



Your file - Votre référence
3BM-PAN0810

September 8, 2014

Our file - Notre référence
IQALUIT-#846258

Megan Porter
Licence Administrator Assistant
Nunavut Water Board
GJOA HAVEN, NU X0E 1J0

**Re: Aboriginal Affairs and Northern Development Canada Review of the Hamlet of
Pangnirtung's Application to Amend and Renew Water Licence #3BM-PAN0810**

Dear Ms. Porter:

Thank you for your email of August 8, 2014, concerning the above mentioned application. A memorandum is provided for the Board's consideration. Comments and recommendations have been provided pursuant to Aboriginal Affairs and Northern Development Canada's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

Please do not hesitate to contact me by telephone at 867-975-4555 or email at david.abernethy@aandc-aadnc.gc.ca for further information.

Sincerely,

David Abernethy
Regional Coordinator
Water Resources Division
Resource Management Directorate
Aboriginal Affairs and Northern Development Canada
IQALUIT, NU X0A 0H0

Encl.

c.c.: Murray Ball, Manager of Water Resources, AANDC Nunavut
Erik Allain, Manager of Field Operations, AANDC Nunavut

Memorandum

To: Megan Porter, Nunavut Water Board

From: David Abernethy, Aboriginal Affairs and Northern Development Canada

CC: Murray Ball (AANDC), Erik Allain (AANDC)

Date: September 8, 2014

Re: Water Licence Amendment Renewal Application, #3BM-PAN0810

Licensee:	Hamlet of Pangnirtung
Project:	Municipal water licence
Region:	Qikiqtani

Comments:

A. Background

On August 8, 2014, the Nunavut Water Board (“**NWB**”) provided notification of the Hamlet of Pangnirtung’s (the “**Licensee**”) Application to renew its Type ‘B’ municipal water licence, #3BM-PAN0810, to allow for the use of water and deposit of waste for municipal undertakings. Mr. Bhabesh Roy, Municipal Planning Engineer, Community Government Services, Government of Nunavut submitted this application on behalf of the Hamlet of Pangnirtung.

Interested parties were asked to review this application and provide comments by September 8, 2014.

B. Results of review

On behalf of Aboriginal Affairs and Northern Development Canada (“**AANDC**”), the following comments and recommendations are provided:

Item	Reference	Issue	Comment	Recommendation
1.	140729 3BM-PAN0810 REVISED WATER LICENCE RENEWAL APPLICATION JULY 28-IAAE, Block #3	Removal of acute lethality testing requirement	The Licensee is requesting the removal of the licence requirement to conduct annual acute lethality tests on effluent discharged from the Waste Water Treatment Plant due to the time constraints of delivering samples to an accredited (southern) laboratory for analysis. It is common practice for licenses to require that treated municipal wastewater effluent be subject acute lethality tests to ensure that the subsection 36. (3) <i>Fisheries Act</i> requirements are satisfied.	The NWB and Licensee should discuss with Environment Canada the time constraints municipalities, associated with the delivery of effluent samples to accredited (southern) laboratories for analysis (i.e., reliance on scheduled air flights). These discussions would provide certainty on what requirements should be imposed on municipalities to ensure the subsection 36. (3) <i>Fisheries Act</i> requirements are satisfied.
2.	140729 3BM-PAN0810 REVISED WATER LICENCE RENEWAL APPLICATION JULY 28-IAAE, Block #3	Geotechnical engineering inspection requirements	<p>The Licensee is requesting that Part F, Item 3 of the Licence be amended to allow Government of Nunavut Regional Municipal Planning Engineers to perform annual inspections (July or August) of engineered facilities associated with the management of water and waste rather than Geotechnical Engineers. Applicable engineered facilities include the municipal water storage reservoir and possibly, diversion berms and collection ponds.</p> <p>This is an acceptable proposal. More stringent inspection requirements can be applied if it is determined that infrastructure pose higher environmental and/or health and safety risks.</p>	The Licensee’s request to amend Part F, Item 3 of the Licence to allow Government of Nunavut Regional Municipal Planning Engineers to perform annual inspections (July or August) of engineered facilities associated with the management of water and waste rather than Geotechnical Engineers should be accepted.

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3.	140729 3BM-PAN0810 REVISED WATER LICENCE RENEWAL APPLICATION JULY 28-IAAE, Block 25	Requested renewal term	The Licensee is requesting a five year licence renewal term (would expire in 2019).	The requested licence renewal term is adequate.
4.	140619 3BM-PAN0810 SOLIDWASTE OM PLAN FOR PANGNIRTUNG-IMLE; and 140521 3BM-PAN0810 PANG WWTP O AND M-IMLE	Inclusion of Executive Summaries in the Solid Waste Disposal Facility and Waste Water Treatment Facility Operation and Maintenance Plans	The Solid Waste Disposal Facility and Waste Water Treatment Facility Operation and Maintenance Plans can be improved with the addition of one page Executive Summaries. This would allow for an overview of how the facilities are being operated with the goal of protecting the environment and satisfying licence requirements.	The Licensee should include one page Executive Summaries in its Solid Waste Disposal Facility and Waste Water Treatment Facility Operation and Maintenance Plans.
5.	140619 3BM-PAN0810 SOLIDWASTE OM PLAN FOR PANGNIRTUNG-IMLE; and 140521 3BM-PAN0810 PANG WWTP O AND M-IMLE	Tracking revision to Solid Waste Disposal Facility and Waste Water Treatment Facility Operation and Maintenance Plans	The Solid Waste Disposal Facility and Waste Water Treatment Facility Operation and Maintenance Plans can be improved with the addition of a section that document their initial versions and changes made in subsequent revisions. This practice has been applied by other licensees (e.g., Agnico-Eagle Mines Ltd.).	The Licensee should include a Document Control Section in its Solid Waste Disposal Facility and Waste Water Treatment Facility Operation and Maintenance Plans to track document revisions. This section should follow an Executive Summary and precede the table of contents. It can be made in a table format with the following columns: Version, Date, Section, Page, and Revision (summary of changes).
6.	140619 3BM-PAN0810 SOLIDWASTE OM PLAN FOR PANGNIRTUNG-IMLE, Section 8.1	Description of Solid Waste Disposal Facility monitoring program stations	Section 8.1 of the Solid Waste Disposal Facility's Operation and Maintenance Plan provides an overview of applicable licenced monitoring program stations: <ul style="list-style-type: none"> PAN-4: Runoff from the (sewage) sludge disposal area; 	The Licensee should revise its Solid Waste Disposal Facility's Operation and Maintenance Plan to include descriptions and visual representations of applicable monitoring program stations (i.e., runoff from the (sewage) sludge disposal area and Solid

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			<p>and</p> <ul style="list-style-type: none"> PAN-5: Runoff from the Solid Waste Disposal Facility. <p>It is difficult to have a good understanding of these monitoring program stations because they are not described in detail and there are no visual representations (e.g., topographic maps that reference their locations relative to surrounding features and photographs).</p>	<p>Waste Disposal Facility). The location, design (sump dimensions, construction materials), upstream and downstream environment of each monitoring station should be described. Furthermore, these descriptions should be accompanied by topographic maps and photographs to allow for a visualization of their locations relative to surrounding features).</p>
7.	140619 3BM-PAN0810 SOLIDWASTE OM PLAN FOR PANGNIRTUNG-IMLE	Management of non-contact water at Solid Waste Disposal Facility and Bulky Metal - Hazardous Waste Storage Area	<p>The Solid Waste Disposal Facility's Operation and Maintenance Plan does not describe how non-contact water (i.e., precipitation and spring freshet snow melt) uphill of the municipal land fill and bulky waste and hazardous material storage areas will be diverted (i.e., diversion berms and collection sumps). Non-contact water should be diverted from these waste management areas because the volume of effluent requiring management will increase if left unattended.</p>	<p>The Licensee should ensure that non-contact water diversion measures are implemented at uphill of its Solid Waste Disposal Facility and bulky metals and hazardous waste storage areas to limit the volume of effluent requiring management. Construction and as-built drawings, stamped and signed by a qualified Engineer registered in Nunavut should be provided for any diversion berms or collection sumps pursuant to Part E, Item 1 of the Licence.</p>
8.	140521 3BM-PAN0810 PANG WWTP O AND M-IMLE	Sewage treatment process and planned system upgrades	<p>The Waste Water Treatment Plant's Operation and Maintenance Plan provides technical instructions for the operation of the sewage receiving tank, sludge system, and control panel. This document also provides technical specifications for facility components (e.g., sensors). Although this information may be helpful to trained operators, the plan would be more useful if it included a</p>	<p>The Licensee should revise its Waste Water Treatment Plant's Operation and Maintenance Plan to provide a non-technical overview of its design and ability to satisfy (licensed) effluent discharge criteria. Details concerning the management of treated effluent and sludge as well as licensed monitoring program requirements should be included in the plan. Prior to making any revisions, the Licensee should review the</p>

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			general overview of the sewage treatment process, planned upgrades, the discharge/removal of treated effluent and sludge, the effluent discharge criteria, and licensed monitoring program requirements. In essence, this plan should allow for a general understanding of the Waste Water Treatment Plant's design and ability to satisfy licensed effluent discharge criteria.	October 1996 Government of the Northwest Territories guidelines titled, "Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories."
9.	2010-2013 Annual Report Submissions	Annual reporting information requirements	<p>The Licensee has provided annual reports for the years 2010 through 2013 (reports for the years 2008 and 2009 were not provided). Although these reports provide useful information, the reporting requirements specified in Part B, Item 1 of the Licence are not being fully satisfied. The following observations describe how future annual reports can be improved:</p> <ul style="list-style-type: none"> a) The NWB's Annual Reporting template should not be relied on as the source for documenting reporting requirements because it is not specific to individual licences. This template can be completed but should be supplemented by additional documentation to ensure that all monitoring requirements are satisfied. The Licensee is encouraged to develop its own annual reporting template; 	The Licensee must ensure that its annual reports satisfy licence requirements. The Licensee should not hesitate to contact AANDC, the NWB, or the Government of Nunavut's Department of Community and Government Services to discuss its licensed monitoring program.

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			<p>b) The submitted reports do not provide tabular summaries of data that should be collected under the licensed monitoring program pursuant to Part B, Item 1 (a) of the Licence. Monitoring data other than the volume of potable water consumption and estimated treated sewage effluent is provided in the form of water quality laboratory analysis reports that do not reference licensed monitoring stations. Tabular summaries should be provided for all monitoring program stations in addition to laboratory analysis reports. These summaries should reference licensed monitoring program stations (e.g., PAN-X), effluent quality limits, and any exceedances; and</p> <p>c) Written responses to Inspection reports should be attached to annual report submissions.</p>	
10.	140619 3BM-PAN0810 SOLIDWASTE OM PLAN FOR PANGNIRTUNG- IMLE	Stand alone Spill Contingency Plan	Part F, Item 1 (f) requires that the Licensee prepare and maintain a Spill Contingency Plan. The Licensee has included a Spill Contingency Plan in its Solid Waste Disposal Facility's Operation and Maintenance Plan. This plan should be a standalone document because hazardous material spills can occur in areas other than the Solid Waste	The Licensee should have a standalone Spill Contingency Plan and ensure that applicable Hamlet personnel are familiar with its content.

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			Disposal Facility (e.g., municipal buildings and roads, oil and fuel storage tanks, quarry areas, etc.).	
11.	140619 3BM-PAN0810 SOLIDWASTE OM PLAN FOR PANGNIRTUNG- IMLE	Sewage Sludge Management	According to the Section 2 of the Solid Waste Disposal Facility Operation and Maintenance Plan, sludge generated from the Licensee's Waste Water Treatment Plant is bagged and delivered to the municipal landfill for disposal. This sludge produces leachate that is subject to monitoring requirements specified in Part H, Items 1 and 3 of the Licence. This sludge can be treated prior to landfill disposal.	The Licensee should consider treating sludge removed from the Waste Water Treatment Plant prior to disposing it in the municipal landfill. A program similar to that being developed for the treatment of sewage sludge recovered a former lagoon in the Hamlet of Gjoa Haven can be implemented (freeze/thaw dewatering of sludge on drying beds and the collection/further treatment of recovered leachate).

Prepared by David Abernethy