



Project Title: Sydney Landfill Closure

Client: Sydney, Nova Scotia

Project Description:

GEMTEC Limited, in a joint venture with Vaughan Engineering Limited, was hired by the Cape Breton Regional Municipality (CBRM) and the Nova Scotia Department of Transportation & Public Works, for the closure of the Sydney Landfill. The closure of the landfill was part of the Muggah Creek Watershed (shown at left) remediation effort.

The complex closure of the 23-hectare site involved many unique features and technical challenges. As the lead designers for the project, GEMTEC Limited carried out additional hydrogeological assessments and utilized both its environmental and civil groups to provide innovative, cost-effective solutions. The joint venture team worked together as a single unit to provide seamless consulting services to the project management company.

The scope of GEMTEC's work included minimizing the amount of leachate leaving the landfill, providing effective control over landfill gases, controlling surface water on the site, providing a system for long term monitoring, providing controlled access to the site and enhancing site aesthetics. The closure of the Sydney Landfill involved shaping the landfill surface, construction of a cover system (cap), installation of an impermeable barrier wall at the MAID Pond to limit the water flow through the landfill, diversion of Coke Ovens Brook, installation of a leachate collection system, installation of a passive landfill gas management system and related activities such as traffic control, access control, pest control, erosion control, storm-water

management and health and safety considerations.

GEMTEC was also involved in the "open house" information session held for the public to present their concerns and questions.

The client was very satisfied with the project and the resultant quality of the report and recommendations. The project is considered to be one of the major accomplishments of the Muggah Creek clean-up effort and is highlighted on the community based environmental joint-action group (JAG) website (www.muggah.org).

Completion Date: 2002

Project Budget: 10.5\$ million

The project was completed on time and within budget.