Technical Summary of the Environmental Facilities of the Hamlet of Sanikiluaq

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The Hamlet of Sanikiluaq is a small Community of Baffin Region situated on the North end of Flaherty Island, a large central Island off the Belcher Island in Hudson Bay and located at $56^0$32'N latitude and $79^0$14'W longitude. The population of the community is now 830. The Community is serviced by trucked water extracted from the nearby lake called Sanikiluaq Lake. Wastewater is trucked from house to house and directed to a natural lake where treatment is being taken place prior to discharge to the wetlands. Wastes of the Community are managed in the open land fill site located next to the sewage lagoon.

Water Supply: The Potable water source is the natural Lake named Lake Sanikiluaq centrally located within the Community. The water is pumped from this source into the water trucks at the Truck fill station which is located at the edge of the lake. The average annual consumption of water for the Community is about 31,618 cubic meters. This 30 yrs. old facility has been recently rehabilitated, the existing building envelope was replaced and the process was optimized with cartridge filters to address the Turbidity of the treated water in order to satisfy the drinking water guidelines. The provision for bypassing water flow out during fire hazard and a standby generator in case of power failure has been accommodated. Standby chlorination equipment has been provided as a safe guard against malfunction. The freeze protection measure has been taken care. The intake screen has recently been replaced.

Wastewater Treatment Facility: The wastewater of the community is being trucked and delivered into the natural ditch which acts a sewage lagoon with a capacity of about 19,360 cubic meters. This facility is located 2.90 km west of the hamlet next to the Community waste management site. This facility discharges effluent seasonally sometimes at end of August/early September through an undefined wetland prior to discharge to the marine environment. The current sewage lagoon is well accessible from the Community but this is under capacity. A new site has been identified next to this current facility. Right now an Engineering Consulting firm is designing a new sewage lagoon to treat the wastewater of the community to satisfy the annual demand and to meet the requirements of the Water License. Site surveying and geotechnical investigation were completed. The consultant Arktis Solutions Inc. is engaged designing the new facility and the design brief is expected to be available by February/March 2014.

Waste Management: The Community waste management site consists of a land fill and a bulky metal area which is situated adjacent to the existing sewage lagoon and easily accessible by the same access road. This is not an engineered facility. Therefore design, drawings and O&M manual are not available. Nunavut wide waste management feasibility study was conducted. The latest guidelines to design the new waste management facility will be implemented once the project is funded.

The community has been participating in the extended Sampling and Testing program following GN-CGS guidelines to maintain the quality of the drinking water guidelines and to satisfy the quality of wastewater effluent standard.