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LETTER REGARDING SEACOAST ANTI-POLLUTION LEAGUE REVIEW COMMENTS ON  
NOVEMBER 2000 DRAFT PRELIMINARY REMEDIATION GOALS FOR OPERABLE UNIT 4  
(OU 4) NSY PORTSMOUTH ME  
4/11/2001  
LEPAGE ENVIRONMENTAL SERVICES

# Lepage Environmental Services, Inc.

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April 11, 2001

Ms. Marty Raymond  
Portsmouth Naval Shipyard  
Code 106.3R, Building 44  
Portsmouth, New Hampshire 03804-5000

Subject: Review of Responses to Comments on the November 2000 Draft *Preliminary Remediation Goals for Operable Unit 4*

Dear Ms. Raymond:

We are transmitting comments on behalf of the Seacoast Anti-Pollution League (SAPL) concerning the Navy's March 9, 2001, responses to our comments on the Draft *Preliminary Remediation Goals for Operable Unit 4*. Most of the Navy's responses to our January 25, 2001, comments, and the information provided at the April 3, 2001, technical meeting, satisfied our concerns. We have repeated our original comments below where we still have unanswered questions or issues.

**Original Comment 1. General Comment.** We found the document very difficult to read and understand. While we understand the overall process for developing Preliminary Remediation Goals (PRGs), we were unable to follow the actual PRG development and we cannot say at this time that the PRG values presented are acceptable. To do so, we would have to recreate the work performed, which time and budget do not allow. Therefore, our comments below do not reflect sufficient understanding to say if the report and its conclusions are accurate and appropriate. We are also relying on comments dated January 23, 2001, that were submitted by the Maine Department of Environmental Protection (MEDEP), and, in the interest of efficiency, our comments below do not repeat most of the issues and questions already covered by MEDEP. We are particularly concerned with the interpretation and application of OU4-wide average PRGs (MEDEP comments 1 and 21).

**Navy Response:** The Navy's response focuses on having discussions at a PRG technical meeting to address comments regarding the PRG process.

**Additional Comment:** Reviewing the PRG development process at the April 3, 2001, technical meeting was helpful. Regarding the difficulty in reading and understanding the document, the Navy and the EPA acknowledged at the technical meeting that the readability of the report needed to be improved so that the regulatory agencies' technical experts could express confidence in the PRG development. Example calculations should be included in the revisions. The Executive Summary should also be rewritten so that the public can understand the process and results.

**Original Comment 2. Page ES-1, PRG BACKGROUND.** The text states that the PRG development approach uses data to “...*establish sediment-based concentrations that represent thresholds below which adverse effects on ecological and human receptors are not expected to occur.*” As MEDEP points out in their comment number 1, the PRGs do not account for exposure via ingestion of contaminants associated with sediment particles. It is appropriate to check at this time if there are contaminants of concern (CoCs) for which the ingestion pathway is significant.

We also find the statement quoted above to be at odds with passages later in the document. For example, page 3 in Appendix A states that the objective of PRG development is “...*to determine sediment-based concentrations that represent thresholds below which adverse effects on sediment-associated aquatic biota (i.e., benthic organisms) are not expected to be ecologically significant.*” Does “ecologically significant” mean there will be no effects? If so, the text on page 3 and elsewhere should be revised. If not, the text on page ES-1 and elsewhere should be revised.

**Navy Response:** The first portion of the response refers to the response to MEDEP’s comment number 1. The second portion reads “Following a conservative approach, it is assumed that all adverse effects are ecologically significant hence the meanings are the same. This clarification will be provided on page 3 in Appendix A “...*to determine sediment-based concentrations that represent thresholds below which adverse effects on sediment-associated aquatic biota (i.e., benthic organisms) are not expected to be ecologically important to maintenance of the population.*”

**Additional Comment:** The revised text quoted in the second part of the response suggests that there are adverse effects that occur that are not ecologically important. This is not the same as saying that all adverse effects are ecologically significant. We suggest that the passage in Appendix A be revised to read the same as on page ES-1. We also note that the MEDEP cited data in their April 10, 2001, comment letter that demonstrates that ingestion can be an important pathway for enhanced uptake of contaminants by organisms. This information should be considered with the on-going data collection and in the application of PRGs to decisions and remedial measures in the future.

**Original Comment 3. Page ES-2, PRG BACKGROUND.** The basic assumption of the PRG development approach is that concentrations of chemicals in sediment, porewater, surface water, and biota are in equilibrium. Does the currently-available data support this assumption? How will the on-going monitoring data be evaluated to check this assumption? What action will be taken if the monitoring data or other information indicates this assumption is incorrect? What is the “sanity check” mentioned later in the paragraph?

**Navy Response:** The Navy states that the equilibrium assumption made is widely applied in sediment toxicology, and that the agreement between site-specific and literature values, and between calculated concentrations causing effects and water quality criteria as supporting the assumption. Therefore, the Navy does not foresee the need to continually validate the assumption.

**Additional Comment:** We disagree with the Navy's position that the monitoring data collected in the future does not need to be checked to verify the validity of the equilibrium assumption. While we do not believe it is necessary to check the assumption continually, the data collected in the future should be checked. Otherwise, inappropriate PRG values could be applied in making decisions and implementing remedial measures.

**Original Comment 4. Page ES-2, PRG Derivation.** This paragraph covers the assumption regarding selection and remediation of limiting CoCs, those CoCs that are responsible for much of the baseline risk. By remediating limiting CoCs, collocated CoCs will be remediated to levels that will not have adverse effects. Does the data support this assumption? We also reiterate MEDEP's comment number 11, that focusing on a limiting CoC does not address potential cumulative toxicity.

**Navy Response:** The Navy's response refers to the response to MEDEP comment number 13a.

**Additional Comment:** Our question regarding does the data support the assumption of limiting COCs does not appear to be answered directly in the response to MEDEP comment 13a.

**Original Comment 6. Page ES-3, PRG Implementation.** The final paragraph states that the PRGs are consistent with the findings of the risk assessment. What does that mean? (See comment 15, below.)

**Navy Response:** The statement means that the areas (i.e., Sullivan Point, Back Channel, and Dry Docks) identified in the EERA as having intermediate risks associated with them are the same areas where sediment concentrations were found to be above PRGs.

**Additional Comment:** This is an important clarification that should be added to the text of the document. We also note that, while dioxin is included in the on-going offshore monitoring, it was not evaluated as part of the EERA.

**Original Comment 10. Table ES-2.** Why do the recommended PRGs in this table differ from those in Table 2.2-6 in Appendix A? Comment 9, above, also applies to Table ES-2. We had commented in our June 18, 1998, letter on the PRG development approach about the need to consider health advisories pertaining to fish consumption as part of the process. How do the recommended PRGs compare with fish consumption advisory thresholds?

**Navy Response:** The Navy's response notes that the PRGs are sediment-based concentrations and are thus not directly comparable to tissue-based thresholds. It also states that it was determined that PRGs protective of human health were not necessary as part of the OU4 interim remedy, and that PRGs to address human receptors are not necessary based on the results of the risk assessments.

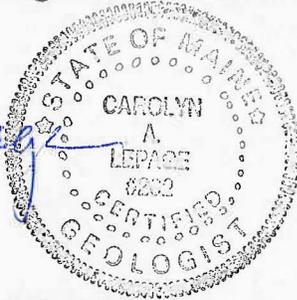
**Additional Comment:** With regard to the final statement in the Navy's response, the risk assessments did not evaluate dioxin, as dioxin has only recently been tested in various sampling programs around the Shipyard. In addition, as was noted at the April 3, 2001, technical meeting, the State of Maine recently issued updated Fish Tissue Action Levels. How do these Action Levels compare with the PRGs? The basic assumption of the PRG process is that concentrations of chemicals in sediment, porewater, surface water and biota are in equilibrium. Based on this assumption, can the concentrations of chemicals in tissue be estimated?

If you have any questions regarding the comments above, please give me a call at 207-777-1049.

Sincerely,



Carolyn A. Lepage, C.G.  
President



cc: Jim Horrigan, Seacoast Anti-Pollution League  
Iver McLeod, Department of Environmental Protection  
Meghan Cassidy, Environmental Protection Agency  
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