UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
1 CONGRESS STREET, SUITE 1100 (HBT)
BOSTON, MASSACHUSETTS 02114-2023

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NCBC DAVISVILLE
5090.3b

March 19, 2008

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

Re: Response to EPA comments on the *"Draft Second Five-Year Review Report for Former Naval Construction Battalion Center, North Kingston, Rhode Island"*, dated February 2008 and *"Draft Final Second Five-Year Review Report for Former Naval Construction Battalion Center, North Kingston, Rhode Island"* dated February 2008, at the former Davisville Naval Construction Battalion Center, North Kingstown, RI

Dear Mr. Frye:

Pursuant to ' 7.6 and '32 of the Davisville Naval Construction Battalion Center Federal Facility Agreement dated March 23, 1992, as amended (FFA), the Environmental Protection Agency (EPA) has reviewed the subject documents and comments are below.

Response to EPA Comments on Draft Document

General comment: In several comments, EPA requested evaluation of VOCs in pore water for both toxicity to infaunal benthic organisms and accumulation of VOCs in shellfish to levels that may pose a risk to wildlife and human consumers of shellfish. The Navy has responded to these comments with its agreement to consider developing trigger levels for these endpoints in future DQO meetings. EPA agrees that this response is acceptably responsive to the EPA comments, provided that such trigger levels are actually developed and that VOCs are actually measured in pore water and shellfish in the future if the trigger levels are exceeded

Introduction: OU8 Calf Pasture Point Revised Issues & Recommendations Tables: the recommendation #2 does not address the plume expansion to the south and east, the source area investigation is the only recommendation. Please move this issue to be part of #1.

Introduction: OU1 Allen Harbor Landfill Revised Issues & Recommendations Tables, recommendation #2 and Comment #70: The recommendations do not solve the issue of increasing VOC concentrations. The

recommendation of #1 should help solve this issue. While EPA understands Navy has plans to repair/replace various wells, EPA does not concur that these are the only wells that need to be added to the LTMP. For consistency between Issue and Recommendation tables for both OUs, it is recommended that the Navy planned specifics to the revision of the LTMP for OU1 be removed and a more general recommendation be inserted in the table such as the recommendation #1 for OU1.

Protectiveness Statement OU1 Allen Harbor Landfill: As requested above, please remove the specifics of which wells the Navy plans on repairing/replacing. EPA does not agree that these changes are the only ones that need to be made to the LTMP and would prefer to discuss the needed changes during a DQO meeting.

General Comment #1: EPA does not agree that the plume has been proven to be stabilized, or that the Navy has refuted this conclusion. The ROD assumption of a stabilized plume has been disproved by the evaluation of the monitoring data in both EPA and Navy's evaluation. The plume is moving. EPA has requested the Navy determine when the plume will reach the shoreline since the Navy's 2007 conceptual site model had a range of 2.9 to 69 years. While EPA appreciates the increase in sampling frequency and the proposal to develop trigger values, what will be triggered? An additional restriction? A new remedy? This must be agreed upon by the BCT before the revisions to the LTMP can be agreed upon.

On page 5, 3rd paragraph: Navy Response: "One important fact that should not be excluded from the discussion of plume migration in regards to remedy protectiveness is that VOCs were not identified as a contaminant of concern during the Allen Harbor Landfill ecological risk assessment and the only actionable human health risks associated with exposure to VOCs at Site 09 was through ingestion of deep groundwater or exposure to vapors during showering."

EPA Response: It doesn't matter whether VOC's were previously identified as a COC. If in the course of the 5-year review they are identified as a new potential COC the Navy needs to evaluate the protectiveness of its remedies to take the new contaminant into account and determine whether existing remedies need to be amended or modified through a ROD amendment or ESD.

General Comment #2: Part of this response states that the limits of the plume have not changed. EPA disagrees that the Navy has all of the data to determine this. The leading edge of the plume in the harbor or bay has not been delineated, so it is impossible to determine if the limits have changed. If the Navy is referring to the northern or western extent, then EPA agrees that the wells, when sampled (22, 7, 8 & 30), have not had any hits above risk levels since the inception of the investigation at the site. Please clarify.

Page 9, 5th paragraph, Navy Response: "The Navy does not agree with the EPA's suggestion that the "No Wading" signs be changed to "No Digging". The June 2007 Human Health Risk Assessment of Shoreline Surface Waters and Sediments, and Groundwater in Shallow Piezometers evaluated a digging scenario (shellfish collection) and determined that there was no unacceptable risk associated with digging in the entrance channel, where the highest VOC concentrations are present."

EPA Response: The "No Wading" signs are not part of the current remedy (let alone any prohibition on digging). If there is a CERCLA risk from wading, an ESD needs to be issued at least to modify the current use restrictions for the site to include prohibition on wading (and it needs to be incorporated into the ELUR). Otherwise the signs should be removed until there is a risk from either digging or wading and then the Remedy needs to be changed by an ESD and a change to the ELUR.

Last paragraph on page 10. EPA is also concerned with the source area loss of 4,000 ppb of CVOC at the source area that is not accounted for as increased concentrations in the downgradient overburden. This 4,000 ppb must have gone somewhere. EPA postulates that it has migrated downward into the bedrock and may be moving toward the southern shoreline at the 21 location. EPA is looking forward to a source area investigation planned in 2008/2009.

Comment #4, page 16: The next to last paragraph on page 16 states that access restrictions are not required to ensure the protectiveness of the remedy. Although it is the responsibility of the land owner to enforce the prohibition on the use of motorized vehicles or any other activity that might impact the integrity of the cap, it is ultimately the responsibility of the Navy to ensure the protectiveness of the remedy. If the town does not enforce the prohibitions, then the Navy must revisit the remedy, which may include access restrictions or, ultimately if the prohibition is not enforced, another remedial alternative, such as removal of the landfill may have to be performed. The Navy cannot remove itself from responsibility just because it no longer owns the property.

General Comment #4, graph on p. 17: if the year 1&2 data had been included the increases would be more apparent. In year 1 the CVOC in MW09-09S was around 50 ppb, in year 2 the contaminate levels increased to around 200ppb. Year 3 is shown on the graph around 300 ppb. Why did the Navy pick May 2003 as their starting point instead of the beginning of the monitoring program or the data collected during the RI?

Navy response to Comment 4, page 17: The last paragraph of the response on page 17 states that VOCs were not a contaminant of concern for ecological receptors and the shellfish sampling efforts do not even include VOC analysis for shellfish tissue. This statement is correct. However, EPA is concerned that VOCs may be increasing to the point where toxicity might occur to infaunal benthic organisms such as shellfish at low ppm levels, and where VOCs may be accumulating to levels (albeit no higher than in pore water) that may have unacceptable risk to human and wildlife consumers of such organisms. EPA contends that VOCs may now be a contaminant of potential concern for these two endpoints and looks forward to developing target screening levels in pore water in the DQO process.

General Comment#7: EPA will place the final second 5-year review on the EPA public website.

General Comment #8: The response on page 19 states that the hole in the fence and damage to two wells

was out of Navy's control but will not have significant ramifications on the protectiveness of the remedy. If wells are destroyed or trespassers have the potential to be exposed, then the protectiveness of the remedy is jeopardized. If the town does not protect the remedy (monitoring wells are the remedy in this case), then the Navy must revisit the remedy, which may include access restrictions or, ultimately if the remedy is not protected, another remedial alternative, such as a source area or total remediation of the contamination, may have to be performed. The Navy cannot remove itself from responsibility just because it no longer owns the property.

Comment #26: The LTMP is a component of the remedial action under the Site 07 ROD. Under Section 17.7 of the FFA approval by EPA and the State is required to change the LTMP. Providing a rational is not the same as obtaining EPA and State approval. EPA has recently provided comments on the changes the Navy has made to the LTMP. Please set up a meeting to discuss these comments prior to implementation of any reduction in monitoring.

Comment #57: this comment was not addressed. EPA requested a table of the LTM sediment analytical testing as compared to the sediment analytical testing of the dredge spoils used to create the wetlands because of the Navy's statement on page 3-22 that "the placement of the dredged material (and the porewater within) may have had an impact on analytical data collected from piezometers during the early years of the LTMP". Please provide.

Comment #59: this comment was not addressed. EPA's photographs included shots of the drainage in the created wetlands at the old locations of the Land N and Land M seeps. Please provide the Navy's plans to address these ditches during the DQO process for the OU1 LTM plan revision.

Comments on the Draft Final Document

Five-Year Review Summary Form: this form is a requirement of the EPA guidance. As such, the form should follow EPA guidance. The review period is the period the data was collected and evaluated, from February/March (?) 2003 to October/November (?) 2007. The triggering action date from WASTELAN is the EPA date or March 27, 2003, since the Navy date of March 28, 2003 is not in WASTELAN, (our data base). Please make these changes in order for the form to be consistent with EPA guidance.

P. 1-2, Responses to Navy Questionnaire: Please provide EPA with the location for the resident who is requesting well sampling. Is this property west of the landfill? Or is this property on the northern side of the CED area?

P. 2-15, Shallow Monitoring Wells: The LTM network includes 9 month wells, 27 month wells, and contingent wells. Please revise the first sentence to read, "The current agreed to Calf Pasture Point LTMP includes 4 shallow wells for the 9 month sampling interval, 2 wells for the 27 month sampling interval, 7 wells for the contingent sampling, and 4 new wells that the interval hasn't yet been decided". The parenthetical phrase could be re written as its own sentence for clarification of the ME08 sampling event.

P.3-4, History of Contamination, first paragraph: please change the last sentence to read as the section 3.2.4 reads. "…In 1972, after landfilling operations had ceased, the landfill was closed by placing a discontinuous 2-foot soil cover over the fill materials."

P. 3-22, Piezometers, last paragraph: please provide the previously requested table of the LTM sediment analytical testing as compared to the sediment analytical testing of the dredge spoils used to create the wetlands to justify the last sentence.

P. 3-24, § 3.5.25, Shellfish: the ROD requires the baseline be the RI data. In this section, the Navy's evaluation of the shellfish did not adhere to this provision of the ROD. Please re-evaluate the shellfish data in accordance with the ROD or re-write this section to correspond to the shellfish memo where the data was compared to the RI data, although not quite enough of the data. Please see the comments dated, March 11, 2008.

P. 3-24, § 3.5.25, Shellfish: EPA has made comments on the shell fish data report and therefore cannot accept this section as written. Please address our comments.

In addition, it seems that Navy has inferred that shellfish sampling on the harbor side of the breakwater is inappropriate because this area is not "adjacent" to the landfill. However, this area is adjacent, as the word is defined (lying near, close or contiguous, neighboring), especially because the groundwater connection between the landfill and the area is likely to be contiguous, It is EPA's rebuttable position that there is a major discharge of groundwater contaminated with the highest concentrations of site-related contaminants up through the sediments on the harbor side of the breakwater. Infaunal organisms such as shellfish will be exposed to this emerging groundwater in the pore water before it is appreciably diluted. Since the groundwater in the central portion of the landfill contains CVOCs at several hundreds of mg/L, the possibility that there may be toxic effects in infauna and accumulation of CVOCs to levels equal to that in pore water should be evaluated. Therefore, shellfish sampling should be conducted on the harbor side of the breakwater. In addition, all future shellfish analysis should include the site-related chlorinated volatile organic chemicals because there are now EPA-approved methods (EPA Method 8261A-VD/GC/MS and Method 5032-VD Sample Prep Only). Therefore, EPA requests that Navy add these methods to the QAPP and collect and analyze shellfish from the harbor side of the breakwater for the CVOCs as well as the other chemicals. EPA looks forward to discussing this issue with the Navy during the DQO discussions on changes to the LTM plan.

P. 3-26, Inspection, last paragraph: please provide the date and the actions Navy performed to repair the sign. When EPA inspected the landfill in January the sign was repaired.

P. 3-28, second paragraph: the erosion at the toe of the landfill directly east of the MW20 cluster seems to be more of a drainage ditch from the groundwater/seawater runoff than an overland runoff situation. Please verify, during a joint inspection with EPA.

Page 3-31, Section 3.6.2: The 3rd bullet of this section states that it may be necessary to update Table 8-2D of the QAPP for long-term monitoring. Please add this to the action items.

Page 3-32, Section 3.6.2: In the 1st bullet of the section entitled "Changes in Risk Assessment Methods" the text discusses the changes in risks that would occur if the dermal guidance were used. Please document these calculations in appendix G.

Table 2-3: This table shows that the MCL for arsenic is 5 ug/L for 2002 and 2007. The correct number is 10 ug/L. Please revise.

Table 3-8: This table shows that the MCL for arsenic is 5 ug/L for 2002 and 2007. The correct number is 10 ug/L. Please revise.

Table G-3: Please add footnotes that provide the meaning of the abbreviations I, H, P, E, and M.

Table G-13: The tabulated values for EPA Region 9 residential soil PRGs are inaccurate for some of the PAHs. The correct PRGs are 62 ug/kg for dibenz(a,h)anthracene and benzo(a)pyrene. The correct PRGs are 620 ug/kg for benzo(a)anthracene and 6200 ug/kg for chrysene. Please revise the table and calculations. Also please calculate and show cumulative risk of the maximum concentration of each chemical to support the conclusion in the text preceding this table that cumulative risk would not exceed 1E-04 or 1E-05 when the maximum concentrations are evaluated against the Region 9 PRGs and recreational screening levels, respectively. Please revise the text in Section 3.6.2 and 3.6.4 if the revised calculations indicate that the changes could significantly impact the protectiveness of the remedy.

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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:

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