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NAS SOUTH WEYMOUTH
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LETTER AND COMMENTS FROM U S EPA REGION I REGARDING GROUNDWATER
INVESTIGATION FIELD REPORT FOR AREA OF CONCERN 55C NAS SOUTH WEYMOUTH
MA
12/02/2010
U S EPA REGION I



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION I

5 Post Office Square, Suite 100
Boston, MA 02109-3912

December 2, 2010

Brian J. Helland, P.E.
BRAC Program Management Office NE
4911 South Broad Street
Philadelphia, PA 19112-1303

Re: Groundwater Investigation Field Report for Area of Concern 55C

Dear Mr. Helland:

EPA reviewed the *Groundwater Investigation Field Report for Area of Concern 55C* for completeness and for consistency of the conclusions and recommendations with the available data. The report details the installation and sampling of five piezometers at AOC 55C following a non-time-critical removal action (NTCRA) of surficial debris and soil, as well as restoration of the wetland. The piezometers were installed and developed in June 2010 and sampled in July 2010. Detailed comments are provided in Attachment A.

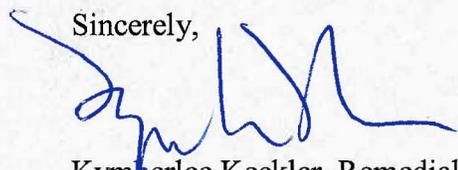
Synoptic water-level data support an interpretation of the hydraulic potential surface (Figure 3), and show that groundwater flow in the vicinity of AOC 55C is to the southeast toward French Stream, where it merges with a general flow of surface water and groundwater toward the south. This confirms previous inferences based on larger-scale interpretation of groundwater flow in the vicinity of French Stream, which is now supported by local measurements at the site scale. Placement of the piezometers adequately characterizes potential impacts of the debris on site groundwater. PZ-105 is located upgradient of the removal area, PZ-104 is in the center of the removal area, PZ-102 is downgradient of the center of the removal area, PZ-103 is downgradient of the western portion of the removal area, and PZ-101 is downgradient of only a small portion of the easternmost removal area.

The quality of the groundwater samples appears to be good. Stabilization of field parameters was achieved during the purge for each piezometer. Turbidity was generally low (1.07 to 3.78 NTU). pH was in the range 5.40 to 6.08, consistent with shallow groundwater (relatively recent recharge) and the wetland setting. DO was low (0.25 to 0.65 mg/L), again consistent with the wetland setting, and ORPs ranged from +1.1 to +209 mV.

Based on site soil, sediment, and surface water data, COPCs include metals, PAHs, and PCBs. Neither PAHs nor PCBs were detected in groundwater. In addition, no VOCs were detected in site groundwater. Cobalt, iron, and manganese were detected above their respective RSLs, but below basewide background levels (95% UPLs). (See related comment with regard to the background value for manganese.) Pesticides were detected at all five piezometers; Dieldrin was detected at PZ-103 at 0.14 ug/L (RSL is 0.0042 ug/L).

I look forward working with you and the Massachusetts Department of Environmental Protection to complete the remedial action at Area of Concern 55C. Please do not hesitate to contact me at (617) 918-1385 should you have any questions.

Sincerely,



Kimberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Attachment

cc: Dave Barney, USN, South Weymouth, MA
Dave Chaffin, MADEP, Boston, MA
Kevin Donovan, SSTDTC, South Weymouth, MA
Phoebe Call, TTNUS, Wilmington, MA

ATTACHMENT A

<u>Page</u>	<u>Comment</u>
p. 4, §2.1	<p>The text states that development of the piezometers was continued "...until the parameters of the extracted water showed signs of stabilizing, or until a sufficient volume of water had been removed from the well." Turbidity did not decline adequately for PZ-101 and PZ-102 (358 and 572 NTU, respectively, at the end of development). However, by the time the piezometers were sampled approximately one month later, the low-flow sampling resulted in satisfactory turbidities (3.36 (PZ-101) and 1.61 (PZ-102) NTU).</p>
p. 7, §3.1.4	<p>The text states that all manganese concentrations were below the basewide background value of 2.68 mg/L. (The maximum detection at the site piezometers was 2.22 mg/L.) An appropriate background value for manganese in groundwater has not been agreed upon by EPA. In particular, EPA re-sampled and analyzed seven of the eight original background wells in 2004, and a statistical assessment was performed in 2005. EPA recommended a background value of 0.377 mg/L based on the 2004 data. If this concentration is adopted, then only PZ-102 yielded water below the 95% UPL. EPA acknowledges that a larger sample set would provide better-constrained background statistics and therefore recommended that Navy and the regulators discuss possible approaches to establishing more robust background statistics, particularly for manganese.</p> <p>The document should note the drinking water lifetime HA established for manganese, 0.300 mg/L (EPA-822-R-04-003), as a point of reference.</p>
p. 10, §4.1	<p>The first bullet states, "Dieldrin was not detected in the other two downgradient locations (PZ-101 and PZ-102), but was detected at similar low concentrations (0.0033J µg/L and 0.0039 µg/L) in the upgradient piezometer (PZ-105) and the source (debris) area piezometer (PZ-104), respectively." Is the term "similar low concentrations" in reference to PZ-103, where Dieldrin was detected at 0.14 ug/L, or in reference to the non-detects at PZ-101 and PZ-102, which reported detection limits of 0.0094 ug/L? The detection at PZ-103 is about 40 times those at PZ-104 and -105. Please clarify.</p>