conservative than the current value. A change that has occurred during the last five years is the inclusion of an early-life cancer risk for compounds with a mutagenic mode of action, including PAHs and vinyl chloride. The early-life assessment can increase the cancer risk associated with exposure for older children by up to three-fold. However, this difference in toxicity does not affect remedy protectiveness since much of the affected areas have been capped, and current surface water and sediment sampling in areas where exposures could occur indicates acceptable concentrations. Other differences between historical and current toxicity values are minimal.

**Summary and Conclusions Relative to Human Health Risks**

Because OU1 soils are capped and groundwater extraction and treatment is underway, the remedy is protective of human health as long as the cap is maintained, migration of the groundwater plume is controlled, and institutional controls are implemented to prevent contact with contaminated groundwater and to assure that land use changes resulting in more intense human exposures than under current conditions do not occur in the future. Because PCB-contaminated sediments were removed and levels of contaminants in sediment and surface water remaining are not of a concern for current human exposures, the remedy is also protective for the stream bed (OU1) and the area north of Hathaway Road (OU2). Overall, the remedy is considered to be protective of human health.

### 7.2.1.2 Review of Ecological Risk Assessments

As discussed for Human Health Risk Assessment, the Phase I and Phase II ecological risk assessments (Ebasco 1987; 1989) and the ecological risk assessment for Middle Marsh (OU2; M&E, 1991) were conducted using methodology which would generally comply with current EPA risk assessment guidance. The primary discrepancies between current guidance and previous guidance, as noted in the first 5-year review, exist in the areas of benchmarks and toxicity values utilized. The following provides an evaluation of these discrepancies, based on changes that have occurred since 2003 (the date of the last 5-year review), and their impact on the protectiveness of the remedy for ecological receptors. Recent compliance monitoring data are also reviewed to evaluate the protectiveness of the remedy. There are no newly promulgated standards, relevant to the site, which bear on the protectiveness of the remedy.

**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. The principal contaminants of concern for ecological receptors in OU1 identified in the risk assessment were PCBs. Target cleanup levels, protective of ecological receptors, were established for the site for sediments, surface water and soils.

As discussed in the last 5 year review, backfilled stream sediments and wetland soils act as a barrier between remaining contaminants (including PCBs) and potential aquatic and benthic receptors, thus creating an incomplete exposure pathway to aquatic and semi-aquatic organisms. The sediment cleanup level was established as 20 µg of PCBs per gram of carbon (µg/gC). This risk-based target level was developed based on potential risk to aquatic organisms and wildlife receptors. The cleanup level was estimated in the risk assessment using sediment partitioning and the ambient water quality criteria based on the protection of wildlife consuming aquatic organisms. PCB tissue concentrations estimated from direct exposure to PCB-contaminated sediments were also used in developing the risk-based target level of 20 µg/gC.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 Congress Street, Suite 1100
BOSTON, MA 02114-2023

**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.