

**STATE OF CONNECTICUT**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**



**BUREAU OF WATER MANAGEMENT**  
**PERMITTING, ENFORCEMENT & REMEDIATION DIVISION**  
**FEDERAL REMEDIATION PROGRAM**

March 30, 1995

Mr. Mark Evans  
U.S. Department of the Navy  
Northern Division, Naval Facilities Engineering Command, Code 1823  
10 Industrial Way, Mail Stop 82  
Lester, PA 19113-2090

Re: State Comments Regarding Draft Proposed Plan for the Area A Landfill, Installation Restoration Program, Naval Submarine Base-New London, February 1995

Dear Mr. Evans:

Staff of the Permitting, Enforcement, and Remediation Division of the Bureau of Water Management have reviewed the draft Proposed Plan, Area A Landfill, Installation Restoration Program, dated February 1995. This document was submitted for our review by the U.S. Department of the Navy, Northern Division, Naval Engineering Facilities Command (North Div). It was received by the Department on January 25, 1995. Our comments regarding this document are listed below.

**General Comments**

The Department supports the preferred alternative outlined in the proposed plan. We feel that capping of the landfill and excavation of PCB contaminated soil hot spots should be accomplished as soon as possible to reduce human health risks posed by direct contact with site contaminants, and to reduce the rate of leachate generation. Although this interim source control remedy is not aimed at ground water remediation, the Department remains committed to the long term goal of restoring ground water quality. For this reason, continued and expanded monitoring of ground water quality will be required. This will allow the effectiveness of the cap in reducing leachate generation rates to be assessed, and will provide base line data useful in selecting the final remedy for ground water.

We feel that the general approach taken in the Record of Decision for Old Southington Landfill National Priorities List Site, which was issued in September 1994, would be appropriate at the Area A Landfill site. Old Southington Landfill is a municipal waste landfill with several discrete cells containing industrial waste. The September 1994 ROD for Old Southington Landfill includes capping and hot spot excavation as an interim remedy to address source control. The

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final remedy will address ground water contamination and management of migration. The Record of Decision includes provisions for ground water monitoring.

One of the main purposes of the Proposed Plan is to explain in a clear and understandable manner to non technically oriented members of the general public the remedy that is being proposed for the Area A Landfill. As it is written, the Proposed Plan is confusing in many places, and fails to define many technical terms and legal and administrative jargon which would be unfamiliar to the average reader. Although it is necessary to use technical terms and jargon, they should be used sparingly in a document of this type, and all such terms should be defined in the text, or included in the glossary. The proposed plan as written assumes a reasonably detailed level of knowledge of technical issues and of the legal and administrative structure of the CERCLA program. The proposed plan should be rewritten so it can be more easily understood by its intended audience. We suggest that the Proposed Plan be reviewed for clarity by a group of non-technically oriented people.

US EPA New England has recently begun using a clearer and more concise format for Proposed Plans. This includes the use of a matrix which shows how well each of the remedial alternatives complies with the nine criteria used to evaluate remedial alternatives. Each of the alternatives are listed on one axis, while the nine criteria are listed on the other axis. Various symbols are used to denote how well a particular alternative complies with a specific criteria. We suggest that the Navy consider using EPA' s new format for this proposed plan, and in the future. We understand that EPA is planning to release in April a proposed plan for the Raymark Site in Stratford, Connecticut. This proposed plan will use the new format. When this plan is released to the public, I would be happy to forward a copy to you.

**Specific Comments**

**Page 2 Written Comments**

There should be a “)” after the words “...comment period”.

**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

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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".

**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.

**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 through out the document, and in a manner which is consistent with its use at other sites on the sub base. 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.

**¶ 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 ground water 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?

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**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.

**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.

**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, in accessible 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.

**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 ground water 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

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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.

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 ground water 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/

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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. US 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 ground water 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.

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".

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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.

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.

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.

Page 15 Glossary

PAHs:

This definition should note that PAHs are one type of semi volatile organic compound.

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.

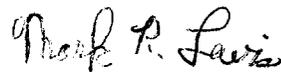
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Volatile Organic Compounds

The word "ground" should be replaced with the word "group".

If you have any questions regarding this letter, please contact me at (203) 424-3768.

Sincerely,



Mark R. Lewis  
Environmental Analyst  
Federal Remediation Program  
Permitting, Enforcement & Remediation Division  
Bureau of Water Management

cc: Ms. Kymberlee Keckler, US EPA Region 1, Federal Facilities Section  
Mr. Andy Stackpole, NSBNL Environmental Department  
Ms. Sheila Gleason, CTDEP, Water Management Bureau, Federal Remediation Program