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LETTER AND COMMENTS FROM U S EPA REGION I REGARDING REMEDIAL
INVESTIGATION WORK PLAN ADDENDUM FOR BUILDING 81 NAS SOUTH WEYMOUTH
MA
06/15/2009
U S EPA REGION I



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

June 15, 2009

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

Rc: Remedial Investigation Work Plan Addendum for Building 81

Dear Mr. Helland:

Thank you for the opportunity to review the Remedial Investigation Work Plan Addendum for Building 81. The additional investigation will refine the delineation groundwater contamination and characterize sub-slab VOC vapor. Detailed comments are provided in Attachment A.

EPA generally concurs with the locations selected for new monitoring wells and related activities outlined in the Work Plan. However, that data analysis and conceptual site model (CSM) development lags data collection. EPA is concerned that new data, as well as additional analysis of existing data, may necessitate actions beyond those proposed in this work plan. Many of the elements in need of further consideration for an updated CSM for the site are listed in item D on page 1-4, and others were listed in EPA's letter dated March 6, 2009. EPA had expected that much of the new analyses of existing data would be completed and incorporated into an updated CSM before the next phase of field work. EPA recognizes that CSM development is iterative at complex sites such as this one. As such, modifications to this work plan and/or new recommendations as new information and/or analyses become available are possible. EPA looks forward to working with the Navy to integrate new and existing data into an internally-consistent technically-based CSM for the site that will serve as a framework for evaluation of remedial alternatives in an FS. Please provide the electronic data files itemized in our letter of March 6, 2009.

In addition to the specifics described in Section 3.2 of the Work Plan (pages 3-1 to 3-6), drilling, well design, well installation, well development, *etc.* should adhere to the specifications outlined in the Army Corps of Engineers Engineering Manual EM-1110-1-4000, 1 Nov. 1998, (Engineering and Design), *Monitoring Well Design, Installation and Documentation at Hazardous, Toxic, and Radioactive Waste Sites.*

In addition to the specifics described in Section 3.3 of the Work Plan (pages 3-6 and 3-7), the sub-slab investigation should adhere to the extent possible to methodologies described in *Assessment of Vapor Intrusion in Homes Near the Raymark Superfund Site using Basement and Sub-slab Air Samples, EPA 600/R-05/147, March 2006.*

The proposed scope and the specific target locations of the proposed investigation generally address the primary data gaps identified by EPA. The proposed wells B81-MW-44S and -45S add shallow head and chemistry control to the east and southeast of the source area. Proposed wells B81-MW-47I, -48I, and -49I add deep overburden control to the north and west of the site, proposed well

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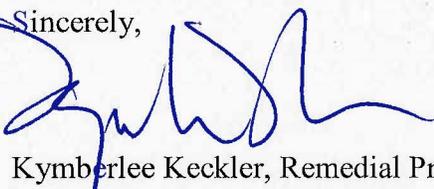
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B81-MW-40B2 adds deep bedrock control to the northwest, proposed wells B81-MW-46S and -48I add overburden control to the southwest, and proposed wells B81-MW-42B2 and -47B2 add deep bedrock control downgradient to the west of existing well MW-21D2 (220 ppb PCE in RI sampling). The proposed locations are generally consistent with comment-resolution discussions held among the Navy, MDEP, and EPA. Proposed analytes for field and laboratory analysis (Table 3-2) are appropriate, and in addition to the VOCs that are the primary target of the investigation, include TAL metals, as well as parameters to review the potential for reductive dechlorination (*e.g.*, nitrate, sulfate, ferrous iron, ethane/methane/ethane).

However, it should also be noted that many of the items requested in EPA's March 2009 comment letter have not yet been submitted. It is further noted that since many of these requests in large part were directed to a more comprehensive analysis and consideration of previously collected data, EPA reserves the right to suggest modifications and/or additions to the specific monitoring well locations and other proposals in the current work plan once the requested analysis is forthcoming. It remains EPA's expectation that the originally requested information will be completed concurrently with finalization of the work plan, but in any case, finalization of the RI will require a comprehensive integration, synthesis and analysis of both new and existing data leading to a technically-based consensus for an updated CSM for the site which can support a rigorous evaluation of remedial alternatives. Towards this goal, we reiterate our request for the electronic data files listed in our letter of March 6, 2009.

I look forward working with you and the Massachusetts Department of Environmental Protection on the investigation and remediation of the remaining areas of the base. 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, SSTTDC, South Weymouth, MA
Phoebe Call, TTNUS, Wilmington, MA

ATTACHMENT A

- | <u>Page</u> | <u>Comment</u> |
|-------------------------|--|
| p. 1-2, § 1.0 | In Parts A and B, it is presumed that utility or other technical issues that come to the attention of the project team will result in relocation of particular wells rather than eliminating them from the program. With respect to the proposal for MW47I, please indicate more clearly why the water level data collected in April 2009 supports the lack of shallow monitoring well control in this area. |
| p. 1-3, § 1.0 | The second bullet in Part C states that soil gas samples will be collected over a 2-hour period. This may not be long enough to capture fluctuations in concentrations over time. EPA recommends a 24-hour sampling period unless a reference can be provided for the 2-hour period. |
| p. 1-4, § 1.0 | The first bullet in Part C is somewhat unclear. EPA recommends constructing flow-netted hydrogeologic cross sections on alignments that are both parallel and perpendicular to groundwater flow directions. It may be possible to simplify the presentation of these flow nets in a manner that honors the data yet minimizes posting of redundant data. Vertical exaggeration should be minimized to the extent possible. |
| pp. 3-1 & 3-2, §3.2.1 | In the first and third bullets, it would be more appropriate to state that August 2009 will <i>most likely</i> not reflect a seasonal water level. |
| p. 3-2, §§3.2.2 & 3.2.3 | A continuous/cumulative log of all water gained or lost to the formation during drilling, well development, or other well operations needs to be collected. |
| p. 3-2, §3.2.2 | The third sentence in the first paragraph states, "Four new shallow and five new deep overburden monitoring wells are proposed" Figure 3-2 and Table 1-1 indicate that four deep overburden wells are proposed. Please edit as necessary. |
| p. 3-2, §3.2.2 | EPA endorses the proposal to collect and log continuous soil samples for the deep boring at each cluster. This will help to refine knowledge of the hydrostratigraphy, and allow for greater precision in screen placement. |
| p. 3-3, §3.2.3.2 | Please case off more than two feet of the uppermost bedrock to ensure a good casing seal. Accurate records for the thickness of the uppermost bedrock interval that is not accessible during geophysical logging should be collected. Reasonable efforts (<i>e.g.</i> , split spoon samples, coring, <i>etc.</i>) should be made to characterize the uppermost bedrock interval. |
| p. 3-4, §3.2.5 | EPA disagrees about the usefulness of temperature and resistivity data. These logs should be considered, particularly if running them does not involve an additional trip into the hole. Also, it should be noted that the HPFM logs are only representative within a somewhat narrow range of flows. For example, flows much greater than 5 gallons per minute may not be detected by this method, and extremely |

low flows are also problematic. What steps will be taken to ensure that any zones with high flow rates will be properly identified and evaluated?

- p. 3-4, §3.2.5 What screen length is anticipated for the overburden wells? Is this pre-determined or is it to be determined upon inspection of the soil samples? Screened-interval lengths should be ten feet or less.

- p. 3-5, §3.2.7 Following development, a relaxation period on the order of two-weeks should precede groundwater sampling efforts. Well development should adhere to the specifications outlined in Army Corps of Engineers Engineering Manual EM-1110-1-4000, 1 Nov. 1998, (Engineering and Design), *Monitoring Well Design, Installation and Documentation at Hazardous, Toxic, and Radioactive Waste Sites*.

- p. 3-6, §§3.3 & 3.3.1 If preferential vapor migration pathways are identified, (such as subsurface conduits, utility trenches, footings, barrier walls, etc.), efforts should be made to target these features directly. It is possible that such features are facilitating vapor migration rather than 'interfering' with it. Please explain how preferential pathways will be considered when determining the probable locations.

- p. 3-7, §3.2.3 Please provide the basis for selecting two hours as an appropriate interval for the time-integrated samples. A 24-hour period is usual.