

Environment Act Licence Loi sur l'environnement Licence

Manitoba
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Licence No./Licence n° 1154 RR

Issue Date/Date de délivrance January 19, 1988

Revised: April 7, 2000
December 19, 2000

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

LORD SELKIRK SCHOOL DIVISION NO. 11: "the Licencee"

for the construction and operation of the Development being a package extended aeration wastewater treatment plant located on Parcel 3, Plan 6249 WLTO, in the Parish of St. Andrews in the Rural Municipality of St. Andrews and in accordance with the Proposal filed under The Clean Environment Act on February 18, 1972 and the Notices of Alteration filed under The Environment Act on February 28, 2000 and November 20, 2000 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 Canadian Standard Can/CSA-Z753, extension of the international standard ISO 9000, Guide 25;

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

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

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

"**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 a minimum of 10 equal volumes of effluent or flow proportional volumes collected at approximately equal time intervals over a period of not less than 6 hours and not exceeding 24 hours, 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, non-spore-forming, rod-shaped bacteria capable of growth at 44.5°C, and associated with fecal matter of warm-blooded animals;

"final discharge point" means a sample location prior to the discharge conduit leading to the receiving stream where a disinfected sample can be obtained;

"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;

"five day biochemical oxygen demand (BOD₅)" means that part of oxygen usually associated with biochemical oxidation of organic material within 5 days at 20°C;

"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;

"sewage" means human body, toilet, liquid, waterborne culinary, sink or laundry waste;

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

"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;

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

"UV dose" means the unit of intensity of ultraviolet light that is required to kill bacteria and viruses present in the sewage effluent; and

"wastewater treatment plant" means a plant where sewage is collected and treated.

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. 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.
2. 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.
3. 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.
4. The Licencee shall operate the wastewater treatment plant in such a manner that:
 - a) all the sewage generated within St. Andrews Elementary School and the Community Centre is directed to the wastewater treatment plant or other approved facility;
 - b) only sewage as defined in this Licence is discharged into the wastewater treatment plant; and
 - c) waste solids and sewage sludge are treated and disposed at a facility approved by the Director.
5. The Licencee shall not cause or permit an odour nuisance to be created as a result of the operation or alteration of the Development, and shall take such steps as the Director may require to eliminate or to mitigate an odour nuisance.
6. The Licencee shall install, operate and maintain an effluent discharge pipeline from the wastewater treatment plant into the Red River, and shall take the necessary steps to prevent freezing of the effluent in the pipeline.

7. 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 UV sensor to monitor lamp intensity;
 - appropriate alarm and shutdown systems;
 - a lamp monitoring system to identify the location of individual lamp failures;
 - an hour meter which cannot be reset to display actual hours of UV lamp operation; and
 - protective circuits for overcurrent and ground current leakage detection.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

8. The Licencee shall ensure that the sewage load on the wastewater treatment plant does not exceed the design capacities as follows:
- hydraulic loading not to exceed 131 m³ for any 24-hour period; and
 - organic loading not to exceed 14.2 kilograms of five-day biochemical oxygen demand (BOD₅) per day.
9. The Licencee shall ensure that the UV lamps have a rated output of at least 253 nanometers (nm) capable of delivering a germicidal dose in excess of 30, 000 microwatt seconds/sq cm.
10. The Licencee shall ensure that the UV units are sized to give a germicidal dose of 20, 000 microwatt seconds/sq cm or more, at the end of lamp life.
11. The Licencee shall not discharge sewage effluent from the wastewater treatment plant, where:
- the organic content of the effluent, as indicated by the five-day biochemical oxygen demand (BOD₅), is in excess of 30 milligrams per litre;
 - the suspended matter content of the sewage effluent, as indicated by the non-filterable residue is in excess of 30 milligrams per litre;
 - the fecal coliform content of the sewage effluent, as indicated by the MPN index, is in excess of 200 per 100 millilitres of sample;
 - the total coliform content of the sewage effluent, as indicated by the MPN index, is in excess of 1500 per 100 millilitres of sample; or
 - the concentration of total ammonia is in excess of the values indicated in Schedule 1 attached to this Licence.

MONITORING AND REPORTING SPECIFICATIONS

12. The Licencee shall provide a system acceptable to the Director, to measure the sewage flows to the wastewater treatment plant, prior to operating the wastewater treatment plant.
13. The Licencee shall take samples of influent sewage before the sewage enters the wastewater treatment plant and of treated sewage effluent at the final discharge point.
14. The Licencee shall provide a heated and secured effluent monitoring station acceptable to the Director and equipped with:
- a direct access way for an effluent sampling line to a location near the discharge from the UV disinfection chamber; and
 - an electrical power source of 15 amperes at 110 volts.

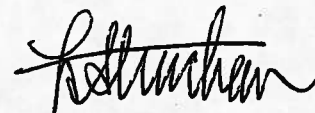
15. The Licencee shall:
- take one composite sample of effluent from the wastewater treatment plant during the discharge period once each month;
 - take three grab samples of effluent from the wastewater treatment plant during the discharge period once each month;
 - have the composite effluent sample analyzed for five day biochemical oxygen demand, field temperature, field pH, ammonia and total suspended solids;
 - have the grab samples analyzed for fecal coliform content and total coliform content; and
 - report the results to the Director within 60 days of the samples being taken.
16. The Licencee shall:
- prepare "as constructed drawings" for the Development, and shall label the drawings "As Constructed"; and
 - provide to the Director, on or before February 15, 2001, "as constructed drawings" of the wastewater treatment plant, including the effluent discharge pipeline complete with final elevations.
17. The Licencee shall in case of physical or mechanical breakdown of the wastewater collection and/or treatment system, including the UV disinfection system:
- notify the Director immediately;
 - identify the repairs required to the waste collection and/or treatment system; and
 - complete the repairs in accordance with the written instructions of the Director.

DECOMMISSIONING

18. The Licencee shall, after placing the Development into operation, decommission the existing wastewater treatment plant in accordance with the decommissioning terms stated in the Notice of Alteration dated February 28, 2000.

REVIEW AND REVOCATION

- A. This Licence replaces Licence No. 1154 R 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, 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.



Larry Strachan, P. Eng.
Director
Environment Act

Schedule 1
To Environment Act Licence No. 1154 RR

Month	Maximum Allowable Total Ammonia in Wastewater Effluent (mg/L)
January	10
February	10
March	10
April	10
May	5
June	5
July	5
August	5
September	5
October	10
November	10
December	10