



RHODE ISLAND  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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James Shaffer, 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

May 15, 1998

RE: Draft, Preliminary Remediation Goals for Offshore Derecktor Shipyard Ecological Risk Assessment, Naval Education and Training Center, Newport, Rhode Island

Dear Mr. Shaffer,

The Office of Waste Management has reviewed the Draft Preliminary Remediation Goals (PRG) for the Derecktor Shipyard Site, dated 31 March 1998. Attached are comments generated by this Office on the Preliminary Remediation Goals document.

It is the Office's understanding the Preliminary Remediation Goals document is designed to create numerical remediation standards for contaminated sediments at the site. To achieve this goal, information from the Ecological Risk Assessment is incorporated into a matrix for standard development. The Preliminary Remediation Goals document is therefore, not an Ecological Risk Assessment; it is merely a tool to generate cleanup numbers based upon information from the risk assessment. Accordingly, the remediation goals should follow the recommendations of the Ecological Risk Assessment. A review of the Preliminary Remediation Goals document clearly indicates that this is not the case. Areas of Coddington Cove that have a demonstrated unacceptable risk are not designated as areas of concern in the Preliminary Remediation Goals document. This disconnect has to be address prior to proceeding forwarded in the process.

If the Navy has any questions concerning the above, please contact this Office at (401) 277-2797.

Sincerely,

*Paul Kulpa*  
Paul Kulpa, Project Manager  
Office of Waste Management

cc: Warren S. Angell, DEM OWM  
Richard Gottlieb, DEM OWM  
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**Comments of Draft  
Preliminary Remediation Goals  
Derecktor Shipyard**

**1. General Comment**

A number of parameters were utilized during the evaluation conducted under the Ecological Risk Assessment. These parameters included sediment chemistry, water chemistry, biotoxicity test, tissue analysis, biota condition analysis and modeling. This comprehensive evaluation was deemed necessary as no single parameter was considered adequate in an ecological risk assessment. As an illustration, chemical analysis of the sediment may not reveal a problem that would be evident through a biota condition analysis. However, the process developed for the PRG derivations has relied heavily upon essentially two parameters, chemistry and modeling. This is of concern as it was realized that all of the aforementioned parameters were needed to conduct the risk assessment. However only a limited number of parameters were used in the PRG process. This may be the reason why there is disagreement between the output of the ecological risk assessment and the PRG document. As such, it may warrant a significant revision in the PRG derivation process. The Office recommends that the Navy evaluate whether the comments below will address the discrepancies in the PRG process or whether a totally revamped process is required.

**2. General Comment**

The Ecological Risk Assessment has assumed that static conditions will prevail at the site, that is, there will not be any resuspension of contaminated sediments. This Office has repeatedly questioned this assumption in written correspondence and in meetings held for the Ecological Risk Assessment. The Office's position is that storm action, ship traffic or other factors will result in a resuspension of contaminated sediments, thereby generating a greater risk than that predicted by the Ecological Assessment. The Office stated that this assessment should be evaluated during the Ecological Risk Assessment. The Navy indicated that such an assessment would conflict with the schedule for the site and proposed performing the evaluation during the next step of the process, ie Feasibility Study and/or PRG development. In the interest of expediting the process, and reducing overall cost, the Office agreed to this provision. However, the Office clearly stated in correspondence, dated 20 March 1997, that the Ecological Risk Assessment will not be considered finalized until this issue is addressed. A review of the Derecktor Shipyard Offshore Feasibility Study and Preliminary Remediation Goals Document reveals that the Navy has not provided the agreed to resuspension evaluation. Accordingly, the Navy has not finalized the Ecological Risk

Assessment for the site. It therefore, follows that any document based upon this assessment, Feasibility Study or Preliminary Remediation Goals Report will be of limited utility.

**3. General Comment**

Historically Pier One was the location where Derecktor Shipyard moored the two large floating dry docks. This was an area where contaminated blast grit, sludges, oils and other debris were routinely dumped as part of normal shipyard activity. The material disposed of at this location was considerable in that it was later found that the waste changed the sediment contours at this location. This illegal action resulted in a criminal investigation against the Derecktor Shipyard. During the ecological risk assessment process this area was discussed. However, as this was a known area of contamination, the Ecological Risk Assessment did not evaluate this location. Please indicate how the current PRG process has addressed this area.

**4. Section 2,2, Aquatic PRG Derivation:  
Page 8.**

This section of the report indicates that EPA WQC values were used in the PRG development. Please be advised that RIDEM WQC values are used throughout this State. Therefore, in order to be consistent, RIDEM's WQC values must be used in the PRG derivation process.

**5. Section 2,2, Aquatic PRG Derivation:  
Page 8.**

This section of the report states that an EqP model was used to estimate the porewater concentrations using TOC sediment concentrations at each location. It is routine to check the validity of a model by comparing the models output to actual porewater concentrations. In this case the porewater concentrations predicted by the model may be compared to known results. This comparison was not found in the report. As this is a necessary step in the PRG process , please indicate which section of the report contains this comparison.

**6. Section 2,2, Aquatic PRG Derivation:  
Page 8.**

This section of the report refers to sediment benchmarks. This report is a public document and as such these benchmarks as well as any other referenced material should be included. In addition, in the final analysis, the PRG values should be included in a table with the aforementioned benchmarks.

**7. Section 2,2, Aquatic PRG Derivation:  
Page 8.**

This section of the report discusses the biotoxicity test conducted at the site. The report is a public document and it should indicate whether a biotoxicity test was conducted at each location where a chemistry sample was collected, ie whether only one type of sample (chemistry) was collected. If this is not the case the report should include a discussion to address this issue.

**8. Section 2,2, Aquatic PRG Derivation:  
Page 10.**

This section of the report has compared the results of the biotoxicity test in the evaluation of whether contaminated sediment represents a threat. In numerous meetings this Office has indicated that due to variability in biotoxicity test and sampling, the biotoxicity test may be used as an indicator of contamination. It cannot be used as a stand alone test in the determination as to whether contaminated sediments represent a problem. The PRG document has used the biotoxicity test to discount contaminated sediments. The biotoxicity test performed at the site would not have sufficient rigor to meet this task and should not be used as such. Please modify the report accordingly.

**9. Section 2,2, Aquatic PRG Derivation:  
Page 10, Paragraph 2.**

This section of the report appears to state that the No Observable Effect Quotient represents the highest concentrations of contaminants for which adverse affects are unlikely. As stated, this method does not appear to be conservative, in that instead of using the lowest or average concentration of a contaminant which does not produce an adverse affect, the highest concentration of the contaminant is used. This approach is normally not used in assessments of this nature. Please clarify how No Observable Effect Quotients were developed.

**10. Section 2,2, Aquatic PRG Derivation:  
Page 10, Paragraph 1.**

This section of the report discusses the use of the bioassay in the determination of whether sediments at the site were contaminated. As previously stated this is beyond the function of a biotoxicity test. Furthermore, a host of other test were performed in addition to the biotoxicity test. Therefore, please modify the report such that the emphasis is not placed upon the biotoxicity test.

**11. Section 3.1, Implementation Methods:  
Page 18.**

This section of the report discusses the derivation of the contaminant polygons. In this endeavor the results of the URI study were employed. This sediment depth used in this study was 0-2 cm. As a result they may be inappropriate for the derivation of contaminant polygons.

**12. Section 3.3, PRG Assessment:  
Page 19.**

This section of the report summarizes the PRG assessment. As indicated in the cover letter there is a disconnect with the findings of the Ecological Risk Assessment and the PRG document. This disconnect is clearly demonstrated for sampling station 27. The Office recommends that station 27 be evaluated in an effort to resolve this problem.