

Technical Summary of the Water, Wastewater and Solidwaste Management for the Hamlet of Arctic Bay

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The Hamlet of Arctic Bay with a population of about 700 is sitting at the coordinates of 73°02'N and 83°05'W. They renewed the Water License on November 1, 2002. This license expired on October 31, 2007. The water license covers drinking water supply, wastewater treatment and solidwaste management. Since then, the infrastructures have been unchanged for drinking water and solidwaste management of this community.

In case of wastewater treatment by Sewage Lagoon, several times repair works to the berms were carried out. Again, Lagoon effluent quality became questionable many times. An experienced engineering consulting firm, Trow Associates Inc., has been recruited to design and build a new sewage lagoon satisfying the demand of the community growth for 20 years period. At the same time decommissioning plan will be implemented following the CCME guidelines once the new facility will be commissioned.

Arctic Bay is located on North Baffin Island, Nunavut. Steep hills surround the settlement on three sides with a nearly land-locked bay on the fourth side. The community itself sits on a low gravel beach near the water. The community is actively trying to manage infrastructure hazards. In these circumstances, the new lagoon is proposed to sit on the top of the hill very close to the existing Lagoon using the existing access road after little extension. The wastewater of the community will be treated by the proposed lagoon and the wetland for twenty years period. This new facility is under design stage at the moment and expected to start construction in 2008 and commission in 2009.