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May 23, 2001

Project Number N7538

Ms. Kymberlee Keckler
U S. Environmental Protection Agency
Federal Facilities Superfund Section
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Reference: CLEAN Contract No N62472-90-D-1298
Contract Task Order 0282

Subject: Response to EPA's Technical Review of Navy's Responses Dated April 11, 2001
Revised Draft Final Remedial Investigation Report
Old Fire Fighting Training Area, Naval Station Newport, Newport, Rhode Island
Received in EPA letter to James Shafer of the U S Navy, May 3, 2001

Dear Ms. Keckler:

This is in response to your letter to Mr. James Shafer, dated May 3, 2001, notifying the Navy of EPA's review of the Navy's responses to EPA's additional comments on the Revised Draft Final Remedial Investigation Report for the Old Fire Fighting Training Area, Naval Station Newport, Newport, Rhode Island. The Navy's responses to these comments were submitted to the EPA in a letter from Tetra Tech NUS, Inc on behalf of the Navy, dated April 11, 2001. The Navy's responses to EPA's additional comments (Numbers 6 and 28) were provided in Attachment A to the April 11 letter. The Navy also provided responses to EPA's comments on three related issues in Attachment B to the April 11 letter

In its review of the Navy's April 11 letter the EPA commented on two responses, namely Comment No. 28 (Attachment A) and Comment No. 1 (Attachment B). Regarding Comment No. 28 the Navy acknowledges that the EPA evaluation indicates agreement with the Navy's approach for statistical comparisons of site and background data. The EPA's evaluation of the Navy's response to Comment No. 1 discusses the EPA's concern that site-related activities or contaminants have altered the natural form of arsenic. The Navy acknowledges your concern and appreciates the reference citations that you provided on this subject. The Navy's position concerning this issue is presented below.

The Navy understands PAHs may indirectly enhance the mobility of arsenic as described by your letter. In fact, most of the EPA's concerns regarding this issue were addressed in Section 5.4 of the Draft Final RI. The 2nd and 3rd paragraphs describe the affects of solution Eh and pH on arsenic speciation, toxicity, and mobility. These two paragraphs also describe the sorptive capacity of hydrous oxide grain coatings as well as their propensity to dissolve under certain reducing conditions. The reducing capacity of organic compounds such as PAHs was mentioned in the 7th paragraph, and groundwater pH and dissolved oxygen data were included in the 5th paragraph.

In the 4th paragraph it was noted that several OFFTA soil samples exceeded background arsenic concentrations. However, maximum arsenic concentrations detected in surface and subsurface soils (10.4 mg/kg and 74.4 mg/kg, respectively) were similar to their respective background values (5.5 mg/kg and 42.8 mg/kg). Likewise, the maximum arsenic concentration detected in filtered groundwater (28.3 µg/L) was approximately the same as the unfiltered upgradient value (16.5 µg/L), and the concentrations in unfiltered groundwater samples were within an order of magnitude of this upgradient value.



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Although the on-site groundwater has a near neutral pH and a fairly low redox potential that may enhance the mobility of arsenic, on-site concentrations of arsenic in soil and groundwater are similar to those in background samples. Therefore, on site-related PAHs may not be mobilizing arsenic any more than off-site processes are mobilizing arsenic.

Based on this assessment the Navy does not believe the site data supports conducting additional investigation to evaluate reducing conditions that could promote arsenic mobility as part of the RI or FS. If needed the Navy is open to further discussion on this matter with EPA and RIDEM. Please contact me or Jim Shafer of the Navy if you have any questions about this transmittal or would like to discuss this matter further.

Very truly yours,


James R. Forrelli, P E
Project Manager

JRF:rp

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