

### 4.3 Protectiveness of Wetlands and Drainageways (OU III)

The 1993 ROD states that the principal threats to human health and the environment posed by the Site are mainly from mercury contaminated sediments and surface water of the wetlands and drainageways between the Site and the Sudbury River. The 1993 remedy stipulated the cleanup of mercury-contaminated sediments in a wetland and certain drainageways between the area of former Nyanza, Inc. operations and the Sudbury River. Contaminated sediments with greater than 1 mg/kg mercury will be excavated, dewatered, consolidated, and deposited beneath the cap constructed for OU I. Dewatering water will be treated and discharged onsite, and wetlands impacted will be restored. The design of the remedy was completed in 1998. Cleanup activities began in April 1999. Remedial actions have not been completed; therefore, the issue of protectiveness cannot be resolved within the scope of this five-year review.

### 4.4 Protectiveness of Sudbury River (OU IV)

The original risk assessment for OU IV found that mercury contamination in fish in the Sudbury River was too high to allow for safe human consumption. Contamination in river sediments were the primary source of mercury in the fish. EPA is currently re-evaluating the risk from mercury to people and ecological life. In the meantime, the current fishing advisory remains in effect. EPA has posted signs along the river warning against the consumption of contaminated fish. These actions have been taken while remaining long-term cleanup actions are being planned.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

This report documents the second five-year review for the Site. Remedial actions for OU I (Source Control and Soil) have been implemented and post-closure monitoring is occurring. Remedial actions for OU II (Off-Site Groundwater) have not been implemented. Remedial actions for OU III (Wetlands and Drainageways) began in April 1999. Remedial actions for OU IV (Sudbury River) have not been implemented as a ROD has not been signed. Since remedial actions have not been completed for OUs II, III, and IV, this section will only include conclusions and recommendation for the various components of OU I. As remedial actions for OUs II, III, and IV are completed they will be discussed in more detail in future five-year reviews.

**5.1.1 OU I: Source Control and Soil - Landfill Cap.** M&E completed a visual inspection of the landfill cap and its features. The cap appeared functional, promoting positive drainage. Vegetation is maintained on its surface. There were very limited signs of cap erosion (small area of geotextile exposed). There were no visible signs of cap settlement. The drainage system appeared functional with requirements for some overgrowth maintenance and some repair to eroded sections (Section 5.2). The perimeter roadways and security fence around the landfill were in good condition.

One area of concern was the seepage of groundwater in the low area just southeast of the landfill cap. This area was very wet, and groundwater monitoring reports indicate that the measured groundwater level in this location has been above the ground surface.

The O& M Plan (U.S. EPA, 1987) in use is outdated and does not achieve compliance with regulatory-based standards of a post-closure plan.

**5.1.2 OU I: Source Control and Soil - Restored Wetlands.** The field observations of Area C and G Wetlands are similar to those noted in the first five-year report (Ebasco, 1993). The 1985 ROD indicated that prior to remediation, Area C and G Wetlands were vegetated with monotypic stands of common reed, an undesirable invasive species and were greatly degraded due to historical activities at the Site. Historically, Area C and G Wetlands were vegetated with trees, saplings, and shrubs (U. S. EPA, 1982 and Ebasco, 1993) and therefore included greater vegetation diversity than at present. Based on available data, it appears that Area C Wetland was historically drier than at present, while Area G Wetland had more areas of standing and flowing water in the past (U. S. EPA, 1982 and Ebasco, 1993).

The western area of Area C Wetland and the northern area of Area G Wetland are currently functioning well as wetlands. The eastern area of Area C Wetland is currently primarily a pond, and therefore its wetland functions are limited. Similarly, the southern portion of Area G Wetland outside of the Trolley Brook channel currently lacks indicators of wetland hydrology and wetland soils, and therefore is providing limited wetland functions. Although neither of the wetlands investigated has vegetation or hydrologic features that are the same as historic conditions in these areas, the current characteristics of Area C and G Wetlands are clearly an improvement over the pre-remediation condition, in which common reed dominated these areas.

It should also be noted that the area designated as Area G Wetland on the OU I as-built topographic map (Land Planning, 1992) appears to be larger in areal extent than the historic wetland area along Trolley Brook.

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**FINAL  
SECOND FIVE-YEAR REVIEW  
FOR THE  
NYANZA CHEMICAL WASTE DUMP SITE**

Operable Units I, II, III, and IV

Ashland, Massachusetts

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Prepared By:

