OU2

Similar to OU1, there are no major changes in site conditions or exposure assumptions on which the risk assessment was based that would result in increased exposure or risk to ecological receptors. The primary basis for action in OU2 was the risk related to ecological receptors from PCBs in sediments of Middle Marsh. As discussed in the previous 5 year review, the Phase I and Phase II investigations demonstrated that the primary source of contamination was the OU1 disposal area. Before the implementation of the remedial action, flood waters from the disposal area could transport contaminants downstream. Because the remedy at OU1 consisted of capping the upstream disposal area, and the remedy at OU2 consisted of excavating sediment from the Middle Marsh to the edge of the flood plain and restoring wetlands, the source of contaminants has been eliminated. Thus, flood water will no longer transport contaminants via surface water or sediment. Furthermore, the clean fill and wetland soil used to reconstruct the Middle Marsh and the Adjacent Wetland act as a barrier to any residual contaminants below the excavation area, effectively eliminating the exposure pathway into sediment pore water. Therefore, the selected remedy is protective of benthic organisms as well as aquatic and semi-aquatic organisms.

The mean sediment quality criterion (20 µg PCB/gC) was established as the cleanup level of aquatic areas in the Middle Marsh. The risk-based sediment/soil cleanup levels for non-aquatic areas in Middle Marsh and for the adjacent wetland were established using site specific food chain modeling and set at 15 mg/kg total PCBs to be protective of wildlife. As with OU1, the surface water standard of 0.014 µg/L was used, and is consistent with current water quality criteria.

As discussed for OU1, current levels of contaminants in sediment, wetland soil, and surface water are available and most appropriate to consider when evaluating remedy protectiveness. The maximum PCB concentration measured in sediments from the Unnamed Stream (SDPC-2) was 653 µg/kg or 7.6 µg/gC (at 8.6% TOC), which is below the 20 ug/gC cleanup level. However, during the same monitoring event in 2006, two other sediment samples from the Unnamed Stream (SDPC-1 and SDPC-3) contained PCB concentrations of 355 µg/kg or 32 µg/gC (at 1.1% TOC) and 415 µg/kg or 61 µg/gC (at 0.68% TOC), respectively. These two samples showed higher PCB concentrations and lower TOC concentrations than were reported for the same locations during monitoring performed in 2002, 2003, and 2004. Although two out of the four 2006 samples from the Unnamed Stream exceed the target level of 20 ug/gC, these were associated with very low TOC. The PCB levels in the OU2 monitoring have remained below 1 ppm total PCBs. Continued monitoring of sediments in OU2 should be conducted to continue to evaluate the protectiveness of the remedy.

The maximum concentration of total PCBs in non-aquatic soil/sediment samples from the Middle Marsh and Adjacent Wetlands for monitoring data from 2002 to 2006 were all below the cleanup level of 15 ppm. The maximum concentration of total PCBs in wetland soils was less than 1 ppm, indicating that the remedy is protective for non-aquatic soils/sediments.

Similar to OU1, contaminant levels in surface water measured for OU2 would not be associated with an elevated risk or hazard to ecological receptors because PCBs have not been detected in surface water.

Based on removal of contaminated sediments in Middle Marsh and wetland soils, and the capping of the upstream disposal area in OU1, the source of PCBs for exposure of ecological

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Memorandum

Records Center
Sullivan's
8.3

Date: September 23, 2008

Subject: Transmittal of Second 5 Year Review, Sullivan's Ledge Superfund Site, New Bedford, MA

From: David O. Lederer
Remedial Project Manager

To: James T. Owens, III
Director, Office of Site Remediation and Restoration

Thru: Bob Cianciarulo,
Chief, Massachusetts Superfund Section

Larry Brill
Chief, Remediation and Restoration Branch

Richard A. Cavagnero
Deputy Director, Office of Site Remediation and Restoration

The Sullivan's Ledge Site, located in New Bedford, Massachusetts, consists of two operable units, Operable Unit 1 (OU1) and Operable Unit 2 (OU2). OU1 consists of a 12-acre historic disposal area and the adjacent unnamed stream. OU2 includes a 13-acre wooded wetland called Middle Marsh, and a 1.5 acre wetland area bordering the unnamed stream (400 feet upstream of the Middle Marsh) referred to as the "Adjacent Wetlands."

This is the second five-year review for the site. The trigger for this statutory review is the signature date of the previous five-year review report on September 29, 2003. This review is required by statute as the selected remedies for OU1 and OU2 result in site contaminants being left on the site above levels that allow for unlimited use and unrestricted exposure.