

ANNUAL REPORT FOR THE HAMLET OF KUGAARUK

YEAR BEING REPORTED: 2009

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence (3BM-PEL0712) issued to the Hamlet of Kugaaruk.

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 results for Monitoring station PEL-1 and PEL-2, as well as detailed chemical, physical and biological analysis required at PEL-3-1, PEL-3-2, PEL-4, PEL-5, PEL-6 and PEL-9-2 (for the months of July to September, inclusive).

Month Reported	Quantity of Water Obtained from all sources (m ³) (PEL-1)	¹ Quantity of Sewage Waste Discharged (m ³) (PEL-2)
January	2,490	1,372
February	2,331	1,372
March	2,468	1,372
April	2,297	1,372
May	2,097	1,372
June	2,005	1,372
July	2,296	1,372
August	2,084	1,372
September	2,250	1,372
October	2,208	1,372
November	2,237	1,372
December	2,235	1,372
ANNUAL TOTAL	26,997	16,464

Please indicate volumes in cubic metres - 1 cubic meter equals 1000 litres

¹*Note: Volume of sewage delivered is estimated based on volume of sewage trucks and number of daily deliveries. Sewage is not measured by a meter on the truck.*

ANNUAL REPORT FOR THE HAMLET OF KUGAARUK

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;

After completion of construction of the sewage lagoon in 2008, a heat trace unit was installed during the summer of 2009 in order to allow thawing of the discharge valve in the spring. This will enable the Hamlet to begin decant of the lagoon in July and allow it to continue until October as per the Hamlet's water licence.

Clean up of the municipal solid waste and metal dump sites was completed in 2008, however barrels that had waste oil contained within them were stored in one area of the metals dump site over the winter. During the summer of 2009, a waste oil incinerator was brought to site and waste oil was incinerated on site. Care was taken to separate the waste oil from the other unclassified waste liquids in the barrels. The unclassified waste liquids were stored and sealed in barrels for shipment to a proper disposal facility. These barrels were shipped out of the Hamlet in September 2009.

Other miscellaneous items of note:

- Sampling of the wetland SNP locations (PEL-3-1, PEL-3-2, PEL-4 and PEL-5) was completed once per month for July, August and September. Sampling of PEL-6 and PEL9-2 (run off from the municipal solid waste and metals dump sites) occurred once during August as per the requirements of the water licence. Acute lethality testing was completed for *Oncorhynchus mykiss* (Rainbow Trout) and *Daphnia magna* (crustacean) at SNP point PEL-4 in August as per the requirements of the Hamlet's water licence.
- Signs were erected in both the municipal solid waste and metals dump sites to identify the locations for the various waste streams (white goods, tires, wood products, vehicle carcasses, general metals waste, general household waste, batteries, hazardous materials, waste barrels and animal carcasses).
- Two drainage outfall structures were constructed (one at the municipal solid waste site and the other at the metals dump site). Samples for PEL-6 and PEL-9-2 were taken from these structures.
- Used vehicle batteries were collected and packaged, however at the time of this submission it is unknown if these batteries have been shipped south to a proper disposal facility.
- Pit for animal carcasses was located within the municipal solid waste site. Gravel pile was placed next to pit for covering of carcasses.

ANNUAL REPORT FOR THE HAMLET OF KUGAARUK

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

No spills were reported to the NWT-NU Spill Report Line for 2009.

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

Abandonment and Restoration Work:

- Clean up of barrels and incineration of waste oil at the metal dump site. Shipping of unclassified waste liquids out of the Hamlet on the barge (See Section iv).

Anticipated Work for Summer of 2010:

- Geotechnical engineering inspection of the lagoon berms to the Dam Safety Guidelines.
- Certified sub-contractor to remove CFC's from the waste refrigerators and freezers on site.
- Warranty inspection of the sewage lagoon and solid waste facilities.
- Continuous sampling and monitoring of wetland area by Hamlet staff.

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;

Continuation of the wetland assessment by Hamlet staff as requested by the water licence. This study should be completed in 2012 and included with the application for a new licence once the current licence expires. The study should state the condition of the wetland, the efficiency of the wetland to treat the effluent and include sampling data of effluent from monitoring stations PEL-3-1, PEL-3-2, PEL-4 and PEL-5 from 2009 to 2012.

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

No known requests by the Board at this time.

ANNUAL REPORT FOR THE HAMLET OF KUGAARUK

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

The following manuals and plans have been completed and are currently under review by the Nunavut Water Board:

- Sewage Treatment Facility Operation and Maintenance Manual
- Solid Waste Facility Operation and Maintenance Manual
- Spill Contingency Plan, Sewage and Solid Waste Sites
- Wetland Treatment Area Assessment Report

ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

As per the Solid Waste Facility Operation and Maintenance Manual, a number of SNP stations (PEL-7, PEL-8-1, PEL-8-2, PEL-9-1, PEL-9-2, PEL-10-1 and PEL-10-2) have been identified for groundwater monitoring locations due to their proximity upstream and downstream of the municipal solid waste and metal dump sites. Groundwater monitoring wells have not been placed at these sites, but signs marking each location have been installed. It has not been determined when groundwater monitoring wells will be installed in these locations.

Although SNP station PEL-9-2 has been identified as a groundwater monitoring site, this point is located adjacent to the settlement pond that collects run off from the metals dump site. Therefore samples taken from PEL-9-2 are samples taken from this settlement pond and not from a groundwater monitoring well.

FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

No additional information to report at this time.