

Technical Summary of the Hamlet of Kimmirut Environmental Facilities

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Hamlet of Kimmirut is a small community within Baffin Region of Nunavut located at 62°50'06"N and 69°52'04"W. The current population of this Community is 467. Their water License #3B-KIM0911 covers wastewater facility, water supply facility and waste management facility. This license expired on January 29, 2011.

Water Supply facility: The community draws water directly from the Fundo Lake as a source of potable water used not to exceed 30,000 cubic meters annually. The average water consumption is about 18,500 cubic meters annually. The potable water is chlorinated prior to distribution. The water truck fill station is being operated under the guidelines of the existing operation and maintenance manual. The volume of water in the source is more than adequate to meet the demand of the community throughout the year.

Waste Management Facility: The Hamlet's Solid Waste Disposal Facility is located just west of the location where sewage is currently discharged. This is not an engineered facility and no design document and O&M manual were prepared for this site. However, a new Solid Waste Disposal Facility includes a waste oil storage area and a bulky scrap metal disposal area was built in 2002. Hamlet used equipment was dumped at this location. Again, no design document and O&M manual are available for this new facility. A new location will be identified very close to this site to build a new waste management facility to meet the demand of the community satisfying the requirements of the water license. Once the capital funding is available, the new facility will be built and commissioned, soon after these exiting two facilities will be abandoned under the same contractual arrangement.

Wastewater Treatment Facility: The Community is dumping raw sewage at the slope of the hill next to the solid waste site currently being used. However, a new sewage lagoon was built next to the new solid waste management site at the same time in 2002. This was never used. This facility was updated recently and converted into two cell lagoons. The lagoons are not intended as the main treatment mechanism, the wetland is intended to provide the treatment. The lagoons provide retention and pretreatment and the wetland is the main treatment process. The construction was completed but not commissioned yet due to leakage of the lower berm. A geotechnical inspection was carried out and the berm is expected to be repaired next summer. Once this facility is commissioned, soon after the existing sewage dumping site will be decommissioned. The new facility will be operated under the NWB approved O&M manual.

The entire effluent treatment train including definite flow patterns, discharge location into wetlands, predicated flow course through the wetlands, discharge into small ponds, and finally discharge into the receiving body has been established along with the base line water quality model of the wetlands.

The consultant Nunami Stantec Ltd is conducting a fish habitant study and planning to complete in 2014.

Hamlet has started extended sampling program to meet Part H of the expired Water license # 3BM-KIM 0911.

The second consultant exp services Inc. has prepared a Plan for Compliance and this was submitted to AANDC. exp is retained to provide assistance to meet the requirements of the Plan for Compliance. exp also has prepared training manual and provided training to the Hamlet operators to effectively and efficiently manage the monitoring program under the Water license guidelines.