



**Conservation and Water Stewardship**

Environmental Stewardship Division  
Environmental Approvals Branch  
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**CLIENT FILE NO.: 263.10**

February 11, 2015

Doug Nicholson  
Frontier School Division  
30 Speers Road  
Winnipeg MB R2J 1L9

Dear Mr. Nicholson:

Enclosed is **Environment Act Licence No. 3134** dated February 11, 2015 issued to **Frontier School Division** for the construction and operation of the Development being a wastewater collection system and a 125 m<sup>3</sup>/day wastewater treatment plant located on Lot 63, in the settlement of Norway House, Manitoba, with discharge of treated effluent into the Jack River, and in accordance with the Proposal filed under *The Environment Act* on May 13, 2014, and additional information provided on November 4, 2014.

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.

For further information on the administration and application of the Licence, please feel free to contact Bereket Assefa, Environmental Engineer at 204-945-5081.

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 Conservation and Water Stewardship within 30 days of the date of the Licence.

Yours truly,

*“original signed by”*

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**Tracey Braun, M.Sc.**  
**Director**  
**Environment Act**

c: Don Labossiere, Director, Environmental Compliance and Enforcement  
Tim Prawdzik, Provincial Manager, Environmental Compliance and Enforcement  
Art Gossen, Alliance Engineering Services Inc  
Public Registries

**NOTE:** Confirmation of Receipt of this Licence No. 3134 (*by the Licencee only*) is required by the Director of Environmental Approvals. Please acknowledge receipt by signing in the space provided below and faxing a copy (letter only) to the Department by February 25, 2015.

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On behalf of Frontier School Division

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Date

# LICENCE

Licence No. / Licence n°

3134

Issue Date / Date de délivrance

February 11, 2015

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 11(1) / Conformément au Paragraphe 11(1)

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

**FRONTIER SCHOOL DIVISION;**  
**"the Licencee";**

for the construction and operation of the Development being a wastewater collection system and a 125 m<sup>3</sup>/day wastewater treatment plant located on Lot 63, in the settlement of Norway House, Manitoba, with discharge of treated effluent into the Jack River, and in accordance with the Proposal filed under *The Environment Act* on May 13, 2014, and additional information provided on November 4, 2014, and subject to the following specifications, limits, terms and conditions:

**DEFINITIONS**

In this Licence,

**"access road"** means a road that leads from a Provincial Trunk Highway, Provincial Road, or a municipal road;

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

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

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

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

"**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;

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

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

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

"**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 the oxygen demand usually associated with biochemical oxidation of organic matter within five days at a temperature of 20°C;

"**five-day carbonaceous biochemical oxygen demand (CBOD<sub>5</sub>)**" 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 wastewater taken at a given place and time;

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

"**mg/L**" means milligrams per litre;

"**MPN Index**" means the most probable number of coliform organisms in a given volume of wastewater which, in accordance with statistical theory, would yield the observed test result with the greatest frequency;

"**noise nuisance**" means an unwanted sound, in an affected area, which is annoying, troublesome, 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 unwanted sound

- 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, 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 unwanted sound 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;

**"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, 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.

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

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

**"sludge solids"** means solids in sludge;

**"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, nonspore-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 germicidal dose"** means the unit of intensity of ultra violet light that is required to kill bacteria and viruses present in the wastewater effluent;

**"WAS"** means waste activated sludge removed from the SBR;

**"waste disposal ground"** means an area of land designated by a person, municipality, provincial government agency, or crown corporation for the disposal of waste and approved for use in accordance with Manitoba Regulation 150/91, or any future amendments thereto, or a Licence pursuant to *The Environment Act*;

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

**"wastewater collection system"** means the sewer and pumping system used for the collection and conveyance of domestic, commercial and industrial wastewater; and

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

### **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 limits, terms and conditions specified in this Licence, the Licencee shall, upon the request of the Director:

- a) sample, monitor, analyze and/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 or ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, for such duration and at such frequencies as may be specified;
  - b) determine the environmental impact associated with the release of any pollutant(s) from the Development; or
  - c) 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.
2. The Licencee shall submit all information required to be provided to the Director or Environment Officer under this Licence, in writing, 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 labelled with the Licence Number and Client File Number associated with this Licence.
  3. 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.
  4. The Licencee shall not cause or permit a noise 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 a noise nuisance.
  5. 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.
  6. The Licencee shall, following the reporting of an event pursuant to Clause 5,
    - 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
    - d) submit a report to the Director about the causes of breakdown and measures taken, within one week of the repairs being done.

7. The Licencee shall operate the wastewater collection system and the wastewater treatment plant in such a manner that:
  - a) all the wastewater generated within the Jack River School is directed towards the Jack River School Wastewater Treatment Plant or other approved wastewater treatment system;
  - b) only wastewater as defined in this Licence is discharged into the wastewater treatment plant;
  - c) primary screenings are disposed of in a waste disposal ground operated under:
    - i. a permit issued in accordance with Manitoba Regulation 150/91 or any future amendment thereof;
    - ii. the authority of a Licence issued under *The Environment Act*; or
    - iii. another waste disposal facility approved by the Director; and
  - d) sludge solids are transported in containers in such a manner to prevent loss of solids to the satisfaction of an Environment Officer.
8. The Licencee shall not spill, or allow to be spilled, wastewater and/or sludge as a result of operation of the wastewater treatment plant.
9. The Licencee shall, during construction and operation of the Development, 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*.
10. The Licencee shall obtain all necessary provincial and federal permits and approvals for construction of relevant components of the Development prior to commencement of construction.
11. The Licencee shall actively participate in any future watershed based management study, plan and/or nutrient reduction program approved by the Director, for the Jack River and associated waterways and watersheds.

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

### **Respecting Construction - General**

12. 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.

13. The Licencee shall:
  - a) conduct all ditch related work activities during no flow or dry conditions and not during the April 1 to June 15 fish spawning and incubation period;
  - b) not construct the wastewater treatment plant or wastewater collection system during periods of heavy rain;
  - c) place and/or isolate all excavated and construction materials where it will not erode into any watercourse;
  - d) implement effective long-term sediment and erosion control measures to prevent soil-laden runoff and/or silt from entering any watercourse during construction and until vegetation is established;
  - e) routinely inspect all erosion and sediment control structures and immediately complete any necessary maintenance or repair; and
  - f) revegetate soil exposed during the construction of the Development with native or introduced grasses or legumes. Native species shall be used to revegetate areas where native species existed prior to construction.
14. The Licencee shall dispose of non-reusable construction debris from the Development at a waste disposal ground operating under the authority of a permit issued pursuant to *Manitoba Regulation 150/91* respecting *Waste Disposal Grounds*, or any future amendment thereof, or a Licence issued pursuant to *The Environment Act*, or at another waste disposal facility approved by the Director.
15. The Licencee shall locate fuel storage and equipment servicing areas established for the construction and operation of the Development a minimum distance of 100 metres from any waterbody, and 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.
16. The Licencee shall, during construction 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 the wastewater treatment plant, the discharge route and associated watercourses, and have an emergency spill kit for in-water use available on site during construction.
17. The Licencee shall install, operate, and maintain an effluent discharge pipeline from the wastewater treatment plant into the Jack River, and shall take the necessary steps to prevent freezing of the effluent in the pipeline.



**Respecting Operation**

18. The Licencee shall obtain and maintain classification of the Development pursuant to *Manitoba Regulation 77/2003* respecting *Water and Wastewater Facility Operators* or any future amendment thereof and maintain compliance with all requirements of the regulation including, but not limited to, the preparation and maintenance of a Table of Organization, Emergency Response Plan and Standard Operating Procedures.
19. The Licencee shall carry out the operation of the Development with individuals properly certified to do so pursuant to *Manitoba Regulation 77/2003* respecting *Water and Wastewater Facility Operators* or any future amendment thereof.
20. The Licencee shall limit the wastewater load on the wastewater treatment plant as follows:
  - a) hydraulic loading not to exceed 125 m<sup>3</sup> for any 24-hour period; and
  - b) organic loading not to exceed 5.6 kilograms of five-day biochemical oxygen demand (BOD<sub>5</sub>) for any 24-hour period.
21. The Licencee shall remove an adequate amount of liquid from the WAS and other sludge and treated solid materials generated as waste by the wastewater treatment plant and dispose of it at a waste disposal ground.
22. The Licencee shall install and maintain adequate instrumentation 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) a UV sensor to monitor lamp intensity;
  - b) an appropriate alarm;
  - 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.
23. The Licencee shall utilize UV lamps that have a rated output of at least 254 nanometres (nm) capable of delivering a UV germicidal dose in excess of 30,000 microwatt seconds/sq cm.
24. The Licencee shall operate and maintain the UV units to give a germicidal dose of 80% or more of the design germicidal dose, at the end of the lamp life.

25. The Licencee shall not discharge effluent from the wastewater treatment plant, where:
- a) the organic content of the effluent, as indicated by the five-day carbonaceous biochemical oxygen demand (CBOD<sub>5</sub>), 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 fecal coliform or *E. coli* content of the 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 3 grab samples collected at equal time intervals once each week;
  - d) the total phosphorus content of the effluent is in excess of 1.0 milligram per litre, as determined by the thirty-day rolling average; and
  - e) concentration of unionized ammonia is in excess of 1.25 mg/L, expressed as nitrogen (N), at 15°C ± 1°C.
26. The Licencee shall, when chlorine is used as a disinfecting agent:
- a) notify the Director in advance;
  - b) dechlorinate effluent prior to discharge;
  - c) obtain grab samples prior to and daily during the discharge period and have them analyzed for total residual chlorine; and
  - d) not discharge effluent where the concentration of the total residual chlorine is in excess of 0.02 milligrams per litre.

### **MONITORING AND REPORTING SPECIFICATIONS**

27. 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) have all analytical determinations undertaken by an accredited laboratory; and
  - c) 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.
28. The Licencee shall monitor, and make the records of such monitoring available to the Director as may be requested, the wastewater treatment process for the following parameters:
- a) total flow rate(s) into the plant; and
  - b) other process parameters approved or required by the Director.

29. The Licencee shall provide a heated and secured effluent monitoring station acceptable to the Director and equipped with:
  - a) a direct access way for an effluent sampling line to a location near the discharge from the UV disinfection chamber; and
  - b) an electrical power source of 15 amperes at 110 volts.
  
30. The Licencee shall:
  - a) take one flow proportional composite sample of effluent from the effluent monitoring station during the discharge period once each month;
  - b) take three grab samples of the effluent from the effluent monitoring station during the discharge period at equal time intervals once each week;
  - c) have the flow proportional composite effluent sample analyzed for:
    - i. carbonaceous biochemical oxygen demand (CBOD<sub>5</sub>);
    - ii. total suspended solids;
    - iii. ammonia;
    - iv. total phosphorus;
    - v. pH; and
    - vi. temperature;
  - d) have the grab samples analyzed for fecal coliform content or *E.coli*; and;
  - e) determine and record the monthly geometric mean for the fecal coliform or *E. coli* counts based on all the data collected during each month, from a minimum of twelve (12) grab samples.
  
31. The Licencee shall during each year maintain the following records and retain them for a minimum period of five calendar years:
  - a) wastewater sample dates;
  - b) original copies of laboratory analytical results of the sampled wastewater;
  - c) a summary of laboratory analytical results;
  - d) monthly effluent discharge volumes; and
  - e) maintenance and repairs.
  
32. The Licencee shall submit an annual report to the Environment Officer by February 28 of the following year including all records required by Clause 31 of this Licence.
  
33. The Licencee shall:
  - a) prepare "record drawings" for the Development, including the wastewater treatment plant and the effluent discharge pipeline complete with final elevations, and shall label the drawings "Record Drawings"; and
  - b) provide to the Director, within six months of the successful commissioning of the wastewater treatment plant, two electronic copies of the "record drawings".

34. The Licencee shall, during the first year of operation of the Development following the construction of the wastewater treatment plant, obtain and analyze grab samples of the effluent and report the results of the analysis in accordance with Schedule “A” attached to this licence.

#### **DECOMMISSIONING**

35. The Licencee shall submit to the Director for approval, within three (3) months of the date of this Licence, a decommissioning plan for the existing wastewater treatment plant and associated works, to be carried out as approved by the Director.

#### **REVIEW AND REVOCATION**

- A. Licence No. 47 is rescinded upon commissioning of the new wastewater treatment plant and decommissioning of the existing wastewater treatment plant.
- 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*.

*“original signed by”*

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**Tracey Braun, M.Sc.**  
**Director**  
**Environment Act**

**Client File No.: 263.10**

## **Schedule "A" to Environment Act Licence No. 263.10**

Initial Characterization of Wastewater Pursuant to Clause 34

Facility Size: Very small (less than 500 m<sup>3</sup>/day)

Facility Type: Sewage Treatment Plant - Continuous discharge

### **Effluent Sampling:**

During the first year of operation:

1. a grab sample shall be collected on a monthly basis; and
2. a grab sample shall be collected on a daily basis, if chlorine is used.

### **Effluent Analysis:**

1. Have the monthly sample analyzed for:
  - a) the organic content as indicated by the five-day biochemical oxygen demand and expressed as milligrams per litre;
  - b) the organic content as indicated by the five-day carbonaceous biochemical oxygen demand and expressed as milligrams per litre;
  - c) the total suspended solids content expressed as milligrams per litre;
  - d) the *Escherichia coli* (*E. Coli*) content as indicated by the MPN index and expressed as MPN per 100 millilitres per sample;
  - e) the fecal coliform content as indicated by the MPN index and expressed as MPN per 100 millilitres per sample;
  - f) the total coliform content as indicated by the MPN index and expressed as MPN per 100 millilitres per sample;
  - g) total ammonia nitrogen expressed as milligrams per litre;
  - h) nitrate-nitrite nitrogen expressed as milligrams per litre;
  - i) total Kjeldahl nitrogen, TKN ( ammonia + organic N) expressed as milligrams per litre;
  - j) dissolved phosphorus expressed as milligrams per litre;
  - k) total phosphorus expressed as milligrams per litre;
  - l) Temperature; and
  - m) pH.
2. Have the daily sample analyzed for Total Residual Chlorine (TRC), if required.

### **Effluent Reporting:**

1. Report the results to the Director, in writing or in an electronic format acceptable to the Director within 60 days of the sampling date. The report shall include the sampling date, sample temperature, the dates of the effluent discharge, and copies of the laboratory analytical results of the sampled effluent.