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LETTER AND COMMENTS FROM MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION REGARDING DRAFT FEASIBILITY STUDY FOR OPERABLE UNIT 4 (OU 4)
NSY PORTSMOUTH ME
9/20/2010
MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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September 20,2010

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9742 Maryland Ave
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Norfolk VA 23511-3095
Attn: Linda Cole

re: Draft Feasibility Study for OU4, Portsmouth Naval Shipyard, Kittery, Maine, July 2010

Dear Linda,

The Maine Department of Environmental Protection has reviewed the Draft FS for OU4. Our comments follow.

1. The MEDEP disagrees with the Navy's decisions for No Further Action remedies at MS-05, MS-07, MS-08 and MS-09. The February 2010 Rounds 1 Through 10 Interim Offshore Monitoring Program Report for OU4 recommends continued monitoring at all these stations until a final remedy is implemented for OU4. Even though we're now at the final remedy selection stage the Navy can't declare no further action is necessary at these sites without addressing the issues that were the basis for recommending further monitoring. While we ultimately may be willing to cease monitoring at these stations, additional discussion is necessary.

As stated in emails to the Navy dated 9121/09 and 10/8/2009 MEDEP agreed with the Rounds 1 Through 10 Interim Offshore Monitoring Program Report recommendations as presented in Table 6-1 of that document. At no point have we indicated the Navy could stop monitoring at any monitoring station without discussion with the regulators.

2. 1.2, Scope and Objectives, p. 1-1.

"Based on the results of the human health risk assessment, risks for ingestion of sediment, dermal contact with sediment, and ingestion of surface water were less than regulatory guidelines...therefore, human health is not considered in this FS."

The HHRA is 16 years old – has the Navy determined if its conclusions are still valid? Have items such as reference doses/concentrations, regulatory guidelines, or exposure factorsldefault values changed for OU4 COCs in that time period? In addition, the 1994 HHRA showed high risk to some human receptors from ingestion of seafood. How has the Navy addressed this risk? Also, the 1994 HHRA did not look at dermal risks for exposure to organics in surface water.

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Have later studies evaluated the potential risk for this exposure? These issues must be addressed in the FS (or perhaps in the ROD).

In addition, the Navy may want to revise the McLaren/Hart, March 1994 reference to May 1994. The March 1994 document did not address offshore risks to human health. Offshore risks were addressed in the May 1994 Final Human Health Risk Assessment Report for Off-shore Media for Portsmouth Naval Shipyard (an addendum to the March 1994 document).

3. 1.4.2.4, Ecology, p. 1-7. "No known endangered...species...are located with the boundaries of PNS, including OU4." The endangered shortnose sturgeon exists in the Piscataqua River and therefore should be considered potentially present within OU4.

4. 1.4.2.4, Ecology, p. 1-7. Change Maine Fisheries and Wildlife to Maine Inland Fisheries and Wildlife.

5. 1.4.2.4, p. 1-7. "PNS is not included in the critical habitats..," Clarify the term "critical habitats" as it can refer to Federally designated Critical Habitat. This would be a good place to mention that PNS is also not included in State designated Essential Habitat. These terms should also be defined.

The Navy needs to mention that the Piscataqua River, as with most estuaries in Maine, is considered to be among the top 25% most important saltmarsh/saltwater habitat for US Fish and Wildlife Service Priority Trust Species in the Gulf of Maine.

Also, the Maine IF&W January 1989 and NFEC August 1993 references are very outdated. Please use the most recent references available. See http://www.beginninmithhabitat.ordthe_maps/index.html and http://www.fws.gov/northeast/gulfofmaine/projects/habitat_analysis.htm for recent data and more information.

6. 1.4.4.1, Potential Sources of Contamination, p. 1-8. "Contaminated groundwater migration to sediment could have occurred from onshore at OU3 and OU7 to the offshore areas." Such migration could have occurred from any PNS IRP site, except perhaps Building 184. Please revise this statement.

7. 1.4.4 Conceptual Site Model, p. 1-7. This section discusses contaminant sources, release mechanisms, transport mechanisms and receptors in a general sense. However, details for each MS (or group of MS, e.g. 03 and 04) need to be added. This information is provided in a couple instances (Site 5, OU2), and is presented in other parts of the FS, but it should be discussed for each station in the CSM section. Fig. 1-5 is cluttered and doesn't provide the necessary details for each MS. This information could possibly be presented as a table.

8. 1.5, p. 1-10 last paragraph. In the first sentence change "a ROD" to "an Interim ROD."

9. 1.6.1, MS-01, p. 1-14: This section indicates that there is generally "20 to 40 feet between mean high and mean low tide elevations" at MS-01. Please clarify this statement. There are no such tidal ranges in Maine south of Washington County. Mean low water at MS-01 is 92.23 feet and mean high water is 100.36 feet (2002 PNS Datum).[1] Therefore, there are only 8.13 feet between mean high and mean low tide elevations.

Maine DEP has not noticed the error before but it appears that the 20 to 40 feet figure has been cited since at least the Aug. 2004 SSI Report for Site 34. It is important to ensure that it is not included in future documents.

10. 1.6.4, MS-05, p. 1-20. "MS-05 will not be considered further in this FS and NFA will be conducted at this MS." MEDEP disagrees with this decision. The February 2010 Rounds 1-10 Interim Offshore Monitoring Program Report stated, "Having additional samples before the next five-year sampling event will allow the Navy to determine whether concentrations are decreasing." MEDEP agrees with this statement. Why has the Navy switched its recommendation from additional sampling to NFA?

11. 1.6.6, MS-07, p. 1-21. "MS-07 will not be considered further in this FS and NFA will be conducted at this MS." MEDEP disagrees with this decision. The February 2010 Rounds 1-10 Interim Offshore Monitoring Program Report stated, "...to provide nearby reference concentrations for MS-08 and MS-09, samples should be collected at the five-year sampling for PAHs, 4,4'-DDT, dioxins/furans, PCBs, and metals." MEDEP agrees with this recommendation. Why has the Navy changed its recommendation?

12. 1.6.7, MS-08, p. 1-22. "MS-08 will not be considered further in this FS and NFA will be conducted at this MS." MEDEP disagrees with this decision. The February 2010 Rounds 1-10 Interim Offshore Monitoring Program Report stated, "Sampling is recommended even though no concentrations currently exceed their IRGs and lead concentrations do not exceed its ER-M. Having additional samples before the next five-year sampling event will allow the Navy to determine whether concentrations are decreasing over time." MEDEP agrees with this recommendation. Why has the Navy changed its recommendation?

13. 1.6.8, MS-09, p. 1-24. "MS-09 will not be considered further in this FS and NFA will be conducted at this MS." MEDEP disagrees with this decision. The February 2010 Rounds 1-10 Interim Offshore Monitoring Program Report stated, "Sampling is recommended even though no concentrations currently exceed their IRGs. Also, although the concentration of lead was greater than its ER-M during Round 10, lead concentrations have generally decreased each round from Round 7. Having additional samples before the next five-year sampling event will allow the Navy to determine whether concentrations are decreasing over time." MEDEP agrees with this recommendation. Why has the Navy changed its recommendation?

14. Figures 1-6 – 1-16. The titles of all these figures need to indicate the sample collection date for the results represented by the markers.

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[1] Interim RI Items for OU9_March 5 2010.pdf

15. Figs 1-6, 1-7, 1-14, 1-15 and 1-16. The tables on these figures are misleading as they represent only three of many sample locations and don't always show the maximum concentrations of all samples collected. Either add the results of the other sample locations or remove the tables.

16.2.1.2 Location-Specific ARARs and TBCs, p. 2-6. Add the following State location-specific **ARARs/TBCs** to this section and to all other applicable ARARs tables.

Maine Wetland Protection (06-096 CMR 310). Standards are provided for wetlands protection. Activities that have an unreasonable impact on the wetlands are prohibited.

Ch. 315, Assessing and Mitigating Impacts To Existing Scenic and Aesthetic Uses (06-096 CMR 335). This chapter describes the process for evaluating impacts to existing scenic and aesthetic uses resulting from activities in, on, over, or adjacent to protected natural resources subject to the Natural Resources Protection Act, pursuant to 38 M.S.R.A. § 480-D (I).

Ch. 335, Maine Significant Wildlife Habitat Rules (06-096 CMR 335). These rules outline requirements associated with a NRPA permit for an activity impacting significant wildlife habitat, including certain seabird nesting islands.

17. 2.1.2 Location-Specific ARARs and TBCs, p. 2-7. "Federal and State of Maine wetlands regulations have been determined not to be ARARs because no known wetlands are present at **OU4.**"

This is incorrect. As Maine DEP has stated before the entire offshore area of PNS is coastal wetland. Therefore, OU4 is wetland in its entirety and any coastal wetlands regulations certainly are ARARs or TBCs.

We also note that any wetlands **ARARs/TBCs** would also apply to the Jamaica Cove constructed wetland, whether or not it is considered to be part of OU4.

18.2.1.3 Action-Specific ARARs and TBCs, p. 2-7. Add the following State action-specific ARAR to this section and to all other applicable ARARs tables as necessary.

Maine Waste Discharge Licenses (38 M.R.S.A. § 413 et seq .) and Waste Discharge Permitting Program (06-096 C.M.R. Chapter 520-529). These standards regulate the discharge of pollutants from point sources and would be applicable to alternatives that require water management during soil excavation and where discharges of treated water to a surface water body may occur. The substantive requirements would need to be met if any discharges of treated water to surface water bodies are required.

19.2.3 Remedial Action Objectives, p. 2-10. The **RAO** must include a time frame, **e.g. reduce** risks within 10 years, in order to evaluate **MNA** effectiveness.

20.2.4 PRGs for OU4, p. 2-11. "...reference sample data were incorporated in to the PRG process..." The Navy should determine whether or not the reference data have been updated.

21.2.5 Extent of Contamination, p. 2-12. The table indicates sediment thickness at MS-01 is 2 feet. What is the source of this value? We can't find data indicating sediment there is more than 12 cm deep.

22.3.0 Identification and Screening of Technologies and Development of Alternatives, p. 3-2. Under Implementability add a bullet referring to sustainable remediation issues.

23.3.3.2.3 Natural Recovery, p. 3-7. What evidence exists that natural recovery processes at OU4 are sufficient to meet the RAO in a reasonable amount of time? COC trends may not necessarily reflect natural recovery processes.

Since there has been no formal evaluation of natural recovery at OU4 how will the Navy determine if this alternative is appropriate?

24.3.3.2.3 Natural Recovery, p. 3-7. The Navy should include discussion of enhanced natural recovery such as installing flow control structures to encourage deposition. See Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, USEPA, Dec. 2005, OSWER 9355.0-85 for more information.

25. 3.3.2.3 Effectiveness, p. 3-8. "...effective in providing a natural cover..." What is generally considered to be a sufficient natural cover thickness? We note that an artificial cover is typically at least 2 feet thick.

26.3.3.3 Containment, p. 3-8: "The only technology considered under this GRA is covering."

The Navy considered containment in the form of a barrier at MS-12A. Revise section 3.3.3 to reflect this.

27. 3.3.5.2 Conclusion, p. 3-16. "...ex-situ sediment washing/chemical extraction is eliminated from further consideration." Table 3-1, page 3 of 4, indicates that this technology has been retained. This same contradiction exists for chemical stabilization~solidification.

28. Table 3-2. Monitoring Stations 5, 7, 8 and 9 should be added to this table with the Monitoring option retained.

29.4.1.2.1 Description, p. 4-3. At the top of p. 4-3 the Navy states, "Observations have identified the MS-01 offshore area as a sediment dispersion area and not a deposition area." At the bottom of p. 4-3 the Navy writes, "...if sampling does not identify continued accumulation of cleaner sediment over the contaminated areas..." Based on the first statement why would the Navy consider accumulation of cleaner sediment to be a possibility?

30. 4.1.2.2 Reduction of Toxicity... p. 4-4. "Reduction of contamination toxicity, mobility, and volume would occur as a result of naturally occurring processes." MEDEP understands that the Navy is using this phrase with respect to the NCP selection criteria however it is important to note that at MS-01 reduction of contamination toxicity is partly dependent on mobility (dispersion) of the contaminated sediment, i.e. if mobility is reduced then the remedy may not be effective. In addition, the potential for this mobile contaminated sediment to accumulate in a depositional area at unacceptable levels downstream is a real concern and needs to be evaluated.

31. Table 4-1. Change "...will be used to develop PRGs" to "...were used to develop PRGs", as appropriate.

32. 5.1.2.1, Alternative MS0304-02, p. 5-3 This section mentions the shoreline stabilization activities at this location. As a reminder, the shoreline stabilization was considered to be temporary. Does the Navy intend to make this stabilization permanent as part of Site 32 or as part of OU4?

33. 6.1 Comparison of Remedial Alternatives for MS-11, p. 6-1. "...there is not a sufficient amount of sediment located at MS-11 to cause an unacceptable risk to ecological receptors." Please indicate the approximate area or volume of sediment at this sampling location.

Also, please discuss how the Navy determined that there was no unacceptable risk at MS-11. Any mussels anchored to the substrate in the area of contaminated sediment could have unacceptable exposure to contaminants.

34. 6.1 Comparison of Remedial Alternatives for MS-11, p. 6-1. This section lists only two alternatives, No Action or MNA. The Navy should also evaluate mechanical removal. Depending on the volume of contaminated sediment, complete removal could have a lower cost than MNA.

35. 6.1.2.1, Alternative MS11-02, p. 6-3. This section states that naturally occurring processes at MS11 are limited to biodegradation and dispersion. As the only COCs at MS-11 are metals biodegradation is not a factor in reducing COC concentrations.

36. 7.0, MS-12, p. 7-1. Either here or in the CSM section please include a cross-section figure showing the depth of the sediments on the ramp and in the building, the height of the ramp over the riverbed, the location of the eelgrass bed and any other pertinent information.

37. 7.1.2 Alternative MS12A-02. This alternative is unacceptable as written. It is described as Containment, LUCs and Monitoring. The monitoring apparently is only intended to address integrity and performance of the containment barrier. The Navy mentions that over time natural processes would reduce the COC concentrations found in the sediment on the boat ramp but there is no discussion of Monitored Natural Attenuation of the sediments on the ramp. Any alternative without a remedy component specifically addressing the ramp sediments is unacceptable.

38. This barrier wall will be **constructed** to prevent incoming water from breaching it and entering the building. Is it possible for water to enter the area behind the wall through cracks in the floor? Will the floor be sealed?

39.7.1.2.2 Implementability, p. 7-5. Given the current condition of the building has the Shipyard discussed **demolishing/removing** it? If so, a physical removal alternative would make more sense than a barrier since the sediment would have to be removed as part of building demolition.

40.7.1.3.1 Alternative **MS12A-03,** Partial Removal, Off-Yard Disposal, Containment, and **LUCs,** p. 7-6. Please clarify why the Navy is evaluating a "partial removal" alternative. Partial removal would remove most but not all of the contaminated sediment at **MS12A.** This makes no sense given that sediment contaminant concentrations inside the building are as elevated as, or more elevated than sediment contaminant concentrations outside the building.

41. This section mentions that sediment in the **eelgrass** bed does not have elevated concentrations of **PAHs** or lead. It then states that once sediment on the ramp is removed the sediment within the **eelgrass** bed would not present an unacceptable risk to ecological receptors. Please clarify the apparent contradiction.

42.7.4.3 Alternative **MS12B-02,** p. 7-18. "...it is expected that contaminant concentrations would begin to decrease as a result of recent removal of potential **onsite** contaminant sources. With this removal, contaminants will no longer be deposited in the MS-12B offshore area as a result of erosion." This statement is contradictory to the Navy's assertion that there is no ongoing migration of contaminants from Site 10 to the offshore. If migration is not a current issue then the statement should not be used to support an MNA alternative.

43.7.4.4, p. 7-21. Change references to Fig. 7-7 to Fig. 7-5.

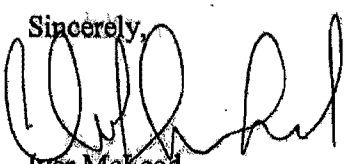
44. Fig. 7-1. This figure represents Alt. MS-12A-02 which does not include dredging. Therefore, limits of dredging should be removed from this figure.

45. Fig. 7-4. This figure shows both a Limit of Contamination and an Estimated Limit of contamination. One of these should be removed. There is a similar issue with Fig. 7-5.

46. App. C. Cost Estimates for **MS12A-03** and **MS12A-04.** Section 7 states that there is approximately 750 cy of **contaminated** sediment outside the building and 150 cy inside the building. Why do the cost estimates show a quantity of 1585 cy of sediment to be dredged?

Please feel free to contact me at (207) 287-8010 if you have any questions.

Sincerely,



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