

## **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**

On May 9, 2013, EPA issued a press release announcing that EPA was beginning five-year reviews of 16 Superfund sites across New England, including Sullivan's Ledge. A similar press release will be issued by EPA once the five-year reviews are complete. On May 11, 2013, an article was published in the Standard Times announcing that five-year reviews were being conducted at Sullivan's Ledge and another nearby Superfund site.

Interviews were conducted with parties involved in O&M and monitoring of the remedy, including the City of New Bedford Water Superintendent, City of New Bedford Conservation Agent, and a representative of the OU1 Project Management Committee. 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 analyses were evaluated to determine if pretreatment discharge limitations were met. PCB samples have been typically collected on a weekly basis and although there have been a small number of exceedances of the discharge limit within the past 5 years, no PCBs have been detected in samples collected during 2012 and the first quarter of 2013. Where there were effluent exceedances in past years, they were typically attributed to temporary operational problems or maintenance within the treatment plant. There have been fewer effluent exceedances since the modifications to the GWTP, which occurred in late 2010. Samples have typically been collected for VOCs, metals, and cyanide on a monthly or bi-weekly basis and review of data over the past 5 years has not indicated any exceedances of the discharge limits for Total Toxic Organics (TTO), metals, and cyanide. Semivolatile organics (SVOCs) and pesticides have been analyzed on a less frequent basis. SVOCs were last analyzed for in January 2011 and no SVOCs were detected. Pesticides were last analyzed for in August 2012 and no pesticides were detected. Table A3-1 (located in Attachment 3) provides a comparison of recent effluent data from April 2013 to the pretreatment discharge limitations.

influent to the treatment plant. Quarterly groundwater monitoring includes collection of groundwater from the passive collection system for chemical analysis. In addition to the quarterly monitoring, the City of New Bedford has generally been sampling the collection trench groundwater for PCBs on a weekly to biweekly basis since March 2005 and at other frequencies prior to that time. To date, specific cleanup levels have not been defined for the passive collection system; however, cleanup levels will need to be determined in the future to assess compliance and determine whether continued operation of the passive collection system is warranted.

During the recent September 2012 monitoring round, groundwater from the shallow collection trench was analyzed for VOCs, PCBs, and metals and a summary of detected analytes is provided as Table A3-3 in Attachment 3. In general, levels of VOCs, PCBs, and metals have remained relatively consistent since treatment plant startup. SVOCs were last sampled in December 2008 and none were detected.

The passive collection system continues to collect shallow contaminated groundwater. Flow from the collection system is providing essential additional flow to the treatment plant to ensure continuous/semi-continuous operation. During dry weather periods and the resultant lower than expected flow rate from the passive collection system vault, the treatment plant has been operating intermittently.

### **5.3.1.3 Sediment Monitoring**

Bi-annual sediment sampling was performed in September 2009 and September 2011 and additional supplemental sediment sampling was performed in June 2010. In 2009 and 2011, sediment samples were collected from the Unnamed Stream just upstream of Pond A, OU1 diversion swale, sedimentation basin, the Unnamed Stream just downstream of the Hathaway Road culvert, and from upstream of the former disposal area at the OU1 cap swale. Sediment samples were analyzed for PCBs, PAHs, TOC, metals, and percent solids. During the 2009 and 2011 sampling events, an additional sediment sample was collected from within a culvert pipe at the headwall just north of Hathaway Road and analyzed for PCBs, PAHs, and metals.

In 2009, two sediment samples exceeded the sediment target level of 20 ug PCB/g carbon, including the sediment sample from the sedimentation basin (45.16 ug PCB/g carbon) and the sediment sample from the Unnamed Stream just upstream of Pond A (50.48 ug PCB/g carbon). All other sediment samples from September 2009 showed concentrations below the sediment target level (OBG, 2010a). In order to further assess the 2009 sediment target level exceedances, these two locations were resampled in 2010. Ten samples were collected in the vicinity of each of these locations and analyzed for TOC, while one of the samples was also analyzed for PCBs. In addition both TOC and PCBs were analyzed on composites of 6 samples at each of the two locations. The normalized PCB concentrations for the composite samples were 0.96 ug PCB/g carbon and 0.53 ug PCB/g carbon for the sediment samples from the Unnamed Stream upstream of Pond A and the sedimentation basin, respectively, and were below the sediment target level.

In September 2011, all sediment samples showed normalized PCB concentrations below the sediment target level (OBG, 2012a).

During each of the 2009 and 2011 sediment sampling events, PAHs were detected at all sample

**THIRD FIVE-YEAR REVIEW REPORT FOR  
SULLIVAN'S LEDGE SUPERFUND SITE  
BRISTOL COUNTY, MASSACHUSETTS**



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