

Technical Report on the Wastewater Treatment Facility of the Hamlet of Kimmirut

The Hamlet of Kimmirut is a small community on the southern tip of Baffin Island in Nunavut, located at 62°50'06''N and 69°52'04''W. Its current population is 546.

The Hamlet of Kimmirut currently discharges its sewage to a ditch which drains directly to the ocean. In 2001 a new sewage lagoon was constructed 1.5 km from the community, to improve the treatment of sewage. Due to the unsafe condition of the access road to the lagoon, the lagoon has never been used. The design for rehabilitation of the access road has been completed and the works are expected to proceed in 2008.

In addition, a condition assessment was conducted on the existing lagoon and found that the lagoon was not adequate to satisfy the demand of the Community. Detailed investigations were carried out on the facility to determine what works were required to allow the site to meet the requirements of the Community. Based on these investigations a sewage treatment facility has been proposed utilizing the existing lagoon as the primary cell and the construction of a second Lagoon at the bottom of the gulch to provide additional retention followed by wetlands.

The expected values of BOD and TSS at the end of the second Sewage Lagoon are less than 216 mg/L and 172 mg/L respectively and at the end of the wetlands are less than 45mg/L for both. The current proposed design will satisfy the requirements of the Community for 20 yrs period and comply with the conditions of the Nunavut Water Board License.

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