



Environment Canada
Environnement Canada

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Our File: 4782070

Oct. 25, 2010

Richard Dwyer
Licensing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

By email

**Re: 3BM-PEL0712 – Hamlet of Kugaaruk Wetland Treatment Assessment
Report – Water Licence Submission under Part D. Item 6**

Environment Canada (EC) staff have reviewed the above report and offer the following comments for your consideration.

The report's description of the Kugaaruk wastewater treatment system was accurate and found to be consistent with observations made by EC field staff this past summer. The photos and design drawings were very helpful; the only aspect which could have been improved would be to provide a line drawing overlay on the site photograph to delineate the area of the wetlands.

It would have been useful to have an estimate of the approximate time involved for effluent travel from lagoon to the end of the wetlands, acknowledging that there would be variation in this according to precipitation, ground saturation, discharge rates, vegetation density, and temperatures (to name a few factors). This would have given some indication of whether the proposed monitoring schedule was appropriate.

With respect to monitoring of the system, the report states that discharge should be timed to begin once vegetation has had time to become established, and mid-July was recommended for start of discharge. Effluent would be discharged over a three month period. Monitoring of the effluent at the end of the wetland was suggested to be done at spring melt (beginning of July), mid-summer (mid-August), and just prior to freeze-up (end of September). If this schedule is followed, the initial monitoring could miss effluent presence (other than residual from the previous year), and the last monitoring event could occur while there is still discharge to be done. An operational aspect which may affect timing is the need to thaw the valve, unless active pumping is installed. It may be more practical to tie the monitoring to the discharge timing rather than the calendar. Lagoon discharge monitoring does not necessarily need to be timed to coincide exactly with the wetlands monitoring, and should be done at initiation of decant, mid-way through, and prior to completion of discharge.

Please do not hesitate to contact me at 867-669-4735 or by email at anne.wilson@ec.gc.ca with any questions or comments regarding the foregoing.

Sincerely,

A handwritten signature in blue ink that reads "M. A. Wilson".

Anne Wilson
Water Pollution Specialist
Environmental Assessment - North

cc. Carey Ogilvie (Head, EA-North, Yellowknife)
Rick Milne (Student Research Assistant, WTC, Burlington)