

**ANNUAL REPORT
FOR THE HAMLET OF PANGNIRTUNG- 2014**

YEAR BEING REPORTED: 2014

The following information is compiled pursuant to the requirements of **Part B, Item 1** of Water License # NWB 3- PAN 0810 issued to the Hamlet of Pangnirtung.

- i) - iii) tabular summaries of all data generated under the “Monitoring Program”; monthly and annual quantities in cubic metres of freshwater obtained from all sources; monthly and annual quantities in cubic metres of each and all wastes discharged;

Attached are quantities of water used as reported in our On Tap Water Delivery System and the estimated discharge of sewage waste based on quantities used.

Month Reported	Quantity of Water Obtained from all sources (litres)	Quantity of Sewage Waste Discharged (Estimated)
January 2014	4,555,495.17	Same
February 2014	4,284,945.70	Same
March 2014	4,813,685.75	Same
April 2014	4,489,573.80	Same
May 2014	4,476,722.20	Same
June 2014	4,472,371.30	Same
July 2014	4,353,727.72	Same
August 2014	4,202,690.50	Same
September 2014	4,045,184.40	Same
October 2014	4,398,614.26	Same
November 2014	4,105,233.29	Same
December 2014	4,344,338.00	Same
ANNUAL TOTAL	52,542,582.09	52,542,582.09

Note: The monthly water consumption volume is considered equal to the discharge volume because there is no meter at the end of the discharge pipe. The old accumulator

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in the Water Truck Fill Station is not recording water extraction volume correctly.

- iv. a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities;

WWTP: The construction for final optimization of the Waste Water Treatment Plant is complete. The upgraded WWTP is a mechanical biological, suspended growth treatment system based on membrane bioreactor (MBR) technology. The plant is now capable of a high level of treatment with biological nutrient removal (BNR) capability of nitrogen and a tertiary level of solids removal provided by the membranes. The system treats Domestic sewage and some food processing waste (local fish processing plant) from the Community which is delivered to the plant via a trucked system. This collection method results in a relatively low volume of wastewater but a relatively high contaminant concentration on a per capita basis. The system is designed to accept wastewater on a 7-day per week delivery schedule. Treated effluent is discharged to the Pangnitung Fiord.

WTFS: No modification was made to Water Truck fill station for water supply system during this reporting period.

Waste management site (Land fill): No modification or major maintenance works were carried out for this facility during this reporting period.

- v. a list of unauthorized discharges and summary of follow-up action taken;

During construction period of the WWTP, raw screened sewage from the WWTP was directly bypassed into the Fiord. The by-passing permit issued by AANDC is valid during the commissioning period until end of May 2015.

Spills:

2014113; 2014-04-23; Pangnitung; PH Unit 636; Fuel oil: 1000L

2014222; 2014-06-19; Pangnirtung; PH Unit 766; Fuel oil; 5L

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- vi. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;

Once the WWTP is fully commissioned, the existing ditch so called natural lagoon will be abandoned and restored because all liquid wastes of the Community are expected to be treated by this plant.

The existing WTFS will be planned to decommission once new one is built and commissioned, which is expected in 2016.

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- vii. a summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;

The studies on solid waste management were completed by Arktis Solutions Inc. A new guideline has been developed and accepted by CGS. The consultant exp Services Inc. has done some researches on alternative waste management processes like gasification, incineration etc. The Project is on hold due to funding. Hamlet is still working on segregation of wastes in summer 2015.

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- viii. any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and

Wastes management in the Community are the major concerns of the Nunavut Water Board and AANDC.

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- ix. updates or revisions to the approved Operation and Maintenance Plans.

The O&M manual of the Water Truck fill station will be updated once the new facility is built and commissioned. The O&M manual of the WWTP is under development stage and will be available for submission to NWB by April 2015. The O&M manual of the existing non-engineered waste management facility (Land Fill site) was prepared and submitted to NWB. Once the new waste management Facility is built and commissioned, new O&M manual will be prepared accordingly.

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- x. **ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:**

Hamlet received a new water Licence for 3 yrs. period. Hamlet has started extended sampling and testing program on water, wastewater and leachate. WWTP has a new Lab where several tests on waste water quality like Ammonia, TSS, DO, COD, VSS etc. is monitored on daily basis. Also for QA/QC, samples are tested in Caduecon lab in Ottawa on monthly basis. The optimized WWTP is operated by a SCADA system. Hamlet is planning to implement CGS's new report Card in order to closely monitor the Environmental facilities.

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xi. FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

Hamlet is working closely with Water Licence Compliance Group (WLCG) for Hamlet water licence compliancy. They will be updating the Plan for Compliance based on the current situation. Hamlet is submitting 2014 Annual report in time.

The Lab test Results for 2014 are submitted in a separate document.