## Rehabilitation of an acid generating gold tailings area in northern Ontario

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The Hollinger Mine is a gold mine in Timmins, Ontario, that operated from 1910 through 1968. Tailings were deposited into a lake, referred to as the Hollinger Tailings Management Area (HTMA). In addition to tailings, 400,000 cubic metres of off-spec (high sulphide) concentrate were also stored in the HTMA. The site is 256 ha in area with the majority of the site covered in acid generating tailings that had spread over the area after a containment dam failed in the 1960s. The site is located within the Timmins city limits and has been a major health and safety concern to the local residents. The acidic tailings also damaged a stream and rendered it barren of fish.

Goldcorp Canada Ltd. is now the owner of this site and in 2005 PGM retained AMEC's services to prepare and implement the closure plan for the site as part of their commitment to protecting the environment. AMEC carried out tailings characterization; ground water and surface water investigations; developed groundwater, hydrotechnical, and contaminant loadings models; and prepared a detailed closure design for the regulatory agencies. The overall objective of the closure design is to improve the surface waters sufficiently to support aquatic life, improve the overall aesthetics of the site, and create a self sustaining/low maintenance landscape. This involved relocating acid generating tailings to the pond within the tailings area, stream restoration, ditch construction, and revegetation. The closure activities started in the fall of 2008 and are expected to be complete by the fall of 2011. This presentation will describe the site, some of the history, the investigations that were undertaken, and the measures (implemented and planned) required to achieve closure.