



Indian and Northern
Affairs Canada

Affaires indiennes
et du Nord Canada

3rd Floor Bellanca Building
PO Box 1500
Yellowknife, NT
X1A 2R3

File: MV2009L3-0007

City of Yellowknife

September 30th 2009

Mackenzie Valley Land
& Water Board

To: Lynn Carter
Regulatory Officer
Mackenzie Valley Land and Water Board
P.O. Box 2130
Yellowknife, NT X1A 2P6

File

SEP 30 2009

Application # MV2009L3-0007

Copied To LC / Reg

SEND BY FAX: (867) 873-6610

**RE: MUNICIPAL CORPORATION OF THE CITY OF YELLOWKNIFE – TYPE
A WATER LICENCE RENEWAL APPLICATION**

INAC has reviewed the City of Yellowknife Type A Water Licence Renewal Application and its related documents. INAC would like to submit the following comments for the consideration of the Board.

PROPOSED LICENSE AMENDMENTS

Part D., Section 11

INAC supports the City's suggestion to perform a full year characterization of the effluent according to the CCME Strategy for the Treatment of Municipal Wastewater Effluent. INAC commends the City for its initiative.

SEWAGE DISPOSAL

Leaks at the Control Structure

INAC's July 2009 inspection report noted a leak at the control structure of Fiddler's Lagoon. In the City's correspondence, it was noted that the leak should be fixed after the fall decant. INAC would like the City to provide an update of the repair to the Board once completed. INAC also suggests that the City update their Spill Contingency Plan with the submitted "Action Plan", to ensure proper planning is in place should additional leaks/spills occur in the future.

pH Issue at F3

INAC understands that pH at SNP 0032-F3 has exceeded the pH range required in the water licence on several occasions. It is not clear why F3 has elevated pH. INAC recommends the City to pursue a study to determine the environmental effects and the reasoning of the elevated pH. Following this study, site specific criteria for F3 could be revisited.

Honey Bag Pit

The containment of the Honey Bag pit at the Fiddler's Sewage Lagoon was noted within an INAC inspection report. INAC recommends that Part D, Section 6 be changed to "*All bagged toilet wastes (honey bags) shall be disposed of at the Bagged Toilet Waste Disposal Facilities. The Bagged Toilet Waste disposal Facilities should be maintained and contained to the satisfaction of the inspector.*"

Fiddler's Lake Treatment System Plan

In the current licence, Part D, Section 11 requested the City to submit a Fiddlers Lake Treatment System Plan evaluating the Licence's present management of flows within the system. Two reports have been submitted, including an Expansion of Fiddler's Lagoon Treatment System Plan. INAC would like to recommend the following regarding the "Expansion of Fiddler's Lagoon Treatment System Plan":

- A wetland study is recommended to monitor the treatment performance of the Wetland during cold weather. INAC believes this study is necessary to understand the level of treatment being achieved through the wetland system. The City is suggesting the end of pipe sampling from this system be located 100m from Great Slave Lake. INAC would like the wetland study to evaluate the whole wetland system in order to justify the location of the end of pipe proposed by the City.
- The study also recommends a pilot study to evaluate the possibility of pre-treatment to improve the lagoon treatment performance. INAC is in support of this study and would also like to note the work that is currently being done with the Northern Research Working Group (NRWG) for Municipal Wastewater Effluent. This group is co-chaired by INAC and Environment Canada and has been formed to facilitate understanding of municipal wastewater effluent and site conditions in the North. The NRWG is very interested in the results of this pilot study and would like the City to communicate its projects and results. The NRWG would also be pleased to assist the City by providing a communication forum and a technical base of expertise on Northern MWW issues if it feels appropriate. For more information, please contact Ms. Catherine Mallet at Catherine.Mallet@inac-ainc.gc.ca or Ms. Anne Wilson at Ann.Wilson@ec.gc.ca.

SOLID WASTE DISPOSAL

Landfill Closure

The application notes that the current landfill is close to capacity. A proper landfill Closure plan should be submitted for review and approval before closure as described in part F, Section 1.

Composting Facility

The City is now operating a composting facility pilot study at their Solid Waste Facility. INAC supports this study. INAC recommends that the City sample the leachate from the composting facility before discharging to the Lagoon. INAC also recommends that the City record the quantity of compost received and sold as well as the quantity of water discharged from the composting facility to the sewage lagoon. This information should be recorded in the annual report.

Hydrocarbon Contaminated Soils

The City has been operating a contaminated soil facility since the summer of 2007. INAC Inspector's report in 2008 indicated that the volume of contaminated soil received has exceeded the capacity of the asphalt treatment pad. While runoff water from the pile on the asphalt pad is collected and treated at the landfill water treatment plant, the runoff from additional contaminated soil stored beside the asphalt pad facilitate the migration of fuel contaminants into the landfill.

To prevent contamination from runoff from contaminated soil temporary stored beside the treatment pad, INAC recommends that at a minimum the city should evaluate what is the storage capacity of the asphalt pad, and thereafter strategically plan with its clients when soil should be brought to the facility. To meet the predicted contaminated soil treatment demands, options such as building one or more supplementary treatment pad(s) could be considered.

INAC also recommends that runoff from the Hydrocarbon Soil Treatment Facility be sampled and results of that sampling be included within the Quarterly and Annual reporting requirements. Quantity of water discharged to the lagoon from the hydrocarbon Contaminated soil treatment facility should also be recorded and included in the annual report.

PLANS

Spills Contingency Plans

Part I, Section 1 should refer to INAC's new "Guidelines for Spill Contingency Planning" April 2007. Copies of the Guidelines can be obtained from the Water Resources Division by contacting Chelsea Janz at Chelsea.Janz@inac.gc.ca.

Storm Water Management Plan

The City's Municipal Stormwater Management Plan (MSWMP) has not been yet approved by the Board. The new licence should require submission of a revised Stormwater Management Plan for review and approval, should the submitted Plan not be deemed acceptable by the Board.

Fiddlers Lake Treatment System Plan

A revised Fiddler's Lake Treatment System Plan should be a requirement within the renewed licence. This Plan should include how the City intends to upgrade the Fiddler's Lake Treatment System to accommodate the wastewater capacity issue anticipated over

the next few years. This Plan could reflect commitments of recommendations from the "Expansion of Fiddler's Lagoon Treatment System Plan". The Plan should also include how the City intends to comply with the new upcoming CCME regulations. The Plan should also demonstrate how the City will ensure compliance of pH at station F3 and how the City will ensure no leaks or overflow of the sewage lagoon will be performed in the future.

SNP

Locations

INAC recommends that SNP requirements associated with the solid waste facility be revisited to reflect potential locations where runoff from the facility may occur, including the snow dump, the soil treatment facility and the composting facility. SNP locations should be chosen in consultation with the INAC inspector.

Parameters tested

Due to the new proposed CCME Strategy for the Treatment of Municipal Wastewater Effluent, it is recommended that CBOD be added to the list of parameters to be sampled from 0032-F1 and 0032F3 in Part B. Section 1.

If you have any further questions or concerns please contact either Ms. Catherine Mallet at (867) 669-2402 Catherine.Mallet@inac-ainc.gc.ca or Mr. Scott Stewart at (867) 669-2764 Scott.Stewart@inac-ainc.gc.ca

Sincerely,



Bob Reid
A/Manager
Water Resources Division
Indian and Northern Affairs Canada