed in the text and figures to "institutional controls" and the referenced sentence will be deleted.
<i>p. 165, ¶3</i>	The term "deed restrictions" will be changed in the text and figures to "institutional controls" and the referenced sentence will be deleted.
<i>p. 177, ¶2</i>	The term "deed restrictions" will be changed in the text and figures to "institutional controls" and the referenced sentence will be deleted.
<i>p. 181, ¶1</i>	The term "deed restrictions" will be changed in the text and figures to "institutional controls" and the referenced sentence will be deleted.
<i>p. 181, ¶4</i>	The term "deed restrictions" will be changed in the text and figures to "institutional controls" and the referenced sentence will be deleted.
<i>p. 192</i>	The term "deed restrictions" will be changed in the text and figures to "institutional controls" and the referenced sentence will be deleted.

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<u>Page</u>	<u>Comment</u>
<i>p. 192, Section 4.6.6, ¶1</i>	Procedures to control fugitive dusts from trucks will be described in this section. Procedures will consist of adding a dust suppressant to any very dry materials and providing a tarp over all transport vehicle containers. Routes and schedules will be detailed in the design documents for the selected alternative. The design documents will be made available for public review and comment. This issue and the availability of these documents will be explained at the public meeting to be held for this remedial action.
<i>p. 200, last ¶</i>	The word "much" will be changed to "somewhat".
<i>Appendix A</i>	A key will be provided to this appendix to define the data qualifiers.
<i>Appendices</i>	The draft final FFS will include the landfill/wetland interface sample results as an appendix.

Should you have any questions or desire to discuss any of these responses, please feel free to contact Mark Evans or me. Once we have an indication that you agree with the responses, the draft final FFS will be finalized and submitted for your review and approval.

Sincerely,

ATLANTIC ENVIRONMENTAL  
SERVICES, INC.



Barry Giroux, P.E.  
Project Manager

BG:sjg

cc: ~~Mark Evans~~ - NORDIV  
Mark Lewis - CTDEP  
Jean-Luc Glorieux - HNUS

**ATLANTIC**