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May 6, 2016

Karén Kharatyan
Acting Manager of Licensing
Nunavut Water Board
P.O. Box 119, Gjoa Haven, NU, XOB 1JO

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Email: karen.kharatyan@nwb-oen.ca

Re: 3AM-GRA1624 Notification of Modification to Water Storage Tank

Dear Mr. Kharatyan,

As per Part E, Item 2 of Water Licence 3AM-GRA1624, the Government of Nunavut, Department of Community and Government Services (GN-CGS) is notifying the Nunavut Water Board (NWB) of a proposed modification to the existing water supply facilities in Rankin Inlet.

The water storage tank adjacent to the Williamson Lake Pumphouse will be converted from a raw water storage tank to a treated water storage tank in summer 2016, in order to achieve the required chlorine contact time outlined in the Public Water Supply Regulations of the Public Health Act. The Chief Medical Officer of Health (CMOH) for Nunavut supports this project and has recommended the construction takes place as soon as possible. The proposed modification will have no impact on any Licence conditions; water withdrawal volumes from Nipissar Lake or Char River will remain the same.

Please see below for information required as per Part E, Item 4 of Water Licence 3AM-GRA1624:

a. A description of the facilities and/or works to be constructed;

To convert the water storage tank from containing raw water to treated water, there will be a second chlorine injection unit installed in Williamson Lake Pumphouse with injection occurring prior to the storage tank. The construction includes installation of the new chlorine injection unit, tubing, valves, etc. No changes are being made to the chlorine room size, number of gas cylinders or scales.



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Ministère des Services Communautaires et gouvernementaux

Also being included in the construction is the addition of online chlorine and turbidity analyzers for increased monitoring of the drinking water system. These analyzers are used for daily monitoring parameters outlined in the Public Waters Supply Regulations of the Public Health Act.

b. The proposed location of the structure(s);

The water storage tank is located adjacent to Williamson Lake Pumphouse, next to Williamson Lake in Rankin Inlet. The storage tank was constructed in 1991 and the location of the storage tank will not change.

c. Identification of any potential impacts to the receiving environment;

Consideration has been given to confirm that chlorinated water will not enter Nipissar Lake from the recirculation-line used to prevent freeze-ups during winter in the 2km pipeline between the Williamson Lake Pumphouse and the Nipissar Lake Pumphouse. There are check valves already located at Nipissar Lake Pumphouse and Williamson Lake Pumphouse to prevent water from flowing back into Nipissar Lake.

d. A description of any monitoring required, including sampling locations, parameters measured, and frequencies of sampling;

No additional monitoring is required as a result of this proposed modification.

e. Schedule for construction;

Construction is scheduled to take approximately 1 week, and is anticipated for the end of June/beginning of July 2016 (pending delivery of required equipment).

The new equipment will not go online to chlorinate the storage tank until the end of August 2016, after regular operational maintenance is performed to clean in the interior of the currently raw water storage tank. In converting the storage tank from raw water to treated water, it is important to ensure there is not biological growth or sediment inside the tank which will negatively impact the quality of the drinking water.

f. Drawings of Engineered Structures stamped by a Professional Engineer;

GN-CGS retained exp. Services to provide engineering consulting services for this project. Please find attached the following signed and stamped issued for tender drawings:



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- 4-1: Chlorination Plan
- 4-2: Chlorination Section and Details

Once the project is completed, signed and stamped as-built drawings will be forwarded to the NWB.

g. Proposed sediment and erosion control measures.

No sediment and erosion control measure are needed.

For further clarification or additional information on the proposed modification, please contact Megan Lusty at (867) 645-8176 or mlusty@gov.nu.ca.

Sincerely,

Megan Lusty, EIT

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Municipal Planning Engineer-In-Training Community and Government Services Kivalliq Region, Government of Nunavut P.O. Box 490, Rankin Inlet, NU, XOC 0G0

Phone: (867) 645-8176 Fax: (867) 645-8196 Email: mlusty@gov.nu.ca

cc: Atuat Shouldice, Resource Management Officer, Field Operations Unit, INAC