RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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June 8, 2001

James Shafer, Remedial Project Manager
U.S. Department of the Navy
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway
Code 1823-Mail Stop 82
Lester, PA 19113-2090

RE: Old Fire Fighter Training Area Feasibility Study, Naval Station Newport, Newport, Rhode Island

Dear Mr. Shafer,

The Rhode Island Department of Environmental Management, Office of Waste Management (RIDEM) has reviewed the Feasibility Study for the Old Fire Fighter Training Area dated 25 April 2001. Attached are comments generated as a result of this review. If the Navy has any question concerning the above please contact this Office at 401-222-2797, ext. 7111.

Sincerely,

Paul Kulpa

Paul Kulpa
Office of Waste Management

cc: Mathew DeStefano, DEM OWM
Richard Gottlieb, DEM OWM
Kymberlee Keckler, EPA Region I
Melissa Griffin, NSN

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Comments on Draft Feasibility Study
For
Soil and Marine Sediments
Old Fire Fighter Training Area

1. **Page ES-2, Background,**
   Paragraph 1, Sentence 5

   This sentence states that intermediate and low risk are acceptable from and ecological standpoint. Please provide the criteria for high, intermediate, and low risk so the reader can understand what the impacts are.

2. **Page ES-3, Summary of Soil Alternatives,**
   Paragraph 1, Sentence 3

   This sentence states that no land use restrictions would remain or be implemented. It is implied that there are currently land use restrictions. RIDEM is not aware of any land use restrictions on this property, but if there are please provide a copy of them for our files.

3. **Page 1.2, Section 1.3, Old Fire Fighter Training Area Background Information**
   Whole Section

   In the chronology discussion for the site the report should note the following:

   The Remedial Investigation was initiated when construction activities in 1987 unearthed petroleum contaminated subsurface soil.

4. **Page 1.12, Section 1.8, Fate and Transport**
   Paragraph 1.

   ...in the soil in the central portion of the site. These contaminates will continue to leach.....

   Please insert the following statement into the above:
   ...in the soil in the central portion of the site. Petroleum saturated soils and petroleum floating on the groundwater was also found at the site. These contaminates will continue to leach.....

5. **Page 1-12, Section 1.9, Human Health Risk Assessment**
   Paragraph 5.

   The risk assessment considered exposure under a residential scenario, recreational and visitor scenarios...

Please modify the above as follows: The risk assessment considered exposure under a residential scenario (not equivalent to RIDEM residential scenario), recreational (considered a limit restricted recreational scenario under RIDEM's regulations) and visitor scenarios...

6. **Page 1-13, Section 1.9, Human Health Risk Assessment Paragraph 1.**

The section of the report notes that the various risk assessments for surface, and subsurface soils, and sediments slightly exceeded or exceeded RIDEM's risk range. This would imply that RIDEM concurred with the risk assessments and the results of this assessment slightly exceeded or exceeded DEM requirements. This is not the case as the assessments did not conform to RIDEM risk assessments criteria. In order to avoid confusion this section of the report should note that the chemical specific RIDEM standards were exceeded at the site.

7. **Page 2-4, Section 2.21, Identification of Media of Concern, Soil Paragraph 2.**

Both carcinogenic and noncarcinogenic risks were below EPA risk range and RIDEM's benchmarks for recreational receptors and excavation workers.

Please modify the above as follows: Both carcinogenic and noncarcinogenic risks were below EPA Risk range for recreational receptors and excavation workers. The concentrations of contaminants are above the State's standards for unrestricted recreational use of the site.

8. **Page 2-5, Section 2.21, Identification of Media of Concern, Soil Paragraph 2.**

...of 1.0 for any target organ.

Please add the following sentence to the above: ...of 1.0 for any target organ. The RIDEM unrestricted recreational standard was exceeded on the shoreline.

9. **Page 2-5, Section 2.21, Identification of Media of Concern, Groundwater Paragraph 8.**

"The groundwater levels do not exceed RIDEM GB Groundwater Objectives for any contaminant, although RIDEM does not provide values for SVOCs, pesticides or metals in GB aquifers. Because there are no exceedances of the GB groundwater objectives and federal MCLs are not applicable, groundwater is eliminated as a media of concern."

The State's GB groundwater numerical standards are designed to address volatilization into structures. These standards are not designed to be protective of

other human health exposure scenarios or discharges to sensitive environments. These cases require the development of site specific cleanup standards (the Navy may elect to use GA standards as default standards). Therefore, the above should be modified as follows:

The groundwater levels do not exceed RIDEM GB Groundwater Objectives for any contaminant, although RIDEM does not provide values for SVOCs, pesticides or metals in GB aquifers. The State's GB groundwater numerical standards are designed to address volatilization into structures. These standards are not designed to be protective of other human health exposure scenarios or discharges to sensitive environments. These cases require the development of site specific cleanup standards.

10. Page 2-5, Section 2.21, Identification of Media of Concern, Groundwater Paragraph 8.

This section of the report discusses the groundwater objectives for the site. The report should list, in addition to any chemical specific objective, the requirement for no free product in the groundwater at the site.

11. Page 2-9, Section 2.2.2.3, Development of Remedial Objectives for Soil Whole Section.

Although not stated, the report should note that either the lower of the RIDEM Direct Exposure Standards or the Sediment PRGs will be applied to the beach.

12. Page 2-12, Section 2.2.2.4, Remedial Action Objectives for Soil Whole Section.

This section of the report discusses the remedial objective for soil. In addition to the chemical specific objectives the report should include the objective of no free product in the soil. This requirement applies to both the vadose and saturated zones.

13. Page 2-13, Section 2.2.3.1, Identification of Chemicals of Potential Concern in Sediment.

As stated in previous correspondence the State has not accepted the Ecological Risk Assessment performed at the site and does not concur with the process used to develop the Preliminary Remediation Goals for the sediments. In an effort to allow work to proceed on the project the OWM elected not to enter into dispute resolution over these documents or processes. Instead the OWM would simply review the final product, that is the actual chemical specific PRGs. It was the OWM's understanding that the Navy agreed to develop PRGs for all of the contaminants at the site, independent of the processes which would limit the final number of PRGs, (as an illustration, PRGs eliminated due to collocated

contaminants which have lower PRGs values). A review of the PRGs submitted reveals that PRGs were eliminated from consideration. Please, as previously agreed, provide a complete list of PRGs for the site.

14. Page 2-13, Section 2.2.3.1, Identification of Chemicals of Potential Concern in Sediment.

In addition to the specific chemicals of concern the report should include a PRG for TPH. The TPH standard of 500 PPM may be applied at the site.

15. Page 2-19, Section 2.2.3.4, Remedial Action Objectives for Sediment.

In addition to the objectives listed, the report should include the objective of no free product in the sediment.

16. Page 3-6, Section 3.2.2.2,
Limited Action (Deed Restrictions), Bullet 1, Sentence 2

It is stated that deed restrictions, by themselves are not reliable because they are difficult to enforce. Please be advised that deed restrictions are routinely used not only in Rhode Island, but also across the nation as a form of remediation. Enforcement of the deed restriction depends on an effective monitoring program. At Naval Construction Battalion Center, across the Narragansett Bay, such a program is in place for sites where deed restrictions have been applied.

17. Page 3-7, Section 3.2.2.2,
Limited Action (Deed Restrictions), Bullet 2, Last 2 Sentences

For the next to last sentence which states that restrictions are typically difficult to implement please revise the sentence to indicate that in Rhode Island deed restrictions are voluntarily placed on the property by the owner. For the last sentence, please explain what TSDFs and permits have to do with deed restrictions. The sentence seems out of place.

18. Page 3-10, Section 3.2.2.3,
Containment (Impermeable Cap), Bullet 1, Sentence 5

This sentence states that capping does not alter the natural flow of groundwater through the subsurface. Please remove this statement, as an impermeable cap will lower the water table under the cap thereby affecting the natural flow of groundwater.

19. **Page 3-12, Section 3.2.2.4,**
Removal (Bulk Excavation), Bullet 1, Sentence 3

It is noted that negative pressure enclosures could be used to control airborne contaminates. The site is 5.3 acres in size. Please explain what type of enclosure would be used.

20. **Page 3-39, Section 3.3.2.4, Removal, Hydraulic Dredging.**

"Hydraulic dredging in the nearshore area has been eliminated from further considerations due to the nature of the substrate."

The report has eliminated hydraulic dredging in the nearshore area due to the need for mechanical equipment to remove subsurface debris. Please provide the information that was evaluated to ascertain that the substrate at the site was not amendable to hydraulic dredging. The OWM is aware that the immediate beach area contains debris. This area may be easily excavated by conventional earth moving equipment.

21. **Page 3-41, Section 3.3.2.5,**
Disposal, Bullet 2

It is stated that landfills may not be available with the capacity to handle the volumes from this site. It is estimated there will be 49,500 cubic yards of material from the on-shore activities and 9,670 cubic yards from offshore activities. It would seem reasonable to assume that a landfill, of any significance could handle more than 60,000 cubic yards. Please provide a list of the landfills investigated with their remaining capacity.

22. **Pages 3-45 & 46, Section 3.3.2.7,**
Aquatic Habitat Restoration (Natural Restoration of the Eelgrass Habitat),
Effectiveness, First Sentence

"The natural recovery potential for eelgrass indirectly affected by a remedial action in the nearshore area appears favorable." In the previous section (Characteristics of the Habitat, 3rd Paragraph) it is stated that further characterization of the extent and viability of the eelgrass beds is still required. If further characterization of the eelgrass beds is needed then explain how one knows that natural recovery potential is favorable

22. **Page 4-18, Section 4.4.3,**
Soil Alternative 3: Removal and Disposal, Paragraph 1

It is stated that the three soil mounds are assumed to be non-contaminated. Prior to disposal, samples of each pile should be taken to insure this is the case. Please include this in the description of this alternative as well as alternative 2 for soil.

23. **Page 4-20, Section 4.4.3, Soil Alternative 3:Removal and Disposal,**

The estimated volume of soil requiring removal at the Old Fire Fighter Training Area is approximately 50,000 cubic yards. The estimate cost for this option is approximately eight million dollars. The approximate volume of contaminated soil which required removal at the Melville North Landfill was 100,000 cubic yards. The estimated cost to remove and dispose of this soil was approximately eight million dollars. Please evaluate the cost estimates to ascertain the reason for the discrepancies in the cost of the projects.

24. **Page 5-5, Section 5.2.3,**
Sediment Alternative 3, Paragraph 4, Sentence 3

This sentence states that a trackhoe would be able to reach *most* of the areas from the bay haul road. Please state how contaminated sediment would be reached when the trackhoe could not reach it.

25. **Page 5-5, Section 5.2.3,**
Sediment Alternative 3, Paragraph 3, Sentence 6

Please explain why R-3 stone was used to create the haul road at McAllister Point, but at OFFTA R-6 stone is the more appropriate material.

26. **Page 5-5, Section 5.2.3,**
Sediment Alternative 3, Paragraph 4, Sentence 1

This sentence states that it is not anticipated that segregation of the sediments will not be required as a result of contaminates. It should be noted in this sentence that sediments will be segregated by size. The same also applies the Alternative 4, Page 5-8, Paragraph 4.

27. **General Comment on Alternative 3**

Please explain what happens to the R-6 stone used to create the haul road when it is no longer needed.

28. Page 5-8, Section 5.2.4,
Sediment Alternative 4, Paragraph 4, Last Sentence

If removal of the top two feet of sediment assures contaminate removal then please explain why in paragraph 2 (same page) 15 borings are needed to determine the extent of sediment contamination.

29. Page 5-8, Section 5.2.4,
Sediment Alternative 4, Paragraph 5, Sentence 8

This sentence states that a barge would be used to dredge areas not reachable by the trackhoe. Based on Figure 5-3 the maximum distance from the shoreline that would require dredging is 140 feet. Assuming a maximum 50 foot reach of the trackhoe and assuming the 50 feet closest to the shore could be dredged from the shore, it would seem that with proper placement of the haul road that barge dredging should not be needed. Please explain why it is felt there is a possibility that barge mounted dredging may be necessary.

30. Page 5-9, Section 5.2.4,
Sediment Alternative 4, Last Paragraph

It is proposed to backfill the dredged areas with a mix of clean backfill materials, which will be selected and placed to assist in natural restoration of the aquatic community that was destroyed by the dredging action. In order for RIDEM to comment on the adequacy of the backfill materials, specifications would have to be provided. Therefore, RIDEM will comment on the backfill materials when the design is submitted for review.

31. General Comment

For alternatives 2, 3, and 4 it is noted that monitoring would occur in years 1 through 5 and then at five year intervals after that. Please be advised that depending upon the results of the monitoring the frequency could change. This should be noted in the report, but for estimating purposes the monitoring frequency can be left as is.

32. Page 5-27, Section 5.5.4, Sediment Alternative 4 Dredging and Disposal, Cost

The estimated cost to dredge the contaminated materials is based upon dredging via a haul road. As cost is a modifying factor in the FS selection process the report should evaluate other alternatives to haul road dredging, such as, dredging via a barge, barge and land dredging, or behind a temporary Portadam. Cost for these alternatives should also be included in the report.

33. Table 2-2, Location Specific ARARs

If the National Historic Preservation Act is an applicable ARAR then the Rhode Island Historical Preservation Act should also be an ARAR.

34. Table 2-2 Chemical Specific ARARs

The Rhode Island Air Quality Regulations should also be an ARAR.

35. Table 2.8, Selection of Soil COPCs.

During remedial investigation activities a variety of oils were observed at the site (heavy oils, hydraulics, fuel oils, oil sludges, etc). Samples of the various oil types were not collected and analyzed (certain efforts were designed to visual determine the extent of contamination and or only the predominant oil type was tested, etc). Therefore, please modify the COPC table to include the full list of RIDEM regulated Method 1 SVOCs.

36. Table 4-4 – 5-15, Assessment of Chemical Specific ARARs and TBCs.

Please include the following citations for the soil and sediment ARAR evaluation:
Requirement: State of Rhode Island Oil Pollution Control Regulations
Citation: Chapters 46-12,42-17.1 and 42.35 of the General Laws of Rhode Island
Status Relevant and Appropriate
Synopsis of Requirement Addresses releases of oil into the waters of the State.
Action to be Taken to Attain ARAR Remedial efforts will be designed to insure that releases to waters of the State have been addressed.

37. Figure 5-1, Sediment Alternative 3

If the intent of this alternative is to retain the eelgrass beds then please explain why the haul road goes through the eelgrass beds. In addition, given the limited reach of the trackhoe it would make more sense to move the haul road closer to the shore, even if excavation of the sediments is partially carried out from the shore.

38. Appendix D

With respect to the 5-year reviews, please define the acronym "LOE" and "ODC".

39. **Appendix D, Cost.**

This section of the report includes a cost break down for the various options. At the end of the estimate is a list of references for each cost item. As was done in previous evaluations, the report should indicate which reference applies to a

specific cost item, (that is each line item should have a reference number designating what the estimate was based on.

40. **Appendix D, Cost.**
Soil Removal and TSDF Disposal

Please address the following comments concerning this alternative:

Line Item 1.1 The report proposes performing a preinvestigation to further delineate the site and determine the lateral extent of contamination. This site has been extensively investigated. In addition, during removal actions the excavation itself provides far more useful information concerning the extent of contamination then a boring program (unless the boring program will be located in areas that are not going to be excavated). Accordingly, unless the last provision applies, the OWM recommends that the Navy not perform this preinvestigation.

Line Item 2.1 The estimate includes a cost for mobilization /demobilization of equipment. The report is a public document, therefore, please indicate what this pertains to.

Line Items 2.2-2.6, and 3.5. These items include cost for office trailers, and construction of decon pad. On the site is a former day care center, and a parking area which can be employed in lieu of or may be modified to be part of these structures. The OWM recommends that the Navy explore the use of the existing facilities.

Line Item 3.1 The report contains a line item to clear and grub the site. The site is a grassed field with a number of small trees. The report is a public document, therefore, please explain what is involved with this operation.

Line Item 3.8 This line item includes a cost for the maintenance of the soil staging area. As the maintenance cost is equivalent to one half of the construction cost, please explain what this line item entails.

Line Item 6.1 The report includes a line item for excavation/load material. Please explain how this cost was estimated.

Line item 6.2 The report proposes renting organic vapor analyzers, specifically a flame ionizer detector (FID). FID is a general-purpose field instrument that can be used at this and other sites. Accordingly, the Office of Waste Management recommends that the Navy compare the rental cost to the purchase cost for this unit

Line Item 6.3 The report notes that it will cost $ 124,740 to transport the soil from the excavation to the soil staging area, which is located on site. The entire site is approximately 5.5 acres. Please explain how this value was calculated.

Line Item 6.4. The report notes that it will cost $ 72,000 to dump excavated soil into the soil staging area. Please explain how this value was calculated.

Line Item 6.5 The report notes that 218 samples will be collected and analyzed. Please indicate what is the function of these samples and how they differ from Line item 6.6, Stock Pile material sampling/analysis (which entails the collection of 27 samples).

Line Item 6.9 Please explain what a trench box is and where it will be used at the site.

Line Item 7.3 The estimated cost to pump out the tanks is approximately eight time the transportation and disposal cost for this operation. Please explain.

Line item 8.4,8.5,and 8.6 This section deals with the T&D for soils from the site. Please include a breakdown of the cost for this operation, disposal/transportation cost. Please provide documentation for the transportation cost.

Line Item 10.1,10.2 Please indicate whether the unit value of 100 feet for the wells refers to an individual well or the total for all four wells, (that is four wells at 25 feet per well).

The report is a public documents, therefore please include a definition of G&A.

Please explain why the health and safety monitoring will cost an additional 337,000 on top of the estimated cost for this operation. In addition, please note what this operation entails.

The overhead and other direct cost is approximately sixty percent of the total direct cost of the project. The report should include and explanation justifying this value.