UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

March 15, 2001

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

Re: Technical Review of the Response to Additional Comments for the Draft Final Remedial Investigation for the Old Fire Fighting Training Area at the Naval Station Newport, Newport, Rhode Island

Dear Mr. Shafer:

Thank you for your letter dated February 20, 2001 where you respond to my comments dated January 16, 2001 on the Old Fire Fighter Training Area remedial investigation. Although the majority of the responses to EPA comments were adequate, there are still two outstanding issues that have not been adequately addressed. These two comments requiring further clarification and action are discussed on Attachment A. EPA is concerned that issues concerning the use of background chemical levels in the baseline risk assessment remain despite numerous comment letters and meetings between our respective agencies. EPA recommends that Northern Division coordinate its responses with the Assistant Secretary of the Navy's office to ensure that it accurately represents the Navy's policy on this issue.

EPA supports the Navy's statement in their February 8, 2001 letter that "...the Navy accepts RIDEM's arsenic soil background level of 6.2 mg/kg as a proposed preliminary remedial goal (PRG) for OFFTA surface and subsurface soils...." Voluntarily adopting this performance goal appears to have facilitated agreement between the Navy and the Rhode Island Department of Environmental Management and enabled our respective agencies to work together toward site remediation. Using the map provided on January 11, 2001, EPA was able to find at least 51 locations where the concentration of arsenic in the soil exceeded the 6.2 mg/kg background value. In other words, virtually all of the sample locations are above background for arsenic in soil. Although the Navy's response accurately cites CERCLA, it fails to recognize that when site-related contaminants or activities alter the natural form of background contaminants that such background contaminants no longer meet the limitations on response cited at CERCLA §9604(a)(3)(A). As a result, it is likely that cleanup of naturally occurring arsenic, as mobilized by site-related PAHs, may be required.

As stated in EPA's letters dated November 20, 2000 and January 16, 2001, Sections 1.1 (b), 2.6, and 6.1 of the Federal Facilities Agreement require that remedial investigations under CERCLA

are conducted in accordance with EPA regulations, policy, and guidance. EPA guidance clearly states that the COPC list is to be developed based primarily on comparison to risk-based standards. These chemicals must be *evaluated* in the risk assessment and comparisons to background should be performed in both the risk characterization and the risk management processes. The risk characterization must divulge that there is an increased potential risk from site exposure owing to background contaminants. It is unclear to me why the Navy objects to this approach as it is clearly embodied in the Navy's interim final policy dated September 18, 2000.

Based on the response to additional comments, the Navy claims to be screening versus RBCs first. However, the screening tables in the October 2000 version of RI contained COPCs that were eliminated with a "BKGD" rationale when the site concentrations were actually lower than their respective risk-based screening values. If constituents are screened initially versus risk-based concentrations, as required in EPA guidance and as stated in the Response to Additional Comments, the only constituents eliminated based on background are antimony in surface soils and cadmium in subsurface soils. The risks from these chemicals should be evaluated either quantitatively in the risk assessment or qualitatively in the uncertainty section.

The last page of the Navy's policy (Figure 1: Use of Background Chemical Levels) lists three options for dealing with background sources. Two of the options involve retaining the chemical and continuing with the baseline risk assessment. The third option involves comparing the background level to benchmarks and documenting the background risks in the baseline risk assessment report. Clearly if the background level of a contaminant exceeds benchmarks there will be a contribution to overall site risk from background that must be documented in the baseline risk assessment report. Since site concentrations of antimony in the surface soil and cadmium in the subsurface soil are greater than the benchmark levels (*i.e.*, risk-based concentrations), documenting the contribution to overall site risk is required per the Navy's September 18, 2000 interim policy. EPA therefore reiterates its recommendation that the RI focus its efforts on the risk characterization. The RI must appropriately communicate the risk from the site, *including the contribution to the overall risk from background constituents*, to the public. Qualitatively revealing in the risk characterization that overall site risks may have been underestimated because the contribution from background was not quantified is not only appropriate, but required. Alternatively, the RI could retain antimony and cadmium as COPCs and recalculate the human health risk estimates.

EPA takes issue with your statement that "...the Navy is not responsible for...evaluating risk associated with background constituents...." This statement is in direct conflict with the Navy's own policies on the issue.

The Navy's response also states that their policy serves two purposes, including ensuring that restoration funds are used solely for the cleanup of site-related COPCs and providing information to the regulatory community and the public regarding natural and/or anthropogenic background conditions that may pose a risk. EPA continues to believe that cleanup of contaminated soil below naturally occurring background concentrations, provided such background concentrations are not mobilized by site contaminants or activities, is not necessary under CERCLA. However,

it is essential that the Navy appropriately and accurately document any risk *management* decisions in the administrative record for the site. As the RI currently stands, the risk to humans is not accurately computed or communicated and EPA therefore cannot concur with its findings. Please clarify how the Navy plans to provide "...information to the regulatory community and the public regarding natural and/or anthropogenic background conditions that may pose a risk..." in the Old Fire Fighter Training Area baseline risk assessment.

I look forward to working with you and the Rhode Island Department of Environmental Management toward the cleanup of the Old Fire Fighter Training Area. Please do not hesitate to contact me at (617) 918-1385 should you have any questions or wish to arrange a meeting.

Sincerely,

Kymberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Attachment

cc: Paul Kulpa, RIDEM, Providence, RI
Melissa Griffin, NETC, Newport, RI
David Charters, USEPA, Edison, NJ
David Bennett, USEPA, Washington, DC
Mary Sanderson, USEPA, Boston, MA
David Peterson, USEPA, Boston, MA
Chau Vu, USEPA, Boston, MA
Margaret McDonough, Boston, MA
Jennifer Stump, Gannet Fleming, Harrisburg, PA
Ken Finkelstein, NOAA, Boston, MA
Mary Philcox, URI, Portsmouth, RI
David Egan, TAG recipient, East Greenwich, RI

ATTACHMENT A

No. Additional Comment

6. The response indicates that site data is first screened against risk-based screening values, such as Region 3 RBCs or Region 9 PRGs (Please note that EPA Region 1 policy is to use the Region 9 PRGs). However, the screening tables contained COPCs that were eliminated with a "BKGD" rationale when the site concentrations were actually lower than their respective risk-based screening values. These constituents should have been eliminated based on the risk-based screening rather than based on a background comparison.

   If constituents are screened initially versus risk-based concentrations, as required in EPA guidance and as stated in the Response to Additional Comments, the only constituents eliminated based on background are antimony in surface soils and cadmium in subsurface soils. The risks from these chemicals should be evaluated either quantitatively in the risk assessment or qualitatively in the uncertainty section.

28. The original comment discussed that it was inappropriate to use background data sets where the frequency of detection does not exceed zero percent detections in statistical comparisons between site data and background. The original comment provided several examples of where background data sets containing zero percent detected values were used to compare to site data containing positive values. The original comment also indicated that for at least one other site in EPA Region 1, the Navy has developed a background comparison process where the first step is to reject from consideration any constituent where the frequency of detection in the background data set does not exceed zero percent.

   The response to this comment requires clarification. First, the response indicates that sodium in subsurface soil site data was not determined to be above background based on statistical tests. This is not correct. According to the conclusion column of Table Q-19, the concentration of sodium in the site data set was determined to exceed background (*see* "Y" in Conclusion column).

   More importantly, the response appears to indicate that background comparisons will be considered to be not applicable for only selenium, silver and sodium in the surface soil data set and selenium and sodium in the subsurface soil data set based on the fact that the background data set for each of these constituents had zero percent detected values. However, this list is not comprehensive. As can be seen from Table Q-19, cadmium and mercury in the background subsurface soil data set lacked any detected values. Statistical comparisons to site data were performed using these data sets and, in fact, the site data for cadmium was determined not to exceed background even though 29 percent of the site data set consisted of positively detected values!

To restate the original comment, "comparisons of site data to background data using background data sets where the frequency of detection does not exceed zero percent will not be accepted by EPA and should be removed from this RI report." Therefore, for all constituents in all media where the frequency of detection in the background data set was zero, this report should be revised to consider the background test results for these chemicals as not applicable and the decision to retain or discard these chemicals as COPCs should be based solely upon comparison to risk-based screening levels.