



Sustainable Development

Environmental Stewardship Division
Environmental Approvals Branch
1007 Century Street, Winnipeg, Manitoba R3H 0W4
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CLIENT FILE NO.: 6012.00

September 16, 2019

Stephanie Backhouse
Environmental Licensing and Protection
Manitoba Hydro
360 Portage Avenue (15)
Winnipeg, MB R3C 0G8

Dear Ms. Backhouse:

Enclosed is **Environment Act Licence No. 3297**, issued to **Manitoba Hydro** for the construction and operation of the Development being an expanded fish hatchery located at 3 McKay Avenue in Grand Rapids, in accordance with the Proposal filed under The Environment Act.

In addition to the enclosed Licence requirements, please be informed that all other applicable federal, provincial and municipal regulations and by-laws must be complied with. A Notice of Alteration must be filed with the Director for approval prior to any alteration to the Development as licensed.

If you have any questions on this matter, please contact Cristal Huculak, Environment Officer, at 204-627-8248 or Cristal.Huculak@gov.mb.ca.

Pursuant to Section 27 of The Environment Act, this licensing decision may be appealed by any person who is affected by the issuance of this Licence to the Minister of Sustainable Development within 30 days of the date of the Licence.

Sincerely,

Original Signed By

Siobhan Burland Ross, M. Eng., P. Eng.
Director
The Environment Act

- c: S. Kohler/P. Crocker/C. Huculak: Environmental Compliance and Enforcement
Bruce Webb: Environmental Approvals
Jasmine Langhan, Manitoba Metis Federation
Public Registries

NOTE: Confirmation of receipt of this Licence No. 3297 (by the Licensee only) is required by the Director of Environmental Approvals. Please acknowledge receipt by signing in the space below and email a copy of this letter to Bruce.Webb@gov.mb.ca by October 14, 2019.

On behalf of Manitoba Hydro

Date

****A COPY OF THE LICENCE MUST BE KEPT ON SITE AT THE DEVELOPMENT AT ALL TIMES****

LICENCE

Licence No. / Licence n° : 3297

Issue Date / Date de délivrance: September 16, 2019

In accordance with The Environment Act (C.C.S.M. c. E125)
Conformément à la Loi sur l'environnement (C.P.L.M. c. E125)

Pursuant to Section 10(1) / Conformément au Paragraphe 10(1)

THIS LICENCE IS ISSUED TO: / CETTE LICENCE EST DONNÉE À:

MANITOBA HYDRO "the Licencee"

for the construction and operation of the Development being an expanded fish hatchery located at 3 McKay Avenue in Grand Rapids, in accordance with the proposal filed under The Environment Act dated May 17, 2019 and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

"accredited laboratory" means an analytical facility accredited by the Standards Council of Canada (SCC), or accredited by another accrediting agency recognized by Manitoba Sustainable Development to be equivalent to the SCC, or be able to demonstrate, upon request, that it has the quality assurance/quality control (QA/QC) procedures in place equivalent to accreditation based on the international standard ISO/IEC 17025, or otherwise approved by the Director;

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

"composite sample" means a quantity of undiluted wastewater consisting of a minimum of 10 equal volumes of effluent, or flow proportional volumes collected over a 24-hour period, and may be collected manually or by means of an automatic sampling device;

"day" means any 24-hour period;

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

"effluent" means treated wastewater (fish waste only) flowing or pumped out of the Grand Rapids Fish Hatchery;

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

"five-day biochemical oxygen demand (BOD₅)" means that part of the oxygen demand usually associated with biochemical oxidation of organic material within five days at a temperature of 20°C;

"five-day carbonaceous biochemical oxygen demand (CBOD₅)" means that part of the oxygen demand usually associated with biochemical oxidation of carbonaceous organic matter within five days at a temperature of 20°C, excluding the oxygen demand usually associated with the biochemical oxidation of nitrogenous organic matter;

"grab sample" means a quantity of water or wastewater taken at a given place and time;

"Standard Methods for the Examination of Water and Wastewater" means the most recent edition of Standard Methods for the Examination of Water and Wastewater published jointly by the American Public Health Association, the American Waterworks Association and the Water Environment Federation.

"total residual chlorine" means the sum of free chlorine and combined chlorine, including inorganic chloramines;

"UV" means ultraviolet;

"UV disinfection" means a disinfection process for treating wastewater using ultraviolet radiation;

"UV germicidal dose" means the units of intensity of ultra violet light that is required to kill bacteria and viruses present in the effluent; and

"wastewater" means the spent or used water of a community or industry which contains dissolved and suspended matter.

GENERAL TERMS AND CONDITIONS

This Section of the Licence contains requirements intended to provide guidance to the Licencee 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. The Development includes the following components:
 - a) three existing wells on the hatchery property;
 - b) new pipelines connecting the wells to the hatchery buildings;

- c) water treatment and temperature control equipment, consisting of a degassing tower in the aeration building, a modular water treatment facility adjacent to the existing service garage and water treatment skids, including temperature control equipment in each hatching and rearing area;
 - d) lake sturgeon rearing facilities located in the main hatchery building;
 - e) walleye hatching facilities located in the existing service garage;
 - f) a wastewater treatment system consisting of a drum filter with backwash water directed to bag filters and effluent ultraviolet disinfection, with an average effluent flow rate of 130 litres per minute and a maximum flow rate of 850 litres per minute; and
 - g) an existing wastewater effluent outfall to the Saskatchewan River.
- 2. In addition to any of the limits, terms and conditions specified in this Licence, the Licencee shall, upon the request of the Director:
 - a) sample, monitor, analyze or investigate specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, treatment, handling, disposal or emission systems, for such pollutants, ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, and for such duration and at such frequencies as may be specified;
 - b) determine the environmental impact associated with the release of any pollutant from the Development;
 - c) conduct specific investigations in response to the data gathered during environmental monitoring programs; or
 - d) provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, descriptions of sampling and analytical procedures being used, bioassay data, flow rate measurements and such other information as may from time to time be requested.
- 3. The Licencee shall submit all information required to be provided to the Director or Environment Officer under this Licence, in written and electronic format, in such form (including number of copies) and of such content as may be required by the Director or Environment Officer, and each submission shall be clearly labeled with the Licence Number and Client File Number associated with this Licence.
- 4. The Licencee shall collect and dispose of all used oil products and other regulated hazardous wastes generated by the machinery used in the construction and operation of the Development in accordance with applicable Manitoba Sustainable Development and legislation requirements.
- 5. The Licencee shall maintain the water supply wells associated with the Development to prevent the contamination of groundwater by surface water:
 - a) entering the well casings through the top of the casings; and
 - b) entering the well casings through the sides of the casings.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Construction - General

6. The Licencee shall notify the assigned Environment Officer not less than two weeks prior to beginning construction of the Development. The notification shall include the intended starting date of construction and the name of the contractor responsible for the construction.
7. The Licencee shall dispose of non-reusable demolition and construction debris from the Development at a waste disposal ground operating under the authority of a permit issued pursuant to Manitoba Regulation 37/2016 respecting Waste Management Facilities or any future amendment thereof, or a Licence issued pursuant to The Environment Act.
8. The Licencee shall comply with the requirements of The Heritage Resources Act, and suspend construction and immediately notify the Historic Resources Branch if heritage resources are encountered during the construction of the Development.
9. The Licencee shall comply with the requirements of Manitoba Regulation 188/2001 respecting Storage and Handling of Petroleum Products and Allied Products or any future amendment thereof.
10. The Licencee shall, during construction, operation and maintenance of the Development, operate, maintain and store all materials and equipment in a manner that prevents any deleterious substances (fuel, oil, grease, hydraulic fluids, coolant, paint, uncured concrete and concrete wash water, etc.) from entering watercourses or any well, and have an emergency spill kit for in-water use available on site during construction.
11. The Licencee shall, during construction and maintenance of the Development, prevent the introduction and spread of foreign aquatic and terrestrial biota by cleaning equipment prior to its delivery to the site of the Development and complying with the requirements of Manitoba Regulation 173/2015 respecting Aquatic Invasive Species or any future amendment thereof.

Breakdown or Process Upset Reporting

12. The Licencee shall, in the case of physical or mechanical equipment breakdown or process upset where such breakdown or process upset results or may result in the release of a pollutant in an amount or concentration, or at a level or rate of release, that causes or may cause a significant adverse effect, immediately report the event by calling the 24-hour environmental accident reporting line at 204-944-4888 (toll-free 1-855-944-4888). The report shall indicate the nature of the event, the time and estimated duration of the event and the reason for the event.
13. The Licencee shall, following the reporting of an event pursuant to Clause 12,
 - a) identify the repairs required to the mechanical equipment;

- b) undertake all repairs to minimize unauthorized discharges of a pollutant;
- c) complete the repairs in accordance with any written instructions of the Director and/or the Environment Officer; and
- d) submit a report to the Director about the causes of breakdown and measures taken, within one week of the repairs being done.

Operation - General

- 14. The Licencee shall operate the Development with respect to the volume and rate of water diverted in accordance with a Water Rights licence issued pursuant to The Water Rights Act.
- 15. The Licencee shall develop, maintain and implement a wellhead protection plan for the wells of the Development that addresses disruption and contamination due to natural disasters, spills of contaminants and vandalism.
- 16. The Licencee shall dispose of solid waste and the contents of filled bag filters in accordance with the requirements of Clause 7 of this Licence.

Operation – Effluent Discharge

- 17. The Licencee shall not discharge effluent to the Saskatchewan River from the Development where:
 - a) the organic content of the effluent, as indicated by the five-day carbonaceous biochemical oxygen demand (CBOD₅), is in excess of 25 milligrams per litre;
 - b) the total suspended solids content of the effluent, as indicated by the non-filterable residue, is in excess of 25 milligrams per litre;
 - c) the total phosphorus is in excess of 1.0 milligram per litre, as determined by the thirty-day rolling average; and
 - d) the unionized ammonia content of the effluent is in excess of 1.25 milligrams per litre expressed as nitrogen (N), at 15°C ±1°C.

Operation - Disinfection

- 18. The Licencee shall have adequate instrumentation installed to provide constant monitoring of the UV process to ensure compliance with the UV disinfection requirements. Such instrumentation shall include but not be limited to the following:
 - a) a UV sensor to monitor lamp intensity;
 - b) appropriate alarm and shutdown systems;
 - c) a lamp monitoring system to identify the location of individual lamp failures;
 - d) an hour meter to display actual hours of UV lamp operation; and
 - e) protective circuits for overcurrent and ground current leakage detection.
- 19. The Licencee shall utilize UV lamps in the UV disinfection process that have a rated output capable of delivering a germicidal dose not less than 80 megaJoules/sq cm.

20. The Licencee shall operate and maintain the UV disinfection system to give a germicidal dose of 80% or more of the design UV germicidal dose, at the end of the lamp life.
21. The Licencee shall when chlorine is used as a disinfecting agent:
 - a) obtain grab samples prior to and daily during the discharge period and have them analyzed for total residual chlorine; and
 - b) not discharge effluent where the concentration of the total residual chlorine is in excess of 0.02 milligrams per litre.

MONITORING AND REPORTING

22. The Licencee shall, unless otherwise specified in this Licence:
 - a) carry out all preservations and analyses on liquid samples in accordance with the methods prescribed in the Standard Methods for the Examination of Water and Wastewater, or in accordance with equivalent preservation and analytical methodologies approved by the Director;
 - b) carry out all sampling of, and preservation and analyses on, soil samples in accordance with methodologies approved by the Director;
 - c) have all analytical determinations undertaken by an accredited laboratory; and
 - d) report the results to the Director, in writing and in an electronic format acceptable to the Director, within 60 days of the samples being taken.
23. The Environment Officer shall approve the sampling location for the effluent if the sampling location is altered from the Environment Act Proposal.

Effluent Monitoring

24. The Licencee shall, for the first three months of operation of the Development, collect monthly grab samples of Filox filter backwash effluent and have the samples analyzed for:
 - a) iron; and
 - b) manganese.
25. The Licencee shall take one flow proportional composite sample of effluent from the effluent monitoring station over a 24-hour period once each month when the Development is discharging to the Saskatchewan River, and have the sample analyzed for:
 - a) five-day carbonaceous biochemical oxygen demand (CBOD₅);
 - b) total suspended solids;
 - c) unionized ammonia;
 - d) total ammonia;
 - e) total phosphorus;
 - f) pH; and
 - g) temperature.

26. The Licencee shall transport the samples collected pursuant to Clauses 24 and 25 of this Licence, to an accredited laboratory for analysis. The samples shall be stored and transported in accordance with this Licence to ensure that the samples are suitable for analysis.
27. The Licencee shall during each year maintain the following records and retain them for a minimum period of five calendar years:
 - a) reports of visual inspections of wastewater treatment equipment conducted at a minimum of once per month;
 - b) wastewater sample dates;
 - c) original copies of laboratory analytical results of the sampled wastewater;
 - d) a summary of laboratory analytical results;
 - e) effluent discharge dates; and
 - f) monthly effluent discharge volumes from the Development.
28. The Licencee shall submit an annual report to the Environment Officer by February 28 of the following year including all records required by Clause 27 of this Licence.

REVIEW AND REVOCATION

- A. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has or is failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Director may, temporarily or permanently, revoke this Licence.
- B. If the Licencee has not commenced construction of the Development within three years of the date of this Licence, the Licence is revoked.
- C. If, in the opinion of the Director, new evidence warrants a change in the specifications, limits, terms or conditions of this Licence, the Director may require the filing of a new proposal pursuant to Section 10 of The Environment Act.

Original Signed By

Siobhan Burland Ross, M. Eng., P. Eng.
Director
The Environment Act