

## Technical Specification of the Environmental Facilities under the Hamlet of Kimmirut

### Water Licence # 3KM-KIM0911

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Kimmirut is an Inuit Community located on the south end of Baffin Island, located at 62°50'06"N and 69°52'04"W. The current population of the Community is 485. The water licence of the Hamlet of Kimmirut #3BM-KIM0911 expired on January 29, 2011. This licence covers the water supply system, wastewater treatment facility and waste management facility.

**Water supply system:** The Hamlet of Kimmirut uses Fundo Lake for potable water. The community is 100% serviced by trucked water delivery. The truck fill station is located midway along the eastern shore of Fundo Lake, approximately 1.5 km south of the Community. As per Water Licence # KIM0911, the quantity of water extracted is not to exceed 30,000 cubic meters annually.

**Waste Management Facility:** The community's waste management facility is located approximately 0.75 km south of the community.

**Sewage Treatment Facility:** The community's existing wastewater disposal system is located next to the waste management facility approximately 0.75 km south of the community. The wastewater disposal system currently used consists of a trench at the landfill where the trucked sewage is deposited. The sewage flows onto an embankment dropping a total of 40 metres (170 metres horizontally). This is followed by a gradual drop of 20 metres (200 to 300 metres horizontally) to the ocean at Lake Harbour. The lower gradual sloped portion of the discharge area contains a significant grass and willow area that provides some degree of treatment, but this may be limited to preliminary treatment.

The Licensee requests the following two (2) facilities be removed from the water licence:

1. The enhanced sewage lagoon facility located 1.5 km west of the community

In 2001 a new sewage lagoon was constructed about 1.5 km west of the Community. This lagoon consisted of 1 berm across a natural gulch, making use of the existing terrain to form a lagoon. This system was not commissioned and was later determined to be undersized. The system was upgraded to include two lagoons with low permeability berms. Additional treatment is achieved in the downstream wetland area. This 3 hectare wetland ultimately discharges into Tuullitsit Lake. Following the construction of the lagoons, concerns were raised by regulatory agencies and local community members regarding the presence of fish in the wetland area. A fish study was conducted to assess the downstream wetland which would ultimately accept the discharge from the lagoon system. Through community consultations and site assessments, it was confirmed that the area was fish bearing.

The Hamlet recognizes that the current wastewater disposal practice is not supported by the regulatory agencies. Over the course of 2016/2017 the Hamlet and CGS will work with the appropriate authorities to determine if the enhanced sewage lagoon can comply with all relevant regulations and be brought online. In the event that this system cannot be brought online CGS will initiate the necessary steps to

develop a new sewage treatment system that complies with the terms and conditions of the water licence.

2. The solid waste disposal facility located 1.5 KM west of the community adjacent to the enhanced sewage lagoon.

In 2001 an area of land was fenced to provide a new waste management facility. This fenced area of land is not appropriate for a solid waste site, and as such there are no future plans to use this site as a municipal solid waste site.