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LETTER AND COMMENTS ON BEHALF OF SEACOAST ANTI POLLUTION LEAGUE
REGARDING DRAFT INTERIM OFFSHORE MONITORING PLAN FOR OPERABLE UNIT 4
(OU 4) NSY PORTSMOUTH ME
4/4/1999
LEPAGE ENVIRONMENTAL SERVICES

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April 4, 1999

Peter Vandermark
Seacoast Anti-Pollution League
P. O. Box 1136
Portsmouth, New Hampshire 03802

Subject: Comments on the January 1999 *Draft Interim Offshore Monitoring Plan for Operable Unit 4*

Dear Mr. Vandermark:

As you requested, we are transmitting comments to the Seacoast Anti-Pollution League (SAPL) concerning the January 1999 *Draft Interim Offshore Monitoring Plan for Operable Unit 4*. The Monitoring Plan was prepared by Tetra Tech NUS, Inc., and outlines the requirements for interim monitoring at Operable Unit 4 (OU4), which includes the areas offshore Portsmouth Naval Shipyard (PNS) potentially impacted by onshore sites. The monitoring will be conducted until the Feasibility Study for OU4 is released and a final remedy is selected and implemented. Our comments are as follows:

1. Page ES-1, Executive Summary. *"The monitoring program...was developed to provide data ...to determine whether the interim Remedial Action Objectives (RAOs) for OU4 are being met."*

What action will the Navy take should the data determine that RAOs are not being met? This comment also applies to the second paragraph in Section 1.1.

2. Page ES-1, Executive Summary. The presentation of Interim Remediation Goals (IRGs), interim Preliminary Remediation Goals (PRGs), and [final] PRGs in the fourth paragraph and elsewhere in the Monitoring Plan is confusing. In addition to revising the text (and/or adding a table as suggested by the Maine DEP in their March 26th comments), perhaps different acronyms should be used to differentiate interim PRGs [iPRGs?] from subsequent "final" PRGs. This comment also applies to the paragraph at the top of page 1-2. The terminology is further complicated by the use of "candidate PRGs" (see page 2-11, for example).

3. Page ES-2, Executive Summary. It is not clear how the 5th-year monitoring differs from the annual monitoring. The text here and elsewhere in the Monitoring Plan should identify why the 5th-year monitoring is singled out for "special attention".

4. Page ES-2, Executive Summary. “The seasons for sampling will be determined based on any seasonal trends determined from the baseline data. If no trends are observed, monitoring will be conducted in the late summer season.”

The Navy will be determine seasonal trends based on a maximum of four data points (two from late winter and two from late summer). What is the rationale for selecting the late summer for subsequent sampling should no trends be observed?

5. Page ES-2, Executive Summary. The timeframes identified in Sections 3.3.1 through 3.3.3 for data evaluation should be included in the last paragraph so that the reader does not assume that data evaluation is occurring on an on-going basis. Exceedances of IRGs will be evaluated at the end of the 2-year baseline monitoring, as part of the 5th-year review, and during the first two annual rounds following the 5th-year review. Seasonal trends will only be evaluated at the end of the 2-year baseline monitoring. Trends will not be evaluated until the 5th-year review. These timeframes become especially significant given that the baseline and 5th-year review reports will not be released for 240 days after sampling (see Section 3.3.6).

6. Page 1-1, Section 1.1 Objectives and Scope. The RAOs spelled out in the two bullets at the bottom of the page should be stated exactly the same as in the *Draft Final Record of Decision*.

7. Page 1-2, Section 1.2 Report Organization. Additional Standard Operating Procedures (SOPs) and a Health and Safety Plan (HASP) will be included in the final Monitoring Plan once a contractor is selected. We may have comments and questions once that information is presented.

8. Page 1-3, Section 1.3.1 Facility Description and History. The islands mentioned in the first paragraph should be identified on Figure 1-2.

9. Page 1-5, Section 1.3.2 OU4 Description and History. The use of the term “several” to describe the number of discharge points at Site 5 is misleading. It is our understanding there were about 85 pipes. If the actual or estimated number of discharge points at Site 5 is not included, then the number of discharge points should be described as “numerous” here and elsewhere in the text. Information must also be added about the contaminants (compounds, concentrations, etc.) detected in sediments in the Site 5 area prior to and after dredging (see comment 28, below), and the disposition of the spoils from the periodic maintenance dredging.

10. Page 1-6, Table 1-1. Site 27 is mentioned in the second footnote. Which OU is Site 27 associated with?

11. Page 1-7, Figure 1-2. The location of Site 5 on Figure 1-2 does not appear to be complete. Based on Figure 2-2 in the October 1996 *Community Relations Plan*, for example, Site 5 includes Berths 11, 12, and 13 at the northwestern end of the Shipyard. The figure must be corrected.

12. Page 1-9, Section 1.3.2 OU4 Description and History. The paragraph regarding eelgrass habitats should mention that eelgrass beds appear to be “missing” from areas of Clark Cove where they would be expected to occur, and that this might be an adverse impact from contaminants.

13. Page 1-10, Section 1.3.3 Great Bay Estuary and Portsmouth Harbor Description. *“The water mass in the vicinity of PNS is predominantly marine...and is not used for human consumption.”*

What does human consumption mean? The risks associated with human consumption of fish from the estuary, and measures taken to reduce those risks, have not been addressed. Reliance on fish consumption advisories to provide adequate protection to the public, without taking active steps to determine the Navy’s contribution to human health risks, is neither appropriate nor adequate. The interim offshore monitoring should, at a minimum, include contaminants identified in the human health risk assessment as posing risks, as well as appropriate receptors and media.

14. Page 1-14, Section 1.4.1 Estuarine Ecological Risk Assessment. *“Most AOCs had negligible to intermediate risk.”*

The AOC risks are described on page 2-11 of the *Draft Final Record of Decision (ROD)* as “either low or intermediate”. This passage in the ROD also mentions the contaminants of potential concern. The text should be revised to be consistent with the ROD.

15. Page 1-14, Section 1.4.2 Human Health Risk Assessment Report for Offshore Media. The Navy states that human health risks for ingestion of seafood exceed regulatory guidelines, but the human health risk assessment could not differentiate whether the chemicals causing the risk were from the Shipyard or from other sources along the Piscataqua River. In addition, because these risks are similar to or lower than risks other areas elsewhere along the Maine coast, and shellfish beds are closed due to biological contamination, the Navy concludes that it is not feasible to address the human health risks.

As we have stated in our comments on the Draft and Draft Final RODs, it doesn’t follow that the Navy can’t address risks just because they are similar to those in other areas of coastal Maine. Shipyard activities have adversely impacted the offshore environment, and risks from these adverse impacts exceed regulatory guidelines. Therefore, the Navy has an obligation to address these impacts in a timely fashion. The interim offshore monitoring should, at a minimum, include contaminants identified in the human health risk assessment as posing risks, as well as appropriate receptors and media.

16. Page 1-17, Table 1-4. The exponential notation is not consistent in the table and footnotes. As we suggested in our comments on the Draft ROD, our sense is that the use of superscripts is easier for readers to understand. It is also not clear which parameters are the most significant with regard to risk. This information should be added.

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Draft Interim Offshore Monitoring Plan for Operable Unit 4

17. Page 1-18, Section 1.4.3 Phase I/Phase II Offshore Data Comparative Analysis Report.

Several additional contaminants of concern for human health identified during the Phase I/Phase II data evaluation are listed at the bottom of the page. Was a risk assessment performed for the parameters listed in the last sentence of this section? What are the risks posed by these contaminants? These parameters should also be included in the interim offshore monitoring.

18. Page 2-1, Section 2.0 Aquatic PRGs Development Process and Data Needs. *"Note that pesticides have not been identified as COCs for the offshore at PNS..."*

To reiterate our comments on the Draft and Draft Final RODs, DDT and related compounds exceeded State water quality criteria and screening levels for sediment at a number of seeps along the Shipyard shore. In addition, levels of DDT and its related congeners also exceeded NOAA's ERLs for every sediment sampling location for every round of sampling during the seep/sediment sampling program. Therefore, it is appropriate that DDT and related compounds be included as COCs (contaminants of concern), regardless of whether an onshore source (or sources) has been identified or application of the pesticides was legal.

19. Pages 2-1 - 2-7, Section 2.1 PRG Derivation. We concur with the Maine DEP's comments 9 and 10, dated March 26, 1999, concerning wording and inconsistencies in this section and accompanying tables.

20. Page 2-11, Section 2.2 PRG Implementation. *"No exceedances of the candidate PRGs were at EERA stations in the AOCs with low risk."*

It should be noted in the text that these PRGs do not yet include metals and pesticides.

21. Page 3-1, Section 3.1 Interim Offshore Monitoring Sampling and Analysis Program.

As stated in our comments on the Draft and Draft Final RODs, we take issue with the statement that environmental media will be monitored to determine whether contaminant concentrations **are** (emphasis added) at acceptable levels, particularly because Section 1.3 of the ROD states that acceptable human health and ecological risks were exceeded, meaning that contaminant concentrations **are not** at acceptable levels. The Navy responded to our February 1999 comment that "...monitoring will be conducted to determine whether current and future concentrations (over the course of the interim monitoring) are at acceptable levels." We suggest this portion of the Navy's response be added to the text of the Monitoring Plan. This comment also applies to the second paragraph on page 3-3.

22. Page 3-3, Section 3.1.1 Sampling and Analysis Rationale. *"In addition, monitoring of surficial sediment will provide data to determine whether PNS onshore sites are a continued source of contamination to the offshore (e.g., increasing contaminant concentration trend)."*

With regard to determining if onshore sites are continuing sources of contamination to the

offshore, sampling seeps would provide that information. What is the rationale for only an **increasing** concentration trend to demonstrate on-going contaminant inputs from onshore to offshore? A relatively stable or even a decreasing trend could still indicate contamination is migrating to the offshore areas.

23. Page 3-3, Section 3.1.1 Sampling and Analysis Rationale, Sediment. In the Monitoring Plan, the Navy is proposing to collect surficial sediments from the upper 15 cm of sediments encountered. However, because of vertical spatial variability of analytical results, the EPA (3/19/99 General Comment 2) has suggested only the top 2 cm be removed for analysis, resulting in an increase in the number of replicates required at each sampling location. We would also like to point out that, given sedimentation rates in the vicinity of the Shipyard, sampling only the upper 2 cm will likely give a far better representation of the most recent contamination impacts than the upper 15 cm.

24. Pages 3-3 & 3-4, Section 3.1.1 Sampling and Analysis Rationale, Surface Water. *"The inorganics data from Phase I did not meet data quality objectives for estuarine study because of inappropriate sampling and analysis methods were used (i.e., detection limit too high and unfiltered sample analysis conducted)..."* and *"As with the Phase I EERA surface water samples, these samples were analyzed for total (unfiltered) metals; therefore they are not appropriate for evaluation for ecological purposes."*

These statements require clarification. Organisms are potentially exposed to all metals in water, not just dissolved metals. Metals attached to suspended sediment or other particles in the water may be an important source of exposure.

25. Page 3-4, Section 3.1.1 Sampling and Analysis Rationale, Seep. *"Mixing factors are being developed as part of the modeling."*

What are the mixing factors that will be developed? What field data will be collected in support of the modeling?

26. Page 3-5, Section 3.1.1 Sampling and Analysis Rationale, Analytical Program. See comment 18, above, regarding including DDT and related compounds as COCs.

27. Page 3-6, Table 3-2. As stated in comment 18, above, DDT and related compounds should be included as COCs. Has the Navy considered monitoring for dioxin, given the results of investigations at Site 29 (the Teepee Incinerator)?

28. Page 3-7, Section 3.1.2 Monitoring Station and Reference Station Locations.

Additional information concerning the selection criteria for the reference locations is needed in this section. For example, do the reference locations have depositional environments comparable to the AOCs (areas of concern) adjacent to the Shipyard? This section should also include a

description of how the data collected at the reference locations will be compared with and related to Shipyard AOC data, including assumptions regarding the significance of higher contaminant concentrations at reference locations.

29. Page 3-12, Section 3.1.3 Implementation of the Interim Monitoring Plan. *“During the first late winter round of interim monitoring, replicate samples will be collected to provide a better data set for the spatial representativeness... Replicate samples will not be collected at reference stations.”*

When the Monitoring Plan was written, the Navy hoped to collect the first round of interim monitoring samples during late winter 1999. Based on citizen input at the January 1999 Restoration Advisory Board meeting, the Navy subsequently decided to delay the start of the interim monitoring until issues and questions could be resolved. When does the Navy intend to start the interim monitoring? If it is late summer 1999, will the replicate samples be collected at that time or will they be collected in late winter 2000? This comment also applies to other passages in the text (for example, the paragraph at the top of page 5-2) where the timing for collection of the replicate samples is mentioned. In addition, why aren't replicate samples being collected at the reference locations as well?

30. Page 3-15, Section 3.3.1 Exceedances of IRGs or Reference Values. Additional information is needed regarding how reference location data will be used in comparison with AOC data. This should include the assumptions about the comparability of environments of deposition and interpretation of the significance of contaminant concentrations (see comment 33, below).

31. Page 3-16, Section 3.3.1 Exceedances of IRGs or Reference Values. What happens to the data collected during the 3rd and 4th years of the interim monitoring? This should be clarified.

32. Page 3-17, Section 3.3.3 Evaluation of Trends. How will representative COCs be selected? What are the criteria?

33. Page 3-19, Section 3.3.4 Decision Process for Interim Monitoring at OU4. The steps outlined in this section need additional supporting information. Various steps include comparison of data from individual monitoring stations with reference location data. How will the Navy determine if the depositional environments are comparable? How will the Navy determine the reasons for and significance of increasing or decreasing trends at the various reference locations, and how these can be related to trends in Shipyard AOC data? Does the comparison of data in the 5th-year data set with IRGs mean comparing data from any of the five years or just the 5th year? In other words, if IRGs were exceeded in the 3rd year, but not the 5th year, would the Navy proceed to Step 3b or Step 4?

34. Page 3-21, Section 3.3.6 Schedule of Deliverables. The timeframes provided in this section seem overly long. For example, the baseline and 5th-year reports will not be delivered for

outside review until 8 months after initiation of the fourth round and 5th-year sampling, respectively. Why will it take so long to generate the reports?

35. Page 4-7, Section 4.6 Modifications to Plan. It would be helpful to have an example of something sufficient to warrant a Field Modification Memorandum. Does the memorandum require approval from the regulatory agencies? How does the Field Modification Memorandum differ from the Field Modification Request mentioned on page 5-11?

36. Page 5-2, Section 5.1.1 Sediment Sample Collection. Assuming the Navy concurs with the suggestion to collect only the top 2 cm of sediment for analysis (see comment 23, above), how will the sampling procedure be altered?

37. Page 5-2, Section 5.1.1 Sediment Sample Collection. What is the justification for not conducting toxicity testing on sediment and porewater samples collected at reference locations?

38. Page 5-3, Section 5.1.2 Mussel Sample Collection. *"Collection of the animals at each subsample station will be performed by use of some method of random selection..."*

The text should clearly identify what method(s) of random selection will be used.

39. Page 7-5, Section 7.3 Field-Related QC Samples. This section should include a description of temperature blanks.

40. Appendix A, PRG Proposal, Page 2. *"Hence the PRGs developed in this report do not represent absolute levels that must be removed from the site, rather the application of the seven criteria with Trustee involvement will be necessary to select the Final Remediation Goals for the site."*

This statement regarding development and application of Final Remediation Goals appears to be in conflict with the explanation of development and application of PRGs presented in the body of the Monitoring Plan. Please clarify.

41. Appendix A, PRG Proposal. The basis for all assumptions identified in the text should be provided. For example, on page 2, *"...it is assumed that implementing a PRG for a chemical causing the highest risk will lead to a reduction of lesser risks caused by other CoCs."* Why should the reader assume that all COCs behave the same way?

42. Appendix D, Response to Comments on Proposed Sampling and Analysis Program. Many of the responses to comments submitted in August 1998 are satisfactory. Additional comments are as follows:

42a. SAPL Comment 1. With regard to conducting the essential monitoring studies identified in the Estuarine Ecological Risk Assessment (EERA) as needed to reduce uncertainties, the Navy responded that it accepted the results of the risk assessment and would not conduct additional studies to reduce uncertainties. We concur with the Maine DEP (3/26/99 Comment 40) comment that, in accepting the uncertainties discussed in the EERA, the Navy must make the most conservative assumptions based on these uncertainties. This comment applies to other August 1998 comments (such as SAPL comments 9D and 9E) regarding uncertainties identified in the EERA.

42b. SAPL Comment 3. The Navy's response states that for PRG data needs, one round of lobster sampling is proposed. This appears to be ad odds with portions of the Monitoring Plan that state that lobster will be collected until the correlation between lobster concentration and sediment concentration trends has been established. Please clarify.

42c. SAPL Comment 4. As stated in comment 18, above, DDT and related compounds should be included as COCs in the interim monitoring, regardless of identification of sources or "legality" of past application. We concur with the Maine DEP's 3/26/99 Comment 42.

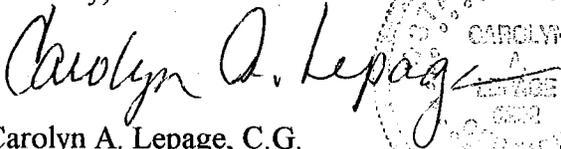
42d. SAPL Comment 5. As stated in several comments above and several August 1998 comments, additional information about the selection of reference locations and how the data from these reference stations will be compared with data from monitoring stations is needed.

42e. SAPL Comment 8. What is the status of the Navy's evaluation of Dr. Henri Gaudette's research regarding sediment accumulation rates and vertical distribution of heavy metals in the Piscataqua River?

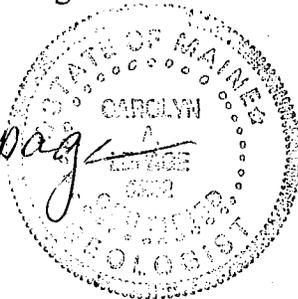
42f. NOAA Comment 2. We concur with NOAA's concern that the eelgrass pilot study should be done "sooner rather than later to learn if eel grass planting is a viable remediation project." What is the status of the Navy's evaluation of eelgrass restoration?

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: Iver McLeod, Department of Environmental Protection
Meghan Cassidy, Environmental Protection Agency
✓ Marty Raymond, Portsmouth Naval Shipyard