

## **EXECUTIVE SUMMARY:**

This Annual Report 2017 for the Hamlet of Kugluktuk (the Licensee) to the Nunavut Water Board (NWB) has been prepared to meet requirements of the Nunavut Water Board Licence 3BM-KUG 1520, Part B General Conditions, through part H conditions to the monitoring program. This report covers the period from 01 January to 31 December 2017.

Water intake from Coppermine River through twin intake pumps, and mobile shake (as convenient) and delivered to the treatment plant of cartage filtration followed by chlorination and then truck-fill supplied to household tank by Hamlet operated water trucks. Quantity of water was drawn approximately **64,200m<sup>3</sup>** which is about 83.38 % of the allowable limit **77,000** annually.

Raw sewage waste collected from household sewage tanks using hamlet operated vacuum trucks, hauled to the sewage lagoon and discharged at the designated dropping point. Raw sewage stayed inside the lagoon during the period Sep - June for almost 10 months freezing where they received primary treatment naturally. Annual decanting carried during July-Sep to reduce water quantity inside and make room for new candidate sewage waste. Samples collected from decanting point of monitoring station and tested at Taiga Laboratory Yellowknife for parameters compliance.

Municipal waste disposed at the solid waste facility using hamlet operated trucks and compacted down with grader and covered with sand-gravels time to time in summer. Loose papers, boxes, waste cloths and light woods were burn with control burning process and safe from flown away.

Earthen buttress constructed on berm toe at east side noted leak area of effluent over the years. Buttress construction completed, visible leak still continued but reduced a bit. Slumping on berm top and slopes on other sides also repaired as part of the buttress contract. The lagoon was built with HDPE liner on inner sides, but some bubbles developed to the base liner at location caused island type floats which could not be eliminated.

### **Water system upgrade:**

The new Water Treatment Plant construction completed and started operation. With this addition, water intake and quality has increased in regards to turbidity issue and salinity concerns. Water intakes for Kugluktuk using two intake pump houses, a mobile shack for ice water when needed and storage reservoir for temporary holding water before directing to treatment plant when salt intrusion increases. Issues on turbidity and excess salt wedge are causing higher cost for operation and frequency of filters change. Water samples are sending to EHO, Cambridge Bay for EC and FC test on a monthly basis and whenever necessary. No issues or concern to during this period.