RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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11 February 2002

Mr. Ed Boyle, Remedial Project Manager
US Department of the Navy
Engineering Field Activity Northeast
Naval Facilities Engineering Command
10 Industrial Highway
Lester, PA 19113-2090

RE: Navy Response to 21 December 2001 RIDEM Comments
Phase I Remedial Investigation Report
Human Health Risk Assessment
IR Program Site 16
(Former Creosote Dip Tank and Fire Fighting Training Area)
Naval Construction Battalion Center
Davisville, Rhode Island
Submitted 7 February 2002, Dated February 2002

Dear Mr. Boyle,

The Rhode Island Department of Environmental Management, Office of Waste Management (RIDEM) has reviewed the above referenced document and has the following comments to offer:

1. **RIDEM Comment 1** - Page 2-2, Section 2.1.3, Exposure Pathways and Receptors of Concern, Paragraph 3 – This paragraph notes that the residential scenario is included in this analysis as a conservative measure. Please revise this to state that the residential scenario is included because the land associated with the marina is subject to RIDEM residential criteria.

   Navy Response - As stated in the text, residential use of Site 16 is not expected in the future. Therefore consideration of residential exposure is to be conservative. This discussion will remain in the text.

   RIDEM Comment – The response is not acceptable. Under RIDEM Remediation Regulations, amended 1996, Section 3.58, the marina constitutes an unrestricted outdoor recreational area and is therefore subject to RIDEM Residential Exposure Criteria. Please revise the document in accordance with comment 1.

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30% post-consumer fiber

2. **RIDEM Comment 2** - Page 2-3, Section 2.1.3, Exposure Pathways and Receptors of Concern, Paragraph 2 – This section notes that surface soil is evaluated from 0 to 2 ft. below ground surface for the recreation scenario. As noted above, the recreation scenario is to be evaluated under residential conditions under RIDEM Remediation Regulations, amended 1996. Residential soil is to be evaluated from the surface to the top of the water table, not just the top two feet. Please revise the analysis accordingly.

   Navy Response - The HHRA evaluation, including the definitions of the media of concern, follows the EA March 2000 Site 16 RI Final Work Plan. Total soil (surface and subsurface soil, combined) is evaluated for the residential scenario. As a recreational receptor is only expected to contact surface soils, this receptor is evaluated for surface soil. As the recreational receptor is only likely to contact surface soils and this is in accordance with the work plan, the risk assessment will not be revised.

   RIDEM Comment – Section 8.02(A)(i)(2) of the Remediation Regulations defines the residential exposure criteria to be applied throughout the vadose zone, except as noted. The marina portion of this site is subject to the residential criteria. The analysis will need to be revised accordingly.

3. **RIDEM Comment 3** - Page 2-3, Section 2.1.4, Risk Based Screening, Paragraph 1, Sentence 2 – This sentence states that any analyte in any medium for which the maximum measured concentration exceeded the risk-based screening concentration is retained as a COPC. This implies that if the concentration is below the risk-based screening concentration then the compound is no longer considered. Under the RIDEM Remediation Regulations, amended 1996, compounds cannot be excluded from the risk analysis until it is shown that there is no risk from that compound.

   Navy Response - The HHRA evaluation, including the screening analysis, follows the EA March 2000 Site 16 Final RI Work Plan. The screening analysis follows both EPA Region I (Risk Update 5) and federal EPA (RAGS A, 1989) risk assessment guidance. As explained in the text and in these standard guidance documents, the screening values used in the screening analysis are highly conservative; a comparison of the maximum detected compound in a medium to the medium-specific screening value demonstrates no risk for that compound. The screening analysis will not be revised, but text will be added to the screening analysis discussion to clarify this.

   RIDEM Comment - Sections 8.01(A & B) of the Remediation Regulations states in part that any individual carcinogenic/non-carcinogenic substance cannot individually exceed a certain level and cumulatively cannot exceed a certain level. The only way to ascertain that this criteria is met is to carry all detected compounds throughout the HHRA, i.e. compounds cannot be dropped out of the analysis because they are below some screening level. Therefore, it will need to be demonstrated that those compounds screened out of the analysis either individually or cumulatively do not pose a health risk.

4. **RIDEM Comment 4 -** General Comment – This risk analysis concludes in general that there are no unacceptable risks associated with this site from soil and sediment. Please be advised that this risk analysis does not conform to Method III RIDEM Remediation Regulations for determining risk at a site for the reasons noted above as well as others. Based on the data contained in the Remedial Investigation, for this site, various PAH compounds and metals are in exceedance of RIDEM Residential Exposure Criteria (Method I) for both soil and sediment samples. Therefore, RIDEM believes there are risks associated with these media. RIDEM does concur, however, that there are unacceptable risks associated with the groundwater.

   Navy Response - The risk assessment evaluated PAHs and metals in soil per EPA federal and regional guidance and in accordance with the March 2000 work plan. Several PAHs and metals exceeded their screening values for soil and were then evaluated for potential risk in the risk assessment. The results of the risk assessment indicated that there are no unacceptable risks for soil at Site 16. The application at this point of RIDEM's non-site-specific values as the sole indicator of risk is not applicable in that the site-specific risk assessment has demonstrated no unacceptable risk.

   Sediment was not included in the HHRA (in accordance with the March 2000 work plan).

   RIDEM Comment – Based on the above comments it should be clear that this human health risk analysis does not meet the requirements of a site specific risk analysis in compliance with RIDEM Remediation Regulations. In order to keep the Navy in compliance with RIDEM regulations the only alternative left is to compare the sample results with the Mehtod 1 Criteria. Based on this there are exceedances for PAHs and metals under a residential scenario within the marina area. If the Navy wishes to perform a HHRA meeting RIDEM regulations because they believe that there is no risk at this site from soils it is more than welcome to do so. If not, RIDEM will utilize the Method 1 Criteria which demonstrates there is a risk from soils at the site and will require remedial action to abate the risk.

If you have any questions or require additional information please call me at (401) 222-2797 ext. 7138 or e-mail me at rgottlie@dem.state.ri.us.

Sincerely,

Richard Gottlieb, P.E.
Principal Engineer

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