

Executive Summary: Roberts Bay Water License Amendment and Long Term Monitoring Program

Roberts Bay and Ida Bay are abandoned mine sites located approximately 115 km southwest of Cambridge Bay, on the north coast of mainland Nunavut. The Roberts Bay site is located approximately 1 km north of Roberts Lake while the Ida Bay mine site is located adjacent to Melville Sound about 7 km north of the Roberts Bay site. The two sites are collectively referred to as the Roberts Lake Area.

Exploration for silver at Roberts Bay and for silver and gold at Ida Bay were carried out at the Robert Lakes Area between 1965 and 1972. The Roberts Bay site was an active silver mine in the early 1970s and was the subject of exploration in the 1980s and 1990s. Clean-up activities were conducted at the sites between 2008 and 2010, including demolition of remaining site structures, securing mine openings, and disposal of non-hazardous waste and contaminated soils. To contain the soils and waste, a non-hazardous waste landfill (NHWL) was constructed over the former tailings pond. The non-hazardous wastes and debris from Ida Bay were co-managed with the non-hazardous wastes from Roberts Bay and disposed of at the Roberts Bay NHWL. As a result, there are no remaining structures at the Ida Bay site.

As per departmental commitments to monitor the Roberts Bay NHWL post-closure, a long-term monitoring program was initiated at Roberts Bay in August 2010. The existing Roberts Bay Water License expired on August 30, 2013. The purpose of this application is to renew and amend the existing water license so long-term monitoring can be continued at the site.

The Long Term Monitoring Plan for Roberts Bay includes the following:

- Visual monitoring of the landfill
- Soil monitoring, if seepage or staining is observed around the landfill
- Thermal monitoring of the landfill
- Natural environment monitoring

The Long Term Monitoring Plan is scheduled to continue for 25 years over three phases as follows:

- Phase I: years 1, 3 and 5
- Phase II: (if required): Years 7, 10, 15 and 25
- Phase III (if required): Beyond 25 years

Phase I monitoring began at Roberts Bay in 2010 and continued in 2012. The last Phase I monitoring event will occur August 2014. An evaluation of Phase I monitoring data will be carried out at the end of the 2014 program to determine whether Phase II monitoring frequency may be modified or downgraded. If no significant issues are identified for the landfill, monitoring may be discontinued (AMSRP 2009). If additional Phase II monitoring is warranted based on the thermal, surface water, or physical inspection associated with the landfill, it will be carried out during the years 2016, 2019, 2024 and 2034. At the completion of the 25 year monitoring program, a review will take place and the need for continued monitoring (Phase III) will be assessed.

References

AMSRP (Abandoned Military Site Remediation Protocol). 2009. Volume II-Technical Supporting Documentation, Chapter 11 – Post-Construction Monitoring , p. 13. Indian and Northern Affairs Canada, Northern Affairs Organization, Contaminated Sites Program, March 2009.

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1BR-ROB0813 Roberts Bay Amendment & Renewal Application

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