

August 26, 2010

Ms. Lynn Carter
Regulatory Officer
Mackenzie Valley Land and Water Board
7th Floor – 4910 50th Street
P.O. Box 2130
Yellowknife, NT X1A 2P6

SENT VIA EMAIL

Dear Ms. Carter,

RE: City of Yellowknife MV2009L3-0007 – Arsenic Criteria for Biotreatment Pad Lagoon Discharge Water

The Water Resources Division and South Mackenzie District Office of Indian and Northern Affairs Canada (INAC) has reviewed the information submitted by the City of Yellowknife in regards to modifying the arsenic criteria used for the discharge of water from the biotreatment pad. INAC notes that there are no formal effluent quality criteria for this discharge point within the current water licence and commends the City for requesting input and direction from the Board for a modification to internal procedures.

INAC offers the following comments for the consideration of the Board:

- Details on the volume of discharge water released should be provided within the monthly SNP report and the annual report. INAC assumes that the City is proposing periodic discharge. Information on the volumes, duration, flow rates (average and maximum) and timing of discharge would be useful to understand the potential loading of metals to the discharge area.
- INAC recommends that sampling be conducted prior to, during, and at the end of discharge. The INAC Inspector should be notified five days prior to the commencement of decant. Results should be provided to the INAC Inspector and within the monthly SNP report. Such information would provide insight into whether or not operational modifications could reduce arsenic loadings to the surrounding environment.
- INAC does not oppose the 340 µg/L discharge criteria as proposed by the City of Yellowknife. INAC understands that this limit was established for non-potable groundwater and that the proposed discharge will be to the land surface only. To ensure that this is the case, surface and groundwater flow patterns should be delineated in the discharge area. The discharge point should be monitored periodically to ensure that the discharge is not flowing overland. INAC

understands that as a requirement of the water licence, the City is required to delineate leachate patterns in and around the current landfill facility. If surface and groundwater from the discharge location flow towards or into a surface water body, the City should conduct monitoring of the downstream waterbody to confirm the appropriateness of the proposed effluent quality criteria in protecting the receiving environment. These monitoring sites may or may not be in addition to current SNP monitoring locations.

INAC hopes the preceding comments are helpful to the Board and the City. Should you have any questions or comments, feel free to contact Mr. Scott Stewart at (867) 669-2764 Scott.Stewart@inac.gc.ca or the undersigned at (867) 669-2574 Robert.Jenkins@inac.gc.ca

Sincerely,

A handwritten signature in blue ink, appearing to read 'R. Jenkins', is written over the word 'Sincerely,'.

Robert Jenkins
A/Manager
Water Resources Division
Northwest Territories Region
Indian and Northern Affairs Canada