

# Environment Act Licence Loi sur l'environnement Licence

Manitoba  
Conservation  
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Manitoba



Licence No./Licence n° 2671 R  
Issue Date/Date de délivrance September 23, 2004

**REVISED: April 12, 2005**

**IN ACCORDANCE WITH THE ENVIRONMENT ACT (C.C.S.M. c. E125)  
THIS LICENCE IS ISSUED PURSUANT TO SECTION 11(1) AND 14(2) TO:**

**4033515 MANITOBA ASSOCIATION INC. (THOMPSON REGIONAL AIRPORT  
AUTHORITY); "the Licence"**

for the construction and operation of the Development being a wastewater collection system, package wastewater treatment plant and sand treatment mound to serve the Thompson Municipal Airport, located on SE 33-78-3WPM in the Local Government District of Mystery Lake and in accordance with the Proposal filed pursuant to The Environment Act on February 26, 2004, and subsequent information submitted on May 11, 2004 and February 17, 2005 and subject to the following specifications, limits, terms and conditions:

## DEFINITIONS

In this Licence,

"**accredited laboratory**" means an analytical facility accredited by the Standard Council of Canada (SCC), or accredited by another accrediting agency recognized by Manitoba Conservation to be equivalent to the SCC, or 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;

"**affected area**" means a geographical area excluding the property of the development;

"**approved**" means approved by the Director in writing;

"**appurtenances**" means machinery, appliances, or auxiliary structures attached to a main structure to enable it to function, but not considered an integral part of it;

"**as constructed drawings**" means engineering drawings complete with all dimensions which indicate all features of the Development as it has actually been built;

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

"**bioassay**" means a method of determining toxic effects of industrial wastes and other wastewaters by using viable organisms;

"**composite sample**" means a quantity of wastewater consisting of equal volumes of effluent, or flow proportional volumes, and may be collected manually or by means of an automatic sampling device;

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

"**effluent**" means treated wastewater flowing or pumped out of the wastewater treatment plant;

"**fecal coliform**" means aerobic and facultative, Gram-negative, nonspore-forming, rod-shaped bacteria capable of growth at 44.5°C, and associated with fecal matter of warm-blooded animals;

"**five-day biochemical oxygen demand (BOD<sub>5</sub>)**" means that part of oxygen usually associated with biochemical oxidation of organic material within 5 days at 20°C;

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

"**influent**" means water, wastewater, or other liquid flowing into the wastewater treatment plant;

"**leachate**" means liquid that has percolated through solid waste or other permeable material and has extracted dissolved or suspended materials from it;

"**MPN index**" means the most probable number of coliform organisms in a given volume of wastewater as determined by statistical estimation;

"**odour nuisance**" means a continuous or repeated odour, smell or aroma, in an affected area which is offensive, obnoxious, troublesome, annoying, unpleasant or disagreeable to a person:

- (a) residing in an affected area;
- (b) working in an affected area; or
- (c) present at a location in an affected area which is normally open to members of the public;

if the odour, smell or aroma

- (d) is the subject of at least 5 written complaints received by the Director in a form satisfactory to the Director and within a 90 day period, and from 5 different persons falling within clauses (a), (b) or (c), who do not live in the same household; or
- (e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses (a), (b) or (c), and the Director is of the opinion that if the odour, smell or aroma had occurred in a more densely populated area there would have been at least 5 written complaints

received within a 90 day period from 5 different persons who do not live in the same household;

**"sand treatment mound"** means the total area field consisting of sand media, through which wastewater is passed to provide treatment, a perimeter collection system that collects all wastewater effluent and a drain to discharge treated effluent to the sewage ejector;

**"wastewater effluent"** means wastewater after it has undergone at least one form of physical, or biological treatment;

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

**"wastewater treatment plant"** means the central facility of wastewater treatment facilities which contains all treatment processes exclusive of the collection system;

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

**"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 coliform"** means a group of aerobic and facultative anaerobic, Gram-negative, non-spore forming, rod-shaped bacteria, that ferment lactose with gas and acid formation within 48 hours at 35°C and inhabit predominantly the intestines of man or animals, but are occasionally found elsewhere and include the sub-group of fecal coliform bacteria; and

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

### GENERAL SPECIFICATIONS

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 Licencee shall operate the wastewater treatment plant in such a manner that all of the wastewater generated within the Thompson Municipal Airport is directed towards the wastewater treatment plant or other approved wastewater treatment facility.
2. The Licencee shall ensure that all waste solids and sludge shall be disposed of in a waste disposal ground operated under a permit issued in accordance with Manitoba Regulation 150/91 or at a treatment facility approved by the Director.
3. The Licencee shall not direct any petroleum hydrocarbons including, but not limited to, gasoline, diesel fuel, or lubricating oil to the Development.
4. In addition to any of the following specifications, 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, handling, treatment and disposal systems, for such pollutants, ambient quality, aquatic toxicity, seepage characteristics and discharge rates and for such duration and frequencies as may be specified;
  - b) determine the environmental impact associated with the release of any pollutant from the Development; or
  - c) provide the director within such time as may be specified, with such reports, drawings, specifications, analytical data, bioassay data, flow rate measurements and such other information as may from time to time be requested.
5. The Licencee shall, unless otherwise specified in this Licence:
  - a) carry out all preservations and analyses of 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; and
  - b) ensure that all analytical determinations are undertaken by an accredited laboratory.
6. The Licencee shall submit all information required to be provided to the Director under this Licence, in writing, in such form (including number of copies), and of such content as may be required by the Director.
7. The Licencee shall ensure that the operation of the Development is carried out by individuals properly trained and qualified to do so.



8. The Licencee shall not cause or permit an odour nuisance to be created as a result of the construction, operation or alteration of the Development, and shall take such steps as the Director may require to eliminate or mitigate an odour nuisance.
9. The Licencee shall ensure that adequate instrumentation is installed to provide constant monitoring of the UV process to ensure compliance with the disinfection requirements. Such instrumentation shall include but not be limited to the following:
  - a) an UV sensor to monitor lamp intensity;
  - b) an appropriate alarm and shutdown systems;
  - c) a lamp monitoring system to identify the location of individual lamp failures;
  - d) an hour meter which cannot be reset to display actual hours of UV lamp operation; and
  - e) protective circuits for overcurrent and ground current leakage detection.
10. The Licencee shall in case of physical or mechanical breakdown of the Development:
  - a) notify the Director immediately;
  - b) identify the repairs required to the Development; and
  - c) complete the repairs in accordance with the written instructions of the Director.
11. The Licencee shall actively participate in any future watershed based management study, plan or nutrient program, approved by the Director, for the Burntwood River and associated waterways and watersheds.

#### SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

12. The Licencee shall:
  - a) install and maintain a flow measuring device at a location acceptable to the Director which is capable of measuring the volume of influent with an accuracy of  $\pm 2$  percent; and
  - b) have the flow measuring device re-calibrated biannually or on the request of an Environment Officer.
13. The Licencee shall:
  - a) construct and make available for use by an Environment Officer, a secured and heated effluent monitoring station, allowing direct access to the discharge pipeline following the UV disinfection and prior to the effluent lift station;
  - b) ensure that the monitoring station is accessible to an Environment Officer at all times;
  - c) install and maintain a flow measuring device at the monitoring station or at a location acceptable to the Director which is capable of measuring the volume of effluent with an accuracy of  $\pm 2$  percent;

- d) have the flow measuring device re-calibrated biannually or on the request of an Environment Officer;
  - e) ensure that the monitoring station is equipped with a flow-proportional sampling device equipped to function with the flow measuring device and have the sampling device available on request for use by an Environment Officer; and
  - f) ensure that the monitoring station is equipped with an electrical power source of 15 amperes at 110 volts.
14. The Licencee shall operate the sludge dewatering system in such a manner that:
- a) all sludge bags containing sludge are stored in an area with a leachate collection system at all times, and
  - b) all leachate from the dewatering area is returned to the influent line of the wastewater treatment plant.
15. The Licencee shall install and maintain a security fence around all components of the wastewater treatment plant and sludge dewatering facility, which are not enclosed within secured buildings.
16. The Licencee shall ensure that the wastewater load on the wastewater treatment plant does not exceed the design capacities as follows:
- a) hydraulic loading not to exceed  $49.2 \text{ m}^3$  for any 24-hour period; and
  - b) organic loading not to exceed 15.72 kilograms of five-day biochemical oxygen demand ( $\text{BOD}_5$ ) per day.
17. The Licencee shall not discharge wastewater effluent from the wastewater treatment plant as sampled at the monitoring station located after UV disinfection and before the lift station where:
- a) the organic content of the wastewater effluent, as indicated by the five-day biochemical oxygen demand ( $\text{BOD}_5$ ), is in excess of 30 milligrams per litre;
  - b) the fecal coliform content of the wastewater effluent, as indicated by the MPN index, is in excess of 200 per 100 millilitres of sample as determined by the monthly geometric mean of 1 grab sample collected at equal time intervals on each of a minimum of 3 consecutive days per week;
  - c) the total coliform content of the wastewater effluent, as indicated by the MPN index, is in excess of 1500 per 100 millilitres of sample as determined by the monthly geometric mean of 1 grab sample collected at equal time intervals on each of a minimum of 3 consecutive days per week;
  - d) the total suspended solids content of the wastewater effluent, as indicated by the non-filterable residue is in excess of 30 milligrams per litre; and
  - e) the total ammonia concentration of the wastewater effluent is in excess of:
    - i) 5 milligrams per litre between May 1 and November 1 of any year; and
    - ii) 10 milligrams per litre between November 1 and May 1 of any year.

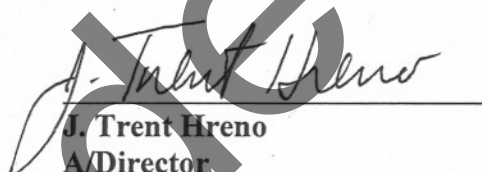
### MONITORING AND REPORTING SPECIFICATIONS

18. The Licencee shall:
- a) take one composite sample of effluent, from the effluent monitoring station, once each month during the discharge period;
  - b) have the composite effluent sample analyzed for five-day biochemical oxygen demand, field temperature, field pH, total ammonia and total suspended solids; and
  - c) ensure that all analytical determinations are undertaken by an accredited laboratory.
19. The Licencee shall, following the commissioning of the UV disinfection system:
- a) take grab samples of the effluent from the effluent monitoring station during the discharge period once each week;
  - b) have the grab samples analyzed for fecal coliform content and total coliform content; and
  - c) ensure that all analytical determinations are undertaken by an accredited laboratory.
20. The Licencee shall:
- a) not implement the existing sand treatment mound for wastewater treatment; and
  - b) submit to the Director for approval, within three months of the date of this Licence, a decommissioning plan for the existing sand treatment mound, to be carried out as approved by the Director.
21. The Licencee shall report all the information requested through the provisions of this Licence to the Director, within 60 days of the samples being taken.
22. The Licencee shall:
- a) prepare "as constructed drawings" for the Development, including the effluent discharge pipeline, complete with final elevations, and shall label the drawings "As Constructed"; and
  - b) provide to the Director, on or before December 31, 2005, two sets of "As Constructed Drawings" of the Development.

### REVIEW OR REVOCATION

- A. This Licence replaces Licence No. 2671, which is hereby rescinded.
- B. 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.

- C. If the Licencee has not commenced construction of the Development within two years of the date of this Licence, the Licence is revoked.
- D. 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 11 of The Environment Act.

  
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J. Trent Hreno  
A/Director  
Environment Act

Client File No.: 5026.00

Rescinded