Water Resources Division
Resource Management Directorate
Nunavut Regional Office
P.O. Box 100
Iqaluit, NU, X0A 0H0

Your file - Votre référence
3AM-IQA1626
Our file - Notre référence
CIDM#1245339

March 29, 2019

Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0
E-mail: licensing@nwb-oen.ca

Re: Crown-Indigenous Relations and Northern Affairs Canada Comments on the City of Iqaluit Version 2 of the Environmental Monitoring Program and Quality Assurance and Quality Control Plan for Water Licence No. 3AM-IQA1626 – Municipal Undertaking

Dear Mr. Dwyer,

Thank you for your March 20, 2019 invitation to comment on the second revision of the Environmental Monitoring Program and Quality Assurance and Quality Control (QA/QC) Plan, which includes the Monitoring Program, submitted by the City of Iqaluit under Water Licence No. 3AM-IQA1626. Revision 2 included more details of the QA/QC and monitoring programs, provided up to date accreditation documents, and added a revision control section.

CIRNAC examined the submission. Comments have been provided pursuant to CIRNAC's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

1. Water Quality Analytical Parameters for Potable Water

References:

- City of Iqaluit, Environmental Monitoring Program and Quality Assurance/ Quality Control Plan, Revision 2, Section 4.3.2, March 2019.
- Federal-Provincial-Territorial Committee on Drinking Water, Canadian Drinking Water Guidelines, Health Canada, February 2017.
- Evans Analytical Group, ICP-OES and ICP-MS Detection Limit Guidance, 2007.

The City of Iqaluit states in Table 3 (page 7) that metals in potable water will be tested by the Inductively Coupled Plasma (ICP) method. For some metals, for example lead (0.01

mg/L) and mercury (0.001 mg/L), the Canadian Drinking Water Guidelines Maximum Acceptable Concentrations are so low that the ICP-AES (atomic emission spectrometry) method may not be appropriate; its analytical detection limit for most metals is about 0.05 mg/L (Evans Analytical Group, 2007). These metals should be analyzed by methods (e.g., ICP-Mass Spectrometry) that have the appropriate detection limits.

Recommendation:

CIRNAC recommends that appropriate analytical methods be selected for the analysis of metals in potable water.

2. Prevention of Cross-Contamination

References:

- City of Iqaluit, Environmental Monitoring Program and Quality Assurance/ Quality Control Plan, Revision 2, Section 4.3.3, March 2019.

The City of Iqaluit states (page 7) “Sampling equipment such as sampling poles are cleaned with soap and water after each sample is collected to prevent cross-contamination.” CIRNAC reminds the City of Iqaluit that Distilled Deionized Water (DDW) should be used rather than tap water.

Recommendation:

CIRNAC recommends using DDW to clean equipment and prevent cross-contamination and suggests the City make this distinction in the Environmental Monitoring Program and Quality Assurance/ Quality Control Plan, Revision 2.

If there are any questions or concerns, please contact me at (867) 975-4282 or bridget.campbell@canada.ca or David Zhong at (867) 975-4555 or david.zhong@canada.ca.

Sincerely,

Bridget Campbell,
Water Resource Coordinator