



RHODE ISLAND  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

January 2, 2008 <sup>July</sup> ← Dates incorrect - should be 2009  
PKP

Winoma Johnson  
NAVFAC MIDLANT (Code OPNEEV)  
Environmental Restoration  
Building Z 144, Room 109  
9742 Maryland Avenue  
Norfolk, VA 23511-3095

Re: Derecktor Shipyard Feasibility Study. NETC

Dear Ms. Johnson,

The Rhode Island Department of Environmental Management, Office of Waste Management (RIDEM) has been working with the United States Navy and the United States Environmental Protection Agency to resolve issues associated with the Feasibility Study for the Derecktor Shipyard site. Comments were submitted by the regulatory agencies on this site and a series of conference calls were held to discuss the concerns broached by the regulatory agencies. At the end of the conference calls the Navy stated that it would evaluate RIDEM's concerns and that additional correspondence from RIDEM was not needed. Recently the Navy stated that at this time it would now be beneficial if RIDEM outlined the aforementioned concerns in writing. Per the Navy's request attached are RIDEM concerns.

If the Navy has any questions concerning the above, please contact this Office at (401) 222-2797. Ext. 7111.

Sincerely,

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

cc: Mathew DeStefano, DEM OWM  
Richard Gottlieb, DEM OWM  
Kymberlee Keckler, EPA Region I  
Cornelia Mueller, NETC

## **Derecktor Shipyard Feasibility Concerns**

### **Human Health**

1. RIDEM questioned whether cumulative affects associated with multiple contaminants were included during the development of the Preliminary Remediation Goals (PRGs). That is, whether the human health PRG developed for a contaminant of concern was based upon the fact that multiple contaminants are present or was the PRG developed assuming that only one contaminant was present. In the conference calls the Navy stated that it is their understanding that the process did include cumulative affects. Further, they would cite which section of a particular report contains this information which demonstrates that cumulative affects were addressed and employed in the process. Please submit this information.
2. RIDEM has concerns with respect to heterogeneity of contaminant distribution at the site, as well as some of the assumptions used in the process (see below). As noted in comments and discussed during the conference calls, the PRG document is not transparent and certain steps in the PRG development process are either not clear and/or missing. Following the information in the PRG document RIDEM was unable to recreate the process for developing the PRGs at the site. The Navy has acknowledged that the PRG document is not transparent and certain steps are unclear and/or missing.

Accordingly, please simply submit either a table or a spreadsheet with PRGs for all of the contaminants observed at the site. As discussed during the conference calls this is not anticipated to be a difficult task to complete, as the Navy would have all of the information in computer format including the associated equations. This will greatly expedite the process, avoid a long review and comment period and allow RIDEM to confirm that cleaning up to the recommended PRGs in the FS will also address heterogeneity and other issues, and allow the agencies to reach consensus on this issue.

3. If the Navy elects not to provide the PRGs for all of the contaminants of concern please submit the following information:

Provide the equation and an example calculation for converting wet tissue weight to dry weight.

Provide the equation and example calculation for converting tissue concentration, which represents a risk, to sediment concentration, which represent a risk.

Provide a reference for the relative absorption factor for PCBs. Please provide the calculation for the tissue concentration of PCBs, which represents an unacceptable risk.

Provide the equations and example calculations for the development of the PRG for one of the contaminants of concern proposed by the Navy. This information must be clear, with each step outlined, showing the equation, the example calculation and the appropriate input values, (default or site specific) including the appropriate tables or other sources of data that serve as input into the equation (as previously noted certain key steps in the processes are not found in the PRG document).

Once RIDEM has this information and is able to generate the PRGs for the other contaminants at the site, then it will be possible to evaluate whether the limited PRGs are appropriate. Please be advised that this approach by its nature will greatly increase the overall time of the process and potentially lead to a series of different reviews and/or inquiries.

4. As noted in previous correspondence and in the conference calls RIDEM has concerns with ingestion rates employed in the PRG process. The ingestion rates used in the document are not in concert with that developed by the United States Food and Drug Administration, (as an illustration, the Navy's ingestion rate for an adult is less than half the rate used by the FDA for a child). The rate proposed by the Navy for the subsistence fisherman may, however, be used to represent the amount of shellfish consumed by a typical individual. In an effort to move the project forward RIDEM recommends that the Navy state that the rate for the subsistence fisherman represents the rate for an individual, which consume shellfish. RIDEM has stated that if the Navy agrees to this adjustment the Navy will not have to redevelop new PRGs associated with modified ingestion rates. That is, the human health PRG developed by the Navy may be used and simply assigned to that of the typical individual. As such, it would represent the central tendency in a risk assessment. The Navy, at this site only, will not have to develop a new PRG for the substance fisherman (that is RIDEM will forgo the requirement to develop a maximum value, as represented by the substance fisherman, in the risk assessment process, provided that concerns in Comments 5 & 6 below are met).
5. RIDEM has concerns with the assumption concerning the amount of shellfish an individual will harvest from the area. Typically, individuals are able to harvest more shellfish from an area than that allowed by law. Assuming that an individual only takes the daily limit allowed under RIDEM regulations it would take approximately 2.5 - 4 trips for an individual to collect the amount of shellfish calculated in the human health risk assessment (the range in number of trips depends upon whether quahogs, soft shell clams, mussels or a combination of shell fish is harvested). Therefore, it is realistic to assume that the amount of

shellfish calculated in the human health risk assessment can be considered to come from the Derecktor Shipyard site. Please modify the document accordingly.

6. In human health risk assessments a hazard quotient of one is used to demarcate what represent an unacceptable risk. The document designates an unacceptable risk as being equal to a hazard quotient of ten. As the regulations and the guidance states that a hazard quotient of one represents an unacceptable risk, the document needs to be modified to state that a hazard quotient of one would be employed to designate what represent an unacceptable in the human health risk assessment.

Please be advised that the human health risk management process is used to determine how to address the human health risk at a site. That is, the human health risk management may be used to designate what form of remediation will be required for the areas, which represent an unacceptable risk in the human health risk assessment. As an illustration, dredging may be required for a hazard quotient of X while monitoring, shellfish restrictions, etc., may be employed for areas with a hazard quotient of Y.

#### **Ecological**

1. Similar to issues broached by the EPA it appears that certain contaminants of concern were not adequately addressed.
2. An ecological risk assessment was performed which evaluated a variety of lines of evidence to ascertain the risk present at the site. This is necessary as no one test or line of evidence is deemed sufficient to ascertain ecological risk. The PRGs process only relied on one line of evidence, toxicity, to demarcate areas, which represent an unacceptable risk. It is not appropriate to ignore the other lines of evidence in this process. Further, toxicity is not a robust test, nor can it be used to usurp the results of the other lines of evidence. The Office of Waste Management has requested that the Navy employ all of the lines of evidence in the ecological PRG process. As discussed in the conference calls and meetings the Office of Waste Management is willing, at this site, to forgo the deficiencies in both the ecological risk assessment and the PRG process and used the ecological PRGs process in the document, provided that the concerns with respect to the human health risk assessment noted above are met. This will avoid the laborious and time consuming process to resolve the many technical and process issues associated with the ecological PRG process and will allow the agencies to reach consensus at this site and move the site forward into remedy and ultimately site close out.

### **Dredging Operation**

1. The Office of Waste Management has reviewed the cost estimates and has requested certain information from the Navy to support the estimated cost. The Navy has elected not to address RIDEM's concern and has recommended that the Office of Waste Management employ a contractor to produce a cost estimate in order to check the validity of the Navy's estimate. Per the Navy's recommendation this task is being implemented.
2. As noted in past correspondence and in meetings the Office of Waste Management has requested that the area to be sampled be greater than that proposed in the Feasibility Study. This will address concerns associated with contaminant redistribution at the site during the berthing of the inactive ships, anticipated redistribution of contaminants when the inactive ships are removed, depth of contamination, recently obtained information concerning areas of contamination, etc.
3. RIDEM agrees with dredging and feels that all of the areas of concern should be dredged. This will avoid problems associated with capping.