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NAS SOUTH WEYMOUTH
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EMAIL AND ATTACHED U S EPA REGION I ON THE DRAFT REMEDIAL DESIGN/
REMEDIAL ACTION WORK PLAN BUILDING 81 FORMER NAS SOUTH WEYMOUTH MA
10/09/2015
U S EPA REGION I BOSTON MA

South Weymouth
Site 9

Helland, Brian J CIV NAVFAC MIDLANT, EV

From: O'Connor, Laurie <Oconnor.Laurie@epa.gov>
Sent: Friday, October 09, 2015 14:50
To: Barney, David A CIV NAVFACHQ, BRAC PMO; Helland, Brian J CIV NAVFAC MIDLANT, EV
Cc: Keating, Carol; Snyder, Michelle; Brandon, William
Subject: SOWEY - Building 81 - EPA Comments on Draft RD/RA Work Plan
Attachments: SOWEY - Bldg81 EPA Comments Draft RD-RA WP.docx

Hi Dave and Brian –

EPA's comments on the Building 81 Draft RD/RD Work Plan are attached.

Bill Brandon has additional concerns, and I believe it will be best to have a face-to-face meeting to address his following issues:

- lack of specifics in the plan regarding the actual interconnectivity testing;
- absence of key information regarding underground utilities;
- insufficient performance monitoring and LTM density in key locations;
- lack of particular performance monitoring objectives with respect to selected remedial actions

We would like to have this meeting sooner rather than later (within the next two weeks), if possible. In advance of the meeting, I will forward along more specific written comments by Bill to help narrow the discussion.

Thank you.

Laurie O'Connor, P.E.

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**EPA COMMENTS ON THE
DRAFT BUILDING 81
REMEDIAL DESIGN/REMEDIAL ACTION WORK PLAN
FORMER NAVAL AIR STATION SOUTH WEYMOUTH,
Weymouth, Massachusetts**

General Comments:

1. The monitored natural attenuation (MNA) portion of the remedy is not substantially included in this document. Reference to a future document that will address MNA at the site needs to be included in the RD/RA Work Plan.
2. Results and findings from the on-going Utility Survey and Preferential Flow Investigation need to be incorporated into the Remedial Design. Please include reference to a future document, such as an RD Amendment, that will detail the activities conducted and resulting modifications to the design based on the findings.
3. The RD/RA Workplan lacks particular performance monitoring objectives with respect to selected remedial actions. In addition, EPA is concerned that there is insufficient performance monitoring and long-term monitoring density in key locations. EPA suggests a face-to-face meeting to come to agreement on performance and long-term monitoring locations.

Specific Comments:

1. Page 6, Section 1.5. The last paragraph briefly mentions that a utility survey and preferential flow investigation will be conducted to support Remedial Design. Please include a summary of the activities conducted as part of that effort.
2. Page 9, Section 2.2.3. Fractured bedrock is known to exist at the site with both vertical and near-horizontal fractures previously identified in bedrock cores, as described in this section. Although EPA appreciates Navy's "evolved terminology" of shallow and deep bedrock, as well as weathered and competent bedrock, as understanding the complexities of the subsurface is vital to the success of the remedy, additional understanding of the bedrock is needed. Because the previous remedial attempts at the site with in-situ chemical oxidation (ISCO) had limited success because of the persistence of contaminants in "very small or dead-end fractures that are hydraulically isolated", Navy's current efforts of conducting geophysical logging of open bedrock boreholes and future efforts of bedrock packer sampling are very important to the Remedial Design. Although it appears that the Navy is already considering fracture orientation and the use of shorter screened intervals for some wells, geophysical information from the bedrock boreholes

and chemical data from the packer testing needs to be integrated, evaluated and modeled in order to assess fracture connectivity at the remedial scale in an effort to better target persistent sources. Additional information on how the data gathered will be evaluated and how those results will affect remedial design and performance monitoring needs to be included in the RD/RA Work Plan. Such information, once processed, may require installation of more bedrock injection and performance monitoring wells, in addition to those presented in this RD/RA Work Plan.

3. Page 16, Section 3.1. Please discuss the vertical profiling activities that the Navy is conducting in Fall 2015 within the overburden source area within this section.
4. Page 21, Section 3.5, 3rd Paragraph. The placement of injection well screens requires close attention and review during well installation, given that the overburden likely contains the very dense till that is present at the Building 82 site. EPA's experience at other DoD sites has been that ERD amendment will flow in the path of least resistance (i.e., if a more permeable soil layer is encountered), only facilitating treatment within a portion of the aquifer. It is therefore critical that injection wells intended to treat the deeper overburden are constructed with screens that do not extend into upper, more permeable soils.
5. Page 26, Section 4.3, 2nd Paragraph and Table 4-1. The second sentence appears to be a remnant of another document, as sodium lactate and a pilot test are discussed. In addition, EHC as an amendment is included in Table 4-1. Based on earlier discussions, the Navy agreed to use emulsified vegetable oil as the amendment rather than EHC.
6. Page 36, Section 6.1. EPA has previously requested the installation of a deep bedrock well south of MW-35D as part of pre-remedial design activities to help ensure the complete delineation of all groundwater plumes at the site, based on a PCE detection of 290 ug/L in 2009 within MW-35D. Recent data from 2014 shows that PCE was not detected at MW-35D. Due to historical detections, EPA requests that MW-35D be included in the upcoming packer testing event, in order to verify that PCE concentrations are no longer elevated at this well. In addition, it is extremely likely that additional wells will need to be installed to the south and southwest of MW-35D.
7. Page 42, Section 10.0. The section heading refers to a pilot test. At the March 12, 2014 BCT Meeting, the Navy indicated that a pilot test would not be conducted at the Building 81 site. The text should be revised appropriately.
8. Page 42, Section 10.1, 1st Paragraph. EPA considers the target date for RD Completion/RA start to be December 28, 2015, not December 30, 2015 as referred to in this section.

9. Page 42, Section 10.1. The document discusses one injection event, although the time to achieve cleanup levels, as described in the ROD, is 30 years. Please discuss the potential for subsequent ERD amendment injection events. Additional clarity is needed as to the particular performance monitoring objectives and goals, and what specific circumstances would trigger additional injections or other actions.
10. Table 4-2. Please update this table to include any additional activities conducted during the Utility Survey and Preferential Flow Investigation.