



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



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

June 12, 2000

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 *Record of Decision Site 20- Area A Weapons Center, Naval Submarine Base New London, Groton, Connecticut*

Dear Mr. Evans:

I have received and reviewed the draft *Record of Decision Site 20- Area A Weapons Center, Naval Submarine Base New London, Groton, Connecticut*. The draft Record of Decision was dated May 2000. EA Engineering, Science and Technology of Newburgh, NY prepared the document on behalf of the department of the Navy. I received this document via e- mail on May 19, 2000.

**General Comments**

The State supports the proposed remedy. The State is pleased that the Navy has chosen to meet the residential direct exposure criteria as opposed to the industrial/ commercial direct exposure criteria. The base is currently an industrial facility, and is likely to remain so. However, it is possible that the Area A Weapons Center site could be used for residential purposes in the future if the base closes. The base is only required to meet the less stringent industrial/ commercial direct exposure criteria. The Navy's decision to meet the residential direct exposure criteria eliminates concerns about possible future residents, and eliminates the need to enact environmental land use restrictions or other institutional controls. This decision also eliminates the need to conduct on- going monitoring and five- year reviews. The State is pleased that the Navy has selected the remedy that is both most cost- effective and most protective of human- health and the environment.

The draft Record of Decision does not completely identify clearly the criteria specified in the Remediation Standard regulations for several constituents of concern. Most importantly, Table 2-5 does not list the 0.5 mg/ liter GB pollutant mobility criterion for arsenic. This criterion applies in a GB area regardless of the use of the property. The direct exposure criteria apply to soils within 15 feet of the ground surface, regardless of the depth of the water table. The pollutant mobility criterion for arsenic should be listed in this table, in addition to the 9.62 mg/kg calculated risk- based direct exposure criterion listed in the table. The 9.62 mg/kg risk- based criterion is acceptable because it is more stringent than the State's residential direct exposure criterion. Samples used to demonstrate compliance with the direct exposure criteria for metals must be analyzed by mass analysis (results reported in mg/kg), while those used to demonstrate compliance with the pollutant mobility criteria for metals must be analyzed by TCLP or SPLP leachate analysis (results reported in mg/l).

The table incorrectly lists the cleanup level for arsenic in soil under the industrial land use scenario. The Industrial/ Commercial Direct Exposure Criterion for arsenic is 10 mg/kg. This value is the same as the Residential Direct Exposure Criterion because this concentration is representative of naturally occurring arsenic in soils in Connecticut. The direct exposure criteria in Appendix A of the Regulations have been

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adjusted upward to account for this factor.

The Navy proposes, for several contaminants in sediments in drainage ditches, cleanup criteria less stringent than those proposed for the same contaminants in soil. The material in the drainage ditches does not meet the definition of sediment specified in section 22a-133k-1(a)(58) of the Remediation Standard Regulations. This material is considered to be soil and must be cleaned up in compliance with the direct exposure and pollutant mobility criteria for soil.

Part 1, Section IV of the Proposed Plan provides for implementing institutional controls to prevent residential re- use, monitoring, and five- year reviews. This would occur "if results of confirmatory sampling indicated COCs are still present above cleanup goals." It is unclear whether any additional excavation would occur after an initial round of excavation. This provision is unacceptable and should be deleted. The agencies specifically selected excavation of all soils with contaminants exceeding residential direct exposure criteria over other remedies that would leave contamination in place. The agencies made this decision because the selected remedy is more protective of human health and the environment than remedies that would leave some contamination in place, and it has a lower long- term cost than less protective remedies. I understand, based on my telephone conversation with you on May 31, 2000, that you intend to delete this bullet point.

I have also provided a revised copy of the Record of Decision, which incorporates my comments and suggestions. I have also provided a redline- strike out version that compares the revised version versus the version you e- mailed to me on May 19.

**Specific Comments**

1. List of Acronyms

Please include UCL (upper confidence limit) in this list.

2. Part 1 Section IV Description of the Selected Remedy

Please delete the last bullet point.

In the last sentence of the last paragraph, please delete "... and will be addressed ...."

3. Part 2 Section III Community Participation

Section A. Public Outreach Effort

The first sentence should state that public concern and involvement have been minimal at NSB NLON.

The first sentence of the first dashed item under the first bullet point should read: "Indate an Administrative Record which includes all documents relevant to the NSB NLON investigations was established.

4. Part 2 Section IV Scope and Role of Response Action

A. Problems Encountered

In the second paragraph, and throughout the document, please use a less confusing term than "risk- based

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10<sup>-5</sup> Preliminary Remediation Goals.” An appropriate term might be “Preliminary Remediation Goals based on an excess lifetime cancer risk of one in 100,000.

Throughout this section, minimizing the use of acronyms would make the document more readable.

5. Part 2 Section IV Scope and Role of Response Action

B. Planned Sequence of Action

1. Soil and Sediment Contamination

In the first bullet point, please delete “.... media specific .... ”

In the third bullet point, the Navy should include provisions for analyzing a minimum of 3 soil samples for waste characterization. Since the Navy estimates that the total volume of material to be excavated is 199 cubic yards, collecting one sample per 100 cubic yards would not by itself provide an adequate number of samples. If the total amount of soil and sediment excavated is 300 cubic yards or greater, then the proposal to collect one characterization sample per 100 cubic yards of excavated material is reasonable.

6. Part 2 Section V. Summary of Site Characteristics E. Conceptual Site Model

In the first sentence, please refer the reader to figure 2-5.

7. Part 2 Section V. Summary of Site Characteristics F. Principal and Low Level Threat Wastes

1. Soil Contamination, and 2. Sediment Contamination

Please delete the reference in the third bullet point in each of these sections, to EPA’s acceptable cancer risk range of 10<sup>-6</sup> to 10<sup>-4</sup>. The remedy selected for Site 20 will address all soils and sediments with contaminants at concentrations greater than the more stringent of either an excess life time cancer risk of 10<sup>-5</sup> or the soil criteria of the Remediation Standard Regulations. The pollutant mobility criteria and the direct exposure criteria are based on an excess life time cancer risk of 10<sup>-6</sup>. This means that for practical purposes, the Remediation Standard Regulation criteria would be more stringent than criteria base on a 10<sup>-5</sup> excess lifetime cancer risk.

It is not appropriate to state in the last bullet point under soil contamination that the soil contamination has had limited impact on ground water. Please change this sentence to state that the impact of soil contamination is being addressed separately as part of the base wide ground water operable unit.

In the following two sections, regarding Surface water Contamination and Ground- water Contamination, please change the numbering. These should be Sections 3 and 4 of Part II, section V. F. of the ROD.

8. Part 2 Section VII. Summary of Site Risks A. Human Health Risk Assessment

In the first sentence, “.... regional and federal EPA guidance ....” should be “.... regional and national EPA guidance.

In the third paragraph, second sentence, “particulate” should be “particulates”.

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In the sixth paragraph, the Department's acceptable incremental cancer risk level is  $10^{-6}$  for individual chemical constituents, and  $10^{-5}$  for the collective incremental risk posed by multiple contaminants. Please clarify this in the text.

In the seventh paragraph, the last sentence should refer to COPCs with a Hazard Quotient, rather than Hazard Index, greater than one. Hazard Quotients are assigned to individual constituents, while a Hazard Index describes the potential for non- carcinogenic health effects as a result of exposure to multiple substances. In the fourth sentence of this paragraph, "chemicals" should be singular.

9. Part 2 Section VII. Summary of Site Risks A. Human Health Risk Assessment

Human Health Risk Assessment Results 1. Soil

The first sentence of the second bullet point should read as follows: "Cumulative cancer risks estimated for full- time employees were ...."

10. Part 2 Section VII. Summary of Site Risks A. Human Health Risk Assessment

Human Health Risk Assessment Results 2. Sediment

Delete "results of the" from the beginning of the first sentence.

The second bullet point should read "The cumulative cancer risk for full- time employees was ...."

In the last sentence of the second paragraph, please add the following at the end of the sentence: "concentration of a contaminant in all samples".

*Risk Assessment Uncertainties*

Why are naturally occurring inorganics a source of uncertainty? The Navy is not responsible for remediating contaminants at concentrations less than the background concentration for soil. Please delete or clarify this statement.

11. Part 2 Section VIII. Remedial Action Objectives

The meaning of the last sentence in this paragraph is unclear. This sentence could be more clearly written as: "The remedial action objectives selected for Site 20 were found to be the most practical based on current and reasonably anticipated exposure routes and future land use considerations".

12. Part 2 Section IX.. Development and Screening of Alternatives- Alternative 1. No Action

Please explain in the text why a "No Action" alternative with no capital cost and no annual O&M cost has a 30- year net present worth cost of \$142,500.

13. Part 2 Section IX.. Development and Screening of Alternatives- Alternative 2. Institutional Controls and Monitoring

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1. Applicable or Relevant and Appropriate Requirements

Under State Action Specific ARARs, the last bullet point should refer to the "State Water Pollution Control Regulations and General Permit Statute (RCSA §22a-430-1 through 8 and 22a-430b and CGS §22a-430-b).

14. Part 2 Section IX.. Development and Screening of Alternatives- Alternative 2. Institutional Controls and Monitoring

2. Five- Year Review

In the first bullet point, the time period is 1 year, rather than 1 years.

15. Part 2 Section IX.. Development and Screening of Alternatives- Alternative 2. Institutional Controls and Monitoring

A. Alternative 3a

1. Applicable or Relevant and Appropriate Requirements

Please add the Coastal Management Act (CGS §22a-90 to 112) to the list of location specific ARARs. This change should also be made for Alternative 3b, and in Sections XI and XII.

Please correct the citation for the Connecticut Air Pollution Control Regulations. The complete citation should be RCSA §22a-174- 1- to 29. This change should also be made for Alternative 3b and in Section XI.

16. Part 2 Section XII Statutory Determinations

Why will the selected remedy be consistent with the NCP "to the extent practicable", rather than fully consistent?

17. Figure 2-2 Base Map

To be consistent with the text, Building 524 should be included within the site boundaries. This comment applies also to Figures 2-3, 2-4, and 2-6.

18. Figure 2-4 Shallow Overburden Surface Map

This map would be more properly titled "Shallow Overburden Water Table Surface Map".

19. Table 2-5 Cleanup Levels for Constituents of Concern

This table does not list the 0.5 mg/ liter GB pollutant mobility criterion for arsenic. This criterion applies to soil in a GB area regardless of the land use.

The table incorrectly lists the cleanup level for arsenic in soil under the industrial land use scenario. The Industrial/ Commercial Direct Exposure Criterion for arsenic is 10 mg/kg. This value is the same as the Residential Direct Exposure Criterion. The direct exposure criteria in Appendix A of the Regulations have been adjusted upward to reflect the naturally occurring concentration of arsenic that can be found in soil in

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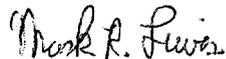
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Connecticut.

In the portion of the table for soil, under industrial use, please list the industrial/ commercial direct exposure criteria of 1 mg/kg for dibenz(a,h) anthracene and benzo(a)pyrene. Although not listed in Appendix A of the Regulations, these criteria were included in the list of Approved Criteria for Additional Polluting Substances that was released by the Department on April 30, 1999.

If you have any questions regarding this letter, please contact me at (860) 424-3768.

Sincerely,



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

cc: Ms. Kimberlee Keckler, US Environmental Protection Agency, 1 Congress St., Suite 1100 (HBT), Boston, MA 02114-2023

Ms. Darlene Ward, Naval Submarine Base New London, Environmental Department, Environmental Department, Building 166, Groton, CT 06349-5100

Mr. Charles E. Mcleod, Jr., P.E., EA Engineering, Science and Technology, 3 Washington Center, Newburgh, NY 12550