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PITT-09-9-057

September 24, 2009

Project Number 112G00805

Mr. Matthew Audet
Environmental Protection Agency
Region I (Mail Code: HBT)
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Mr. Iver McLeod
Maine Department of Environmental Protection
State House Station 17
Augusta, Maine 04333-0017

Reference: Contract No. N62472-03-D-0057 (CLEAN)
Contract Task Order No. 118

Subject: Responses to USEPA Legal Comments on the
Draft Feasibility Study Report for Operable Unit 1
Portsmouth Naval Shipyard (PNS), Kittery, Maine

Dear Mr. Audet/Mr. McLeod:

On behalf of the U.S. Navy, Tetra Tech NUS, Inc. is pleased to provide to the U.S. Environmental Protection Agency Region I (USEPA) and to the Maine Department of Environmental Protection (MEDEP) 2 and 3 copies, respectively, of the responses to USEPA Legal comments dated April 9, 2009.

As per the project schedule, follow-up comments are due on **October 26, 2009**.

If you have any comments or questions, or if additional information is required, please contact Ms. Linda Cole at 757.444.0806.

For the Community Restoration Advisory Board (RAB) members; if you have any comments or questions on these issues, they can be provided to the Navy at a RAB meeting, by calling the Public Affairs office at 207.438.1140 or by writing to:

Portsmouth Naval Shipyard
Public Affairs Office
Attn: Danna Eddy
Portsmouth, NH 03804-5000

Sincerely,

A handwritten signature in black ink, appearing to read 'Deborah J. Cohen'.

Deborah J. Cohen, P.E.
Project Manager

DJC/clm

Enclosures

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Maine Department of Environmental Protection
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RESPONSES TO USEPA LEGAL COMMENTS DATED APRIL 9, 2009
DRAFT FEASIBILITY STUDY REPORT FOR OPERABLE UNIT 1
PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE

1. **Comment:** p. ES-1, 2nd Was the reduction of OU1 to Site 10 only approved through the FFA process? Was the “no further action” finding based on the area being suited for unrestricted residential use? If it was only cleaned up to industrial standards, then there’s still a CERCLA risk and at least ICs would be needed.

Response: The decision that No Further Action (NFA) was required for Site 21 was made through the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. The NFA Decision Document for Site 21 was finalized in February 2008 and was signed by the Shipyard Commander with concurrence of United States Environmental Protection Agency (USEPA) and Maine Department of Environmental Protection (MEDEP) in May 2008. As provided in the NFA Decision Document for Site 21, on the basis of the findings at Site 21, NFA is needed to protect human health and the environment. Therefore, the decision was made for NFA for Site 21, which means that there are no site use restrictions or any other action required for the site. With the signature of the NFA Decision Document for Site 21, the site is no longer an Installation Restoration Program (IRP) site and is no longer included in OU1.

The text on pages ES-1 and 1-1 will be revised to include that the Shipyard Commander signed the document with USEPA and MEDEP concurrence. The following provides the specific text revision:

“The other site that was part of OU1, Site 21 – Former Acid/Alkaline Drain Tank was recommended for No Further Action (NFA). The NFA Decision Document for Site 21 was finalized in February 2008 and ~~will be~~ **was signed in May 2008** by the Shipyard Commander **with United States Environmental Protection Agency (USEPA) and Maine Department of Environmental Protection (MEDEP) concurrence**. Therefore, Site 21 is no longer an Installation Restoration Program (IRP) site (Navy, February 2008) and is no longer included in OU1.”

2. **Comment:** p. ES-1, 3rd In the second sentence is there no groundwater risk because the groundwater is clean enough for unrestricted use? If not, then there is a risk and at least ICs would be required as part of the remedy.

Response: As provided in the OU1 Remedial Investigation (RI) Report (TtNUS, July 2007), groundwater is clean enough for unrestricted use based on the brackish/saline nature of the groundwater and the concentrations of chemicals detected in the groundwater. Risks due to exposure to groundwater and for groundwater impact to the offshore were identified in the OU1 RI Report as acceptable and the RI Report concluded that groundwater was not a medium of concern for OU1 (as noted in the FS). No changes to the OU1 FS are proposed.

3. **Comment:** p. 1-1, 2nd See first comment questioning whether Site 21 poses any risk to unrestricted use.

Response: Please see the Navy's response to USEPA Legal Comment No. 1:

4. **Comment:** p. 1-1, 3rd See second comment questioning whether any CERCLA risk exists from unrestricted use of groundwater.

Response: Please see the Navy's response to USEPA Legal Comment No. 2.

5. **Comment:** p. 1-7, 2nd This section should discuss the regulation of the area under RCRA - the Former Batter reclamation Area (FBRA) in Building 238 was permitted to operate by Maine Department of Environmental Protection (MEDEP) under their license by rule regulation. The operation was covered under the MEDEP license of former Hazardous Waste Storage Facility at Building 313 (License # O-5-95-A-N, dated September 25, 1985). The underground storage tank was #11864-4.

Even though the State did not require a cleanup action when the tank was removed does not remove hazardous waste regulatory jurisdiction over the closure/post-closure of the facility, since waste from the facility is still present.

Response: The Navy respectfully disagrees with this comment and the other comments related to the applicability of RCRA to remedial action for OU1. The point of generation of contaminated soil under RCRA is when it is actively managed. RCRA does not apply to soil or sediment unless it becomes a waste (i.e. through an excavation or a treatment process). Risk assessments determine whether action is needed on in-place soil and sediment that is not waste.

The following provides the Navy's position on USEPA comments provided herein related to RCRA for OU1.

Site 10 was not used for waste disposal (before or after 1980). Releases of contamination from operations to the environment were from discharges of battery acid through industrial waste piping to the offshore (1950s to 1974) and from a leak in the tank that was used from 1974 to 1984 for storage of the battery acid before transportation of the acid offsite for treatment/disposal. The use of the tank was discontinued in 1984 when the leak in the tank was discovered. After use of the tank was discontinued, battery acid wastes were containerized for treatment/disposal offsite. As provided in the OU1 RI Report text and the FS Report text, the tank was remediated and therefore, closed. In addition, the results of toxicity testing of excavated soil as part of the tank closure showed the soil was non-hazardous. The results of the testing were included in Appendix H of the Field Investigation Report, Site 10 (Building 238) and Site 29 (Teepee Incinerator) for Portsmouth Naval Shipyard, Kittery, Maine (TtNUS, March 2000). This information related to the tank removal and toxicity testing results were initially provided during the preparation of the RFI Proposal (1989), RFI Work Plan (1991), and RFI Report (1992).

Authority for remedial actions transferred to CERCLA in 1994 when PNS was included on the National Priorities List (NPL). For OU1, the RCRA ARARs would be applicable only if

excavated material is identified as hazardous waste upon characterization for disposal at the designated facility. Therefore, RCRA ARARs are action-specific ARARs and not chemical-specific ARARs (i.e., RCRA ARARs would not determine the extent of contamination/remedial or drive PRG development for OU1).

Remedial action levels for lead are risk-based, consistent with CERCLA requirements. RCRA (and Maine Hazardous Waste standards) would only apply to any waste generated as part of remediation that is determined to be hazardous.

RCRA standards are included as action-specific ARARs. These standards will be considered as necessary for activities that may occur in the portion of OU1 located in a 100-year floodplain. Closure and post-closure requirements for tanks are not ARARs. For alternatives where chemical concentrations remain above PRGs for unrestricted use, Land Use Controls (LUCs), would be used to meet RAOs and ARARs. Therefore, the Navy believes that Alternatives 2, 3, and 4 will meet the CERCLA threshold criteria of Overall Protection of Human Health and the Environment and Compliance with ARARs. Therefore, these alternatives will remain in the FS Report as viable alternatives.

The Navy does not agree with the way USEPA is applying the "20 times rule of thumb" in this situation. The only statement of certainty that can be used with the 20 times rule of thumb is that if the soil concentration is less than 20 times the toxicity characteristic threshold, then the soil cannot be hazardous for that characteristic (i.e., it must be non-hazardous). For example for lead, if the soil has a concentration less than 100 mg/kg, there would be no question of the soil being non-hazardous. Therefore, if excavated soil has a concentration of less than 100 mg/kg, TCLP testing of the soil for disposal would not likely be needed.

Please also see the Navy's February 5, 2009 responses to USEPA and MEDEP technical comments on the draft OU1 FS Report for revisions to text related to ARARs, PRGs, and alternative development, evaluation, and comparative analysis.

6. **Comment:** p. 1-16, 4th The boundary for the site needs to be where there is a residential risk from lead that would require the establishment of, at least, institutional controls as part of the remedy.

Response: The site boundary is based on the risk exposure unit and area impacted by Site 10 releases. The boundary was provided in the OU1 RI Report (TtNUS, July 2007) and is the area where at a minimum land use controls would be required as part of the remedy for OU1.

7. **Comment:** p. 2-2, 1st bul. In the third sentence, replace all of the text coming after "developed using" with "EPA guidances for identifying risk-based cleanup levels."

Response: This comment is referring to the bullet related to chemical-specific ARARs. The bullet will be revised to read as follows, consistent with other FS Reports for PNS sites:

- Chemical-Specific: Health- or risk-based numerical values or methodologies that establish concentration or discharge limits for particular contaminants within the

medial of concern.

Information regarding TBC criteria that may be useful in developing remedial action alternatives and for determining action levels that are protective of human health and/or the environment are discussed under the TBC Criteria (on page 2-2). Therefore, this information will be deleted from the bullet on chemical-specific ARARs.

8. **Comment:** p. 2-3, 2nd Remove; don't refer to "potential ARARs" in the document.

Response: The Navy respectfully disagrees. The Navy believes the ARAR text and tables are correct as provided. The ARAR discussion in Section 2.0 provides all of the potential ARARs for OU1; some are invoked only when certain remedial actions are taken. The alternative specific-ARARs tables (Appendix B) only provide the specific ARARs associated with that alternative. [Note this method is consistent with the presentation of ARARs in the Draft OU2 FS (TtNUS, November 2004), the Revised Draft OU2 FS (TtNUS, November 2008) and the OU3 FS (TtNUS, November 2000).]

9. **Comment:** p. 2-4, 2nd Remove paragraph and remove from Table 2-1 since the Region 9 document is for establishing screening levels only, not for developing risk-based cleanup standards.

Response: The Navy respectfully disagrees. USEPA Region 9 PRGs (risk-based screening levels) were used in the risk assessment as screening levels and were included in the ARARs sections as TBCs. They have recently been replaced by the USEPA Regional Screening Levels. The text on Page 2-4 will be revised to indicate that in 2008, USEPA replaced region-specific risk-based screening levels (e.g., Region 9 PRGs) with RSLs. The USEPA risk-based screening levels were used as screening levels as part of the HHRA for OU1 and can be used to develop soil clean up goals. This information will also be provided in Table 2-1.

10. **Comment:** p. 2-4, 2nd Insert text on two additional EPA risk guidances (add these to Table 2-1 also):

Guidelines for Carcinogen Risk Assessment EPA/630/P-03/001F (March 2005)	To Be Considered	Guidance for assessing cancer risk.	Guidance used to develop risk-based cleanup standards to address exposure to carcinogenic hazards caused by exposure to contaminants.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens EPA/630/R-03/003F (March 2005)	To Be Considered	Guidance of assessing cancer risks to children.	Guidance used to develop risk-based cleanup standards to address child exposure to carcinogenic hazards caused by exposure to contaminants.

Response: The Navy respectfully disagrees. Although these two guidance documents have been added as TBC at other Region 1 Sites, they pertain mostly to PAHs and do not pertain to lead (COC at OU1). Cancer risks were acceptable at OU1 and there are no

carcinogenic COCs at OU1.

11. **Comment:** p. 2-4, 3rd-4th Replace the paragraphs (and citations in Table 2-1) with:

<p>Maine Solid Waste Act, Lead Management Regulations (06-096 C.M.R. Ch. 424)</p>	<p>Relevant and Appropriate</p>	<p>Regulations establish "lead safe" standards for residential soils. "Lead-contaminated soil" is defined as soil that contains an amount of lead that is equal to or exceeding 375 ppm in bare soil in play areas, or is equal to or exceeding 1000 ppm from bare soil in building perimeters areas in other than play areas.</p>	<p>Cleanup levels for soil in residential areas will meet these standards or institutional controls will be established to prevent residential development in areas exceeding the lead-safe standard.</p>
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Response: The Navy respectfully disagrees. The Navy does not believe that the Maine Solid Waste, Lead Management Regulations are either relevant or appropriate State ARAR or TBC for OU1. As stated in the Maine Solid Waste Lead Management Regulation Chapter 424, "This Chapter applies to any person who engages in lead-based paint activities in residential dwellings and child-occupied facilities in Maine." OU1 is not a lead-based paint site and is neither a residential dwelling nor child-occupied facility, and therefore is not applicable or relevant and appropriate for remedial activities at OU1. USEPA methodology for assessing risk in soil for lead is more relevant for OU1 than these Maine Regulations; therefore, these Maine Regulations were also not considered as TBC. In addition, MEDEP has reviewed the OU1 FS and has not provided the same comment (please see the Navy's February 5, 2009 responses to USEPA and MEDEP technical comments on the draft OU1 FS Report), and these regulations were not included in the ARARs or TBCs listed in other PNS documents (e.g., OU3 FS and OU3 ROD).

12. **Comment:** p. 2-5, 1st Remove the paragraph and remove from Table 2-2 since 40 C.F.R. Part 6 has been redrafted and the appendix which had included the floodplain standards has removed. Any discussion of the Executive Order on Floodplains should be under the Protectiveness criterion rather than under the ARARs criterion.

Response: The Navy concurs that the Executive Order should be removed as an ARAR for OU1, and will remove the paragraph from the text and Table 2-2. Impacts to the environment, including the floodplain, are discussed under the Overall Protection of Human Health and the Environment criterion (as well as under Short-Term Effectiveness, if the impact is only expected during remedial action implementation).

13. **Comment:** p. 2-5, 3rd Remove this paragraph and remove from Table 2-2 since the area of remediation is solely on-shore (unless alternatives involve off-shore activities such a operating removal equipment from moored barges or barging excavated material from the site).

Response: The Navy concurs. The Rivers and Harbors Act will be deleted as an ARAR

because there are no anticipated offshore activities as part of remedial activities for any of the alternatives evaluated.

14. **Comment:** p. 2-5, 4th Discuss in this paragraph and in Table 2-2 that the area is part of the Portsmouth Naval Shipyard Historic District (as noted on page 1-9) and how the remediation within the District will meet applicable standards under the NHPA.

Response: The Navy concurs. Building 238 is considered a contributing element to the historic district. The OU1 FS will be revised using language from the PNS OU3 FS/ROD indicating that the State Historic Preservation Officer (SHPO) would need to be contacted for any major structural change to the building that may impact its appearance. The revision will be made to text on Page 2-5 and Table 2-2.

15. **Comment:** p. 2-5, 5th The Fish and Wildlife Coordination Act is applicable because the remediation is within the 100 year floodplain, filled tidelands, and adjacent to the river, so discuss in the text and add to Table 2-2. Note, however, that 40 C.F.R. 6.302 has been redrafted and no longer pertains to consultations under the Act. Add to Table 2-2.

As previously noted 40 C.F.R. Part 6, Appendix 6 no longer exists so remove any discussion of the Federal Protection of Wetlands from the ARARs section (it can be discussed under the Protectiveness criterion).

Response: The Fish and Wildlife Coordination Act is not applicable to OU1 because there are no wetlands or protected habitat within OU1 and there are no anticipated offshore activities. As provided in earlier comments on the Draft OU1 FS (please see the Navy's February 5, 2009 responses to MEDEP technical comment Nos. 3 and 6 on the draft OU1 FS Report), there is limited ecological habitat available at OU1. In the past, peregrine falcons were observed nesting on building ways located near by OU1, which if present during remedial action the nesting seabirds could be disturbed by the remedial activities. Therefore, the Navy reviewed various potential ARARs and proposed adding the Endangered Species Act of 1973, Maine Endangered Species Act, and Maine Significant Wildlife Habitat Rules to provide consideration for disturbance of nesting birds during remedial action. Based on USEPA Legal comments and Navy legal review it was determined that there are no endangered or threatened species at or near OU1, including nesting birds, that could be disturbed by remedial activities. Therefore, these acts and rules will not be added as ARARs for OU1.

The text related to wetlands will be deleted as per the Navy's response to USEPA Legal Comment No. 13 regarding offshore activities. The reference to 40 CFR Part 6, Appendix A will be deleted from the text and Table 2-2 as provided in Navy's response to USEPA Legal Comment No. 12.

16. **Comment:** p. 2-6, 1st Include the Endangered Species Act in the text and Table 2-2 since the Federally endangered short-nosed sturgeon lives in the Piscataqua River. If waste is left in place, long-term monitoring will need to insure that contaminants don't migrate to the river and pose a risk to endangered species.

Response: The Navy respectfully disagrees. Based on the risk assessment in the OU1 RI Report (July 2007), there are no anticipated adverse offshore impacts; therefore this Act would not pertain to short-nosed sturgeon in the river.

17. **Comment:** The Marine Mammal Protection Act should be discussed in the text and added to Table 2-2 if any off-shore component of the remedy (using barges either to remove waste or as platforms for excavating the site) may effect marine mammals (i.e. seals, which are common in the River). Furthermore, if waste is left in place, long-term monitoring will need to insure that contaminants don't migrate to the river and pose a risk to marine mammals.

EPA agrees that the Migratory Bird Treaty Act is not an ARAR.

Response: The Navy respectfully disagrees. Because there are no anticipated offshore impacts from implementation of any of the alternatives evaluated in the OU1 FS, the Marine Mammal Protection Act will not be added as an ARAR to the OU1 FS. RCRA does not apply to soil or sediment unless it becomes a waste (i.e. through an excavation or a treatment process). Risk assessments determine whether action is needed for in-place soil and sediment that is not waste. The RI Report (July 2007) concluded that migration of groundwater to the offshore would not result in unacceptable risks. In addition, this Act was not cited in the OU2 FS or the OU3 ROD.

18. **Comment:** p. 2-6, 1st Discuss in the text and add to Table 2-2:

RCRA, Floodplain Restrictions for Hazardous Waste Facilities (40 CFR § 264.18)	Applicable	A hazardous waste facility located in a 100-year floodplain must be designed, constructed, operated and maintained to prevent washout by a 100-year flood event	If hazardous waste from the former battery acid tank/collection system is left in place it must be capped so as to prevent washout in a 100-year storm event.
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Response: The Navy respectfully disagrees. RCRA Standards are included as action-specific ARARS and as such will be considered as necessary for activities that may occur in the portion of OU1 located within the 100-year floodplain. Contaminated soil at OU1 is in the tidally saturated zone and is already in contact with groundwater. As discussed in the OU1 FS Report (based on the conclusions of the OU1 RI Report, see the Navy's response to USEPA Legal Comment No. 2), risks are acceptable for groundwater migration. Therefore, washout by a 100-year flood event is not a concern for OU1. Also, please see the Navy's response to USEPA Legal Comment No. 5.

19. **Comment:** p. 2-6, 2nd See modifications to the State location-specific ARARs in Table 2-2.

Response: Please see the Navy's response to USEPA Legal Comment Nos. 49 and 50. In addition, MEDEP has reviewed the OU1 FS and has not provided the same comment (please see the Navy's February 5, 2009 responses to USEPA and MEDEP technical comments on the draft OU1 FS Report).

20. **Comment:** p. 2-7, 2nd See modification to the State location-specific ARARs in Table 2-2 and revise this paragraph accordingly.

Response: Please see the Navy's response to USEPA Legal Comment Nos. 49 and 50. In addition, MEDEP has reviewed the OU1 FS and has not provided the same comment (please see the Navy's February 5, 2009 responses to USEPA and MEDEP technical comments on the draft OU1 FS Report).

21. **Comment:** p. 2-7, 4th Since hazardous waste regulation is delegated to the State of ME, include only a general discussion of the federal hazardous waste standards and list the specific state regulations that are applicable.

Response: The Navy agrees and will delete text under federal RCRA standards and include more detail on Maine Hazardous Waste Regulations.

22. **Comment:** p. 2-8, 2nd bul. Remove the second bullet since the LDR regulations are not ARARs.

Response: Revisions will be made to the text based on the Navy's response to USEPA Legal Comment No. 21. Maine's LDR (06-096 CMR 852) will be included because the Navy believes LDRs could be action-specific ARARs for OU1 depending on how the remedy is implemented.

23. **Comment:** p. 2-8 See previous comment about citing specific State rather than Federal regulations. If the text is to remain apply the following comments:

Response: Please see the Navy's response to USEPA Legal Comment No. 21.

24. **Comment:** p. 2-8, 1st Consider adding sentence that lead levels exceeding 20x the characteristic toxicity threshold, if left in place will be either presumed to be hazardous waste or tested to see if characteristic hazardous waste is present.

Response: The Navy respectfully disagrees with addition of the 20 times rule of thumb as an indication of whether excavated soil is characteristic hazardous waste. RCRA characteristic standards would also not be used to develop PRGs for OU1. The PRGs were developed as risk-based numbers for human health exposure to soil based on TBC for OU1. There are no chemical-specific ARARs for OU1. Please also see the Navy's response to USEPA Legal Comment No. 5.

25. **Comment:** p. 2-8, 3rd Revise the paragraph to discuss that the battery acid collection system is regulated under these standards since it was operated after the effective date of RCRA and that all applicable standards under these regulations, particularly closure/post-closure will be met. Remove the second to last sentence since this is not a CAMU situation.

Response: The Navy respectfully disagrees with suggested RCRA and CAMU text revisions. Please see the Navy's response to USEPA Legal Comment No. 5 regarding RCRA. Please see the Navy's response to USEPA Legal Comment No. 21 related to revisions to discussion of federal and Maine hazardous waste regulations. Maine's LDR (06-096 CMR 852), which addresses CAMUs will be included because the Navy believes that CAMUs could be ARARs at OU1 depending on how the remedy is implemented.

26. **Comment:** p. 2-8, 4th Remove since LDR regulations are not ARARs.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 22 regarding LDRs as action-specific ARARs for OU1.

27. **Comment:** p. 2-9, 1st If the Navy is going to discuss an applicable section of 40 C.F.R. Part 264 (instead of just discussing the applicable state hazardous waste regulation), they should be discussing Subpart J (Tank Systems) rather than Subpart S. The remedy needs to meet closure/post-closure standards under 40 C.F.R. 264.197. In particular note that 40 C.F.R. 264.197(b) requires:

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1. Please see the Navy's response to USEPA Legal Comment No. 5. As provided in the Navy's response to USEPA Legal Comment No. 21, Maine Hazardous Waste Management Rules will be discussed; therefore, the text related to federal RCRA regulations will be deleted.

28. **Comment:** If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph (a) of this section, then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills (§264.310). In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in subparts G and H of this part.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1. Please see the Navy's response to USEPA Legal Comment No. 5.

29. **Comment:** p. 2-9, 3rd Additional federal action-specific ARARs are noted in Table 2-3.

Response: Please see the Navy's response to USEPA Legal Comment No. 51. In

addition, surface water runoff and erosion would not be an issue for the remedial alternatives at OU1. Consequently, there is no need to add provisions from the CWA pertaining to runoff and erosion.

30. **Comment:** p. 2-9, 4th In the fourth sentence insert “tank systems,” before “landfills,”.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1. Please see the Navy’s response to USEPA Legal Comment No. 5.

31. **Comment:** Change the last sentence to: “These standards are applicable to the closure/post-closure of the former battery acid tank system, and associated contaminated soils.”

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1. Please see the Navy’s response to USEPA Legal Comment No. 5.

32. **Comment:** p. 2-10, 2nd Additional state action-specific ARARs are noted in Table 2-3.

Response: Please see the Navy’s response to USEPA Legal Comment Nos. 52 and 53. In addition, MEDEP has reviewed the OU1 FS and has not provided the same comment.

33. **Comment:** p. 2-10, 4th Under applicable state hazardous waste standards all soil exceeding toxicity threshold standards needs to be addressed by the remedy, no matter what the depth.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1. Please see the Navy’s responses to USEPA Legal Comment Nos. 5 and 24.

34. **Comment:** p. 2-11, 1st In the second sentence insert “and ARAR requirements” after “human health risks”.

Response: The Navy respectfully disagrees. Risk-based RAOs and PRGs were developed under CERCLA for OU1. There are no chemical-specific ARARs for OU1 (just TBCs). Please also see the Navy’s responses to USEPA Legal Comment Nos. 5, 11, and 24.

35. **Comment:** p. 2-11 Add two additional RAOs:

Meet closure/post-closure standards for hazardous waste tank systems under applicable standards.

Prevent release of contamination during 100-year storm event.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1. Please see the Navy's responses to USEPA Legal Comment Nos. 5 and 18. In addition, compliance with action-specific ARARs are evaluated as part of the Compliance with ARARs criterion; compliance with action-specific ARARs are not RAOs.

This is also consistent with the guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (EPA/540/G-89/004, October 1988) and with the decision making at other PNS sites (OU3).

36. **Comment:** p. 2-11, 2nd In the last sentence insert "based on ARARs requirements and" before "on a receptor-specific basis."

Response: Please see the Navy's response to USEPA Legal Comment No. 34.

37. **Comment:** p. 2-11, § 2.4 This section needs to discuss how PRGs were developed to meet ARARs hazardous waste closure/post-closure requirements, as well as HHRA methodology.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1. Please see the Navy's responses to USEPA Legal Comment Nos. 5, 24, and 34.

38. **Comment:** p. 2-12, Tbl All soils with lead over the TCLP toxicity threshold needs to be addressed under hazardous waste closure/post-closure standards.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1. Please see the Navy's responses to USEPA Legal Comment Nos. 5, 24, and 34.

39. **Comment:** p. 2-12, 1st In the last sentence, note that all alternatives need to meet applicable hazardous waste closure/post-closure standards that may limit the options available for remediation to removal or capping.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1. Please see the Navy's response to USEPA Legal Comment No. 5.

40. **Comment:** p. 2-12, 2nd In the second sentence, note that all alternatives need to meet applicable hazardous waste closure/post-closure standards that may limit the options available for remediation to removal or capping.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure

standards are ARARs for OU1. Please see the Navy's response to USEPA Legal Comment No. 5.

41. **Comment:** p. 2-12, 3rd In calculating the volume of soil to be addressed that hazardous waste closure/post-closure standards are applicable to any contaminated soil exceeding TCLP threshold levels, whether above or below the saturated soil level. Estimated soil volumes on page 2-13 should be revised accordingly if lead contamination above toxicity threshold levels is present below the saturated soil level.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1 or that RCRA characteristic standards would be used to develop PRGs or remediation areas/volumes for OU1. Migration of soil contamination to groundwater is not a concern for OU1; therefore, PRGs and remediation areas/volumes would not be developed to address this pathway. Please see the Navy's responses to USEPA Legal Comment Nos. 5, 18, 24, and 34.

42. **Comment:** T. 2-1, p. 1 Remove the OSWER lead Directive – the January 2003 document cited in the next line should be the reference for assessing risks from lead in soil.

Response: The Navy respectfully disagrees. The OSWER directive addresses child (residential) exposure to lead whereas the Technical Review Workgroup guidance addresses adult exposure. Therefore, both TBCs can be used to develop risk-based cleanup goals for lead.

43. **Comment:** For the "Recommendations of the Technical Workgroup..." change the Evaluation/Action to be Taken" text to "Guidelines used to develop risk-based cleanup levels for lead in soil."

Response: The text will be revised as provided.

44. **Comment:** For CSFs change the "Evaluation/Action to be Taken" to "Guidance used to develop risk-based cleanup standards to address exposure to carcinogenic hazards caused by exposure to contaminants."

Response: The Navy respectfully disagrees. CSFs were not used to develop PRGs because there were no carcinogenic COCs.

45. **Comment:** Add the two EPA guidance noted at the comment on p. 2-4, 2nd ¶.

Response: Please see the Navy's response to USEPA Legal Comment No. 10.

46. **Comment:** Remove the USEPA Region 9 PRGs – screening levels are not chemical-specific ARARs.

Response: Please see the Navy's response to USEPA Legal Comment No. 9.

47. **Comment:** T. 2-1, p. 2 Remove the two State risk guidance since CERCLA cleanups based on federal risk assessment standards.

Add:

<p>Maine Solid Waste Act, Lead Management Regulations (06-096 C.M.R. Ch. 424)</p>	<p>Relevant and Appropriate</p>	<p>Regulations establish "lead safe" standards for residential soils. "Lead-contaminated soil" is defined as soil that contains an amount of lead that is equal to or exceeding 375 ppm in bare soil in play areas, or is equal to or exceeding 1000 ppm from bare soil in building perimeters areas in other than play areas.</p>	<p>Cleanup levels for soil in residential areas will meet these standards or institutional controls will be established to prevent residential development in areas exceeding the lead-safe standard.</p>
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Response: The Navy respectfully disagrees. The MEDEP risk guidance documents are considered TBC for OU1 and inclusion of these two guidance is consistent with other FS for PNS sites; therefore, the Navy will not remove these guidance. The identified regulation will not be added because MEDEP has reviewed the OU1 FS and has not provided the same comment and the regulation was not included in the ARARs listed in other PNS documents.

48. **Comment:** T. 2-2, p. 1 Remove Federal Floodplain Management since regulation rewritten and Appendix A has been removed from 40 C.F.R. Part 6. Compliance with the Executive Order is a matter to be discussed under the Protectiveness criterion rather than the ARARs criterion.

Federal Coastal Zone Management Act is "Applicable" not "Potentially Applicable." Change the first sentence of the "Action to be Taken" to "Remedial actions within the floodplain of the Piscataqua River will be conducted in compliance with the substantive environmental standards under the Act, to reduce adverse impacts to coastal resources."

See previous comment to p. 2-5, 3rd ¶. If Rivers and Harbors Act is applicable change the Action to be Taken to "Any remedial action that includes activities in the Piscataqua River, adjacent to the site, will meet the substantive environmental standards under the Act."

For the Historic Preservation Act, change status to "Applicable." Under Synopsis add: "Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment." Under Action to be Taken insert a second sentence that states: "The area is part of the Portsmouth Naval Shipyard Historic District and the remediation within the District will meet applicable standards under the NHPA. Remove the last sentence.

Add:

Historic Sites Act of 1935 (16 U.S.C. § 469 <i>et seq.</i>); National historic landmarks (36 C.F.R. Part 65)	Applicable	The purpose of the National Historic Landmarks program is to identify and designate National Historic Landmarks, and encourage the long range preservation of nationally significant properties that illustrate or commemorate the history and prehistory of the United States.	Features with potential historical/cultural significance will be evaluated during the remedial design phase. Should this alternative impact historical properties/structures protected by these standards, activities will be coordinated with the Department of the Interior.
RCRA, Floodplain Restrictions for Hazardous Waste Facilities (40 CFR § 264.18)	Applicable	A hazardous waste facility located in a 100-year floodplain must be designed, constructed, operated and maintained to prevent washout by a 100-year flood event	If hazardous waste from the former battery acid tank/collection system is left in place it must be capped so as to prevent washout in a 100-year storm event.
Fish and Wildlife Coordination Act (16 U.S.C. § 661 <i>et seq.</i>)	Applicable	Any modification of a body of water or work in the floodplain requires consultation with the U.S. Fish and Wildlife Service and the appropriate state wildlife agency to develop measures to prevent, mitigate or compensate for losses of fish and wildlife.	The Navy will consult with U.S. Fish and Wildlife Service to minimize disturbance to fish and wildlife resources because the remediation is within the 100 year floodplain, filled tidelands, and adjacent to the river.
Endangered Species Act (16 U.S.C. 1531 <i>et seq.</i> ; 50 C.F.R. Part 200, 402)	Applicable	The Piscataqua River is habitat to the federally-listed endangered Short-nosed Sturgeon. Standards include protection of listed species and their habitat and consultation with the Department of Interior.	If waste is left in place, long-term monitoring will need to insure that contaminants don't migrate to the river and pose a risk to endangered species.

See comment to p. 2-6, 1st ¶ as to whether to include the Marine Mammal Protection Act.

Response: Building 238 is considered a contributing element to the historic district. The OU1 FS will be revised using language from the PNS OU3 FS/ROD indicating that SHPO will need to be contacted for any major structural change to the building that may impact its appearance. Please see the Navy's response to USEPA Legal Comment No. 14.

The text referencing the actions under the Coastal Zone Management Act will be kept consistent with other PNS FSs/RODs. The Rivers and Harbors Act will be deleted as provided in the Navy's response to USEPA Legal Comment No. 13. No change will be

made related to RCRA Floodplain Restrictions as provided in the Navy's response to USEPA Legal Comment No. 18. Changes based on the Fish and Wildlife Coordination Act and Endangered Species Act will be made as provided in the Navy's responses to USEPA Legal Comment Nos. 15 and 16, respectively.

49. **Comment:** T. 2-2, p. 2 The Maine Site Location of Development Law, for Status remove "Potentially." Change the Action to be Taken to: "Remedial alternatives will comply with these requirements, if deemed appropriate. Storm water management and erosion and sedimentation controls will be designed and implemented so that adverse effects on natural resources are minimized."

Response: Table 2-2 text for this law will be revised by deleting "potentially" and by adding the following text to the end of the Action to be Taken, consistent with the ARARs text in other PNS documents: "Substantive requirements of the law would be met under the CERCLA process in consultation with MEDEP."

50. **Comment:** Natural Resources Protection Act and Coastal Management Policies Act, for Status remove "Potentially."

Add:

Maine Hazardous Waste Rules, Additional Standards Applicable to Waste Facilities Located in a Flood Plain (38 M.R.S.A. §§ 1301 <i>et seq.</i> ; 06-096 CMR 854(16))	Applicable	A hazardous waste facility located in or within 300 feet of a 100-year floodplain must be constructed, operated and maintained to prevent washout by a 100-year flood event.	If hazardous waste from the former battery acid tank/collection system is left in place it must be capped so as to prevent washout in a 100-year storm event.
Maine Solid Waste Rules, Landfill Siting, Design, and Operation, Flood Plain (06-096 CMR 401(1)(C))	Relevant and Appropriate	Siting of solid waste facilities within a 100-year floodplain is restricted without obtaining a variance.	If waste below hazardous waste toxicity thresholds, but about residential risk levels is left in place it will be covered so as to prevent a release in a 100-year storm event.
Maine Mandatory Shoreland Zoning Act (Title 38, M.R.S.A., Sections 435-449; 06 096 CMR Chapter 1000)	Relevant and Appropriate	To protect and conserve shoreland areas by controlling activities within 250 feet of high water mark, as defined in state law.	Measures will be taken during selection, design, and implementation of remedial actions to comply with the substantive requirements of the Act.
Submerged and Intertidal Lands Act (Title 12 M.R.S.A.	Applicable for submerged	The statute establishes the State's ownership and management of	Any remedial action that includes activities in the Piscataqua River and/or within

Sections 1861-1867)	and intertidal land; Relevant and Appropriate for filled tideland	submerged, intertidal, and filled tidal land throughout the State.	filled tidelands, will meet the substantive environmental standards under the Act.
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Response: The Navy respectfully disagrees that the listed ARARs should be included in Table 2-2 or that the Action to Be Taken applies to OU1. Please see the Navy's responses to USEPA Legal Comment Nos. 5, 16, 18, and 24. In addition, MEDEP has reviewed the OU1 FS and has not provided the same comment (please see the Navy's February 5, 2009 responses to USEPA and MEDEP technical comments on the draft OU1 FS Report).

51. **Comment:** T. 2-3, p. 1 Consolidate the first three rows and cite general reference below to federal standards and specific citations to the state regulations since Maine's program is delegated.

Resource Conservation and Recovery Act (RCRA)(42 U.S.C. §6901 <i>et seq.</i>), Subtitle C- Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements, Closure and Post- Closure (40 C.F.R. Parts 260-262 and 264)	Applicable	Federal standards used to identify, manage, and dispose of hazardous waste. Maine has been delegated the authority to administer these RCRA standards through its state hazardous waste management regulations. These provisions have been adopted by the State.	These standards are applicable to the closure/post-closure of the former battery acid tank system, and associated contaminated soils. Wastes generated as part of remedial activities will be characterized as hazardous or non- hazardous. If determined to be hazardous waste, then they will be stored, transported, and disposed of in accordance with these standards.
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Remove the LDR citation, off-site standards not ARARs.

Need to identify Clean Water Act citations for the treatment/disposal of water removed from excavations (NPDES standards if discharge to surface water; Pretreatment standards if discharged to a POTW).

CWA Section 402 National Pollutant Discharge	Applicable	This act and regulations establish discharge limitations, monitoring requirements, and best management practices. Point-source discharges to surface water must comply with NPDES	On-site discharges of excavation water to surface waters shall meet these substantive discharge standards.
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Elimination System (NPDES) (40 CFR 122-125 and 131)		requirements (e.g., National Recommended Water Quality Criteria ("NRWQC")).	
CWA General Pretreatment Regulations for Existing and New Sources of Pollution (40 CFR 403)	Applicable	These regulations establish pretreatment standards before contaminated water can be sent to a publically owned treatment works (POTW).	Any discharge of excavation water shall meet these substantive pretreatment standards before being sent to a POTW.

For monitoring of surface waters if waste left in place:

Clean Water Act (33 U.S.C. § 1251 et seq.); National Recommended Water Quality Criteria ("NRWQC") (40 C.F.R. § 122.44)	Relevant and Appropriate	Used to establish water quality standards for the protection of aquatic life.	Standards to be used for monitoring water quality during waste excavation or if waste left in place.
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For stormwater control add:

CWA, NPDES Phase II Stormwater Standards (40 CFR 9, 122, 123 and 124)	Applicable if over one acre is disturbed; Relevant and Appropriate if less than one acre is disturbed	Storm-water control standards for construction projects between one and five acres	Any remedial action that exposes soil will meet these standards to control stormwater runoff and prevent erosion.
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Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 21 regarding consolidating RCRA federal standards. RCRA tank closure and post-closure standards are not ARARs for OU1 as provided in the Navy's response to USEPA Legal Comment No. 5. Surface water runoff and erosion would not be an issue for the remedial alternatives at OU1. Consequently, there is no need to add provisions from the CWA pertaining to runoff and erosion.

52. **Comment:** T. 2-3, p. 2 If the Navy is going to discuss an applicable section of 40 C.F.R. Part 264 (instead of just discussing the applicable state hazardous waste regulation), they should be discussing Subpart J (Tank Systems) rather than Subpart S. The remedy needs to meet closure/post-closure standards under 40 C.F.R. 264.197.

Including the following specific ME hazardous waste citations:

<p>Maine Hazardous Waste Rules for Identification and Listing of Hazardous Wastes (38 M.R.S.A. §§ 1301 <i>et seq.</i>; 06-096 CMR 850)</p>	<p>Applicable</p>	<p>These standards establish requirements for determining whether wastes are hazardous based on either characteristics or listing. Table I in the Rule identifies the toxicity characteristic for lead.</p>	<p>Wastes exceeding toxicity characteristic levels will be addressed by the remedial action, whether removed or left in place. Wastes generated as part of excavation and other remedial activities will be characterized as hazardous or non-hazardous. For any removal remedy confirmatory testing within the excavation will confirm whether all hazardous wastes have been removed.</p>
<p>Maine Hazardous Waste Management Rules - Requirements for Generators (38 M.R.S.A. §§ 1301 <i>et seq.</i>; 06-096 CMR 851)</p>	<p>Applicable</p>	<p>These regulations contain requirements for generators of hazardous waste. Under Rule 11(b) (Closure for Tank Systems) If a generator conducting closure of a tank system demonstrates that all contaminated soil can not be practicably removed or decontaminated as required by paragraph (A) above, then the generator must close the tank system and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills under Chapter 855, Section 9(H). In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the generator must meet</p>	<p>The closure of the former battery acid tank system will meet applicable closure standards under this Rule, including addressing contaminated soils. All hazardous wastes generated from this remedial action will be managed under the requirements of these Rules.</p>

		all the requirements for landfills in Chapter 855, Sections 9(A)(15) and (16).	
Maine Hazardous Waste Rules – Standards for Hazardous Waste Facilities (38 M.R.S.A. §§ 1301 <i>et seq.</i> ; 06-096 CMR 854)	Applicable	The Rules identifies general requirements for hazardous waste facilities (Rule 6) and Additional Applicable to Hazardous Waste Tank and Container Storage Facilities (Rule 12), including requirements for air, surface water and groundwater monitoring and closure/post-closure	The battery acid tank collection system was part of a licensed hazardous waste facility that is subject to these facility requirements.
Maine Hazardous Waste Rules – Interim Standards for Hazardous Waste Facilities – Landfills (38 M.R.S.A. §§ 1301 <i>et seq.</i> ; 06-096 CMR 855)	Applicable	As required under Rule 851(11)(b) (Closure for Tank Systems) If a generator conducting closure of a tank system demonstrates that all contaminated soil can not be practicably removed or decontaminated as required, then the generator must close the tank system and perform post-closure care in accordance with the closure and post-closure requirements that apply to landfills under Rule 9(A) and (H).	If any hazardous waste is left in place that practically can't be either removed or decontaminated the remedial action will meet these closure/post closure standards.
Maine Hazardous Waste Rules - Special requirements for	Relevant and Appropriate	Standards for wastewater treatment units for the treatment of hazardous waste.	If it is necessary to treat water from excavations contaminated with hazardous wastes prior to discharge to surface waters or a POTW, then the requirements of these regulations will be met.

wastewater treatment units (38 M.R.S.A. §§ 1301 <i>et seq.</i> ; 06-096 CMR 856(6)(d))			
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Erosion control/Stormwater Management standards are “Applicable”, not “Potentially Applicable.”

Response: The Navy respectfully disagrees. RCRA tank closure and post-closure standards are not ARARs for OU1 or that RCRA characterization standards would be used to drive remedial action. Please see the Navy’s responses to USEPA Legal Comment Nos. 5, 21, 24, and 41. In addition, MEDEP has reviewed the OU1 FS and has not provided the same comment.

53. **Comment:** T. 2-3, p. 3 Replace the Maine Ambient Air citation with the following:

Maine Air Quality Control Laws; Protection and Improvements of Air (38 M.S.R.A. 581-608-A), Chapters 101, 105, 110, 115)	Applicable	This law and its associated regulations detail the requirements, limitations, and exemptions of state air emissions, including lead and fugitive dust. The standard for particulate matter is 150 µg/m ³ (micrograms per cubic meter), 24 hour average concentration.	Dust suppression will be utilized as needed to comply with this standard.
Maine Department of Human Services Interim Ambient Air Guidelines, Memorandum February 23, 1993.	To Be Considered	Interim ambient air guidelines are derived from risk assessment-based criteria or from occupational exposure criteria that are protective of ambient air quality.	These guidelines will be considered during the development of air quality controls.

ME Solid Waste in the citation add “401,” after “400,” and change Status to “Applicable for solid waste disposal; Relevant and Appropriate for landfill closure/post-closure standards” and add in the Action to Be Taken that “Any waste below hazardous waste toxicity thresholds, but above residential risk levels will be covered in accordance with relevant and appropriate closure/post-closure standards.”

Add these additional State Action-specific ARARs:

Maine Waste Discharge Licenses (38	Applicable	This rule requires permits issued by Maine Department of	All substantive requirements of this regulation will be met with respect to any point source discharge to
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<p>M.R.S.A. Section 413 <i>et seq.</i> and Waste Discharge Permitting Program (06-096 CMR Chapter 520-529)</p>		<p>Environmental Protection (MEDEP) for the discharge of pollutants from point sources.</p>	<p>surface water. Appropriate controls and best management practices will be implemented.</p>
<p>Maine Water Classification Program (38 M.R.S.A., Section 464-470)</p>	<p>Applicable</p>	<p>This program sets forth standards for the classification of Maine's water. Activities in a water body cannot lower water quality below the designated classification. The Piscataqua River adjacent to the Site is classified as Class SC. Discharges to Class SC waters may cause some changes to estuarine and marine life provided that the receiving waters are of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community.</p>	<p>Site activities will be designed and implemented in a manner that they do not degrade the chemical, physical, or biological integrity of the Piscataqua River. Monitoring will ensure that any remedial action will be protective of water quality.</p>
<p>Maine Surface Water Toxics Program (38 M.R.S.A. Sec. 420; 06-096 CMR Chapter 530)</p>	<p>Applicable</p>	<p>These rules set forth the National Recommended Water Quality Criteria for toxic water pollutants and procedures necessary to control levels of toxic pollutants in surface waters.</p>	<p>Site activities will be designed and implemented in a manner that they do not degrade the chemical, physical, or biological integrity of the Piscataqua River. Monitoring will ensure that any remedial action will be protective of water quality.</p>
<p>Maine Surface Water Quality Criteria for Toxic Pollutants (06-096 CMR Chapter 584)</p>	<p>Applicable</p>	<p>Except as naturally occur, levels of toxic pollutants in surface waters must not exceed federal water quality criteria as established by the U.S. environmental Protection Agency (USEPA), pursuant to Section 304(a) of the CWA, or alternative criteria.</p>	<p>Site activities will be designed and implemented in a manner that they do not degrade the chemical, physical, or biological integrity of the Piscataqua River. Monitoring will ensure that any remedial action will be protective of water quality.</p>

Response: The Navy respectfully disagrees. The Navy believes that the Maine Ambient Air citation is correct as provided to address air quality. As provided in the Navy's responses to previous USEPA Legal Comments (see Nos. 5, 24, 34, and 41), the suggested change for Action to Be Taken under the ME Solid Waste citation is not appropriate for OU1. The suggested additional ME ARARs are not applicable to remedial action for OU1. In addition, MEDEP has reviewed the OU1 FS and has not provided the same comment.

54. **Comment:** p. 3-5, 4th ¶ Insert a new second sentence: "However, LUCs alone would not meet ARARs requirements for closure/post-closure, therefore LUCs would only be effective when paired with a containment action."

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1. LUCs alone would meet ARARs for OU1. Please see the Navy's response to USEPA Legal Comment No. 5.

55. **Comment:** p. 3-6, § 3.3.3 Any containment needs to meet hazardous waste capping requirements, including requirements that waste in place will not be washed out in a 100-year flood event and that landfill closure/post-closure standards are met for any inaccessible contamination (as per closure/post-closure standards for tank systems – see previous discussion in Sec. 2. The Navy needs to revise this section to include an evaluation as to what an ARAR compliant cap system needs to be.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1 or that wash out during a 100-year flood event is a concern for OU1. Please see the Navy's responses to USEPA Legal Comment Nos. 5 and 18.

56. **Comment:** Note that there would have to be a permanent monitoring system established to ensure that a containment system remains effective.

Response: The LUC Remedial Design (RD) and/or Operation, Maintenance, and Monitoring Plan would provide requirements for monitoring as part of a remedy that includes LUCs or OM&M to ensure the remedy remains effective.

57. **Comment:** p. 3-7, 2nd ¶ Discuss if any excavation might be conducted from the waterfront (equipment operating from barges or excavated material loaded onto barges).

Response: The Navy respectfully disagrees. It is not anticipated at this time that barges will be required when excavating material from beneath Building 238. In addition, there is a seawall present and excavation along waterfront is not a concern. Please also see the Navy's response to USEPA Legal Comment No. 13.

58. **Comment:** Also discuss how contaminated excavation water will be treated/disposed of (discharged to the River/sent to a POTW).

Response: Please see the Navy's response to USEPA Legal Comment No. 29.

59. **Comment:** To achieve removal standards, all contaminated soil above toxicity threshold levels would need to be removed both above and below the water table.

Response: Please see the Navy's responses to USEPA Legal Comment Nos. 5 and 41.

60. **Comment:** p. 3-7, 3rd ¶ Insert a fourth sentence: "Monitoring of air quality may be required, as well as water quality monitoring in the River to ensure that erosion/stormwater requirements are being achieved.

Response: The Navy agrees with qualification. Surface water monitoring is not needed as provided in the Navy's responses to USEPA Legal Comment Nos. 29 and 57. Text will be added to the 3rd paragraph to indicate that monitoring of air quality may be required during excavation.

61. **Comment:** p. 3-10, 4th ¶ Regarding the sixth sentence, what basis is there for assuming that soil with lead levels as 2,000 mg/kg would not exceed toxicity thresholds? EPA normally applies the 20x rule in assessing whether soil contaminant levels may exceed TCLP thresholds.

Response: Toxicity thresholds are not PRGs for OU1. The PRGs are risk-based numbers for human health exposure to soil. Please see the Navy's responses to USEPA Legal Comment Nos. 5, 24, and 41.

62. **Comment:** p. 3-11, bullets As noted previously, the LUC alternative can only be used when paired with a containment option and the Asphalt or Multimedia Cover may not meet hazardous waste capping requirements.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1, as noted previously. LUCs alone could meet the RAOs and be protective of human health and the environment. LUCs would be developed to meet ARARs for OU1. Please also see the Navy's response to USEPA Legal Comment No. 41.

63. **Comment:** p. 3-12, Alt. 2 Remove Alternative 2, since a LUC only alternative does not meet ARAR requirements.

Response: The Navy respectfully disagrees. As provided in previous responses to USEPA Legal Comments, RCRA tank closure and post-closure standards are not ARARs for OU1. As part of Alternative 2, LUC RD would be developed and implemented to meet RAOs to provide protection to human health and environment and would comply with ARARs for OU1. Please also see the Navy's response to USEPA Legal Comment Nos. 5 and 18 regarding RCRA as an ARAR for OU1.

64. **Comment:** p. 3-13, Alt.3 Remove Alternative 3, since the surface protection proposed does not meet ARAR requirements or revise this alternative to incorporate a hazardous waste cap over waste exceeding tank system closure thresholds.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1 or that contaminant wash out is a concern for OU1. Alternative 3 would meet RAOs, be protective of human health and the environment, and meet ARARs. A hazardous waste cap is not required to meet RAOs or be protective of human health and the environment because reduction of infiltration of water through soil is not a concern for OU1. The soil being addressed by the cover in Alternative 3 is already in contact with water and migration to groundwater is not a concern. The cover with LUC as provided in Alternative 3 would prevent human health exposure to contaminated soil. RCRA standards for containment of hazardous waste are not ARARs for OU1; therefore, a hazardous waste cap is not required to meet ARARs. Please also see the Navy's responses to USEPA Legal Comment Nos. 5, 18, 24, and 41.

65. **Comment:** p. 3-14, Alt. 4 For Alternative 4 to meet hazardous waste closure standards all contaminated soil exceeding tank system closure standards must be removed. If not, this alternative will not meet ARARs unless inaccessible soils are managed based on closure/post-closure standards for hazardous waste landfills.

Response: The Navy respectfully disagrees that RCRA tank closure and post-closure standards are ARARs for OU1. Alternative 4 would meet RAOs and be protective of human health and the environment by removing contaminated soil greater than risk-based numbers for protection of current site users (e.g., construction workers and occupational workers) and LUCs for protection of future potential site users (e.g., residential receptors). Alternative 4 would meet ARARs for OU1. Please also see the Navy's response to USEPA Legal Comment Nos. 5, 18, 24, and 41.

66. **Comment:** T. 3-1, p. 1 Limited Action; Monitoring; Screening Comment - Note that monitoring is always required if waste is left in place. Also need to have monitoring (air and surface water) during any active remediation they may cause releases into the environment).

Response: The Navy retained limited action for alternatives where contaminated soil at concentrations greater than human health risk-based standards (PRGs) remain at OU1 such that unrestricted use of the site is not allowed. LUCs RD, OM&M Plan, and remedial action work plans developed as part of a remedy for OU1 would provide the specific requirements for the remedy.

67. **Comment:** Containment – Need to add a cap system that is compliant with hazardous waste requirements.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 64.

68. **Comment:** Containment; Asphalt/Multimedia Cover & Soil Cover; Screening Comment – Eliminate if these are not compliant with hazardous waste capping requirements.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA

Legal Comment No. 64.

69. **Comment:** p. 4-5, § 4.2 As previously discussed, eliminate Alternative 2 and Alternative 3 (if the surface protection does not meet hazardous waste capping requirements).

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 63.

70. **Comment:** p. 4-5, §4.2.1.1 Five-year reviews are still required by statute even for the No Action alternative.

Response: The Navy respectfully disagrees. The No Action Alternative is intended to represent maintaining the site as status quo and would not include 5-year reviews. This is consistent with the guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (EPA/540/G-89/004, October 1988) and with the decision making at other PNS sites (e.g., OU3).

71. **Comment:** p. 4-5, §4.2.1.2 In the first sentence add after "human health" add "and the environment."

Response: The Navy concurs. The text will be changed to indicate protectiveness to the environment is being met.

72. **Comment:** Remove the entire second paragraph since none of the restrictions discussed would be enforceable under CERCLA. As previously noted, there would still be 5-year reviews even under the No Action Alternative.

Response: The Navy respectfully disagrees. The paragraph is discussing current site controls that are being implemented by the Shipyard. Please see the Navy's response to USEPA Legal Comment No. 70 regarding 5-year reviews.

73. **Comment:** p. 4-6, 3rd There is one chemical-specific ARAR and a number of chemical-specific TBCs for the No Action Alternative that are used to assess site risks. Since risks are not addressed under this alternative this alternative does not comply with this criterion.

Response: The Navy respectfully disagrees that there are any chemical-specific ARARs (please see the Navy's response to USEPA Legal Comment No. 11). It is unclear whether the comment is on Compliance with ARARs or Long-Term Effectiveness and Permanence (the third paragraph on Page 4-6). However, there are no chemical-specific ARARs and as discussed in the paragraph on Long-Term Effectiveness, No Action would not meet this criterion because there would be no action conducted to reduce risks. Please also see the Navy's response to USEPA Legal Comment No. 5.

74. **Comment:** p. 4-7, 1st ¶ At the end of the first sentence add: ", except for five-year reviews."

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 70.

75. **Comment:** p. 4-7, 2nd ¶ After "Alternative 1" insert ", except the cost of five-year reviews,"

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 70.

76. **Comment:** p. 4-7, § 4.2.2 Remove Alternative 2 since it isn't compliant with hazardous waste closure/post-closure and flood protection ARARs.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 63.

77. **Comment:** p. 4-10, §4.2.3 Remove Alternative 3 unless the "surface protection" is revised to become compliant with hazardous waste capping and flood protection ARARs.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 64.

78. **Comment:** p. 4-15, §4.2.4 Alternative 4 needs to be revised the clarify that all contaminated soil (above and below the water table) exceeding hazardous waste closure standards will be removed or, if inaccessible, will be capped based on applicable landfill closure standards.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 65.

79. **Comment:** If this alternative does meet hazardous waste standards this section needs to discuss how contaminated water in excavations will be treated/disposed of, whether any excavation will be conducted from shoreline facilities (barge mounted excavation equipment or loading of excavated material on to barges), and monitoring plans for the active remediation phase and long-term monitoring of waste left in place.

Response: The Navy respectfully disagrees. Please see the Navy's responses to USEPA Legal Comment Nos. 65, 29, and 57.

80. **Comment:** p. 4-16, 1st bul Note that any asphalt cover would need to meet solid waste cover standards for waste exceeding residential risk levels that is left in place.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA

Legal Comment No. 64. In addition, solid waste cover standards are not ARARs for OU1.

81. **Comment:** p. 4-16, 1st ¶ Insert after the first sentence: “Land use controls will consist of a base instruction to prevent exposure to contaminated soil for as long as the facility is owned by the Navy and if the property is transferred the restrictions will be incorporated into deed restrictions.”

Response: The following text will be inserted after the first sentence, consistent with the Navy language used in the LUC RD template.

“The plan would follow LUC related procedures pertaining to ground-disturbing activity and changes in land use, including property transfer, as per Commander, Navy Region, Mid-Atlantic Instruction 5090.2, *Installation Restoration; Land Use Controls at Navy Region, Mid-Atlantic Installations; Establishment and Maintenance*, as amended.”

In addition, based on review of this comment, the Navy re-evaluated the status of the State of Maine Uniform Environmental Covenants Act (UECA) as an ARAR for OU1, which is located on Navy property. The Navy has determined that the Maine’s state law is not applicable to land use restrictions imposed by the Navy on it’s own property, and therefore, the UECA is not an ARAR for OU1. The following provides additional text revisions from the February 5, 2009 response to comments.

*Uniform Environmental Covenants Act (MRSA Title 38, Chapter 31) creates a statutory mechanism for creating, modifying, enforcing and terminating environmental covenants. The environmental covenants created under this act are based on traditional property law principles and are recorded in the local land records and bind successive owners of the property. State and local governments, and potentially others, have clear rights to enforce the land use restrictions and thereby ensure with greater certainty the protection of human health and the environment throughout the life of the land use restriction and through various real estate transactions or legal issues. ~~OU1 is located on a federal facility; therefore, mechanisms for environmental covenants, including land use restrictions, are governed by the appropriate federal guidelines. Maine’s state law is not applicable to land use restrictions imposed by the Navy on it’s own property.~~ **OU1 is located on a federal facility; therefore, mechanisms for environmental covenants, including land use restrictions, are governed by the appropriate federal guidelines. However, this act is considered relevant and appropriate for remedial actions at OU1 that include land use restrictions.***

82. **Comment:** p. 4-17, 1st ¶ This paragraph is accurate if all soil exceeding closure standards is either removed or capped based on hazardous waste closure standards.

Response: The Navy respectfully disagrees. Please see the Navy’s responses to USEPA Legal Comment Nos. 64 and 65.

83. **Comment:** p. 4-17, 2nd ¶ The soil management requirements noted in third sentence need to be incorporated into the remedy so that they are enforceable under the ROD. They also need to be incorporated into the Base Instruction if the Base Instruction is to be used to establish the land use controls.

Response: Please see the Navy's response to USEPA Legal Comment No. 81.

84. **Comment:** p. 4-17, 3rd ¶ There is one chemical-specific ARAR and a number of chemical-specific TBCs for this alternative that are used to assess site risks. To meet location-specific (particularly hazardous and solid waste floodplain standards) and action-specific (hazardous waste closure/post-closure standards) all waste exceeding tank system closure standards needs to either be removed or capped.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 65 and associated responses to Comment Nos. 5, 18, 24, and 41.

85. **Comment:** p. 4-17, 4th ¶ In the second sentence, the excavation should be based on removing all soil exceeding hazardous waste toxicity thresholds, rather than industrial risks.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 65 and associated responses to Comment Nos. 5, 18, 24, and 41.

86. **Comment:** Add at the end of the last sentence: "and a cover system will be maintained to prevent washout of contaminated soil exceeding residential risk levels during a 100-year storm event."

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 65 and associated responses to Comment Nos. 5, 18, 24, and 41.

87. **Comment:** p. 4-17, 5th ¶ In the second sentence replace all the text after "removal of" with "all soil exceeding hazardous waste toxicity thresholds to meet PRGs and meet hazardous waste closure/post-closure standards.

Response: The Navy respectfully disagrees. The removal of soil is to meet PRGs and provided in the Navy's responses to USEPA Legal Comment Nos. 5, 18, 24, 41, and 65.

88. **Comment:** Add at the end of the third sentence: "and a cover to prevent washout during a 100-year storm event."

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 65 and associated responses to Comment Nos. 5, 18, 24, and 41.

89. **Comment:** p. 4-18, 1st ¶ Add a new third sentence: "Land use controls will consist of a base instruction to prevent exposure to contaminated soil for as long as the facility is owned by the Navy and if the property is transferred the restrictions will be incorporated into deed restrictions."

Response: Please see the Navy's response to USEPA Legal Comment No. 81.

90. **Comment:** p. 4-18, 3rd ¶ In the second sentence replace "from the crawl space" with "exceeding hazardous waste toxicity thresholds, maintaining a flood-proof cover over remaining contaminated soil,"

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 65.

91. **Comment:** Add at the end of the third sentence: ", including collection and disposal of excavation water, erosion and sedimentation controls, and monitoring during remedial activities."

Response: The text will be revised as provided in the Navy's responses to USEPA Legal Comment Nos. 29, 32, 57, and 60.

92. **Comment:** p. 4-18, 4th ¶ In the fourth sentence remove "from the crawl space."

Response: The Navy respectfully disagrees. The text is correct as written.

93. **Comment:** p. 4-19, 1st ¶ In the fifth sentence after "contaminated soil," add "collecting and disposing of contaminated excavation water, monitoring requirements during remedial activities,".

Response: Please see the Navy's responses to USEPA Legal Comment Nos. 29, 32, 57, and 60.

94. **Comment:** p. 4-19, 2nd ¶ In the last sentence after "LUCs" insert ", maintenance of the cover over remaining contaminated soil, long-term monitoring,"

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 64.

95. **Comment:** p. 4-19, 3rd ¶ Revise cost estimate to include the cost of removing all soil exceeding hazardous waste toxicity thresholds, O & M of the cover over remaining contaminated soil exceeding residential standards, and long-term monitoring of waste left in place.

Response: The Navy respectfully disagrees. The Navy believes the cost estimate is appropriate for the alternative as developed. Please see the Navy's response to USEPA Legal Comment No. 65.

96. **Comment:** p. 4-19, 4th ¶ After "disposal of" replace the rest of the sentence with "removal of all soil exceeding hazardous waste toxicity threshold levels and all soil above residential risk levels."

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 65.

97. **Comment:** p. 4-20, 1st ¶ Excavation volumes should be based on removing all contaminated soil exceeding hazardous waste toxicity threshold levels (both above and below the water table) and all soil above residential risk levels.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 65.

98. **Comment:** p. 4-20, 2nd ¶ In this paragraph also discuss the collection and treatment of contaminated excavation water and monitoring (surface water and air) during remedial activities.

Response: The text will be revised as provided in the Navy's responses to USEPA Legal Comment Nos. 29, 32, 57, and 60.

99. **Comment:** p. 4-20, 3rd ¶ Under the 20x rule, contaminated soil 20 times about toxicity characteristic threshold should be considered potentially hazardous.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 24.

100. **Comment:** p. 4-21, 2nd ¶ In the fifth sentence after "disposal requirements," add "determining how best to collect and dispose of excavation water, the development of erosion and sedimentation controls, establishing monitoring during remedial activities,".

Response: The text will be revised as provided in the Navy's responses to USEPA Legal Comment No. 29, 32, 57, and 60.

101. **Comment:** p. 4-21, 5th ¶ In the last sentence after "and backfill," add "facility closure standards would be met with no need for further post-closure activities,"

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 5.

102. **Comment:** p. 4-22, 1st ¶ Replace the second sentence with: "All chemical-specific ARARs and TBCs will be achieved."

Response: The Navy respectfully disagrees. There are no chemical-specific ARARs. Please see the Navy's response to USEPA Legal Comment No. 11.

103. **Comment:** p. 4-22, 2nd ¶ In the first sentence before "TBC" add "ARAR."

Response: The Navy respectfully disagrees. There are no chemical-specific ARARs. Please see the Navy's response to USEPA Legal Comment No. 11.

104. **Comment:** p. 4-22, 5th ¶ In the first sentence after "contaminated soil" add "and excavation water."

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 29.

105. **Comment:** In the second sentence after "erosion controls" add "and air and surface water monitoring,"

Response: The text will be revised as provided in the Navy's responses to USEPA Legal Comment Nos. 29 and 60.

106. **Comment:** p. 4-23, 3rd ¶ Regarding the implementability issues and tides, can some form of tidal dam or sheet piling be installed to keep the tides out of the area (this was done for the remediation of the McAllister Landfill at Newport).

Response: The Navy respectfully disagrees. The use of a tidal dam or sheet piling is not feasible at OU1 for the depth of soil that would be excavated. The tidal dam or sheet piling would have to tie in to bedrock to prevent tidal water from coming in. Excavation under Alternative 4 (in the crawl space) is in the tidally saturated zone.

107. **Comment:** p. 5-1, 2nd ¶ As previously noted remove alternative 2, remove alternative 3 if it does not include a hazardous waste compliant cap, and modify alternative 4 to include removal of all contaminated soil exceed hazardous waste toxicity threshold levels and a cover over remaining contaminated soil exceeding risk levels.

Response: The Navy respectfully disagrees. Please see the Navy's responses to USEPA Legal Comment Nos. 63, 64, and 65.

108. **Comment:** p. 5-1, § 5.1 ¶ Throughout this section change the text to reflect that alternative 2 is not protective, and alternative 3 and 4 are only protective if modified as discussed in the previous comment. Incorporate the Chapter 4 comments, above, made under this criterion for each alternative into this section.

Response: The Navy respectfully disagrees. Please see the Navy's responses to USEPA Legal Comment Nos. 63, 64, and 65.

109. **Comment:** p. 5-2, 1st ¶ In the first sentence, there is a chemical-specific ARAR as well as TBCs for Alternative that the alternative does on achieve.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 11.

110. **Comment:** In the second sentence alternative 2 does not meet location-specific floodplain standards. Alternative 3 and 4 would only meet these standards if the cap/cover can meet 100-year flood washout standards. Alternative 5 would meet all location-specific standards.

Response: The Navy respectfully disagrees. Please see the Navy's responses to USEPA Legal Comment Nos. 63, 64, and 65.

111. **Comment:** Remove the fourth sentence. Alternative 2 does not meet action-specific hazardous waste facility closure/post-closure requirements. Alternative 3 would only meet hazardous waste closure/post-closure standards if a hazardous waste cap is installed over areas with soils exceeding toxicity characteristic threshold levels. Alternative 4 would only meet action-specific standards if all soil exceeding toxicity characteristic threshold levels is removed (or inaccessible soils capped) and contaminated soil exceeding residential risk levels covered, and institutional controls and long-term monitoring established.

Response: The Navy respectfully disagrees. Please see the Navy's responses to USEPA Legal Comment Nos. 63, 64, and 65.

112. **Comment:** p. 5-2, 2nd ¶ In the first sentence before "TBC" add "ARAR and" and after "criteria" add "as well as location and action-specific ARARs requirements."

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 11.

113. **Comment:** In the second sentence Alternative 2 does not meet PRGs. Alternative 3 would only meet PRGs if the modifications previously discussed are made (need to have a hazardous waste compliant cap). Alternative 4 will only meet PRGs if all contaminated soil exceeding toxicity characteristic thresholds is removed or capped and remaining contaminated soils about risk levels is covered and subject to long-term monitoring and institutional controls. Alternative 5 will meet all PRGs by removing all contaminated soil above residential risk levels.

Response: The Navy respectfully disagrees. Please see the Navy's responses to USEPA Legal Comment Nos. 63, 64, and 65.

114. **Comment:** p. 5-2, § 5.3 Incorporate the Chapter 4 comments, above, made under this criterion for each alternative into this section. In summary alternatives 1 and 2 don't meet this criterion. Alternatives 3 and 4 only make this criterion if the modifications previously discussed are made. Alternative 5 meets this criterion.

Response: The Navy respectfully disagrees. Please see the Navy's responses to USEPA Legal Comment Nos. 63, 64, and 65.

115. **Comment:** p. 5-3, § 5.5 Incorporate the Chapter 4 comments, above, made under this criterion for each alternative into this section.

Response: Changes will be made consistent with responses to comments on Section 4.0. Please also see the Navy's responses to USEPA Legal Comment Nos. 63, 64, and 65.

116. **Comment:** p. 5-4, § 5.6 Incorporate the Chapter 4 comments, above, made under this criterion for each alternative into this section.

Response: Changes will be made consistent with responses to comment on Section 4.0. Please also see the Navy's responses to USEPA Legal Comment Nos. 63, 64, and 65.

117. **Comment:** p. 5-7, § 5.7 Add the Cost of 5-year reviews to Alternative 1. Revise the cost estimates to reflect the requested modifications to Alternatives 3, 4, and 5.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 70 related to Alternative 1 costs. No cost estimate revisions are necessary based on USEPA Legal Comments on Alternatives 3, 4, and 5.

118. **Comment:** T. 5-1 Modify this chart based on previous comments. Remove Alternative 2 (or in the alternative note that it is not protective, does not comply with ARARs, would not have long-term effectiveness or permanence, and would not be effective in the short-term). If Alternative 3 is not modified to include a hazardous waste compliant cap it does not meet the Protectiveness, ARAR, Long-term Permanence, and Short-term Effectiveness criteria. If Alternative 4 is not modified to include removal or capping of all contaminated soil exceeding toxicity characteristic thresholds then it does not meet the Protectiveness, ARAR, Long-term Permanence, and Short-term Effectiveness criteria.

Response: Revisions to Table 5-1 will be made consistent with responses to comments on Section 4.0. Please also see the Navy's responses to USEPA Legal Comment Nos. 63, 64, and 65.

119. **Comment:** Appendix A Need to include hazardous waste ARAR requirement in developing PRGs (see previous comments).

Response: The Navy respectfully disagrees. There are no chemical-specific ARARs. Please also see the Navy's responses to USEPA Legal Comment Nos. 11 and 41.

120. **Comment:** Need to include ME Solid Waste "lead-safe" residential thresholds (375 mg/kg) when developing residential PRGs for lead.

Response: The Navy respectfully disagrees. Please see the Navy's response to USEPA Legal Comment No. 11

121. **Comment:** T. B-1, Table B-1 should be for Alternative 1. Need to incorporate all of the changes made to the Chapter 2 Chemical-specific ARARs Tables for Alternative 1. The Evaluation or Action to be Taken text for each TBC or ARAR should describe how Alternative 1 does not meet each standard.

Response: Changes to the Tables in Appendix B will be made based on changes to Tables 2-1, 2-2, and 2-3 as appropriate for the alternative. Please see the Navy's responses to USEPA Legal Comment Nos. related to ARARs and TBCs in Section 2.0..

122. **Comment:** Remove ARARs Tables for Alternative 2, since it does not meet ARARs, otherwise the Navy needs to create tables that reflect the comments to the Chapter 2 ARARs tables and which identify all of the ARARs (particularly location-specific floodplain and action-specific hazardous waste closure/post-closure standards) that the alternative does not meet.

Response: The Navy respectfully disagrees that Alternative 2 tables should be deleted. Changes to the Tables in Appendix B will be made based on changes to Tables 2-1, 2-2, and 2-3 as appropriate for the alternative. Please see the Navy's responses to USEPA Legal Comment Nos. related to ARARs and TBCs in Section 2.0 and Comment No. 63.

123. **Comment:** T. B-2, pp 1-2 Make all of the changes to the Alternative 3 chemical-specific ARARs made to the Chapter 2 ARARs tables. The alternative will only meet chemical-specific risk standards if the remedy is modified to properly cap and cover all wastes to prevent release/exposure.

Response: Changes to the Tables in Appendix B will be made based on changes to Tables 2-1, 2-2, and 2-3 as appropriate for the alternative. Please see the Navy's responses to USEPA Legal Comment Nos. related to ARARs and TBCs in Section 2.0 and Comment No. 64.

124. **Comment:** T. B-2, p. 3 Make all of the changes to the Alternative 3 location-specific ARARs made to the Chapter 2 ARARs Tables. The alternative will only meet location-specific standards if the alternative is modified to include a hazardous waste cap and solid waste cover that will prevent washout in a 100-year flood.

Response: Please see the Navy's response to USEPA Legal Comment No. 123.

125. **Comment:** There are action-specific ARARs for this alternative. All of the action-specific ARARs noted in the Chapter 2 comments pertaining to hazardous waste closure/post-closure (including capping) and solid waste closure/post-closure pertain to this alternative.

Response: Please see the Navy's response to USEPA Legal Comment No. 123.

126. **Comment:** T. B-3, pp 1-2 Make all of the changes to the Alternative 4 chemical-specific ARARs made to the Chapter 2 ARARs tables. The alternative will only meet chemical-specific risk standards if the remedy is modified to either remove or cap all wastes exceeding toxicity characteristic thresholds, as well as covering all additional soils exceeding risk standards to prevent release/exposure of contaminants.

Response: Changes to the Tables in Appendix B will be made based on changes to Tables 2-1, 2-2, and 2-3 as appropriate for the alternative. Please see the Navy's responses to USEPA Legal Comment Nos. related to ARARs and TBCs in Section 2.0 and Comment No. 65.

127. **Comment:** T. B-3, p. 3 Make all of the changes to the Alternative 4 location-specific ARARs made to the Chapter 2 ARARs Tables. The alternative will only meet location-specific standards if the alternative is modified to include either excavation or capping of all contaminated soil exceeding toxicity threshold levels and a solid waste cover that will prevent washout in a 100-year flood.

Response: Please see the Navy's response to USEPA Legal Comment No. 126.

128. **Comment:** T. B-3, pp 4-6 Make all of the changes to the Alternative 4 action-specific ARARS made to the Chapter 2 ARARS Tables. The alternative will only meet action-specific standards if the alternative is modified to include either excavation or capping of all contaminated soil exceeding toxicity threshold levels to meet hazardous waste closure/post-closure requirements. Remaining contaminated soil below toxicity characteristic thresholds but which poses a residential risk need to be covered and meet closure/post-closure solid waste requirements. Additional action-specific ARARS pertain to address contaminated excavation water and long-term monitoring.

Response: Please see the Navy's response to USEPA Legal Comment No. 126.

129. **Comment:** T. B-4 Make all of the changes to the Alternative 5 ARARS made to the Chapter 2 ARARS Tables. In the Evaluation or Action to Be Taken revise the text to describe specifically how this alternative will meet all identified ARARS and TBCs.

Response: Changes to the Tables in Appendix B will be made based on changes to Tables 2-1, 2-2, and 2-3 as appropriate for the alternative. Please see the Navy's responses to USEPA Legal Comment Nos. related to ARARS and TBCs in Section 2.0.

REVISED SECTION 2 TEXT AND TABLES

2.0 REMEDIAL ACTION OBJECTIVES

This section identifies the ARARs, discusses the medium of concern, and develops the RAOs for remedial activities at OU1. ARARs are regulatory requirements and guidance that govern remedial activities. The medium of concern at OU1 is defined along with the volume of the contaminated medium. RAOs are medium-specific goals that define the objectives of conducting remedial actions and are developed to allow consideration of a range of remedial alternatives developed in subsequent sections.

2.1 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Tables 2-1 through 2-3 present a summary of federal and State of Maine ARARs and "to be considered" (TBC) criteria for OU1. The two threshold criteria that remedial alternatives must meet are: (1) Protection of Human Health and the Environment and (2) Compliance with ARARs. Remedial alternatives must attain or exceed conformance with all ARARs unless a waiver of an ARAR is justified, as described further in this section.

ARARs address a chemical, location, or action at a site and are defined as any standard, requirement, criterion, or limitation under federal environmental law, or any promulgated standard, requirement, criterion, or limitation under a state environmental or facility-citing law that is more stringent than the associated federal standard, requirement, criterion, or limitation, that is either legally applicable to the CERCLA hazardous substance(s) at the site, or is relevant and appropriate under the circumstances of the hazardous substance release.

One of the primary concerns during the development of remedial action alternatives for hazardous waste sites under CERCLA, commonly known as Superfund, is the degree of human health and environmental protection afforded by a given remedy. Section 121 of CERCLA requires that primary consideration be given to remedial alternatives that attain or exceed ARARs. The purpose of this requirement is to make CERCLA response actions consistent with other pertinent federal and state environmental requirements.

Definitions of the two types of ARARs, as well as TBC criteria, are as follows:

- Applicable Requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site.

- Relevant and Appropriate Requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that, although not "applicable," address problems or situations sufficiently similar (relevant) to those encountered at the CERCLA site that their use is well suited (appropriate) to the particular site.
- TBC Criteria are non-promulgated, non-enforceable guidelines or criteria that may be useful for developing remedial action alternatives and for determining action levels that are protective to human health and/or the environment. Examples of TBC criteria include Cancer Slope Factors (CSFs) and Reference Doses (RfDs).

Section 121(d)(4) of CERCLA allows the selection of a remedial alternative that will not attain all ARARs if any of six conditions for a waiver of ARARs exists. These conditions are as follows: (1) the remedial action is an interim measure whereby the final remedy will attain the ARAR upon completion; (2) compliance will result in greater risk to human health and the environment than other options; (3) compliance is technically impracticable; (4) an alternative remedial action will attain the equivalent of the ARAR; (5) for state requirements, the state has not consistently applied the requirement in similar circumstances; or (6) compliance with the ARAR will not provide a balance between protecting public health, welfare, and the environment at the facility with the availability of fund money for response at other facilities (fund-balancing). The last condition only applies to Superfund-financed actions.

ARARs fall into three categories. The characterization of these categories is not conclusive because many requirements are combinations of the three types of ARARs. These categories are as follows:

- Chemical-Specific: Health- or risk-based numerical values or methodologies that establish concentration or discharge limits for particular contaminants within the media of concern.
- Location-Specific: Restrictions based on the concentrations of hazardous substances or the conduct of activities in specific locations. These may restrict or preclude certain remedial actions or may apply only to certain portions of a site. Location-specific ARARs pertain to special site features, and examples include floodplain and coastal zone requirements.
- Action-Specific: Technology- or activity-based controls or restrictions on activities related to management of hazardous substances. Action-specific ARARs pertain to implementing a given remedy. Examples are RCRA requirements for management of hazardous waste that may be generated as part of remedial actions.

Deleted: Health- or risk-based numerical values or methodologies that establish concentration limits for particular contaminants within media of concern. Chemical-specific ARARs govern the extent of site cleanup. In the absence of chemical-specific ARARs, site-based cleanup criteria may be developed using guidance provided under USEPA RfD guidance or USEPA Health Assessment Group CSFs.¶

Throughout the following ARAR analysis and associated tables, the term "potentially" is used when requirements ("applicable" or "relevant and appropriate") would be invoked only if certain remedial actions are taken.

2.1.1 Chemical-Specific ARARs and TBCs

This section presents a summary of federal and State of Maine chemical-specific TBC criteria. Table 2-1 presents a list of federal and State of Maine chemical-specific TBCs for OU1. No chemical-specific ARARs were identified. The TBC criteria provide some medium-specific guidance on "acceptable" or "permissible" concentrations of contaminants.

Federal

Office of Solid Waste and Emergency Response (OSWER) Directive 9355.4-12 (Memorandum: Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities) provides a recommended concentration of 400 mg/kg for lead in soil for residential land use. The memorandum clarifies that the recommended concentration is a screening level "that may be used as a tool to determine which sites or portions of sites do not require further study." The memorandum further clarifies that "a screening level is defined as a level of contamination above which there may be enough concern to warrant site-specific study of risks; and "Levels of contamination above the screening level would not automatically require a remedial action, nor designate the site as "contaminated"." The 400 mg/kg screening level was developed based on a model specifically designed to simulate lead uptake in children in a residential setting. Adult lead exposure is evaluated based on a USEPA publication prepared by the Technical Review Workgroup (TRW) for Lead (January 2003), wherein a methodology is described for assessing risks associated with non-residential adult exposures to lead in soil. The directive and the USEPA publication are TBCs for development of PRGs for lead at OU1.

USEPA RfDs are estimates of daily exposure for human populations (including subpopulations) considered unlikely to cause significant adverse effects associated with a threshold mechanism of action in human exposure over a lifetime. RfDs are provided in USEPA's Integrated Risk Information System (IRIS). RfDs were used to estimate noncarcinogenic risk as part of the HHRA in the OU1 RI Report (TtNUS, July 2007). RfDs can be used to develop soil cleanup levels.

USEPA Human Health Assessment Group CSFs present the most up-to-date information on cancer risk potency for known and suspected carcinogens. CSFs are provided in USEPA's IRIS. CSFs were used to estimate carcinogenic risk as part of the HHRA in the OU1 RI Report (TtNUS, July 2007). CSFs can be used to establish soil cleanup levels. However, there were no carcinogenic COCs for OU1; therefore, CSFs would not be used to develop soil cleanup levels for OU1.

USEPA Region 9 PRGs are presumptive levels calculated using standard exposure assumptions for residential and industrial land use scenarios. These concentrations are calculated for an HI of 1.0 for noncarcinogens and a risk level of 1×10^{-6} for carcinogens. USEPA Region 9 PRGs were used as screening levels as part of the HHRA in the OU1 RI Report (TiNUS, July 2007). Although not strictly a TBC criterion to be met by remedial action alternatives, the methodology used to calculate the USEPA Region 9 PRGs can be used to develop soil cleanup levels for chemicals other than lead. USEPA Regional Screening Levels (RSLs) replace the individual USEPA regions screening levels (e.g., Region 9 PRGs). The USEPA RSLs are based on Oak Ridge National Laboratory RSLs for Chemical Contaminants at Superfund Sites.

State of Maine

Maine Risk Assessment Guidelines are provided in the Guidance Manual for Human Health Risk Assessment at Hazardous Substance Site prepared by the MEDEP and the Maine Department of Human Services (June, 1994). The guidance manual provides acceptable carcinogenic and noncarcinogenic risk levels at 1×10^{-5} and 1, respectively. These guidelines are TBC guidance for making risk management decisions.

Remedial Action Guidelines; MEDEP, Division of Remediation (May 1997) present chemical-specific guidelines to assist in making remedial decisions at hazardous substance sites. Direct contact guidelines are presented for three exposure scenarios: residential, trespasser, and adult worker. The default exposure factors for each scenario are described in the companion Technical Basis and Background for Soil Remedial Action Guidelines Based on Direct Contact (Basis Statement). Both the trespasser and adult worker guidelines are for non-residential exposures. Depending on the contaminant, there may be significant differences, and guidelines protective of one of these populations may not be protective of the others. The residential direct contact standard for lead was established by the Maine Department of Health and Human Services (DHS). MEDEP has consulted with DHS regarding acceptable non-residential guidelines for lead.

2.1.2 Location-Specific ARARs and TBCs

This section presents a summary of federal and State of Maine location-specific ARARs and TBC criteria. Table 2-2 presents a list of federal and State of Maine location-specific ARARs and TBCs for OU1.

Federal

Deleted: Federal Floodplain Management Executive Order (E.O.) 11988 [40 Code of Federal Regulations (CFR) Part 6, Appendix A] provides for consideration of floodplains during remedial actions. E.O. 11988 requires federal agencies to avoid long-term and short-term adverse impacts associated with occupancy and modification of floodplains and to avoid support of floodplain development wherever there is a practicable alternative. If no practicable alternative exists to performing cleanup in a floodplain, potential harm must be mitigated and actions taken to preserve the natural and beneficial values of the floodplain. 40 CFR Part 6, Appendix A contains USEPA policy for implementing the provisions of E.O. 11988. Although a portion of the site is within the 100-year floodplain of the Piscataqua River, it is anticipated that remedial actions for soil at OU1 would not adversely affect the floodplain. ¶

Coastal Zone Management Act [16 United States Code (USC) 1451 et seq.] provides for the preservation and protection of coastal zone areas, management of coastal zones to be the state's responsibility, and management of coastal zone development to be in such a way as to minimize the effects on coastal zone resources. Section 304(1) excludes federal lands from the coastal area if those lands are subject solely to the discretion of or are held in trust by the federal government. Under Section 307 (c), Paragraphs (1) and (2), federal activities and development projects in or directly affecting the coastal zone must be consistent, to the maximum extent practicable, with a federally approved state management program. This act is applicable if onshore remedial actions at OU1 could impact the coastal zone. However, CERCLA requires that the remedial action meet only substantive requirements of the regulation. As part of meeting these requirements, MEDEP would be included in the review process for the remedial design and work plan for any alternative affecting the coastal zone at OU1.

The National Historic Preservation Act (16 USC 470 et seq., 36 CFR 800) establishes requirements relating to potential loss or destruction of significant scientific, historical, or archaeological data as a result of any proposed remedy. Prehistoric and historical archeological resource sensitivity for OU1 is low; however, Building 238 is located at OU1 and considered a contributing element to the historic district. The State Historic Preservation Officer (SHPO) would need to be contacted for any major structural change to Building 238 that may impact its appearance. This act would be applicable if excavation or construction activities are included as part of a remedial action at OU1.

As discussed in Section 1.0, there are no known endangered or threatened species at OU1; therefore, the Endangered Species Act of 1973 (16 USC Chapter 35) is not applicable to OU1.

State of Maine

Maine Site Location of Development Law [38 Maine Revised Statutes Annotated (MRSA) 481 et seq.; 06-096 Code of Maine Rules (CMR) 371-377] regulates the siting of developmental activities to ensure that developments will have minimal adverse impact on the natural environment and to protect the health, safety, and general welfare of the people. Approval is needed for developmental activity that includes any activity that consumes, generates, or handles hazardous wastes, hazardous matter, or oil. The developmental activity should have no unreasonable adverse effect on the natural environment (e.g., air quality, runoff, erosion and sedimentation, surface water and groundwater quality). Regulations also include consideration of the preservation of historic sites and unusual natural areas and the protection of wildlife and fisheries. This act is applicable if remedial activities at OU1 affect an area exceeding 3 acres. Because OU1 is less than 3 acres, this act would be considered relevant and appropriate. Substantive requirements of this law would need to be met under the CERCLA process in consultation with MEDEP.

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River and Harbors Act – Section 10 (33 USC 403; 33 CFR 320 to 323) prohibits unauthorized obstruction or alteration of navigable waters. Activities involving excavation or deposition of materials in navigable waters or affecting such waters must serve the public interest, and benefits must outweigh adverse impacts on natural resources, aesthetics, and navigation. These regulations are applicable if remedial actions for OU1 involve work in the Piscataqua River, and such actions would need to be designed to meet the substantive requirements of Section 10 of the act.¶

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Deleted: The Fish and Wildlife Coordination Act (16 USC 661 et seq.; 33 CFR 320; 40 CFR 6.302) and the Federal Protection of Wetlands E.O. 11990 (40 CFR Part 6, Appendix A) have been evaluated and determined not to be ARARs because there are no wetlands or protected habitats within or adjacent to OU1, and the Endangered Species Act of 1972 (16 USC 1531 et seq. and 50 CFR 200 and 402), the Migratory Bird Treaty Act (16 USC 703), and the Marine Mammal Protection Act (16 USC 1361 through 1421h and 40 CFR 13, 18, 216, and 229) have been evaluated and determined not to be ARARs because human activity and the high density of industrial active in OU1 precludes the presence of a significant habitat. Therefore, these acts are not considered further in this FS.¶

Maine Natural Resources Protection Act (38 MRS 480 et seq.; 06-096 CMR 305) regulates any activity conducted in, on, or over any protected natural resource or any activity conducted on land adjacent to any freshwater or coastal wetland, great pond, river, stream, or brook that operates in such a way that material or soil may be washed into them. Activities include dredging; bulldozing; removal or displacement of soil or other materials; draining or other dewatering; and construction, repair, or alteration of any permanent structure. The activity must not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment; cause unreasonable harm to any significant wildlife habitat, freshwater wetland, estuarine or marine fisheries, or other aquatic life; or interfere unreasonably with natural water flow. In addition, the activity must not lower water quality or cause or increase flooding in the activity area or adjacent properties.

Disturbance of soil material adjacent to a wetland or water body may be permitted by rule. Standards are to ensure that the disturbed soil material is stabilized to prevent erosion of the shoreline and siltation of the water, and standards must be met to qualify for permit by rule. The substantive provisions of this act would be applicable to any remedial action at OU1 that could disturb soil near the shoreline of OU1.

Maine Coastal Management Policies (38 MRS 1801 et seq.) provide for the regulation, conservation, beneficial use, and management of coastal resource use by federal, state, regional, and local governments. The coastal area incorporates all coastal municipalities and unorganized townships on tidal waters and all coastal islands. The substantive environmental requirement of these standards would be addressed, in consultation with MEDEP.

As discussed in Section 1.0, there are no known endangered or threatened species at OU1; therefore the Maine Endangered Species Act (12 MRS 7751 et seq.) is not an ARAR for OU1. Maine Significant Wildlife Habitat Rules (06-096 CMR 335) outlines requirements for activities impacting significant wildlife habitats, including certain seabird nesting islands. There are no wildlife habitats at OU1 or seabird nesting islands in near vicinity of OU1. Therefore, these rules are not ARARs for OU1.

Federal and State of Maine wetlands regulations have been determined not to be ARARs because no known wetlands are present at OU1.

Deleted: The Maine Wetland Protection Rules (06-096 CMR 310), the Maine Endangered Species Act (12 MRS 7751 et seq.), and the Maine Significant Wildlife Habitat Rules (06-096 CMR 335) have been determined not to be ARARs because no known wetlands, endangered or threatened species, or critical habitats are present at OU1. Therefore, this act and these rules are not considered further in this FS.

2.1.3 Action-Specific ARARs and TBCs

This section presents a summary of federal and State of Maine action-specific ARARs and TBC criteria. Table 2-3 presents a list of federal and State of Maine action-specific ARARs and TBCs for OU1.

Federal

RCRA Subtitle C, RCRA Regulations for Identification and Listing of Hazardous Waste (40 CFR 261), Standards Applicable to Generators of Hazardous Waste (40 CFR 262), Standards for Hazardous Waste TSD Facilities (40 CFR 264), RCRA LDR Requirements (40 CFR 268, and RCRA Standards (55 Federal Register (FR) 30798; 40 CFR 264, Subpart S) govern the generation transportation and disposal of hazardous waste. The State of Maine has RCRA delegation, and the Maine Hazardous Waste Management Rules provide references to the federal RCRA regulations where appropriate.

National Ambient Air Quality Standards (40 CFR 50 and 53) are not included because the state ambient air quality standards provide the emissions standards for air pollutants necessary to attain the National Ambient Air Quality Standards.

State of Maine

Maine Hazardous Waste Management Rules (06-096 CMR 800 to 801, 850 to 857) provide standards for the generation, transportation, treatment, storage, and disposal of hazardous waste. Therefore, these performance standards would be applicable if hazardous waste is generated, transported, treated, stored, or disposed as part of a remedial action at OU1. The following summarizes the specific standards potentially applicable to OU1.

Identification and Discharge of Hazardous Matter (06-096 CMR 800, 801) identifies those solid wastes that are subject to regulation as hazardous and outlines the procedures for treatment or cleanup of discharges. The procedures for discharge reporting are also included in these rules. These standards are applicable if remedial actions involve generation of hazardous waste.

Identification of Hazardous Wastes (06-096 CMR 850) refers to the federal RCRA regulations for Identification and Listing of Hazardous Wastes (40 CFR 261), which identify those solid wastes that are subject to regulation as hazardous wastes. Hazardous wastes are listed, and test procedures are outlined to determine characteristic hazardous wastes. Requirements in 40 CFR 261.24 identify the regulatory levels for classifying a solid waste as a RCRA characteristic hazardous waste based on Toxicity Characteristic Leaching Procedure (TCLP) results. These regulations are applicable if remedial actions involve the generation of solid wastes.

Standards for Generators of Hazardous Waste (06-096 CMR 851) indicate that a generator that treats, stores, or disposes of hazardous waste on site must comply with these standards, which include manifest requirements, pre-transport requirements (i.e., packaging, labeling, placarding), recordkeeping, and reporting. These standards are applicable if remedial actions involve generation of hazardous waste.

Deleted: RCRA Subtitle C regulates the treatment, storage, and disposal of hazardous waste from its generation until its ultimate disposal. According to USEPA guidance (August 1988), RCRA Subtitle C requirements for the treatment, storage, or disposal of hazardous waste would be applicable if:¶

¶
<#>The waste is a listed or characteristic waste under RCRA.¶

¶
<#>The waste was treated, stored, or disposed (as defined in 40 CFR 260.10) after the effective date of the RCRA requirements under consideration.¶

¶
<#>The activity at the CERCLA site constitutes current treatment, storage, or disposal as defined by RCRA.¶

¶
RCRA Subtitle C requirements would also be applicable if hazardous wastes were generated as a result of remedial activities. Such waste would be required to be managed in accordance with these requirements. As a result, the following RCRA Subtitle C requirements are potentially applicable to OU1:¶

¶
<#>Identification and Listing of Hazardous Wastes; Toxicity Characteristic (40 CFR 261.24). ¶

<#>RCRA Standards Applicable to Generators of Hazardous Waste (40 CFR 262). ¶

<#>Treatment, storage, and di... [1]

Deleted: cable to onsite remedial actions involving hazardous wastes and offsite facilities receiving hazardous waste from the site for treatment or disposal. Standards for TSD facilities include requirements for preparedness and prevention, releases from SWMUs (i.e., corrective action requirements), closure and post-closure care, use and management of containers... [2]

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Deleted: The rules establish performance standards for hazardous waste landfills including migration of hazardous wastes, constituents, or derivatives into ground and surface waters of the state. Hazardous waste includes federally regulated (RCRA) hazardous waste. Facilities for which standards for the location, design, construction, operation, maintenance, management, and closure are ... [3]

Land Disposal Restrictions (LDRs) (06-096 CMR 852) refers to the RCRA LDR Requirements (40 CFR 268), which restrict certain wastes from being placed or disposed on the land unless they meet specific best demonstrated available technology (BDAT) treatment standards (expressed as concentrations, total or in the TCLP extract, or as specified technologies). Removal and treatment of a RCRA hazardous waste or movement of the waste outside of a corrective action treatment unit (CAMU), thereby constituting "placement," would trigger the LDR requirements. It is anticipated that either universal treatment standards (40 CFR 268.48) or alternative LDR treatment standards for contaminated soil (40 CFR 268.49) would be applicable to OU1 if contaminated soil meets hazardous waste criteria after excavation or if other hazardous wastes are generated during remedial action. However, LDRs would not be applicable to onsite treatment of excavated soil and reuse of treated soil. LDRs would be applicable to offsite disposal of soil from the site.

Licensing of Transporters of Hazardous Waste (06-096 CMR 853) outlines the procedures and transporter requirements for obtaining a license to transport hazardous waste in the State of Maine. These licensing rules are applicable if remedial actions involve the transport of hazardous wastes.

Standards for Hazardous Waste Facilities (06-096 CMR 854) specifies the applicable rules for the development, modification, and operation of hazardous waste facilities in the State of Maine and refers to the Standards for Hazardous Waste treatment, storage, and disposal (TSD) facilities (40 CFR 264), which are potentially applicable to onsite remedial actions involving hazardous wastes and offsite facilities receiving hazardous waste from the site for treatment or disposal. Standards for TSD facilities include requirements for preparedness and prevention, releases from SWMUs (i.e., corrective action requirements), closure and post-closure care, use and management of containers, and design and operating standards for tank systems, surface impoundments, waste piles, landfills, incinerators, and miscellaneous units. When a site, or portion thereof, receives a CAMU designation, the designated area qualifies for certain exemptions from RCRA Subtitle C requirements. A temporary unit, such as a waste pile that is only used for a short time during remediation, also qualifies for certain exemptions.

Hazardous Waste Manifest Requirements (06-096 CMR 857) set forth rules for generators of hazardous waste that require them to track the movement of hazardous waste from the point of generation to any intermediate points and finally to its ultimate disposition by use of a manifest. This rule refers to Standards Applicable to Generators of Hazardous Waste (40 CFR 262), which indicates that a generator that treats, stores, or disposes of hazardous waste on site must comply with these standards, which include manifest requirements, pre-transport requirements (i.e., packaging, labeling, placarding), recordkeeping, and reporting. These standards are applicable if remedial actions involve generation of hazardous waste.

Maine Ambient Air Quality Standards (38 MRSA 584; 06-096 CMR 110) are established for particulate matter, sulfur dioxide, carbon monoxide, ozone, hydrocarbons, nitrogen dioxide, lead, and total chromium. This regulation also establishes ambient increments that define the maximum ambient increase of a particular pollutant that can be permitted for a given area depending on the classification of that area. These requirements are applicable if remedial actions at OU1 include discharges to ambient air (e.g., fugitive dust during excavation).

Erosion and Sedimentation Control (38 MRSA 420-C) and Stormwater Management (38 MRSA 420-D; 06-096 CMR 500 and 502) regulations require erosion control measures be in place before activities such as filling, displacing, or exposing soil or other earthen materials occur. These regulations are applicable if remedial activities include earth moving at OU1. Substantive requirements of these regulations would need to be met to minimize erosion of material into the Piscataqua River.

Maine Solid Waste Management Regulations (06-096 CMR 400 to 411) provide standards for the generation, transportation, treatment, storage, and disposal of solid waste and special waste. A solid waste facility requires a license pursuant to the Maine Site Location Law and the Maine Solid Waste Law. Solid wastes generated from remedial action at OU1 would be disposed at appropriately licensed and permitted facilities.

Uniform Environmental Covenants Act (MRSA Title 38, Chapter 31) creates a statutory mechanism for creating, modifying, enforcing and terminating environmental covenants. The environmental covenants created under this act are based on traditional property law principles and are recorded in the local land records and bind successive owners of the property. State and local governments, and potentially others, have clear rights to enforce the land use restrictions and thereby ensure with greater certainty the protection of human health and the environment throughout the life of the land use restriction and through various real estate transactions or legal issues. OU1 is located on a federal facility; therefore, mechanisms for environmental covenants, including land use restrictions, are governed by the appropriate federal guidelines. Maine's state law is not applicable to land use restrictions imposed by the Navy on its own property.

2.2 MEDIUM OF CONCERN

As a result of the HHRA conducted in the RI for OU1, the Navy recommended that an FS be conducted to address unacceptable human health risks posed by exposure to soil. Based on evaluation of human health risks and migration issues, groundwater is not a medium of concern at OU1 (TINUS, July 2007).

As provided in the HHRA, exposure to lead-contaminated soil within the crawl space of Building 238 presents unacceptable risks to construction workers, occupational workers, future potential recreational users, and future potential residential users. Exposure to antimony-contaminated soil under Building 238 also presents unacceptable risks to future potential residential users. Exposure to lead in surface soil outside of Building 238 also presents unacceptable risks to future potential residential users. The depth of concern for a construction worker for exposure to soil within the crawl space extends to a maximum of 3 feet bgs because there is little soil material below 3 feet bgs and because soil at this depth is saturated throughout most of the tidal cycle. Outside the building, the depth of concern for occupation, recreational, and residential exposure is 0 to 2 feet bgs (surface soil), whereas a construction worker could be exposed to soil from 0 to 6 feet bgs (surface and subsurface soil), depending on the depth of construction activities.

2.3 REMEDIAL ACTION OBJECTIVES

RAOs are medium-specific goals for protecting human health and the environment. RAOs are required to specify the COCs, exposure routes and receptors of concern, and an acceptable contaminant level or range of levels for each exposure route. Acceptable contaminant levels are based on PRGs as a starting point, after which a final remediation goal is determined when a remedy is selected.

As provided in Section 1.5.5, potential human health risks have been identified for certain receptors that may be exposed to the soil contaminants at OU1. Based on these potential human health risks, the following RAOs have been developed for OU1:

1. Prevent construction worker, occupational worker, and future potential recreational user exposure through ingestion, dust inhalation, and dermal contact to unacceptable levels of lead-contaminated soil under Building 238.
2. Prevent future potential residential user exposure through ingestion, dust inhalation, and dermal contact to unacceptable levels of lead-contaminated soil under and outside Building 238.
3. Prevent future potential residential user exposure through ingestion, dust inhalation, and dermal contact to unacceptable levels of antimony-contaminated soil under Building 238.

The unacceptable levels are based on PRGs for the COC and receptor. PRGs are the chemical-specific goals for site concentrations [based on the exposure point concentrations (EPCs)] that when achieved will result in site concentrations that pose an acceptable risk for the targeted receptor. Attainment of PRGs is evaluated by determining the areas and volumes of soil that need to be remediated (e.g., through surface protection or excavation) to attain EPCs less than the PRGs. PRGs and remediation areas have been

developed on a receptor-specific basis for protection of human health from exposure to soil contaminants as discussed in Appendix A and summarized in Sections 2.4 and 2.5.

As provided in the OU1 RI Report (TINUS, July 2007), groundwater is not a medium of concern.

2.4 PRELIMINARY REMEDIATION GOALS FOR OU1

PRGs for OU1 were developed based on the HHRA methodology and results provided in the OU1 RI Report. The risks in the HHRA were calculated for two exposure units, soil beneath Building 238 and soil outside the building; therefore, the OU1 PRGs were developed for the two exposure units for the depths of concern provided in Section 2.2. PRGs were developed for lead for occupational workers, construction workers, and recreational users for soil beneath Building 238 and for future residents for surface soil beneath and outside Building 238. PRGs were also developed for antimony for a hypothetical future resident, the only receptor for which an unacceptable risk due to exposure to antimony was calculated, for soil beneath Building 238. The PRG for construction workers is based on likely exposure duration for under the building considering the confined nature of the crawl space, the tidal flooding of the crawl space, and the limited amount of excavation of utilities that could be conducted within the crawl space. The discussion of PRG development is provided in Appendix A. The following PRGs have been identified as the target EPCs for the potential receptors at OU1.

PRGs for OU1		
Potential Receptor	Lead (mg/kg)	Antimony (mg/kg)
Construction Worker (60-day exposure) – under building	2,000	NA
Future Occupational Worker – under building	1,600	NA
Future Adult Recreational User – under building	4,600	NA
Future Resident – under building	400	73
Future Resident – outside building	400	NA

NA – Not applicable; site concentrations do not pose unacceptable risks.

2.5 REMEDIATION AREAS AND VOLUMES

Details of the determination of areas and volumes to be addressed by the remedial alternatives for OU1 are provided in Appendix A. The remediation areas of lead-contaminated soil under Building 238 for construction worker, occupational worker, and recreational user exposure were estimated to be areas around the former drain line, sump, and drain under Building 238 and are shown on Figure 2-1. By remediating the soil in these areas through access restrictions, covering, excavation, or treatment, it is anticipated that the EPC for soil under the building would meet the PRGs for these receptors.

For hypothetical future residential users, the remediation area includes the site area under the building and outside the building. By remediating soil within the entire site area through access restrictions, covering, excavation, or treatment, the EPC for soil would meet the PRG for this receptor. As shown in Appendix A, antimony concentrations were greater than risk levels only in soil samples that also had lead concentrations greater than 50,000 mg/kg. Because the soil with elevated antimony concentrations is within the area of elevated lead concentrations, remediation based on lead concentrations would also address antimony-contaminated soil.

For calculation of the volume of soil for the remediation areas, under the building it was assumed that soil under the building to a maximum depth of 3 feet bgs and soil outside the building to a maximum depth of 6 feet bgs would be remediated. Under the building, soil deeper than 0.5 foot bgs was rocky and compacted, and there was little to no soil at and deeper than 2 to 3 feet bgs. In addition, soil deeper than 2 to 3 feet bgs is saturated during most of the tidal cycle. Outside the building, there was little soil deeper than 6 feet bgs and soil deeper than 6 feet bgs is saturated during most of the tidal cycle. Consistent with the risk assessment, soil at depths that are saturated during most of the tidal cycle is not included in the human health exposure unit.

The areas and volumes of soil associated with OU1 for each receptor with unacceptable risks for evaluation in the FS are as follows:

- Total remediation area and volume under Building 238 for construction worker, occupational worker, and recreational use are 3,500 square feet and 390 cubic yards, respectively (based on the two remediation areas shown on Figure 2-1).
- Remediation area and volume under Building 238 for residential use are 36,000 square feet and 4,000 cubic yards, respectively (based on the area of the crawl space shown on Figure 2-1).
- Remediation area and volume outside Building 238 for residential use are 10,400 square feet and 2,300 cubic yards, respectively (based on the area of the site outside the building, as shown on Figure 2-1).

For the FS, it is assumed that the specific areas and volumes for the selected remedy would be determined in a pre-design investigation or as part of the remedial action that would be conducted in accordance with an approved work plan.

RCRA Subtitle C regulates the treatment, storage, and disposal of hazardous waste from its generation until its ultimate disposal. According to USEPA guidance (August 1988), RCRA Subtitle C requirements for the treatment, storage, or disposal of hazardous waste would be applicable if:

The waste is a listed or characteristic waste under RCRA.

The waste was treated, stored, or disposed (as defined in 40 CFR 260.10) after the effective date of the RCRA requirements under consideration.

The activity at the CERCLA site constitutes current treatment, storage, or disposal as defined by RCRA.

RCRA Subtitle C requirements would also be applicable if hazardous wastes were generated as a result of remedial activities. Such waste would be required to be managed in accordance with these requirements. As a result, the following RCRA Subtitle C requirements are potentially applicable to OU1:

Identification and Listing of Hazardous Wastes; Toxicity Characteristic (40 CFR 261.24).

RCRA Standards Applicable to Generators of Hazardous Waste (40 CFR 262).

Treatment, storage, and disposal (TSD) facility requirements (40 CFR 264), including corrective action management units (CAMUs) and temporary units.

Land Disposal Restrictions (LDRs) (40 CFR 268).

RCRA Regulations for Identification and Listing of Hazardous Wastes (40 CFR 261)

identify those solid wastes that are subject to regulation as hazardous wastes. Hazardous wastes are listed, and test procedures are outlined to determine characteristic hazardous wastes. Requirements in 40 CFR 261.24 identify the regulatory levels for classifying a solid waste as a RCRA characteristic hazardous waste based on Toxicity Characteristic Leaching Procedure (TCLP) results. These regulations are applicable if remedial actions involve the generation of solid wastes.

Standards Applicable to Generators of Hazardous Waste (40 CFR 262) indicate that a generator that treats, stores, or disposes of hazardous waste on site must comply with these standards, which include manifest requirements, pre-transport requirements (i.e., packaging, labeling, placarding), recordkeeping, and reporting. These standards are applicable if remedial actions involve generation of hazardous waste.

Standards for Hazardous Waste TSD Facilities (40 CFR 264) are potentially appli

cable to onsite remedial actions involving hazardous wastes and offsite facilities receiving hazardous waste from the site for treatment or disposal. Standards for TSD facilities include requirements for preparedness and prevention, releases from SWMUs (i.e., corrective action requirements), closure and post-closure care, use and management of containers, and design and operating standards for tank systems, surface impoundments, waste piles, landfills, incinerators, and miscellaneous units. When a site, or portion thereof, receives a CAMU designation, the designated area qualifies for certain exemptions from RCRA Subtitle C requirements. A temporary unit, such as a waste pile that is only used for a short time during remediation, also qualifies for certain exemptions.

RCRA LDR Requirements (40 CFR 268) restrict certain wastes from being placed or disposed on the land unless they meet specific best demonstrated available technology (BDAT) treatment standards (expressed as concentrations, total or in the TCLP extract, or as specified technologies). Removal and treatment of a RCRA hazardous waste or movement of the waste outside of a CAMU, thereby constituting "placement," would trigger the LDR requirements. It is anticipated that either universal treatment standards (40 CFR 268.48) or alternative LDR treatment standards for contaminated soil (40 CFR 268.49) would be applicable to OU1 if contaminated soil meets hazardous waste criteria after excavation or if other hazardous wastes are generated during remedial action. However, LDRs would not be applicable to onsite treatment of excavated soil and reuse of treated soil. LDRs would be applicable to offsite disposal of soil from the site.

RCRA Standards [55 Federal Register (FR) 30798; 40 CFR 264, Subpart S] applies special standards for cleanup at CAMUs and is required to implement remedial activities under 40 CFR 264.101 and RCRA 308(h) or to implement remedial activities at facilities not subject to 40 CFR 264.101. This regulation provides clarification that RCRA Standards are applicable to any SWMUs. This requirement is potentially relevant and appropriate for management of remediation wastes (i.e., staging piles) if remedial action involves excavation and staging of hazardous wastes at OU1.

RCRA Subtitle D provides criteria for the disposal of non-hazardous wastes and may be potentially applicable if material removed from OU1 is classified as non-hazardous.

The rules establish performance standards for hazardous waste landfills including migration of hazardous wastes, constituents, or derivatives into ground and surface waters of the state. Hazardous waste includes federally regulated (RCRA) hazardous waste. Facilities for which standards for the location, design, construction, operation, maintenance, management, and closure are provided include landfills, surface impoundments, land treatment facilities, waste piles, storage facilities, and incinerators. The regulations also provide standards for detailing groundwater monitoring requirements for hazardous waste facilities. The regulations outline general groundwater monitoring standards for detection monitoring, compliance monitoring, and corrective action monitoring. The state provisions are generally more stringent than the federal regulations, and the State of Maine has RCRA delegation.

TABLE 2-1
CHEMICAL-SPECIFIC ARARs AND TBCs
OPERABLE UNIT 1 - FEASIBILITY STUDY REPORT
PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE
PAGE 1 OF 2

Medium/Activity	Requirement/ Citation	Status	Synopsis	Evaluation/Action To Be Taken
FEDERAL				
Soil/Risk Assessment	OSWER Directive 9355.4-12	TBC	USEPA has provided recommended methodology for assessing risk caused by exposure to lead in surface soil under residential scenarios.	Guidelines used to develop risk-based cleanup levels for lead in soil.
Soil/Risk Assessment	Recommendations of the Technical Review Workgroup for Lead for an Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil. (USEPA, January 2003)	TBC	USEPA has provided recommended methodology for assessing risks to adult receptors caused by exposure to lead in soil under residential and commercial/industrial scenarios.	Guidelines used to develop risk-based cleanup levels for lead in soil.
Soil/Risk Assessment	USEPA Risk RfDs from IRIS	TBC	RfDs are estimates of daily exposure for human populations (including sensitive subpopulations) considered unlikely to cause significant adverse health effects associated with a threshold mechanism of action in human exposure over a lifetime.	RfDs were used to estimate noncarcinogenic risk as part of the HHRA for OU1 and to develop soil cleanup goals for antimony.
Soil/Risk Assessment	USEPA Human Health Assessment Group CSFs from IRIS	TBC	CSFs present the most up-to-date information on cancer risk potency for known and suspected carcinogens.	CSFs were used to estimate carcinogenic risk as part of the HHRA for OU1, but were not needed for develop soil cleanup goals for OU1.
Soil/Risk Assessment	USEPA Regional Screening Levels (RSLs)	TBC	In 2008, USEPA replaced Region-specific risk-based screening levels with RSLs. These are risk-based concentrations for contaminants in soil, air, and tap water to assist risk assessors and others in initial screening-level evaluations of environmental measurements.	USEPA risk-based screening levels were used as screening levels as part of the HHRA for OU1 and can be used to develop soil cleanup goals.

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TABLE 2-1
CHEMICAL-SPECIFIC ARARs AND TBCs
OPERABLE UNIT 1 - FEASIBILITY STUDY REPORT
PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE
PAGE 2 OF 2

Medium/Activity	Requirement/ Citation	Status	Synopsis	Evaluation/Action To Be Taken
STATE				
Soil/Risk Assessment	Guidance Manual for Human Health Risk Assessments at Hazardous Substance Sites (MEDEP and Maine Department of Human Services, June 1994)	TBC	This guidance manual provides acceptable carcinogenic and noncarcinogenic risk levels (1×10^{-5} and 1, respectively).	This guidance manual can be used for risk management decisions at OU1.
Soil/Risk Assessment	Remedial Action Guidelines (MEDEP, May 1997)	TBC	Maine has developed chemical-specific guidelines that may assist in making remedial decisions at OU1. Guidelines are presented for three exposure scenarios.	These guidelines can be used to develop soil cleanup goals.

CSFs - Cancer Slope Factors
 HHRA - Human Health Risk Assessment
 IRIS - Integrated Risk Information System
 MEDEP - Maine Department of Environmental Protection
 OSWER - Office of Solid Waste and Emergency Response

PRGs - Preliminary remediation goals
 RfDs - Reference Doses
 TBC - To be considered
 USEPA - United States Environmental Protection Agency

TABLE 2-2

LOCATION-SPECIFIC ARARs AND TBCs
 OPERABLE UNIT 1 - FEASIBILITY STUDY REPORT
 PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE
 PAGE 1 OF 2

Requirement	Citation	Status ⁽¹⁾	Synopsis	Action To Be Taken
FEDERAL				
Coastal Zone	Coastal Zone Management Act (16 USC 1451 et seq.)	Potentially Applicable	This act provides for the preservation and protection of coastal zone areas. Federal activities that are in or directly affecting the coastal zone must be consistent, to the maximum extent practicable, with a federally approved state management program.	If onshore remedial actions at OU1 potentially impact the coastal zone, activities that would reduce adverse impacts would be considered and implemented, as appropriate. MEDEP would be included in the review of remedial designs and work plans to meet the substantive requirements of this act.
Historic Preservation	National Historic Preservation Act (16 USC 470 et seq., 36 CFR 800)	Potentially Applicable	Provides requirements relating to potential loss or destruction of significant scientific, historical, or archaeological data due to remedial actions at a site.	Prehistoric and historical archeological resource sensitivity for OU1 is <u>low</u> , however, <u>Building 238 is located at OU1 and considered a contributing element to the historic district. The State Historic Preservation Officer (SHPO) would need to be contacted for any major structural change to Building 238 that may impact its appearance.</u>
STATE				
Other Natural Resources	Maine Site Location of Development Law (38 MRSA 481 et seq.; 06-096 CMR 371-377)	Relevant and Appropriate	This statute and the related regulations prohibit any development from adversely affecting existing uses, scenic character, or existing natural resources in or near a community. Remediation activities must not have adverse effect on the natural environment, historic sites, unusual natural areas, and wildlife and fisheries.	This regulation is applicable for remedial alternatives that cover more than 3 acres; OU1 covers less than 3 acres. Substantive requirements of this law would be met under the CERCLA process in consultation with MEDEP.

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Deleted: If activities at OU1 potentially impact the floodplain of the Piscataqua River, activities that would reduce adverse impacts would be considered and implemented, as appropriate. It is anticipated that remedial actions for soil at OU1 would not adversely affect the floodplain.

TABLE 2-2

LOCATION-SPECIFIC ARARs AND TBCs
 OPERABLE UNIT 1 - FEASIBILITY STUDY REPORT
 PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE
 PAGE 2 OF 2

Requirement	Citation	Status ⁽¹⁾	Synopsis	Action To Be Taken
	Maine Natural Resources Protection Act Permit by Rule Standards (38 MRSA 480 et seq.; 06-096 CMR 305)	Potentially Applicable	This act regulates activity conducted in, on, or over any protected natural resource or any activity conducted adjacent to and operated in such a way that material or soil may be washed into any freshwater or coastal wetland, great pond, river, stream or brook.	If any work involves the disturbance of soil material near the shoreline of OU1, it would be performed in compliance with the substantive requirements of this act. Potential adverse effects to existing natural resources would be evaluated.
Coastal Zone	Maine Coastal Management Policies (38 MRSA 1801 et seq.)	Potentially Applicable	These policies provide for the regulation, conservation, beneficial use, and management of coastal resources.	Remedial actions at OU1 would need to be consistent with these policies. The substantive environmental and facility siting requirements of these standards would be addressed in consultation with MEDEP.

1 The term "potentially" is used when requirements ("applicable" or "relevant and appropriate") would be invoked only when certain remedial actions are taken.

CFR - Code of Federal Regulations

CMR - Code of Maine Rules

E.O. - Executive Order

MEDEP - Maine Department of Environmental Protection

MRSA - Maine Revised Statutes Annotated

USC - United States Code

TABLE 2-3

**ACTION-SPECIFIC ARARs AND TBCs
OPERABLE UNIT 1- FEASIBILITY STUDY REPORT
PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE
PAGE 2 OF 3**

Requirement	Citation	Status ⁽¹⁾	Synopsis	Evaluation/Action To Be Taken
Hazardous Waste	Maine Hazardous Waste Management Rules (06-096 CMR 800-801, 850 – 854, 857)	Potentially Applicable	These regulations provide standards for the generation, transportation, treatment, storage, and disposal of hazardous waste. They set forth the state definition and criteria for establishing whether waste materials are hazardous and subject to associated hazardous waste regulations. They also provide standards for detailing groundwater monitoring requirements for hazardous waste facilities.	These performance standards would be potentially applicable if hazardous waste is generated, transported, treated, disposed, or stored as part of a remedial action at OU1.
Erosion	Erosion and Sedimentation Control (38 MRSA 420-C) and Stormwater Management (38 MRSA 420-D; 06-096 CMR 500)	Potentially Applicable	Erosion control measures must be in place before activities such as filling, displacing, or exposing soil or other earthen materials occur. Prior MEDEP approval is required if the disturbed area is in the direct watershed of a body of water most at risk for erosion /sedimentation.	These controls would be implemented if any of the alternatives need to address erosion, sedimentation, and storm water management. Also, applicable plans would be coordinated with MEDEP before implementation.

STATE (continued)

Air Emissions	Maine Ambient Air Quality Standards (38 MRSA 584; 06-096 CMR 110)	Potentially Applicable	Establishes ambient air quality standards for the protection public health and welfare for particulate matter, sulfur dioxide, carbon monoxide, ozone, hydrocarbons, nitrogen dioxide, lead, and total chromium.	Applicable to alternatives that have the potential to impact ambient air quality standards. At the completion of the remedial action, these remedial standards would need to be met. These standards would be used if any of the alternatives result in emission of unacceptable levels of airborne particulates to the atmosphere. Lead and total suspended particulate emissions may be of concern at OU1.
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TABLE 2-3

**ACTION-SPECIFIC ARARs AND TBCs
 OPERABLE UNIT 1- FEASIBILITY STUDY REPORT
 PORTSMOUTH NAVAL SHIPYARD, KITTERY, MAINE
 PAGE 3 OF 3**

Requirement	Citation	Status ⁽¹⁾	Synopsis	Evaluation/Action To Be Taken
Waste	Maine Solid Waste Management Regulations (06-096 CMR 400, 411)	Potentially Applicable	Provides standards for generation, transportation, treatment, storage, and disposal of solid and special wastes. Also provides closure and post-closure maintenance standards.	Wastes generated during remedial actions would be disposed at appropriately licensed and permitted facilities.

1. The term "potentially" is used when requirements ("applicable" or "relevant and appropriate") would be invoked only when certain remedial actions are taken.

CFR - Code of Federal Regulations.

CMR - Code of Maine Rules

MEDEP - Maine Department of Environmental Protection

RCRA - Resource Conservation and Recovery Act

TSD - Treatment, storage, and disposal

MRSA - Maine Revised Statutes Annotated