



Department of Health & Social Services: Baffin

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Environmental Health

November 20, 2019

Nunavut Water Board
P.O. Box 119
Gjoa Haven, Nunavut
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RE: Renewal of Iqaluit Water Licence No. NWB31QA9900

In review of the Municipality of Iqaluit's water license renewal application, it is clear that there are a number of areas where information is incomplete and requires further explanation.

Water Supply

A safe and sufficient water supply is necessary for the health and well being of all people. For that reason the Public Health Act Public Water Supply Regulations set out specific criteria for the control of operation, construction or alteration of public water supply systems as well as the quality of the water. Recent upgrades to the plant have helped alleviate many of the safety concerns that were noted by Environmental Health during the last hearing but the question of long-term supply and the upgrades that will be necessary for the population increase that is occurring have not yet been addressed. A condition the NWB should require is a report submitted on the status and projected adequacy of the Lake Geraldine source and any upgrades or changes that will be required. At this time the source and quality of the water is acceptable to Health.

Sewage Treatment and Disposal

The present lagoon system has in the past had problems including breaches in the dykes that have shortened retention and treatment time. Health would like to see a new properly functioning system as soon as possible. If the new sewage treatment plant presently being constructed is able to meet its projected treatment objectives it will vastly improve on the present lagoon system.

There are a few areas of concern in regards to this new system. One concern is whether or not the proposed composting of sewage sludge will work. Composting requires aeration, and temperatures of about 65-80°C to ensure a rapid process and minimize odor problems. If these conditions cannot be maintained in a compost heap the process will be slower, become anaerobic and create an odor problem. Pathogenic organisms may also be able to survive the process at the lower temperatures. Secondly, will there be any provisions for ensuring the old lagoon is maintained in a

condition that will allow it to act as an emergency repository should the new system fail to work adequately or break down?

Solid Waste Management

The collection and proper disposal of solid waste is essential for the operation of a society that wants to avoid disease and injury and to have a pleasant environment. The old system is unacceptable and the plans for a new solid waste management plan are too preliminary to comment upon. The Nunavut Department of Health is deeply concerned about the deficiency, and would request terms in the License which will ensure that we receive a complete plan, including specifics such as location for new site(s), type of system(s) selected, revised operations manual and supplementary supporting documentation.

In the Municipality of Iqaluit's submission of written evidence it was stated that a volume reduction of 85% was achieved through open burning. The Municipality of Iqaluit does not have accurate records of the types and volume of waste being accepted by the present solid waste site according to the information in the Solid Waste Management Planning Study, September 2000 (J.L. Richards & Associates LTD. and Golder Associates LTD.). It would assist our Department in assessing Solid Waste Management proposals to be provided with the background, showing how that figure was calculated. In the absence of more detailed evidence, we have difficulty believing that open burning reduces waste volume by that amount since the manufacturers of incinerators only claim to be able to reduce waste volume by up to 90%.

A contingency plan for the time between the projected end of life of the present waste management facility and commencement of operation of a new facility is urgently required. There is very little time left to design such a plan and it must be reviewed by the regulatory agencies, including the Nunavut Water Board.

The inadequacy of the information provided by the Municipality, makes it impossible to confirm or deny potential concerns regarding any of the proposed changes to the waste management practices of the Municipality of Iqaluit. Therefore Health would recommend that this current license either exclude solid waste management plans, or create review stages. The Municipality of Iqaluit should be required to apply or return to the NWB for a change in the water license or a new water license, ONLY after they have provided sufficient information to allow regulators to assess their plans.

The Department of Health further recommends that the license duration be limited to a period not exceeding three years. By that time most proposed changes to Iqaluit's municipal systems should be in place and can be properly reviewed as to their impact on water use and the deposition of waste into water.

On behalf of the Nunavut Department of Health, an Intervenant in this license proceeding, thank you for the opportunity to express concerns and present suggestions for the consideration of the Nunavut Water Board.

Bonnie Segal
Environmental Health Officer