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LETTER REGARDING SEACOAST ANTI-POLLUTION LEAGUE REVIEW COMMENTS ON DRAFT REVISED OPERABLE UNIT 3 (OU 3) RISK ASSESSMENT NSY PORTSMOUTH ME
4/18/2000
LEPAGE ENVIRONMENTAL SERVICES

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April 18, 2000

Johanna Lyons
Seacoast Anti-Pollution League
P. O. Box 1136
Portsmouth, New Hampshire 03802

Subject: Review of March 17, 2000, Responses to Comments on the *Draft Revised OU3 Risk Assessment*

Dear Ms. Lyons:

As you requested, we are transmitting comments on the Navy's March 17, 2000, responses to our February 14, 2000, comments regarding the January 1999 *Draft Revised OU3 Risk Assessment* to the Seacoast Anti-Pollution League (SAPL). As we noted in previous comment letters, most of the Navy's responses to our original February 25, 1999, comments on the *OU3 Risk Assessment* were satisfactory. However, based on the most recent Navy responses, several of SAPL's concerns have not been resolved. For the following comments remaining, we have retained the numbering of our original February 1999 comments and repeated our February 2000 comment.

Comments by Lepage Environmental Services, Inc.

Original General Comment 2. The original February 1999 and additional August 1999 comment focused on the need to link on-shore and offshore contamination and risks in making remedial action decisions at OU3. "Compartmentalizing" the risks into on-shore and off-shore does not give an adequate picture of total risk. As a result, the feasibility study would potentially underestimate risks and the measures necessary to adequately address these risks. Any remedial measure implemented may prove inadequate for the same reason. We also took issue with the part of the Navy's response that stated that studies conducted to date indicate the chemical concentrations noted in the offshore media can not be differentiated from the rest of the estuary. This statement, as presented, is at odds with the findings of the *Draft Final Revised Estuarine Ecological Risk Assessment* (which linked contamination from the Shipyard to risks to offshore ecological receptors) and the results of seep and sediment monitoring (which demonstrate that contaminants are migrating from on-shore to off-shore environments.

The Navy's December 1999 Additional Response states that studies to date indicate that human health risks due to ingestion of seafood cannot be differentiated between the Shipyard and other sources, and that the OU3 Risk Assessment includes all media the Navy can associate directly with OU3. As was pointed out in the January 2000 Restoration Advisory Board meeting, a recent paper by Hoven and others ("Isotope ratios of $^{206}Pb/^{207}Pb$ in eelgrass, *Zostera marina*, indicate sources of Pb in an estuary", 1999, Marine Environmental Research, p.377-387) demonstrates that the source on a contaminant, in this instance lead, can be identified as Shipyard-related. Clearly, more effort is needed to identify contaminants emanating from the Shipyard so that risks can be addressed adequately and appropriately by future remedial actions. Does the Navy intend to conduct additional evaluations along the lines of the Hoven investigation?

Navy Response: In addition to the responses presented for SAPL Original General Comment No. 2 (dated 8/7/99), please refer to the response to SAPL Comment 1 on the draft OU3 FS (letter dated 2/17/00). The revised OU3 Risk Assessment discusses human health risks for onshore media. The offshore ecological and human health risks are discussed in the Revised Draft Final Estuarine Ecological Risk Assessment (NCCOSC, April 1997) and in the Final Human Health Risk Assessment Report for Offshore Media (McLaren/Hart, May 1994), respectively. The link between onshore and offshore contamination and risks for making remedial decisions is discussed as part of the OU3 FS.

The paper prepared by Hoven and others will be considered when reviewing the Data Quality Objectives of future investigations under the Navy's Installation Restoration Program if the interim offshore monitoring indicates the offshore areas around PNS require additional study. The Navy will also submit this procedure as a possible research project within the Navy. However, it should be noted that the study conducted of eelgrass does not provide information on risks.

Additional Comment: As we noted in our March 27, 2000, Additional Comment to the Navy's response to SAPL's Original Comment No. 1 on the *Draft OU3 Feasibility Study*, there are still a number of issues regarding the link between onshore and offshore contamination and risks that require additional discussion. These include issues relating to facility background locations, State of Maine risk values, State of Maine Hazardous Waste Management Rules performance standards, and groundwater (seep) impacts and management.

With regard to the last sentence in the Navy's response, we do understand that the Hoven paper does not present information on risks. However, it does present is a potential means of determining the source(s) of offshore contamination. As we pointed out in our February 2000 comment, the Navy has previously stated that, based on studies to date, the human health risks due to ingestion of seafood cannot be differentiated between the Shipyard and other sources. However, if offshore contaminants can be linked to a specific source, then appropriate remedial actions can be developed and implemented.

Original Comment 16: Page 3-4, Section 3.3, Summary of Background Groundwater Datasets. Our original and additional comments centered on the appropriateness of the background locations selected, given the nature and level of contaminants detected at several "background" locations. The Navy hasn't demonstrated that the activities that caused the contamination at background locations have had similar effects at the various "Sites" (Sites 8, 9, and 11), or that "Site"-related contamination can be differentiated from so-called background contamination. We do not believe these are appropriate background samples, especially if risks associated with a "Site" would be discounted in overall risk calculations and in risk-management decisions because of contamination found at non-Site locations. We also raised the possibility of considering background locations off-island, or defining "Site" to mean the whole Shipyard, although doing so presents another set of potential problems regarding data comparison. At this time, the selection of locations for "background" data has not been agreed upon.

Navy Response: Please refer to the responses presented for SAPL Original General Comment No. 16 (dated 8/7/99). The Navy agrees that there are uncertainties attached to any background dataset regardless of the approach used to develop the dataset (e.g., on-site background sampling locations versus off-site background sampling locations). The Navy also agrees that the uncertainties attached to any element of an environmental investigation, including the uncertainty regarding the background dataset, should be considered in "risk-management decision". The Navy believes that the uncertainty attached to the PNS background datasets is not a significant source of uncertainty for decision making for OU3 because, as noted previously, very few chemicals were deleted as COPCs based on background comparison.

Additional Comment: Just because relatively few COPCs were eliminated from consideration based on the draft facility background data doesn't necessarily mean that the background data is appropriate. The Navy has stated that it wants to determine site-related risks due to CERCLA releases (see Navy response to Dr. Brown's Original Comment 1, below). However, the Navy has yet to demonstrate that site-related contamination can be differentiated from naturally occurring or other non-site-related levels of chemicals. Therefore, it is not clear why risks associated with a site should be discounted because of contamination found at non-site locations. Furthermore, the issue of proper selection and characterization of background sampling locations has implications for other sites at the Shipyard, not just OU3.

Comments by Dr. David R. Brown

Original Comment 1: The Navy explanation for use background levels to eliminate contaminates of concern is clear but unresponsive. This is, in our interpretation, inconsistent with USEPA Region 1 guidance that background should not be used to eliminate chemicals of potential concern. We see a problem with respect to air and groundwater pathways.

Response 7 Dec, 1999 OU3 etc to MEDEP comments 5,14,15,and 20 and SAPL comment 16 and Brown's comment 2, as well as the 7 Dec. 1999 Facility Background responses to EPA comment 7, MEDEP comment and SAPL comments 3 and 5, shows a firm commitment of the Navy to strict implementation of the guidance exclusive of the health and environmental concerns raised by the public.

As the documents are currently presented it is not possible to determine which, if any, chemicals have been omitted, or could have been omitted from the COCs because of elevated background. The point is whether these compounds would have on health or environmental grounds been considered a problem were the background concentrations selected differently. As the documents are now written one can not resolve that point. The documents should contain a clear statement that there remain unresolved health and environmental concerns that are not part of the Installation Restoration Program.

It is not reasonable to expect SAPL to identify these omissions given the information available to them. It is also not reasonable to expect SAPL to accept these documents as assurance that the issues have been considered and resolved.

Navy Response: The use of background to eliminate chemicals of potential concern is consistent with the Technical Memorandum for the revised OU3 risk assessment, with USEPA Guidance, and with USEPA comments on the revised OU3 risk assessment. The document has been prepared to assist the Navy in making CERCLA related decisions for the OU3. The health and environmental concerns raised by SAPL are outside the scope of the revised OU3 risk assessment. The Navy's position is that it is appropriate to eliminate <u>potential</u> contaminants of concern based on facility background levels to determine site related risk due to CERCLA releases.

Please see response to SAPL Comment No. 2 ("16. Page 3-4, Section 3.3, Summary of Background Groundwater Datasets) dated February 14, 2000. Also, please note that the Appendix B tables to the OU3 Risk Assessment present, on a media specific basis, the rationale for the selection of a chemical as a chemical of potential concern (COPC). Those chemicals not selected as COPCs based on background comparisons are clearly identified. Also, please see response to SAPL Comment No. 3 dated August 8, 1999.

Additional Comment: Please see our Additional Comment for Original Comment 16, above. Our concern is not with the concept of using background data when evaluating risks posed by site-related contamination. We disagree with the elimination of chemicals of potential concern based on the current draft facility background development. In addition, the text of the document should summarize the information presented in Appendix B, so the reader can more easily find the rationale for COPC selection and elimination.

Original Comment 4. In review of these responses and the risk assessments it appears that certain areas are excluded from the human health risk assessment. This included the total risk from different pathways and the lead risks that are not directly occurring in an operable unit. Is this correct or are there other areas excluded from the human health risk assessment? From the perspective of the public overall there appears to be gaps in the assessment of the risks. Again this is a limitation of the process that should be clearly stated in the documents.

Navy Response: There are no areas excluded from the Revised Risk Assessment for OU3 that are associated with OU3. Please refer to the response to SAPL Comment No. 1 ("2. General Comment) dated February 14, 2000 and to the response to Dr. Brown's Comment 2 dated February 14, 2000 regarding human receptors potentially consuming offshore aquatic life. Please refer to Dr. Brown's Comment No. 3 dated February 14, 2000 regarding lead risks.

Additional Comment: To clarify our original comment, as we have discussed in comments on this and other documents, we are concerned that all the risks, including the total risks, presented by contamination associated with OU3 have not been evaluated in a cohesive manner. For example, the elimination of COPCs based on suspect background data has the effect of excluding parameters from risk evaluation. Without linking the on-shore and off-shore contaminants, pathways, and associated risks, the overall risk posed by OU3 contamination is not clearly identified.

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

Sincerely,

Carolyn A. Lepage

STATE OF MAINE CAROLYN A. LEPAGE 1022 CERTIFIED GEOLOGIST

Carolyn A. Lepage, C.G.
President

Enc.

cc: Iver McLeod, Department of Environmental Protection
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