



RHODE ISLAND  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

May 5, 2006

Curt Frye, 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: Conceptual Site Model, Old Fire Fighter Training Area, Naval Station Newport, Newport, Rhode Island

Dear Mr. Frye,

The Rhode Island Department of Environmental Management, Office of Waste Management has reviewed the Conceptual Site Model for the Old Fire Fighter Training Area, which was produced by the Navy's Tiger Team. The Tiger Team involvement in the site was a result of a Navy's mandate, in which the team worked independently of the federal and state regulators. As such, the Conceptual Site Model is not a product of a work plan or a report typically produced in accordance with the Federal Facilities Agreement.

The primarily focus of the Team was alternative risk evaluations and applicability of certain regulatory requirements. The Team has not evaluated alternative remedial approaches and/or concerns broached by the regulatory agencies on the site. The Office of Waste Management is disappointed that the Tiger team did not address concerns of the regulators or assess methods to optimize the proposed removal action presented in the Proposed Plan, as well as, other remedial alternatives for the site. The attached comments are designed to express the Office's concerns over the information presented in the CSM Report. Finally, please be advised that agreement has not been reached between the parties of the Federal Facilities Agreement over the need to revise either the Remedial Investigation Report or the Feasibility Study for the site.

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

Sincerely,

Handwritten signature of Paul Kulpa in cursive.

Paul Kulpa  
Office of Waste Management  
cc: Matthew DeStefano, DEM OWM  
Richard Gottlieb, DEM OWM  
Kymberlee Keckler, EPA Region I  
Cornelia Mueller, NSN

**Comments on  
Conceptual Site Model  
Old Fire Fighter Training Area**

**1. Section 2.1, Soil, Petroleum  
Page 2-3**

This section of the report notes that oil saturated soil and free product flowing from the test pits onto the water table has been observed at the site. In addition it acknowledges that globules of oil is present, however the report has labeled them as residual oil, which has not appeared to migrate. Please be advised that the term free product applies to any media; soil sediment, and groundwater. Further, the observations made at the site demonstrates that free product is present in the soil.

**2. Section 2.1, Soil, Petroleum  
Page 2-3**

Please be advised that the concentration of oil at the site has exceeded the leachability standard for TPH (2500 ppm). The standard is applicable to the site, as TPH has been found dissolved in the groundwater.

**3. Section 2.1, Soil, PAHs,  
Page 2-3**

This section of the report attributes the observed PAHs to abraded asphalt. Please be advised that the Office of Waste Management has outstanding concerns with respect to the Navy's conclusion that asphalt is the culprit.

**4. Section 2.1, Soil, Metals  
Page 2-3.**

This section examines the concentrations of metals in till, fill, and natural materials to make statements concerning contaminants distribution and potential sources. Using onsite data it concludes that the till is a natural source of elevated metals.

Please be advised that releases at a site will complicate any attempt to determine background studies. That is why at all sites the standard procedure is to collect background samples from locations not impacted by a site.

**5. Section 2.1, Soil, Background Study**  
**Page 2-4**

This section of the report evaluates the distribution of metals in the background study. In regards to arsenic it concludes that the high concentration of arsenic (84 ppm) in the subsurface soil compared to 5.5 ppm in the surface soil demonstrates that the arsenic in the subsurface is naturally occurring. The evaluation was somewhat simplistic and failed to address a number of important aspects of any background study, including spatial distribution outliers, normality, etc. The elevated levels of subsurface arsenic were all observed in one location. They were identified as outliers during the statistical evaluation and they did not conform to normality. Finally, if the samples from this one location are removed the maximum concentration of arsenic in the subsurface soil is 5.7 ppm, which essentially mirrors the maximum concentration observed in the surface soils ( 5.5 ppm).

**6. Section 2.2, Groundwater, Petroleum**  
**Page 2-6**

The report notes that petroleum saturated soils were observed in test pits and/or borings. In addition free products was observed flowing into test pits and sheens were detected in wells. Please be advised that these observations demonstrate that NAPLs are present at the site, which requires remediation.

**7. Section 2.2, Groundwater, Petroleum**  
**Page 2-6**

The report notes that the concentrations of TPH in the groundwater ranges from 250-1381 ppb, and implies that this concentration is not at levels of concern. Please be advised that a number of states either have regulations or guidelines, which stipulate that TPH at this concentration warrants action.

**8. Section 2.2, Groundwater, PAHs VOCs**  
**Page 2-7**

This section of the report notes that low levels of PAHs and VOCs were observed in the groundwater (two PAHs and one VOC exceeded GA standards). The report should note that the low level of PAHs might be contributing to the PAHs observed in the sediments.

**9. Section 2.2, Groundwater, Metals**  
**Page 2-7**

This section of the report is limited to a discussion of manganese. Elevated levels of lead, including concentrations above drinking water standards, were found in wells at the site. This section of the report should also note that elevated levels of lead were found in the soil at the site and in the adjacent sediments.

**10. Section 2.2, Groundwater, Metals**  
**Page 2-7**

Previous reports produced by the Navy stated that antimony, arsenic, beryllium, cadmium, chromium and nickel were found at the site in the groundwater exceeding MCLs or state criteria. This should be noted in the report.

**11. Section 2.3, Sediments**  
**Page 2-7**

The focus of the sediment discussion was the distribution of PAHs, possible sources, and the fact that there is disagreement in this matter. The section should also note that elevated levels of lead were found in the adjacent sediments. Further, the report should note that elevated levels of lead were found in the soil and in the groundwater.

**12. Section 2.5, Surface Water**  
**Page 2-9**

This section notes that sheens were not observed on the surface water. It is the Office of Waste Management's understanding that free product was found in the remains of an unknown discharge pipe and a sheen was observed flowing out of a storm drain.

**13. Section 2.4, Shellfish**  
**Page 2-9**

The report compares the concentrations of contaminants observed in mussel tissue samples with those from the mussel watch program. A comparison was not performed for lobsters and clams, as this information is not available in the mussel watch program. The report failed to note that the concentrations of contaminants in tissue samples for these organisms are higher on site when compared to the Jamestown reference station.

**14. Section 2.6, Summary of Contaminants Detected**  
**Page 2-13**

The report erroneously notes that PAHs were not detected in the groundwater. PAHs and VOCs were detected, including concentrations above MCLs.

**15. Section 2.6, Summary of Contaminants Detected**  
**Page 2-13**

The report notes that the PAHs observed in the sediment were dissimilar to those observed at the site. This is not the case as the same PAHs were observed at both locations. The report should accurately state that there is disagreement with the source of the PAHs in the sediment.

**16. Section 2.6, Summary of Contaminants Detected**  
**Page 2-13**

The report failed to note the concentration of contaminants in onsite samples were higher than the Jamestown reference station.

**17. Section 3.0, Fate and Transport**  
**Page 3-1.**

This section of the report discusses the contaminant distribution at the site and possible migration routes. The conclusions presented in this section have been questioned by the Office of Waste Management in previous correspondence and in meetings on other reports submitted by the Navy. Rather than reiterate these concerns, please note that the Navy has not provided any additional information in the CSM report, which addresses these concerns.

**18. Section 4-1, Human Health Risk**  
**Page 4-1.**

Although, the Tiger team is supposed to conduct an independent evaluation of the remedial investigation conducted at the site this section essentially reiterates the previous human health risk assessment performed at the site, with the recommendation that a residential scenario is not appropriate. It has not addressed any of the concerns generated by the Office of Waste Management on the human health risk assessment, such as the fact that the risk assessment grossly underestimates the ingestion rate for adults who consume shellfish (shellfish ingestion rate for an adult in this assessment is a fraction of what a child between the ages of 1-6 consumes).

**19. Section 4-3, Ecological Risk**  
**Page 4-8.**

The Ecological Risk Assessment is essentially a summary of the previous studies performed at the site. It does not address concerns broached by the Office of Waste Management on previous submittals or in meetings.

**20. Section 5.0, Summary**  
**Page 5-1**

Please be advised that as indicated in the above comments and in previous comments submitted on other documents the Office of Waste Management does not concur with a number of conclusions presented in this report with respect to the mobility and risk associated with petroleum, SVOCs and metals found at the site the Navy interpretation of NAPLs and the exclusion of certain risk evaluations, such as residential which is equivalent to RIDEM's recreational standard.