



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
NEW ENGLAND - REGION I  
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NCBC DAVISVILLE  
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August 7, 2006

Curtis Frye  
Dept of the Navy, BRAC PMO Northeast  
Code 5090 BPMO NE/CF  
4911 South Broad St  
Philadelphia, PA 19112-1303

Re: June 8, 2006 BCT Meeting Notes concerning the Interim Groundwater Sampling Events for Site 03: Construction Equipment Department, OU7, at the former Davisville Naval Construction Battalion Center, North Kingstown, RI

Dear Mr. Frye:

Pursuant to § 7.6 of the Davisville Naval Construction Battalion Center Federal Facility Agreement dated March 23, 1992, as amended (FFA), the Environmental Protection Agency has reviewed the subject document and comments are below.

While the Navy has paraphrased the discussion adequately, EPA has additional comments on the Navy's evaluation of continued ground water monitoring at OU7.

As you know the Army Corps of Engineers (ACOE) has finished it's steam injection pilot study. The ACOE stopped extracting groundwater in November and in December took groundwater samples from monitoring and injection wells across the NIKE PR-58 FUDS.

Observation of the pilot study report, figure 6-11, the liquid mass balance, shows that much more water was extracted than injected, by a ratio of almost 7:1. Based on the temperature data, the steam zones formed don't appear to be extensive, so overall it can be expected that groundwater was moving towards the FUDS, not away from it during the time the extraction wells were pumping. More than 1.2 M gallons were extracted beyond what was injected as steam. Thus, if there had been an effect on the Navy's site it may have been to pull the plume from the Navy's site toward the treatment cell during extraction.

The MW03-13 cluster is along the Navy's boundary, but on NIKE PR-58 and quite a distance from the location of the pilot study. You wouldn't necessarily expect it to see a temperature increase. It's initial and final recorded temperatures during groundwater sampling are:

MW03-13D: Dec 2004, 9.72 and 9.67  
Sept 2005, 15 and 11.6  
Dec 2005, 5.48 and 9.0

MW03-13R: Dec 2004, 9.63 and 10.0  
Sept 2005 14.3 and 12.6  
Dec 2005, 7.91 and 9.13

These wells do not appear to have been affected by the steam injection pilot study by a rise in temperature. However, there does seem to be some major variability in the total CVOC concentrations at these wells with an increase after the extraction was ended in 2005:

MW03-13R	1995-	8,280 ppb	2000-	533 ppb	2004-	824 ppb	2005-	2,005 ppb
MW03-13D	1996-	1,719 ppb	2000-	301 ppb	2004-	1,419ppb	2005-	11,835 ppb

EPA questions if the plume was brought back from the Navy's property to the NIKE site by the extraction system and the resulting contamination at the Navy's facility is lower or if the plume contamination on the Navy's facility has increased due to the increase in dissolved phase created by the heating of the subsurface at the source area and a lack of extraction starting in December 2005.

The Navy should continue to sample the OU7 in accordance with the November 2001 agreed to work plan. The Navy would have to sample at least 4 more times to provide a statistically adequate data set for documentation in the future required FS as there have already been 4 rounds under the interim work plan. If a plume was indeed brought back from the Navy's facility, the current change in concentrations could be dramatically lower at OU7. If this is so, it would help make the Navy's case for a less active remedy if the Army's proposed remedy is as active as this pilot test. I suggest the Navy scope the interim groundwater sampling at OU7 as has been agreed to in the past by both EPA and RIDEM.

If you have any questions with regard to this letter, please contact me at (617) 918-1384.

Sincerely,



Christine A.P. Williams, RPM  
Federal Facilities Superfund Section

cc: Louis Maccrone, RIDEM  
Richard Gottlieb, RIDEM (via e-mail only)  
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