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LETTER REGARDING SEACOAST ANTI-POLLUTION LEAGUE REVIEW COMMENTS ON
NOVEMBER 2000 PRELIMINARY REMEDIATION GOALS FOR OPERABLE UNIT 4 (OU 4)
NSY PORTSMOUTH ME
1/25/2001
LEPAGE ENVIRONMENTAL SERVICES

Lepage Environmental Services, Inc.

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January 25, 2001

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

Subject: Review of November 2000 *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 November 2000 *Preliminary Remediation Goals for Operable Unit 4*. Our comments are as follows:

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).

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.

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?

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.

5. Page ES-3, PRG Implementation. The description of Step 7 at the top of page ES-3 doesn't seem to "Evaluate practicality of candidate PRG for effective risk reduction.", as stated in Table ES-1. We do not understand the use of "practicality" in this situation.

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.)

7. Page ES-3, DATA USED IN PRG DEVELOPMENT FOR OU4. The text should state why Round 2 data was used for PRG development, and how PRGs will be evaluated and possibly modified based on additional monitoring data in the future.

8. Page ES-4, DATA USED IN PRG DEVELOPMENT FOR OU4. A couple of problems encountered during the Round 2 sampling and analysis are presented in the third and fourth bullets. Sufficient pore water could not be extracted from sediment sample OU4-SD-M14-300B, so surface water from the back channel was added to the sample, and then extracted from the sample as porewater after 24 hours. Is 24 hours sufficient for concentrations in the water and sediment to equilibrate? Where was the surface water sample collected in relation to the sediment sample? What effect might this have on the results? The initial volume of sediment collected at the reference stations was insufficient, so resampling was conducted two weeks later. What effect, if any, did the delay in sampling have on the results?

9. Page ES-4, DATA USED IN PRG DEVELOPMENT FOR OU4. The paragraph beneath the bullets states that pesticides have not been linked to an onshore IRP site at the current time and so are not identified as COCs for OU4. We agree with the MEDEP's position (MEDEP comment number 31) that a PRG for DDT must be developed.

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?

11. Appendix A, Page 1, Section 1.0 BACKGROUND AND OBJECTIVES. The conflicting statements in the last full paragraph on the page regarding the use/non-use of the proposed Sediment Quality Criteria (SQC) should be revised. Also, are the SQCs intended to protect 95 percent of all individuals present, or 95 percent of species present regardless of the number of individuals present.

12. Appendix A, Page 2, Section 2.0 PRG DERIVATION. In addition to the assumption regarding co-located CoCs (see our comment number 4, above), the PRG development process also assumes that the "...CoCs selected as [for?] PRGs adequately represent risks posed by all site-related CoCs, e.g., there does not exist novel chemicals at high concentrations that have not yet been detected..." As we noted in our September 2, 1999, comments on this aspect of the PRG process description in the *Draft Final Interim Offshore Monitoring Plan for OU4*, dioxin, for example, had not been an analyte in previous offshore sampling and we questioned how detection of dioxin would affect PRG development. How was dioxin considered in the PRG development? If "novel" chemicals are detected, how will they be addressed via PRGs?

13. Appendix A, Page 11, Section 2.2 Aquatic PRG Derivation. The last paragraph on the page requires additional explanation about how narcosis theory supports the first sentence in the paragraph.

14. Appendix A, Pages 17-19, Section 3.3.1 Baseline PRG Evaluation. It would be helpful to have a table summarizing the information presented in this section.

15. Appendix A, Page 21, Section 4.0 UNCERTAINTY ANALYSIS. The second sentence in the section states that "*Areas of PRG exceedence also appear to correspond well with areas of observed risk such that the implementation of baseline PRG values (i.e., as recommended PRGs) would appear to be reasonable from a risk-based perspective.*" This statement appears to be at odds with the passage in the previous paragraph that states the PRGs did not address a number of intermediate risk locations around PNS. Additional explanation is required.

16. Appendix A, Page 21, Section 4.0 UNCERTAINTY ANALYSIS. The second paragraph opens with the statement that the process leading to the calculated baseline PRGs is largely quantitative and devoid of professional judgement. We find that statement misleading as it implies that deriving a PRG is not much more than a standardized "plug and chug" exercise. Instead, designing the PRG development process required professional judgement all along the way,

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particularly with regard to formulating the underlying assumptions. These underlying assumptions contribute significantly to the uncertainties both with the resulting PRG values and with how those PRGs should be applied in making decisions about risk and remediation. The text should be revised appropriately.

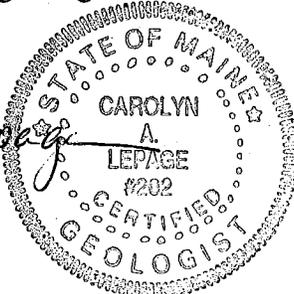
17. Appendix A, Tables 2.2-2 - A-3-1.3c. It is unclear how the data in the tables in the second half of Appendix A were used, and what information (and why) is included or dropped. Perhaps a sample calculation would help the reader track the process.

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: Johanna Lyons, Seacoast Anti-Pollution League
Iver McLeod, Department of Environmental Protection
Meghan Cassidy, Environmental Protection Agency
David R. Brown, Sc.D.