

**Sustainable Development**

Environmental Stewardship Division  
Environmental Approvals Branch  
1007 Century Street, Winnipeg, Manitoba, Canada R3H 0W4  
T 204-945-7071 or 204-945-6658 F 204-945-4552  
[www.gov.mb.ca/sd/eal](http://www.gov.mb.ca/sd/eal)

**File: 5573.00**

September 25, 2018

Rob Elder , P.Eng.  
Director, Bipole III Converter Stations  
Transmission  
Manitoba Hydro  
18 – 360 Portage Avenue  
Winnipeg, MB R3C 0G8

Dear Mr. Elder:

**Re: Manitoba Hydro – Keewatinohk Construction Camp Lagoon – Alteration Requests**

I am responding to the August 10, 2018 letter and attachments regarding requests for alteration relative to the disposal of lagoon sludge and the abandonment of the sewer main associated with the Manitoba Hydro – Keewatinohk construction camp wastewater treatment lagoon (lagoon) that were constructed and operated under Environment Act Licence No. 3015 (Licence). Clause 60 d) of the Licence identifies that sludge from the lagoon is to be disposed of as a waste at a licenced or permitted waste disposal ground upon lagoon decommissioning.

As an alternative means of disposal, the letter and attachments describe a plan to land apply approximately 1200 m<sup>3</sup> of sludge from the primary cell of the lagoon that will be dewatered and used as a soil amendment in Excavated Material Placement Area (EMPA) 1C (approximately 7 hectares) and 1E (approximately fourteen hectares) where the soils are reported to be mixed clay and peat. Twelve representative soil samples from each of these EMPAs were bulked into one sample for each of the two sites. The two bulked samples were submitted for laboratory analyses. A plan to leave approximately 700 metres of low pressure HDPE sewer main that was pre-insulated and has a heat traced outer jacket in the ground between the lift station and the check valve manhole is also proposed. This piping is buried at a depth of approximately 3.5 metres. The two berm-surrounded EMPAs are proposed to have jack pines planted in spring/summer 2019.

The letter and attachments suggest that the proposed land application of sludge will have an overall positive effect on the receiving areas, particularly regarding natural re-vegetation. It also suggests that abandoning the pipe in the ground over that length will have less significant impact on the area than would result by removing it.

Upon review of the letter and attachments, I am satisfied that the environmental impacts of the proposed land application of sludge and the abandonment in place of the approximately 700 metres of HDPE sewer main are insignificant. Therefore, pursuant to Section 14(2) of The Environment Act, I hereby approve the implementation of the proposed alterations as described in the August 10, 2018 letter subject to the following conditions:

### **DEFINITIONS**

In this approval letter,

**"approved"** means approved by the Director, or an assigned Environment Officer, in writing;

**"biosolids"** means accumulated organic solids, resulting from wastewater treatment processes, that have received adequate treatment to permit the material to be recycled;

**"Director"** means an employee so designated pursuant to The Environment Act;

**"Environment Officer"** means an employee so designated pursuant to The Environment Act;

**"sludge"** means accumulated solid material containing large amounts of entrained water, which has separated from wastewater during processing; and

**"sludge solids"** means solids in sludge.

### **GENERAL TERMS AND CONDITIONS**

This Section of the approval letter contains requirements intended to provide guidance to Manitoba Hydro in implementing practices to ensure that the environment is maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

1. Manitoba Hydro shall, during all biosolids and sludge solids land application activities, report spills of fuels or other contaminants to an Environment Officer in accordance with the requirements of Manitoba Regulation 439/87 respecting Environmental Accident Reporting or any future amendment thereof.
2. Manitoba Hydro shall, during all biosolids and sludge solids land application activities, comply with the requirements of Manitoba Regulation 62/2008 respecting Nutrient Management or any future amendment thereof.
3. Manitoba Hydro shall only apply the biosolids and sludge solids to Excavated Material Placement Area (EMPA) 1C and 1E as indicated on Figure 1 of the August 10, 2018 letter and attachments.
4. Manitoba Hydro shall isolate the cell of the wastewater treatment lagoon from which biosolids and sludge solids are to be removed from the rest of the wastewater treatment

lagoon system while the biosolids and sludge solids are being mixed or removed from the cell.

5. Manitoba Hydro shall transport biosolids and sludge solids in containers in such a manner to prevent loss of biosolids, sludge solids and associated liquids to the satisfaction of an Environment Officer.
6. Manitoba Hydro shall maintain the sites in such manner that they do not create potential threats to the environment, public health or wildlife.
7. Manitoba Hydro shall maintain the sites in such manner as to control vector attraction and activity at the sites to the satisfaction of the assigned Environment Officer.

### **SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS**

8. Manitoba Hydro shall notify the assigned Environment Officer not less than ten days prior to the commencement of removal, transportation and land incorporation of biosolids and sludge solids. The notification shall include the intended starting date of the activities and the name of the contractor responsible for the activities.
9. Manitoba Hydro shall complete the application of the biosolids and sludge solids such that it is tilled into the surface materials in a manner acceptable to an Environment Officer.
10. Manitoba Hydro shall not permit the application of biosolids or sludge solids:
  - a) between November 10<sup>th</sup> of any year and April 10<sup>th</sup> of the following year, unless otherwise authorized in writing by the Director; or
  - b) to frozen soil.

### **MONITORING AND REPORTING SPECIFICATIONS**

11. Manitoba Hydro shall submit to the Director, not later than December 31, 2018, the details of the biosolids and sludge solids sampling and analysis programs used to determine the volumes and solids contents of the biosolids and sludge solids removed on a daily basis and the volume and the solids contents of biosolids and sludge solids applied to each area.
12. Manitoba Hydro shall submit to the Director, not later than December 31, 2018, the details of the field monitoring programs on the biosolids and sludge solids disposal operations used to determine the following:
  - a) the sodium bicarbonate extractable phosphorous, as P, in the upper 15 centimetres of the soil;
  - b) the pH of the soil;
  - c) the surface slope of the land; and
  - d) the number of hectares on which sludge solids were applied on a daily basis.

**TERMINATION**

13. This approval shall terminate December 31, 2018 unless otherwise extended by the Director.

If you have any questions or would like to discuss related matters, please contact Robert Boswick, Environmental Engineer, at 204-945-6030 or [robert.boswick@gov.mb.ca](mailto:robert.boswick@gov.mb.ca).

Sincerely,



Tracey Braun, M.Sc.  
Director

- c. Jodine MacDuff, Senior Environmental Specialist – Manitoba Hydro  
Don Labossiere/Tim Prawdzik/Jeff Fountain – Environmental Compliance and Enforcement Branch,  
Manitoba Sustainable Development  
Robert Boswick/Asit Dey– Environmental Approvals Branch, Manitoba Sustainable Development  
Public Registries