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LETTER AND COMMENTS ON BEHALF OF SEACOAST ANTI POLLUTION LEAGUE ON U S NAVY RESPONSES REGARDING REVISED OPERABLE UNIT 2 (OU 2) RISK ASSESSMENT
NSY PORTSMOUTH ME
8/12/2000
LEPAGE ENVIRONMENTAL SERVICES

Lepage Environmental Services, Inc.

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August 12, 2000

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

Subject: Review of the Responses to Comments on the March 2000 *Revised OU2 Risk Assessment*

Dear Ms. Lyons:

We are transmitting comments to the Seacoast Anti-Pollution League (SAPL) on the Navy's July 28, 2000, responses to our June 15, 2000, comments on the March 2000 *Revised OU2 Risk Assessment*. Dr. David Brown's comments on the responses are also enclosed. Most of the responses are satisfactory. We have retained the numbering of our original comments from our June 15th letter to you for the following additional comments where we still have questions or concerns.

SAPL Original Comment 2. Page ES-1, EXECUTIVE SUMMARY. The third paragraph should be amended to clarify that this risk assessment focuses on onshore areas, that human health risks in offshore areas were evaluated in the May 1994 *Final Human Health Risk Assessment Report for Off-shore Media*, and that potential offshore impacts are being monitored as part of the on-going OU4 monitoring program. This information should also be added to the discussion of the scope of this document on page 1-1.

Additional Comment: The Navy's response states that the *Revised OU2 Risk Assessment* focuses on onshore human health risks and does not address ecological risks or potential offshore impacts from OU2. The response goes on to list the reports where that information is presented. The point of our Original Comment 2 is that the *Revised OU2 Risk Assessment* should state clearly up-front, so there is no confusion on the part of the reader, what is and is not covered in this report, and that the reader should be provided with the reference citations for other reports documenting potential OU2-related risks not covered in the *Revised OU2 Risk Assessment*. The public is concerned with potential ecological and human health risks associated with contamination at OU2, particularly given the erosion of highly-contaminated soil along the OU2 shoreline that was discovered last summer. The information in the Navy's response to our Original Comment 2 would be appropriate to add to the *Revised OU2 Risk Assessment* to help address those concerns.

SAPL Original Comment 4. Page ES-5, Site 29. As we stated in our comment letter dated May 10, 2000 regarding the responses to comments on the *Draft Final Field Investigation Report for Site 10 and Site 29*, we do not believe that the vertical and horizontal extent of contamination at Site 29 have been adequately defined. The range of contaminant concentrations, particularly maximum values, also needs to be refined. Without additional investigation to adequately characterize the site, it is likely that risks are being underestimated at Site 29.

Additional Comment: The Navy's response states that additional investigation is not needed to characterize the risks at OU2, and that additional sampling to refine the vertical and horizontal extent of contamination is unlikely to significantly impact the "representative" concentrations already detected. As we have noted in previous comments on other documents, we are particularly concerned that the extent of ash at Site 29 has not been determined. Therefore, without additional site characterization, there is no reason to accept that the risks at Site 29 are not likely to be underestimated.

SAPL Original Comment 5. Page ES-5, Site 29. What is the basis for the statement near the bottom of the page that risk estimates for military residents located in the general vicinity of Site 29 are anticipated not to exceed the USEPA target risk range? What about State of Maine risk guideline?

Additional Comment: The Navy's response states that the State of Maine risk guidelines were exceeded for the future hypothetical military child resident cancer risk, but not for the future hypothetical military adult resident cancer risk. This information should be added to the text.

SAPL Original Comment 6. Page ES-6, Site 29. The risk assessment document contains numerous references to and comparisons with facility background data. As we have stated in a number of previous comment letters (see our April 26, 2000 letter regarding the *Draft Final Facility Background Development*), the issue of what constitutes representative background conditions for the Shipyard as a whole and for individual sites is still unresolved and we continue to have concerns with the interpretation and application of background values. We do not believe that the Navy is able to differentiate "background" contamination from site-related contamination. As the MEDEP points out in their comment letter dated May 15, 2000, "facility background" should not be considered the same as "local anthropogenic background" contaminant conditions without confirmatory data, particularly for substances such as DDT that are not naturally-occurring. In our November 19, 1999, letter on the *Technical Memorandum for the Human Health Risk Assessment Protocol for OU2*, we commented on the Navy's proposal to eliminate inorganic compounds on the basis of background levels, even though the most recent USEPA guidance states that background levels should not be used to eliminate any COPC from the evaluation process. As the USEPA stated in their May 9, 2000, comment letter, if chemicals are

eliminated based on background studies, the total site risk will be underestimated by the risk assessment, and that uncertainty associated with the background study should be discussed.

Additional Comment: According to the Navy's response, no chemicals were eliminated from the OU2 risk assessment solely on the basis of background. This statement should be included in a number of appropriate locations in the *Revised OU2 Risk Assessment*, particularly because the issue of background sampling locations is still not resolved.

SAPL Original Comment 7. Page ES-7, DRMO Impact Area. The final paragraph on the page summarizes risks associated with the DRMO Impact Area. Do the risks presented consider the additional potential risks should the soils, including subsurface soils, at the DRMO be disturbed?

Additional Comment: The Navy's response focuses on current soils conditions at the DRMO Impact Area. Our concern is with the risks posed by soils (both surface and subsurface soils) at the DRMO should they be disturbed by construction or other activities at some point in the future. Was the potential risk associated with disturbance of DRMO soils figured into the risks at the DRMO Impact Area?

SAPL Original Comment 8. Page 2-5, Section 2.2.1 Site 6 - DRMO. The last paragraph in the section should be revised to include information regarding the sampling the Navy conducted in 1999 after discovering the soil erosion problem along the DRMO shoreline. The reference for the 1999 sampling results should also be added to the reference list. In addition, the text should state that potential offshore impacts have been evaluated as part of previous risk assessment efforts (with the appropriate documents cited) and will continue be evaluated as part of the on-going OU4 monitoring.

Additional Comment: We appreciate that the Navy will add some text regarding the 1999 sampling at the DRMO and will include the sampling results in Appendix A. However, the Navy will not make a revision to discuss the offshore (OU4) risk assessment or the OU4 monitoring. We did not mean to suggest that the text be revised to include a discussion of offshore monitoring data or risk evaluation. Instead we were looking for a simple statement to be added to provide the reader with the appropriate references for those discussions. We have commented previously on the link between on-shore and offshore contamination and risk. Land-based contamination has made its way from OU2 into the offshore environment. Therefore, we think it is important that the reader be directed to the appropriate documents where offshore data and risks are presented.

SAPL Original Comment 12. Page 2-11, Section 2.251 <u>Previous Human Health Risk Assessment Summary</u>. The discussion of risks posed by dioxins/furans at Site 29 should state how risks compared with State of Maine risk guidelines. In addition, the DRMO is located immediately adjacent to the Teepee Incinerator (Site 29), and the DRMO Impact Area is located nearby. Have the potential risks posed by windblown deposition from Site 29 been evaluated at the other two sites?

Additional Comment: The Navy will add a statement regarding dioxin/furans cancer risk estimates exceeding State of Maine risk guidelines. The Navy's response also points out that dioxin samples were not collected at Site 6 or the DRMO Impact Area, but that dioxin concentrations in surface soils at Site 29 are an order of magnitude lower that the EPA's residential action level. There are a couple of issues regarding this portion of the Navy's response. As we have pointed out in this and other comment letters, we are concerned that the extent of contamination at Site 29, including the magnitude of concentrations, requires additional investigation. In addition, soils at Site 29 that are currently buried were at one time located at the ground surface, and could very easily have been blown onto adjacent and nearby areas.

SAPL Original Comment 17. Page 3-9, Section 3.3.1 <u>DRMO Impact Area - 0 to 1 Foot bgs</u>. As the Maine Department of Environmental Protection points out in their comment number 6 (dated 5/15/00), the extent of contamination by DDT and its metabolites DDE and DDD should be described for the individual compounds and collectively, as the sum of concentrations.

Additional Comment: The Navy's response refers to the June 22, 2000 response to MEDEP Specific Comment No. 6, which requests that the MEDEP provide information on how the summation of DDT, DDE, and DDD concentrations would be used to define nature and extent. We look forward to the resolution of this issue.

SAPL Original Comment 21. Pages 5-25 through 5-34, Section 5.1.5. <u>Uncertainty Analysis</u>. We appreciate thte discussion of the uncertainties affecting the OU2 risk assessment. As we pointed out in comment 4, above, we believe additional investigation is necessary to adequately characterize Site 29. In the meantime, the uncertainty regarding the extent of contamination at Site 29 and the resulting impact on the assessment of site risks should be added to the discussion in this section. This comment also applies to Section 5.3.4, which discusses the uncertainties specific to the risk assessment for Site 29.

Additional Comment: The Navy's response to this comment refers to the response to SAPL comment number 4. Please refer to our Additional Comments on SAPL Original Comments 4 and 12, above.

SAPL Original Comment 22. Page 5-28, Section 5.1.5.1 Uncertainty in Selection of COPCs. We agree with the USEPA's comment number 14 (dated 5/9/00) that if chemicals are eliminated based on background data, then the risk assessment will underestimate the total site risk. Discussion of the uncertainty associated with the background study and the application of background data should be added to the report.

Additional Comment: Please see our Additional Comment on SAPL Original Comment number 6, above.

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

Sincerely,

Carolyn A. Lepage

Carolyn A. Lepage, C.G.
President

Enc.
cc: Iver McLeod, Department of Environmental Protection
Meghan Cassidy, Environmental Protection Agency
David Brown, Sc.D.
Marty Raymond, Portsmouth Naval Shipyard

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August 7, 2000

To: Carolyn A. Lepage, C.G.
Lepage Environmental Services, Inc.

From: David R. Brown ScD.

Subject: Comments on the Navy's July 28, 2000 Response to SAPL Comments on the Revised OU2 Risk Assessment, Portsmouth Naval Shipyard, Kittery, Maine, March 2000

Dear Ms. Lepage:

The comments in my May 28th letter noted a change in the risk profile and a general finding of limited low level risks. The omission of mercury from the revised RA was noted.

The Navy's July 28, 2000 response indicates that a different approach is used to evaluate mercury and that mercury release from OU2 is not a problem using this different methodology. It is not clear whether mercury is still found in the air at the site.

Observations on the "Responses to specific comments";

Comment 1. The objective of the first part of the question is to determine whether different time scales of exposure are used because this is a military base. Tours of duty are generally limited, e.g. 4 years. Although the answer indicated that CERCLA guidance is used and it is not unique to PNS, it seems that time scales are shorter and based on tours of duty. Such changes in the durations of exposures assume a linearity between the times of exposure and risk that is not justified by the risk analysis methodology. Changing the duration of exposure reduces the calculated risk by a 1/3 to 1/10.

Note the mercury comment above.

Comment 3. With respect to lead exposures, does the risk calculated indicate that there is no need for lead to be a consideration in the remediation plan?

Comment 5. What is the risk management decision for Site 29 with respect to dioxins and furans? The RA indicates that current understanding of is that exposures are below guidance risk levels. Will more work be done on this risk? If so, why and how?

Comment 6. The risk values calculated for this group of materials nearly reach levels of concern. Is this because shortened durations of exposures are used? Is the answer given as a basis to justify the lower risks?

Comment 7. It appears that the toxicological profiles form the basis for interpretation of the risk in the revised risk assessment.

Comment 10. My concern is that the risk assessment is not in a form that can be understood by the readers in the community. The ability of the community to understand these documents is important because in the future these documents may constitute the basis for decisions by the local officials. I have reread the Executive Summary as The Navy's response suggested. Additionally I looked at the suggested changes. It is my opinion that an educated reader who is not involved with this project can draw unjustified conclusions from the Executive Summary as it is currently written. At no point is an overall conclusion provided. Failure to provide a document that can be understood by readers who are potentially part of the affected community is not acceptable. A clear concise summary is needed as outlined in comment 10.

General: The issues of background levels and risk and aggregate exposures continues and appears to be unresolved. SAPL should use this information to place the process in context.

As stated previously, this risk assessment provides detailed analysis of the risks for different pathways and for different exposure groups. It is an improvement over the 1994 Risk Assessment in that a broader group of hazards are evaluated. The report should assist in the evaluation and determination of the remedial alternatives.

However the responses to our comments in some cases indicates limited concern for the community awareness and involvement in the process. In other cases it appears that even when guidance levels are exceeded an effort is made to dismiss the "yellow flags" by use of characterizations such as 'minor or minimal' to describe the exceedances.

Even if there were an "iron clad" system of estimating human health risks at hazardous waste sites it would not be justified to minimize indications of areas of concern. The present process is not "iron clad" it only assures that areas of concern will be identified. It is appropriate to look more deeply at the risks for each particular site when a guidance value is approached or exceeded.

Sincerely

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