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LETTER AND RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT COMMENTS TO REVISED DRAFT FEASIBILITY STUDY SITE 8 NS NEWPORT RI
9/19/2011
RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

19 September 2011

Ms. Maritza Montegross
NAVFAC MIDLANT (Code OPTE3)
Environmental Restoration
Building Z 144, Room 109
9742 Maryland Avenue
Norfolk, VA 23511-3095

RE: Revised Draft Feasibility Study
Naval Undersea Systems Center Disposal Area (Site 08)
Naval Station Newport, Newport, Rhode Island

Dear Ms. Montegross:

The Office of Waste Management at the Rhode Island Department of Environmental Management has conducted a review of the *Revised Draft Feasibility Study*, dated July 2011 for Naval Undersea Systems Center Disposal Area (Site 08), Naval Station Newport, located in Newport, Rhode Island. As a result of this review, this Office has generated the attached comments on the *Revised Draft Feasibility Study*.

If you have any questions, in regards to this letter, please contact me at (401) 222-2797, extension 7020 or by e-mail at pamela.crump@dem.ri.gov.

Sincerely,

Pamela E. Crump, Sanitary Engineer
Office of Waste Management

cc: Matthew DeStefano, RIDEM
Gary Jablonski, RIDEM
Richard Gottlieb, RIDEM
Ginny Lombardo, USEPA Region I
Deb Moore, NETC, Newport, RI
Jim Ropp, Tetra Tech

30% post-consumer fiber

RIDEM Comments on the
Revised Draft Feasibility Study for
Site 08 – NUSC Disposal Area
September 19, 2011

1. **Page ES-2, Table, Contaminants of Concern.**

   The contaminants of concern listed in this table should include the COCs listed in Table 6-6 in the NUSC SRI. Please include the following individual PAHs for soil: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene.

2. **Page 1-34, Section 1.10.2, Selection of Chemicals of Concern for Human Health; whole section.**

   Although not selected as a COC in the RI/SRI, concentrations of lead in the surface and subsurface soil exceed RIDEM's risk based criteria of 150 mg/kg. In the exposed area, the maximum concentrations of lead detected were 2,870 mg/kg in the surface soil and 4,650 mg/kg in the subsurface soil. In the paved area, a concentration of 27,200 mg/kg was detected in the subsurface soil. Please include lead as a COC for surface and subsurface soil and include a discussion of lead in this section explaining how the Navy proposes to prevent exposures of lead for any receptor/exposure scenario.

3. **Page 2-6, Section 2.1.4.1, Chemical Specific Applicable or Relevant and Appropriate Requirements, Sediments; Whole Section.**

   The report notes that there are no promulgated chemical specific ARARs for sediments. As such it proposes to use federal TBC guidance to develop site specific cleanup values. Please be advised that the Site Remediation regulations are also applicable. Please modify the report to state this.

4. **Page 2-6, Section 2.2.1, Identification of Media of Concern; 1st bullet.**

   "*The scenarios causing unacceptable risk include the hypothetical residential use exposures, adolescent trespasser exposure, recreational use exposure...*"

   As you are aware, RIDEM Remediation Regulations require unrestricted recreational scenarios to meet Residential Standards. Please modify the above sentence to reflect this.

5. **Page 2-7, Section 2.2.2, Derivation of Preliminary Remediation Goals, Human Health PRGs; whole section.**

   This section states that the cumulative target goal for PRGs is 10^{-5}. A review of the information provided in Table 2-4 and 2-5 indicates that this goal will not be achieved if more than one contaminant is present at the target PRG concentration. To avoid this problem and in order to meet regulatory requirements, please set the PRGs to the 10^{-6} criteria. Please

ensure that any compound which exceeds RIDEM's risk based criteria was carried forth in the PRG process.

6. **Page 2-7, Section 2.2.2, Derivation of Preliminary Remediation Goals, Human Health PRGs; Table 2-4.**

   The selected industrial PRG for total carcinogenic PAHs (expressed as benzo(a)pyrene equivalents) is 2.1 mg/kg, which is based on a 10^{-5} target cancer risk level. This exceeds the RIDEM Direct Exposure Criteria of 0.8 mg/kg for the industrial scenario. Please revise this table to include the RIDEM DEC of 0.8 mg/kg as the PRG for total carcinogenic PAHs.

   Also, please develop PRGs for each individual PAH as listed in Table 6-6 of the NUSC SRI and in Comment 1 above, which are based on a 10^{-6} target cancer risk level.

7. **Page 2-7, Section 2.2.2, Derivation of Preliminary Remediation Goals, Human Health PRGs; Table 2-4.**

   Please explain why RIDEM's leachability criteria are listed as "Not Applicable" in this table. RIDEM's leachability criteria are ARARs for this Site and must be included in this table and throughout this FS.

8. **Page 2-7, Section 2.2.2 Derivation of Preliminary Remediation Goals, Human Health PRGs; 2nd paragraph.**

   "The RIDEM Method 1 Direct Exposure values are also included for comparison, however, the risk-based calculated values supersede them."

   The RIDEM Method 1 Direct Exposure values are ARARs for this Site. Pursuant to the NCP and CERCLA, the most conservative criteria between EPA and RIDEM must be used to determine PRGs for this Site. Please change the above sentence in the FS to reflect this and any other section of the FS and in addition please add any exceedances to RIDEM's Criteria as PRGs, including TPH.

9. **Page 2-7, Section 2.2.2, Derivation of Preliminary Remediation Goals, Ecological PRGs; Table 2-6.**

   Table 2-6 shows a PRG developed for lead in stream sediment, but not for lead in pond sediment. Please derive a PRG for lead in pond sediment and revise this table accordingly. Also, this Office does not accept the proposed stream PRG for lead (which is nine times the upper level screening criteria which typically is indicative of impacts).

10. **Page 3-10, Section 3.3.3, Containment, Impermeable Cap; Conclusion**

    "... the soil PRGs and groundwater conditions do not require mitigating COC leachability in soil."

This statement is incorrect. Contaminants in the subsurface soil exceed RIDEM Leachability Criteria in the South Meadow. Please develop remedial alternatives to address leaching in the areas of exceedances and carry this option further in the FS process.

11. Page 3-19, Section 3.4.2, Monitored Natural Attenuation; 1st bullet.

"...natural reductive dehalogenation is occurring at the site to some degree; however, limited historical sampling events are available and more data over time would be helpful for further evaluating the effectiveness of MNA at the site."

RIDEM anticipates the Navy to continue MNA sampling rounds on a quarterly basis in order to obtain a more robust set of groundwater data to evaluate the effectiveness of MNA for this Site. Please include the Navy's schedule for proposed MNA sampling dates in the response to comments and the total number or sampling rounds performed in 2011.

12. Page 4-2, Section 4.1.2 Alternative SO2; whole section.

Please explain why excavation would not proceed deeper than 2 feet. It would seem prudent that during a remedial action, if hot spots or sources of contamination are still found deeper than 2 feet, the removal of the sources would be continued to remove the maximum amount of contamination possible. Please add language to this section stating that if contamination is found deeper than 2 feet, the excavation would be extended.

13. Page 4-3, Section 4.1.2, Alternative SO2, Component 6: LUCs and Inspections.

This paragraph of the FS report deals with land use controls. Please add the following statement to the end of this paragraph: *"The Site will be subject to both inspection and regulatory action separately or together by both the EPA and the RIDEM"*. Please note that this statement applies to all soil, groundwater and sediment alternatives which entail LUCs.

14. Page 5-6, Section 5.1.3, Alternative GW3, Component 1: In-Situ Enhanced Bioremediation; 2nd paragraph.

This paragraph notes that as a conservative assumption a second injection would occur after 5 years. It is this Office's experience, depending upon the nature of the agent employed and the geological and hydrological conditions that a second injection is typically warranted within a time frame which ranges from months to a few years. Please change 5 years to anywhere from a few months to no greater than 2 years, or provide justification as to why such a long time frame for a second injection is proposed.

15. Table 2-3, Potential Action-Specific ARARs and TBCs, Federal Regulatory Requirements; whole table.

The following requirements are missing from Federal Regulatory Requirements section of this table:

- Clean Air Act (CAA), National Emission Standards for Hazardous Air Pollutants (NESHAPS), 42 USC 7411, 7412; 40 CFR Part 61
- Resource Conservation and Recovery Act (RCRA), Subtitle C – Standards for Generators, 42 USC 6291 et seq. 40 CFR parts 262
- Clean Water Act; General Pretreatment Regulations for Existing and New Sources of Pollution, 33 U.S.C. § 1251 et seq., 40 CFR Part 403
- Safe Drinking Water Act Maximum Contaminant Levels (MCLs), 40 CFR 141.11-141.16
- Resource Conservation and Recovery Act (RCRA) Regulations, Standards for Identification and Listing of Hazardous Waste, 40 Code of Federal Regulations (CFR) 261, Subparts A, B, C and D
- RCRA Regulations, Standards for Generators of Hazardous Waste, 40 CFR 262, Subparts A, B, C and D
- RCRA Regulations, Standards Applicable to Transporters of Hazardous Waste, 40 CFR 263
- RCRA Regulations, Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal (TSD) Facilities, 40 CFR 264
- RCRA Regulations, Use and Management of Containers, 40 CFR 264, Subpart I
- RCRA Regulations, Land Disposal Restrictions (LDRs), 40 CFR 268

Please add these requirements as Potential Action-Specific ARARs and TBCs.

16. Table 2-3, Potential Action-Specific ARARs and TBCs, State Regulatory Requirements; whole table.

The following requirements are missing from the State Regulatory Requirements section of this table:

- Clean Air Act – Emissions Detrimental to Persons or Property, RIGL 23-23 et seq; CRIR 12-31-07
- Hazardous Waste Management Standards for Generators, RIGL 23.19.1 et seq.; CRIR 12-030-003 Part 5
- Rhode Island Solid Waste Regulations, DEM OWM-SW04-01, 1.7.10
- Rhode Island Solid Waste Regulations, DEM OWM-SW04-01, 1.7.12 (a)
- Rhode Island Solid Waste Regulations, DEM-OWM-SW04-01, 2.1.04
- Rhode Island Solid Waste Regulations, DEM-OWM-SW04-01, 2.1.08 (c)
- Rhode Island Solid Waste Regulations, DEM-OWM-SW04-01, 2.3.05
- Rhode Island Solid Waste Regulations, DEM-OWM-SW04-01, 2.3.11
- Rhode Island Solid Waste Regulations, DEM-OWM-SW04-01, 2.3.14
- Rhode Island Solid Waste Regulations, DEM-OWM-SW04-01, 2.3.23
- Pretreatment Regulations, RIGL 46-12, 42-17.1, 42-45
- Environmental Land Use Restrictions, State of Rhode Island Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases. 8.09 Institutional Controls

- Standards Applicable to Transporters of Hazardous Waste, Rules and Regulations for Hazardous Waste Management, Section 6.00
- Standards for Owners and Operators of Hazardous Waste TSD Facilities, Rules and Regulations for Hazardous Waste Management, Section 7.00 through 10.00
- LDRs, Rules and Regulations for Hazardous Waste Management, Section 10.00
- Rhode Island Oil Pollution Control Regulations

Please add these requirements as Potential Action-Specific ARARs and TBCs.

17. Table 2-3, Potential Action-Specific ARARs and TBCs, page 3; Citation DEM OWM-SW04-01, 1.7.14(b).

"The site will be closed under a plan developed in accordance with CERCLA. As such, the closure requirements of the site will be documented in the ROD, the remedial design (RD), and the Operations and Maintenance Plan (O&M) (including a monitoring plan). If wastes are left in place as a waste management unit, compliance with the State closure requirements contained in the ROD, RD, and O&M plan will be deemed compliance with this ARAR."

Please delete this entire statement above and replace it with the following text: "*An approved closure plan will be submitted and implemented for the Site.*"

18. Table 2-3, Potential Action-Specific ARARs and TBCs, page 4; Citation DEM OWM-SW04-01, 1.8.01(a) and 1.8.01(b).

"This ARAR is cited to memorialize the requirements to monitor groundwater and to meet closure requirements under a waste management unit, if it is established. If contaminants are left in place, the site will be closed as a waste management unit, and undergo long term monitoring. The remedial design (RD), remedial action work plan (RAWP), operations and monitoring plan (O&M) (including the long term monitoring plan [LTMP]) developed for this cleanup will contain the specific monitoring and closure requirements for the waste management unit. These requirements may differ from those cited in this regulation for landfill purposes. Compliance with the groundwater monitoring and closure requirements contained in the LTMP, RD, RAWP, and O&M plan for this site will be deemed compliance with this ARAR."

The above text is inconsistent with language that the State has seen at any other CERCLA Sites in Rhode Island in regards to the State's ARARs. Please delete the 3rd, 4th, and 5th sentences as underlined above as we disagree with the validity of these sentences.

19. Table 2-3, Potential Action-Specific ARARs and TBCs, page 4; Citation DEM OWM-SW04-01, 2.1.08 (a) (8).

"It is intended that this subsection serve as the ARAR memorializing the requirements for construction of new monitoring wells if needed. The specific construction requirements will be described in the appropriate documents. Such requirements may differ from those cited in this regulation, and will be developed to be appropriate for this site. Compliance with the

monitoring well construction requirements of the LTMP will be deemed compliance with this ARAR."

Please delete the 2nd, 3rd, and 4th sentences, and the following text in the 1st sentence: "*subsection serve as the*", and change "*memorializing*" to "*memorialize*" as underlined above. We disagree strongly with these statements and deem them inaccurate.

20. Table 2-3, Potential Action-Specific ARARs and TBCs, page 5; Citation DEM OWM-SW04-01, 2.2.12 (d) (1) and 2.2.12(d) (2) (ii) (iii) and (v).

"Remedies including cover systems may include appropriate vegetation requirements of a soil cover."

Please replace the word "*may*" with "*shall*" in the above sentence.

21. Table 2-3, Potential Action-Specific ARARs and TBCs, page 5; Citation DEM OWM-SW04-01, 2.3.04(e), (f).

"The ROD will include provisions to maintain cover systems, and to assure that cover provides adequate levels of reduced permeability for specific areas cited by RIDEM. It is intended that this subsection serve as the ARAR memorializing the requirement to have and maintain a cover with appropriate permeability limitations, and not to identify permeability requirements."

Please delete this entire statement and replace with the following text: "*If remedial actions involve a cover system, than the requirements of this rule would be followed.*"

22. Table 2-3, Potential Action-Specific ARARs and TBCs, page 5; Citation DEM OWM-SW04-01, 2.3.10.

"It is intended that this subsection serve as the ARAR memorializing the requirement that appropriate surface drainage considerations must be developed for the WMA cover. Cover systems would be designed to prevent erosion, sedimentation, and standing water on the cover. Minimum slope requirements for solid waste landfills would not be relevant or appropriate for a soil cover which is not intended to reduce infiltration."

Please delete the last sentence and the following text in the 1st sentence: "*subsection serve as the*", and change "*memorializing*" to "*memorialize*" as underlined above.

23. Table 2-4, Preliminary Remediation Goals for Soil.

Please explain why the selected PRGs for benzo(a)pyrene (2.1 mg/kg) and Arsenic (18 mg/kg) are the highest risk level values listed from this table instead of the CERCLA requirement of using the most stringent contained in an ARAR.

24. Table 2-6, PRGs for Sediment Invertebrates.

Please explain the PEC-Q with a DDE unit less value and how it will be applied. Please add this explanation to Table 2-6.

25. Table 4-6, Action Specific ARAR and TBCs.

Please refer to comment 16 mentioned above.

26. Table 4-6, Action-Specific ARARs and TBCs, Soil Alternative SO2, page 2; Citation SW04-01, 1.7.14(b).

Please refer to Comment 17 mentioned above.

27. Table 4-6, Action-Specific ARARs and TBCs, Soil Alternative SO2, page 3; Citation DEM OWM-SW04-01, 1.8.01(a) and 1.8.01(b).

Please refer to Comment 18 mentioned above.

28. Table 4-6, Action-Specific ARARs and TBCs, Soil Alternative SO2, page 4; Citation DEM OWM-SW04-01, 2.1.08 (a) (8).

Please refer to Comment 19 mentioned above.

29. Table 4-6, Action-Specific ARARs and TBCs, Soil Alternative SO2, page 4; Citation DEM OWM-SW04-01, 2.3.04(e), (f).

Please refer to Comment 21 mentioned above.

30. Table 4-6, Action-Specific ARARs and TBCs, Soil Alternative SO2, page 5; Citation DEM OWM-SW04-01, 2.3.10.

Please refer to Comment 22 mentioned above.

31. Table 4-9, Action-Specific ARARs and TBCs, Soil Alternative SO3, page 2; Citation SW04-01, 1.7.14(b).

Please refer to Comment 17 mentioned above.

32. Table 4-9, Action-Specific ARARs and TBCs, Soil Alternative SO3, page 3; Citation DEM OWM-SW04-01, 1.8.01(a) and 1.8.01(b).

Please refer to Comment 18 mentioned above.

33. Table 4-9, Action-Specific ARARs and TBCs, Soil Alternative SO3, page 4; Citation DEM OWM-SW04-01, 2.1.08 (a) (8).

Please refer to Comment 19 mentioned above.

34. Table 4-9, Action-Specific ARARs and TBCs, Soil Alternative SO3, page 4; Citation DEM OWM-SW04-01, 2.2.12 (d) (1) and 2.2.12(d) (2) (ii) (iii) and (v).

Please refer to Comment 20 mentioned above.

35. Table 4-9, Action-Specific ARARs and TBCs, Soil Alternative SO3, page 5; Citation DEM OWM-SW04-01, 2.3.04(e), (f).

Please refer to Comment 21 mentioned above.

36. Table 4-9, Action-Specific ARARs and TBCs, Soil Alternative SO3, page 5; Citation DEM OWM-SW04-01, 2.3.10.

Please refer to Comment 22 mentioned above.