

## **SECTION 5.0 FIVE-YEAR REVIEW PROCESS**

This section describes the activities performed during the five-year review process and provides a summary of findings.

### **5.1 COMMUNITY NOTIFICATION AND INVOLVEMENT**

An advertisement was placed in the New Bedford Standard Times on September 13, 2007 announcing that EPA had begun the Five Year Review Process for the Sullivan's Ledge Superfund Site.

Interviews were conducted with interested parties such as the PRPs, City personnel involved in O&M of the project, and a nearby business owner. A summary of responses to questions posed to PRPs and City personnel is provided in Section 5.5.

### **5.2 DOCUMENT REVIEW**

This five-year review consisted of a review of relevant documents for both OUs including the remedial investigation reports, RODs, remedial construction reports, and O&M and monitoring plans and reports. See Attachment 2 for a list of documents that were reviewed.

### **5.3 DATA REVIEW**

#### **5.3.1 Operable Unit 1**

##### **5.3.1.1 Groundwater Treatment Plant Effluent Monitoring**

Effluent from the GWTP is discharged to the City of New Bedford publicly-owned treatment works (POTW). The New Bedford POTW has established discharge criteria that must be met by the GWTP for discharge to the municipal sewer system. Treatment plant effluent sample analysis was evaluated to determine if pretreatment discharge limitations were met. A review of the available data indicates that pretreatment discharge limitations are being met for PCBs, Total Toxic Organics (TTO), Semi-volatile Organic Compounds (SVOCs), and 12 select metals. Table A3-1 (located in Attachment 3) provides a comparison of the most recent effluent data to the pretreatment discharge limitations. Table A3-2 (located in Attachment 3) provides a summary of recent PCB effluent data for 2007 and available data for 2008. During 2007, PCB samples were collected on a weekly basis and the pretreatment discharge limit for PCBs was exceeded four times. Each time, EPA has notified and corrective action taken.

No exceedances have occurred for available 2008 data. The effluent exceedances were generally attributed to temporary operational problems with the ultraviolet oxidation system or bedrock well pumps and maintenance or plant shutdowns that had occurred prior to sample collection.

##### **5.3.1.2 Groundwater Monitoring**

Monitoring is being conducted while the groundwater treatment plant is operating until the groundwater clean-up standards are achieved in accordance with the requirements of the CD

and shut down over the weekend under those conditions.

### **5.3.1.3 Sediment Monitoring**

Bi-annual sediment sampling was performed in September 2003, September 2005, and September 2007/January 2008. Sediment samples were collected from the unnamed stream, OU1 diversion swale, sedimentation basin, just downstream of the Hathaway Road culvert, and OU1 cap swale. Sediment samples were analyzed for PCBs, PAHs, TCO, metals, and percent solids. Two sediment samples exceeded the sediment target level of 20 ug PCB/g carbon. In September 2003, the sediment sample from the OU1 diversion swale exceeded the sediment target value with a PCB concentration of 91.6 ug PCB/gC (OBG, 2004a). Subsequent PCB concentrations for this location were much lower at 10.3 ug PCB/gC and 6.9 ug PCB/gC in 2005 and 2008, respectively, indicating that the 2003 result may have been an anomaly. All other sediment samples from September 2003 showed concentrations below the sediment target level. In addition, all sediment samples from September 2005 showed concentrations below the sediment target level (OBG, 2006a).

In January 2008, the sediment sample from the unnamed stream, near Pond A, exceeded the sediment target value with a PCB concentration of 64.5 ug PCB/gC (OBG, 2008a). This concentration was elevated compared to previous concentrations of 8.1 ug PCB/gC and 5.5 ug PCB/gC in 2003 and 2005, respectively, at the same location. Future monitoring data should be assessed to determine if the 2007 results was anomaly or indicative of increased impacts at this location. All other sediment samples from September 2005 were below the sediment target level.

During each of the 2003, 2005, and 2007 sediment sampling events, PAHs were detected at all sample locations including the location upstream of the former disposal area at the OU1 cap swale. Concentrations of PAHs were generally highest in the sediment sample collected from just downstream of the Hathaway Road culvert. Similarly, several metals were detected in all sediment samples including the upstream samples from the OU1 cap swale. While the downstream metals concentrations were generally higher than the upstream metals concentrations, there do not appear to be any sharp upward trends between monitoring events. Higher metals concentrations were generally found in sediment samples collected from just downstream of the Hathaway Road culvert. OBG has attributed the higher concentrations at this location to runoff from Hathaway Road.

### **5.3.1.4 Surface Water Monitoring**

Bi-annual surface water sampling was performed in September 2003, September 2005, and September 2007. Surface water samples were generally collected from the unnamed stream, OU1 diversion swale, sedimentation basin, downstream of the Hathaway Road culvert, and OU1 cap swale (upstream location). A surface water sample could not be obtained from the sedimentation basin during the 2005 sampling event because it was dry. The surface water samples were analyzed for VOCs, PAHs, PCBs, metals, and pH.

Generally, surface water data showed similar results for each of the three sampling events. PCBs were not detected in any surface water samples. Very low concentrations of chlorinated VOCs were detected at one to two downstream locations with no increasing trends. Metals concentrations were generally similar between the three monitoring events. PAHs were not detected during the 2003 and 2005 events but were detected in 2007 at the sampling locations

**Second Five-Year Review Report**  
**for**  
**Sullivan's Ledge Superfund Site**  
**New Bedford,**  
**Bristol County, Massachusetts**

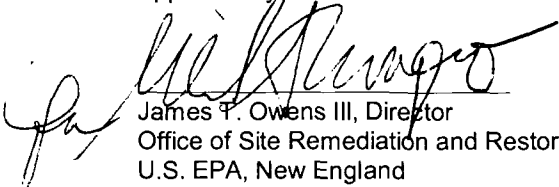
**September, 2008**

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9-23-08