



**Mackenzie Valley Land and Water Board**  
**7th Floor - 4910 50th Avenue**  
**P.O. Box 2130**  
**YELLOWKNIFE NT X1A 2P6**  
**Phone (867) 669-0506**  
**FAX (867) 873-6610**

### Staff Report

<b>Applicant:</b> City of Yellowknife	
<b>Location:</b> Yellowknife	<b>Application:</b> MV2009L3-0007
<b>Date Prepared:</b> December 29, 2014	<b>Meeting Date:</b> January 21, 2015
<b>Subject:</b> 2013 Annual Report and Proposal to Add Station to Surveillance Network Program	

#### 1. Purpose/Report Summary

The purpose of this Report is to present to the Mackenzie Valley Land and Water Board (the Board) the 2013 Annual Report submitted by the City of Yellowknife (City), and to provide an update on activities licensed under Type A Water Licence (WL) MV2009L3-0007. A proposal to add a station to the Surveillance Network Program (SNP) will also be presented for the Board's consideration.

#### 2. Background

- May 31, 2010 – WL MV2009L3-0007 issued for a period of 12 years;
- April 14, 2014 – 2013 Annual Report received;
- May 5, 2014 – Annual Report sent for review;
- July 8, 2014 – Reviewer comments due;
- July 24, 2014 – Proponent's response due;
- January 21, 2015 – Update presented to the Board; and
- February 29, 2020 – WL MV2009L3-0007 expires.

#### 3. Discussion

The WL Annual Report is not for Board approval; however, it is being presented as an update to the Board.

WL MV2009L3-0007 was issued to the City for the use of water and disposal of waste for municipal undertakings. Water is drawn from the Yellowknife River for drinking water; sewage is deposited into the Fiddlers

lagoons system; and solid waste is deposited at the Solid Waste Disposal Facility, located just off of Highway 4 north of the City.

This Annual Report was filed in accordance with Part B, Item 3 and Schedule 1, Item 1 of the WL; these are included in Appendix A of this Staff Report.

#### **4. Comments**

In the Board's [November 14, 2013 letter](#) approving the Landfill Operations and Maintenance Plan (LOMP), the Board provided direction to the City on a number of items:

1. To sample leachate from the Baling Facility and include the results in an updated LOMP. The City conducted testing of the Baling Facility leachate; however, the results have been included in the Annual Report (section e.2.i));
2. To include in a revised LOMP the estimated volumes of liquid and sludge deposited in the sewage lagoon from the Baling Facility as well as frequency of discharge. The City responded in the Annual Report (section o); and
3. To include testing results for leachate from the new landfill cell in their annual reporting. This information was included in section e.2.i.

#### **5. Review Comments**

No comment letters were received from Environment and Natural Resources (ENR) and Environment Canada (EC).

#### **6. Conclusion**

Regarding sampling results for leachate from the Baling Facility:

- The City has included sampling results for Baling Facility liquid waste; however, there are no sampling results for Baling Facility sludge.
- In section (v) of the Annual Report, the City committed to conduct a sludge management study during the 2015 fiscal year. This study is intended to support the completion of a Sludge Management Plan in 2016 (as required as part of the Operations and Maintenance Plan for the Sewage Disposal Facilities (Schedule 4, Item 1.e)). In the acceptance letter, the Board could encourage the City to include consideration of Baling Facility sludge in the sludge study and plan.

Regarding estimated volumes of liquid and sludge deposited in the sewage lagoon from the Baling Facility and frequency of discharge:

- The City has included the estimated volume and discharge frequency for Baling Facility sludge; however, there is no information on volume and discharge frequency for Baling Facility liquid waste. The City

states that due to the method of discharge, they are unable to provide this information.

- The Board could encourage the City to work with Inspectors to develop an estimate of the liquid fraction volume (i.e. L/Bale ratio) in order to be able to provide an estimated volume of liquid discharged from the Baling Facility for future Annual Reports.

Testing results for leachate from the new landfill cell:

- Currently testing of leachate from the new landfill cell is not included in the Licence; instead, the City has committed to testing this leachate in the LOMP. The Board could establish an SNP station at the leachate sump to formalize the testing the City has already agreed to carry out. Adding the new landfill leachate sump as an SNP station would not change Licensee obligations, and would be consistent with both the Biotreatment Pad and Compost Facility sumps. In discussions with the Inspector and the City, they indicated support for the addition of this SNP station. Parameters would be consistent with other SNP Stations designed to monitor for leachate (i.e. same as SNP stations 032-13A, 0032-14, 0032-15A, 0032-16, 0032-18 and 0032-18A). Sampling frequency would be prior to discharge.

## **7. Recommendation**

The Annual Report is not for Board approval; however, the Board may wish to follow up with the City based on the information provided in the Annual Report.

Board staff has prepared the following options for the Board's consideration. One or more of these options could be chosen to include in the Board's response letter to address the issues that have been identified:

- The Board could note that the City plans to conduct a sludge management study during the 2015 fiscal year to support the completion of a sludge management plan in 2016. The Board encourages the City to include consideration of all sources of sludge, including Baling Facility sludge, in the scope of the study and plan.
- The Board could encourage the City to work with Inspectors to develop an estimate of the liquid fraction volume (i.e. L/Bale ratio) in order to be able to provide an estimated volume of liquid discharged from the Baling Facility for future Annual Reports.
- The Surveillance Network Program (SNP) could be updated to include station 0032-19 to monitor leachate from the new landfill cell (Cell A). Sampling parameters match those listed for SNP stations 0032-13 through 0032-16, 0032-18 and 0032-18A. Sampling shall occur prior

to discharge of leachate; results should be submitted to an Inspector and the Board at least 10 days prior to discharge.

**8. Attachments**

- [2013 Annual Report](#);
- Draft Board response letter;
- Water Licence MV2009L3-0007 with draft revised SNP; and
- Appendix A – Water Licence conditions pertaining to the Annual Report.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "M Ehrlich".

Miki Ehrlich  
Regulatory Officer

## **Appendix A**

### **Water Licence Conditions pertaining to the Annual Report**

B.3 The Licensee shall file an annual report with the Board not later than March 31 of the year following the calendar year reported which shall contain the information as set out in Schedule 1, Item 1, included in this Licence.

#### **Schedule 1 – General Conditions**

1. The Annual Report referred to in Part B, item 3 shall include, but not necessarily be limited to, the following:
  - a) The monthly and annual quantities in cubic metres of fresh Water obtained from all sources;
  - b) The monthly and annual quantities in cubic metres of each and all Waste discharged to the Waste Disposal Facilities;
  - c) The monthly and annual quantities of Waste removed from the Waste Disposal Facilities;
  - d) A summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures;
  - e) Tabular summaries of all data generated under the Surveillance Network Program;
  - f) A summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
  - g) A summary of any studies requested by the Board that relate to Waste disposal, Water use or reclamation, and a brief description of any future studies planned;
  - h) A list of unauthorized discharges;
  - i) Comparison of Waste volumes accepted to the remaining storage volume at the Waste Disposal Facilities;
  - j) The monthly and annual quantities of organics received and quantity of compost produced and/or distributed from the compost facility;
  - k) Record of Biotreatment Pad containment pond liner inspections;
  - l) Updates or revisions to the approved Stormwater Management Plan;
  - m) Updates or revisions to the approved Sewage Disposal Facilities Operation and Maintenance Plan;
  - n) Updates or revisions to the approved Spill Contingency Plan;
  - o) Updates or revisions to the approved Solid Waste Disposal Facilities Operation and Maintenance Plan;

- p) Updates or revisions to the approved Biotreatment Pad Operation and Maintenance Plan;
- q) Updates or revisions to the approved Hazardous Waste Management Plan;
- r) Tabular summaries of all data generated from the Stormwater Effluent Monitoring Program;
- s) At each of the seven sampling locations for stormwater, provide trends of biological and heavy metal data collected in the Stormwater Effluent Monitoring Program (short term) and Surveillance Network Program monitoring station (long term);
- t) Comparison of the Surveillance Network Program data to Water Licence regulated limits and sampling and analysis requirements;
- u) The inclusion of all formal written correspondence between the Inspector and Licensee;
- v) A summary of efforts to monitor, manage, treat and dispose of sewage sludge at the Sewage Disposal Facilities; and
- w) Any other details on Water use or Waste disposal requested by the Board by November 1 of the year being reported.



Environmental Protection Operations Directorate (EPOD)  
Prairie & Northern Region (PNR)  
5019 52<sup>nd</sup> Street, 4<sup>th</sup> Floor  
P.O. Box 2310  
Yellowknife, NT X1A 2P7

July 3, 2014

EC File: 5200 000 001/004  
MVLWB File: MV2009L3-0007

Rebecca Chouinard  
Regulatory Manager  
Mackenzie Valley Land and Water Board  
7<sup>th</sup> Floor, 4922 48<sup>th</sup> St.  
PO Box 2130  
Yellowknife, NT X1A 2P6

Via online submission

Attention: Rebecca Chouinard

**RE: MV2009L3-0007 (Annual Water Licence Report and Updates to Plans – Municipal Water Licence – City of Yellowknife)**

Environment Canada (EC) has reviewed the information submitted to the Mackenzie Valley Land and Water Board (MVLWB) regarding the above-mentioned project proposal and will not be submitting any comments at this time. EC's specialist advice is provided pursuant to the *Canadian Environmental Protection Act 1999*, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Should you require further information, please do not hesitate to contact me at (867) 669-4707 or [Bradley.Summerfield@ec.gc.ca](mailto:Bradley.Summerfield@ec.gc.ca).

Sincerely,

Bradley Summerfield  
Environmental Assessment Coordinator

cc: Loretta Ransom, Senior Environmental Assessment Coordinator, PNR-EPOD  
Carey Ogilvie, Head, Environmental Assessment North (NT and NU), PNR-EPOD



Northwest  
Territories Environment and Natural Resources

July 8, 2014

Miki Ehrlich  
Regulatory Officer  
Mackenzie Valley Land and Water Board  
7<sup>th</sup> Floor – 4910 50<sup>th</sup> Avenue  
P.O. Box 2130  
Yellowknife, NT  
X1A 2P6

Dear Ms. Ehrlich,

**Re: City of Yellowknife  
Water Licence – MV2009L3-0007  
2013 Annual Water Licence Report and Updates to Plans  
Request for Review and Comments**

The Department of Environment and Natural Resources has reviewed the documents at reference based on its mandated responsibilities under the *Environmental Protection Act*, the *Forest Management Act*, the *Forest Protection Act*, the *Waters Act* and the *Wildlife Act* and has no comments or recommendations for the consideration of the Board at this time.

Should you have any questions or concerns, please do not hesitate to contact Patrick Clancy, Environmental Regulatory Analyst at 920-6118 or [patrick\\_clancy@gov.nt.ca](mailto:patrick_clancy@gov.nt.ca).

Sincerely,

Patrick Clancy  
Environmental Regulatory Analyst  
Environmental Impact Assessment  
Conservation, Assessment and Monitoring Division  
Department of Environment and Natural Resources  
Government of the Northwest Territories