



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 Congress Street, Suite 1100

BOSTON, MA 02114-2023

**MEMORANDUM**

**DATE:** April 5, 2005

**SUBJ:** Comments on Proposed Engineered Cap  
McCoy Field, New Bedford Massachusetts

**FROM:** Yoon-Jean Choi, P.E.  
Hydrogeology and Waste Geotechnics  
US EPA Region 1 (MC: HBS)

**TO:** Kim Tisa, PCB Coordinator (CPT)  
Office of Ecosystem Protection

As requested, I have reviewed the *Risk-Based Cleanup Request, Rev. 0, March 21, 2005*, for the School Site at McCoy Field, New Bedford, Massachusetts which was submitted by BETA Group on behalf of the City of New Bedford School Department. My comments focus on the adequacy of the technical design for the engineered cap proposed for the Site, including the building footprint.

**General Comments**

1. It appears that the proposed Risk-Based Cleanup Request is based on MCP requirements (all PCB remediation waste less than 100 ppm encountered in the process of characterizing soil is to be covered by soils, pavement and buildings). However, the PCB regulations at 40 CFR Part 761 provide for a risk-based determination for on-site disposal provided that a finding can be made that there is no unreasonable risk to human health or the environment (see ' 761.61(c)). The City has proposed a soil/asphalt cap outside the school building footprint and a passive ventilation system/solid vapor barrier beneath the building footprint. While it appears that the proposed capping designs are conservative given the site contaminants, insufficient information clearly justifying these proposed designs was contained in the Request. A short summary on Fate and Transport was included in the Human Health Risk Characterization Section, however, this discussion should be expanded as part of the discussion supporting the proposed institutional controls for this Site. In addition, fate and transport should be considered when designing the long-term O&M plan.

2. The following technical specifications need to be provided:
  - 1) Environmental control plan, storm water management plan, erosion control plan: Detailed environmental control plan and storm water management plan to handle (properly excavate, store and dust control) the PCB contaminated soils both during site grading and during storm events are not provided. In addition, locations of site erosion control devices (ie. silt fences, hay bales, etc) and horizontal limits of proposed geotextile separation layer should be provided on the design figures.
  - 2) Geotextiles and Warning barrier: It is unclear what types and physical properties of the geotextile (and warning barrier) are proposed for use as a separation layer between the clean fill and contaminated soil or protection layer for the vapor barrier. Technical specifications for these materials should be included in the technical specifications.
  - 3) Topsoil layer information was not provided.
3. The "Engineer" should be responsible for Earthwork (Section 02200) rather than "Architect."

### **Specific Comments**

1. Section 1.4 page 5 of 18: Intrusion into fill material underneath the exposure management barriers may also result from root penetrations and animal burrowing over time. The thick geotextile may discourage animal burrows, but tree roots can penetrate through the geotextile (see Figure 6).
2. Section 3.3.4 page 12 of 18 bullets 5 and 6: The statements "over the gravel@" (bullet 5) and "over the granular material@" (bullet 6)" are not consistent with those described in Figure 5 (section 3/L6 Bituminous concrete roadway pavement). Please correct them as appropriate.
3. Attachment B Section 07133 2.2.B 2nd Table and 2.2.C and D Geotextile: It is unclear which geotextile are proposed below and above the vapor barrier regarding the thickness and unit weight (eg. 8 oz./sf or thicker). Please clarify..
4. Attachment E:
  - 1) Background (3) Asphalt thickness: A minimum thickness of the asphalt pavement is 3 inches rather than 6 inches. Change it as appropriate.
  - 2) Background and Cap maintenance: It is stated that "the purpose of these three barriers is to prevent infiltration of water." The asphalt pavement and soil cover

in the landscape area (except for buildings) may minimize the infiltration of water by promoting surface runoff during storm events, but can not prevent infiltration of water entirely through cracks and openings developed due to effects of dry/wet and freeze/thaw cycles over time. Thus maintaining the integrity of the cover by proper repairs is important for long-term O&M.

5. Attachment G

- 1) Earth work should be performed under the direction of "Engineer" (not "Architect"). Please correct this.
- 2) Section 3.04.A.2. Samples and Testing: Test methods and testing frequency for all fill material are not provided. Please provide the information on what tests and how many tests should be performed 1) as the material is delivered to the project site to determine that the material meets the specified requirements for each material source, and 2) after the material is installed and in-place.
- 3) Section 3.04.B.1 Lift thickness: It is unclear whether the proposed lift thickness is loose or compacted. Please clarify.

6. Figure 4

- 1) Typical 1: It is unclear why the PRCVS is located above the compacted fill.
- 2) Typical 3: What is the purpose of "Gas & Vapor membrane 80 Dry mil" and how will it be installed above the grade beam?
- 3) Typical 4 and Typical 5: Provide details of how the PVC vent and PVC header pipe are connected.