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August 2, 2002

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Sent by email to:
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Pangnirtung Water Licence Application

On behalf of Indian and Northern Affairs Canada (INAC), I am pleased to submit the following comments on the water licence application from the Municipality of Pangnirtung.

1. Introduction

This submission, on the application for a municipal water licence by the Municipality of Pangnirtung, is submitted on behalf of the Water Resources division of INAC.

This submission will be based on the water licence application received by the Nunavut Water Board (NWB) on July 5, 2002. Past inspection reports have also been taken into consideration.

The Municipality of Pangnirtung was previously under the water licence N5L4-1447. The previous water licence was issued January 1, 1991, and expired on December 31, 2000. Since the previous water licence was allowed to expire, INAC views this as an application for a new water licence, and not as a renewal of N5L4-1447.

2. Conditions Applying to Water Use

The Municipality currently receives water from the Duval River. An intake pipe pumps water into the municipal reservoir, where it is batch fluoridated. The reservoir has a storage capacity of 120,000 m³. Water trucks chlorinate the water and deliver it to the residents of the Municipality. Water consumption was approximately 68,000 m³/year in 2001. Water consumption is expected to reach approximately 80,200 m³/year in 2007, and

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92,000 m³/year in 2012.

Assuming a 10-year term for the licence, INAC recommends that the annual volume of water pumped from the Duval River should not exceed 100,000 m³/year for the term of the licence.

SNP station 1447-2 - Raw water supply from the reservoir at the truck fill point - should continue to be used to measure the volume of water intake from the Duval River. The amount of water used should be recorded on a monthly and annual basis.

INAC also recommends the proper maintenance of warning signs along the Duval River indicating that the river is the source of the Municipality's drinking water.

3. Conditions Applying to Waste Disposal

The current sewage discharge area consists of a nothing more than a small ditch. The retention time of this lagoon is estimated to be between 8 to 12 hours before the sewage discharges into the fiord roughly 100 metres away. There is no discharge control structures associated with this sewage lagoon.

INAC recommends that the current sewage lagoon effluent be sampled at SNP station 1447-6 - Runoff below the pumpout sewage disposal area and prior to discharge to the Fiord - on a monthly basis during periods of flow for as long as the lagoon remains in use.

INAC recommends that the sewage effluent from the current sewage lagoon (SNP 1447-6) be sampled for the following parameters and limitations:

Total Suspended Solids	180 mg/L
BOD	120 mg/L
Feecal Coliform	100,000 CFU/L
pH	6-9
Oil and Grease	no visible sheen
Ammonia	monitor only

The water licence application also mentions that a new mechanical sewage treatment facility is being planned for the future. This will constitute a significant change to the project and should be properly dealt with as an amendment to the water licence at the appropriate time. The various stakeholders should have the opportunity to review and comment on the plans for the facility before its implementation. INAC recommends that a new SNP station be created for this mechanical sewage treatment facility. SNP station 1447-9 should be defined as "effluent from the mechanical sewage treatment facility" and should be sampled on a monthly basis.

The sewage effluent parameters for the proposed mechanical sewage treatment facility should be identical to those of the sewage lagoon (as above), although the specific limitations should be dependant upon the design capabilities of the system. More stringent limitation may be appropriate depending on the design, although in no way should the limits be less stringent than for the sewage lagoon.

The Municipality of Pangnirtung periodically compacts their solid waste within their landfill. This landfill is surrounded by a fence, but the fence is usually knocked down due to strong winds.

INAC recommends that a proper fence capable of withstanding the high winds of the area be installed around the perimeter of the landfill.

Monitoring of the runoff from the landfill should continue to take place as SNP station 1447-7 on a monthly basis during periods of flow.

4. Conditions Applying to Abandonment and Restoration

The proponent has indicated the intention of creating a new mechanical sewage treatment facility. An Abandonment and Restoration Plan will therefore be required for the old sewage treatment lagoon. This plan should be submitted to the NWB for approval.

5. Conditions Applying to Operation and Maintenance

INAC recommends a requirement for an Operation and Maintenance (O&M) Plan for the waste disposal facilities be submitted to the Board for approval within 6 months of the issuance of the licence. With respect to the Municipality of Pangnirtung, the O&M Plan should include, along with standard O&M issues, provisions for the segregation and storage/disposal of hazardous waste such as petroleum or batteries.

6. Recommended Terms of Licence

In the application, the Municipality has requested a 10-year term for their water licence. INAC finds the request to be acceptable. However, INAC wishes to once more state that once the final plans for the mechanical sewage treatment facility are available, the appropriate applications and/or amendments must be submitted them to the NWB by the appropriate parties. All stakeholders should have the opportunity to review the design plans before the actual implementation of the mechanical sewage treatment facility.

The role of the government of Nunavut in designing, funding, maintaining and/or conducting studies on the waste treatment facilities will play an important part in the ability

of the Municipality to remain in compliance with their water licence. INAC therefore respectfully suggests that the Nunavut Water Board take into consideration issues of ownership and funding as it relates to the terms and conditions within the water licence.

Finally, INAC recommends allowing all interested parties to review and comment on the draft licence prior to it being issued. This will allow the Municipality of Pangnirtung to express any reservations they may have at this point. Hopefully, any reservations can be resolved early in the process and minimize any non-compliance issues in the future.

If you have any concerns or questions, please feel free to contact me.

Sincerely,

Original Signed By: Michael Roy

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