



Sustainable Development

Environmental Stewardship Division
Environmental Approvals Branch
1007 Century Street, Winnipeg Manitoba R3H 0W4
T 204 945-8321 F 204-945-5229
www.gov.mb.ca/sd/

File No.: 5696.00

May 29, 2019

Anthony McInnis. Ph.D., City Manager
City of Thompson
226 Mystery Lake Road
Thompson MB R8N 1S6
Email: amcinnis@thompson.ca

Dear Anthony McInnis:

RE: City of Thompson – City of Thompson Wastewater Treatment Plant – Minor Notice of Alteration Approval – Environment Act Licence No. 3118 R

I am responding to the April 26, 2019 Notice of Alteration request, submitted by you, relative to a request for alteration to Clause 13(b) of Environment Act Licence No. 3118 R (Licence), originally issued for the construction and operation of the Development being a wastewater collection system and a wastewater treatment plant located on Lot C, Plan 4657 in Township 78 and Range 3 WPM in the City of Thompson. The submission is considered a Notice of Alteration (NoA) pursuant to Section 14 of The Environment Act.

The intent of the NoA is to alter the completion of the construction and commissioning of the new wastewater treatment plant from July 31, 2017 to July 2019.

Upon review of the NoA and pursuant to Section 14(2) of the Environment Act, I hereby amend Clause 13 of the Licence as follows:

13. The Licencee shall:

- a) submit progress reports every month from the date of this approval until final commissioning summarizing the design, construction and commissioning of the wastewater treatment plant;
- b) complete the construction and commissioning of the wastewater treatment plant on or before August 30, 2019;
- c) take one flow proportional composite sample of effluent from the effluent monitoring station of the existing wastewater treatment plant operating under Environment Act Licence No. 2589 from the date of this letter to approved commissioning of the new wastewater treatment plant during discharge period once each week;

- d) take a grab sample of effluent from the existing aerated wastewater treatment lagoon operating under Environment Act Licence No. 30 from the date of this letter to approved commissioning of the new wastewater treatment plant during discharge period once each week;
- e) have the flow proportional composite sample analyzed for total phosphorus;
- f) have the grab sample analyzed for total phosphorus;
- g) submit a report on total phosphorus discharge from the existing wastewater treatment plant and the existing aerated wastewater treatment lagoon to the Director of Environmental Approvals Branch on or before September 30, 2019.

All other clauses of Environment Act Licence No. 3118 R remain in effect.

Should you have any questions concerning this approval, please contact Asit Dey, Environmental Engineer at (204) 945-2614 or at asit.dey@gov.mb.ca.

Yours sincerely,



Cordella Friesen
Director,
The Environment Act

- c: Saibal Basu, Stantec
Brad DeGraeve, Manitoba Water Services Board
Scott Davies/Tim Prawdzik/Peter Crocker, Environmental Compliance and Enforcement
Asit Dey, Environmental Approvals
Public Registry

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CLIENT FILE NO.: 5696.00

April 5, 2016

Santokh Randhawa, P.Eng.
City of Thompson
226 Mystery Lake Road
Thompson MB R8N 1S6

Dear Mr. Randhawa:


I am responding to the January 6, 2016 letter prepared by Stantec Consulting Ltd. relative to a request for minor alteration to Environment Act Licence No. 3118 (licence), originally issued for construction and operation of the Development being a wastewater collection system and a wastewater treatment plant in the City of Thompson. The letter is considered a Notice of Alteration (NofA) pursuant to Section 14 of *The Environment Act*.

Clause 25 a) of the licence states "hydraulic loading not to exceed 12,000 m³ for any 24-hour period". The NofA proposes revising Clause 25 a) of the licence to a 20-year maximum 24-hour hydraulic loading of 13,700 m³. The revised calculations are based on the review of additional flow data. The NofA stated that the resulting potential impact to the environment due to this change is insignificant and that the treatment plant is designed to handle the proposed maximum 24-hour hydraulic load.

Upon review of the NofA, I am satisfied that the identified changes in the environmental effects as would result from the proposed alterations will be insignificant. Therefore, pursuant to Section 14(2) of *The Environment Act*, I hereby approve the implementation of the proposed alterations as described in the January 6, 2016 letter. The required revisions to Environment Act Licence No. 3118 have been made; **Environment Act Licence No. 3118 R is attached.**

For further information on the administration and application of the Licence, please feel free to contact Asit Dey, Environmental Engineer, at (204) 945-2614. 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.

Yours truly,



Tracey Braun, M.Sc.
Director, Environment Act

c: Don Labossiere, Tim Prawdzik, Jeff Fountain - Environmental Compliance and Enforcement Branch
Saibal Basu, Stantec
Public Registries

NOTE: Confirmation of Receipt of this Licence No. 3118 R (*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 April 18, 2016.

On behalf of the City of Thompson

Date

LICENCE

Licence No. / Licence n°	<u>3118 R</u>
Issue Date / Date de délivrance	<u>September 12, 2014</u>
Revised :	<u>April 5, 2016</u>

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) and 14(2) / Conformément au Paragraphe 11(1) et 14(2)

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

CITY OF THOMPSON;
"the Licencee";

for the construction and operation of the Development being a wastewater collection system and a wastewater treatment plant with a maximum hydraulic loading of 13,700 cubic metres per day, located on Lot C, Plan 4657 in Township 78, Range 3 WPM in the City of Thompson, with discharge of treated effluent being directed to the Burntwood River, in accordance with the Proposal filed under *The Environment Act* on January 27, 2014, additional information provided on April 25, 2014, and a Notice of Alteration request dated January 6, 2016, 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;

"aerobic digestion" means the degradation of organic matter brought about through the action of microorganisms in the presence of elemental oxygen;

"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 (BOD₅)" 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 (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 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;

"**SBR**" means sequencing batch reactor;

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

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

"**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;

"**truck dumping station**" means a facility used to receive, store and meter wastewater, including septage, which has been hauled to the wastewater treatment plant with a truck;

"**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.

Future Sampling

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

Reporting Format

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.

Respecting Air Emissions

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.

Respecting Noise Pollution

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.

Equipment Breakdown

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 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.

Wastewater Sources

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 City of Thompson is directed towards the City of Thompson Wastewater Treatment Plant or other approved wastewater treatment system;
 - b) only wastewater as defined in this Licence is discharged into the wastewater treatment plant; and
 - 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; or
 - ii) the authority of a Licence issued under *The Environment Act*.

Spills and Spill Reporting

8. The Licencee shall not spill, or allow to be spilled, wastewater and/or sludge in the area around the wastewater treatment plant.
9. The Licencee shall ensure that, during construction and operation of the Development, spills of fuels or other contaminants are reported to an Environment Officer in accordance with the requirements of *Manitoba Regulation 439/87* respecting *Environmental Accident Reporting*.

Other Provincial and Federal Permits and Approvals

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.

Future Studies

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 Burntwood 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) submit progress reports every six (6) months from the date of this Licence until final commissioning summarizing the design, construction and commissioning of the wastewater treatment plant; and
 - b) complete the construction and commissioning of the wastewater treatment plant on or before July 31, 2017.
14. 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 material 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;
 - 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; and

- g) use rock that is free of silt and clay for riprap.
- 15. 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*.
- 16. 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.
- 17. 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.
- 18. 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.
- 19. The Licencee shall install, operate, and maintain an effluent discharge pipeline from the wastewater treatment plant into the Burntwood River, and shall take the necessary steps to prevent freezing of the effluent in the pipeline.
- 20. The Licencee shall construct and maintain an all-weather access road and a wastewater dumping facility for truck hauled wastewater. The dumping facility shall be equipped with an influent pipe fitted with a quick-coupler. All trucks used to deliver wastewater to the wastewater treatment plant are to be equipped with a flexible hose and matching adapters for the quick-coupler. All wastewater delivered to the wastewater treatment plant is to be discharged through the hose and influent pipe into the wastewater influent pipe before the influent flow measuring device.
- 21. The Licencee shall install and maintain a security fence around all components of the wastewater treatment plant and sludge dewatering facility that are not enclosed within secured buildings.
- 22. The Licencee shall, at a location approved by the Director near the effluent outfall from the wastewater treatment plant into the Burntwood River, erect and maintain not fewer than two warning signs having letters not less than five centimetres in

height stating "Wastewater Treatment Plant Outfall, Not Suitable for Swimming or Body Contact Water Sports" or other signage approved by the Director.

Respecting Operation

23. 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.
24. 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.
25. The Licencee shall limit the wastewater load on the wastewater treatment plant as follows:
 - a) hydraulic loading not to exceed 13,700 m³ for any 24-hour period; and
 - b) organic loading not to exceed 3,000 kilograms of five-day biochemical oxygen demand (BOD₅) for any 24-hour period.
26. 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.
27. The Licencee shall subject all sludge to aerobic digestion, or an equivalent digestion process acceptable to the Director, where:
 - a) the digester contents have a minimum of 2 milligrams per litre dissolved oxygen during aeration;
 - b) the digester contents are maintained at a minimum temperature of 10°C; and
 - c) the digester provides a minimum solids retention time of 60 days.
28. 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.

29. 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.
30. 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.
31. 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 (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 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 1 grab sample collected at equal intervals on each of a minimum of 3 consecutive days per 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;
 - e) the total nitrogen is in excess of 15 milligrams per litre, as determined by the thirty-day rolling average unless in compliance with Clause 33 of this Licence; and
 - f) the ammonia nitrogen content (as N) of the effluent is in excess of the following limits:

Period	Ammonia Nitrogen (as N) (kilograms/any 24 hour period)
January	40
February	40
March	40
April	60
May	60
June	36
July	36
August	36
September	36
October	40
November	40
December	40

32. 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.
33. The Licencee shall submit to the Director for approval by February 28 of each year for the preceding year, an annual report on progress toward meeting the nitrogen limit of 15 milligrams per litre, as determined by the thirty-day rolling average. An interim limit for total nitrogen of 25 milligrams per litre, as determined by the thirty-day rolling average shall be in effect upon approval of the annual progress report.
34. The Licencee shall not release a quality of effluent from the wastewater treatment plant which:
- a) on any day, causes, or contributes to, the mixing zone for the effluent in the Burntwood River being acutely lethal to aquatic life passing through the mixing zone; or
 - b) can be demonstrated to be acutely lethal to fish within the mixing zone for the effluent in the Burntwood River by using a 96-hour static acute lethality test which results in mortality to more than 50 percent of the test fish exposed to 100 percent concentration of effluent, with the test carried out in accordance with the protocol outlined in Environment Canada's "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout: EPS 1/RM/13 Second Edition – December 2000" or any future amendment thereof.

MONITORING AND REPORTING SPECIFICATIONS

35. 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.
36. 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;
 - b) flow rate(s) from the truck haul receiving station;
 - c) water level in the influent channel entering the headworks screen;

- d) pH, dissolved oxygen, temperature, and tank liquid levels of the digestion processes;
 - e) water level in the hauled wastewater holding tank;
 - f) flow rate(s) into and through the UV disinfection system;
 - g) hydrocarbons at the truck haul receiving station; and
 - h) other process parameters approved or required by the Director.
37. The Licencee shall:
- a) construct and make available for use by an Environment Officer, secured and heated monitoring stations with direct access to:
 - i) the wastewater treatment plant influent wastewater pipelines; and
 - ii) the wastewater treatment plant effluent discharge pipeline following UV disinfection;
 - b) make the monitoring stations available to an Environment Officer at all times;
 - c) install and maintain flow measuring devices at the monitoring stations or at locations acceptable to the Director which are capable of measuring the volume of influent with an accuracy of ± 2 percent;
 - d) have the flow measuring devices re-calibrated biannually or on the request of an Environment Officer;
 - e) equip the monitoring stations with flow-proportional sampling devices equipped to function with the flow measuring device and have the sampling devices available on request for use by an Environment Officer; and
 - f) equip the monitoring stations with an electrical power source of 15 amperes at 110 volts.
38. The Licencee shall arrange for the taking of samples of influent wastewater before the wastewater enters the wastewater treatment plant and of the effluent at locations that are accessible during all weather conditions.
39. The Licencee shall:
- a) take one flow proportional composite sample of effluent from the effluent monitoring station during the discharge period once each week;
 - b) take three grab samples of the effluent from the effluent monitoring station during the discharge period once each week;
 - c) have the flow proportional composite effluent sample analyzed for:
 - i) carbonaceous biochemical oxygen demand (CBOD₅);
 - ii) total suspended solids;
 - iii) ammonia;
 - iv) total nitrogen;
 - v) total phosphorus;
 - vi) pH; and
 - vii) temperature; and
 - 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.
40. The Licencee shall:
- a) take two flow proportional composite samples of effluent from the wastewater treatment plant over a 24 hour period every three months each year with a minimum separation time of 90 days between samples;
 - b) have one bioassay sample of the effluent analyzed at 100 percent concentration for acute lethality in accordance with the protocol outlined in Environment Canada's "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout: EPS 1/RM/13 Second Edition – December 2000", or any future amendment thereof; and
 - c) report the results to the Director within 30 days of the end of the month during which the samples were taken.
41. 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;
 - e) maintenance and repairs; and
 - f) a summary of any sanitary sewer overflows / combined sewer overflows.
42. The Licencee shall submit an annual report to the Environment Officer by February 28 of the following year including all records required by Clause 41 of this Licence.
43. The Licencee shall:
- a) prepare "record drawings" for the Development, including the wastewater treatment facility 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".
44. 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

Decommissioning of Existing Aerated Wastewater Treatment Lagoon and Associated Works (Environment Act Licence No. 30)

45. The Licencee shall, after placing the Development into operation, prevent additional wastewater or septage from being discharged into the existing aerated wastewater treatment lagoon located south of Seal Road.
46. The Licencee shall:
 - a) within one year following successful commissioning of the wastewater treatment plant, submit to the Director for approval a plan to decommission the existing aerated wastewater treatment lagoon and associated infrastructure; and
 - b) carry out the decommissioning plan approved by the Director within such time as may be prescribed by the Director.

Decommissioning of Existing Wastewater Treatment Plant and Associated Works (Environment Act Licence No. 2589)

47. The Licencee shall, after placing the Development into operation, prevent additional wastewater or septage from being discharged into the old wastewater treatment plant located at the northerly end of Nelson Road between Yale Avenue and the Burntwood River.
48. The Licencee shall, within one year following successful commissioning of the wastewater treatment plant, decommission the old wastewater treatment plant in accordance with the decommissioning terms stated in the Proposal filed on January 27, 2014 and the following conditions:
 - a) empty all tanks of any wastewater or other liquid wastes by hauling to the truck dump station;
 - b) dispose of sludge solids at a waste disposal ground; and
 - c) transport wastewater and sludge solids in containers in such a manner to prevent loss of wastewater and sludge solids to the satisfaction of an Environment Officer.

Decommissioning of Existing Outfall Pipe and associated Ancillary Components (Environment Act Licence No. 2589)

49. The Licencee shall, within one year following successful commissioning of the wastewater treatment plant, submit to the Director for approval, a detailed plan for decommissioning the existing outfall pipe and associated ancillary components of the old wastewater treatment plant and carry out the decommissioning in accordance with the approved plan within such time as may be prescribed by the Director.

REVIEW AND REVOCATION

- A. This Licence replaces Environment Act Licence No. 3118 which is hereby rescinded. Environment Act Licences No. 2589 and 30 are rescinded upon approved commissioning of the new 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*.



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

Client File No.: 5696.00

Schedule "A" to Environment Act Licence No. 3118 R

Initial Characterization of Wastewater Pursuant to Clause 44

Facility Size: Medium (greater than 2500 m³/day but less than 17,500 m³/day)

Facility Type: Wastewater Treatment Plant - Continuous discharge

Effluent Sampling:

During the first year of operation:

1. a grab sample shall be collected every two weeks;
2. a grab sample shall be collected on a quarterly basis; and
3. a grab sample shall be collected on a daily basis, if chlorine is used.

Effluent Analysis:

1. Have the bi-weekly 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;
 - i) dissolved phosphorus expressed as milligrams per litre;
 - j) total phosphorus expressed as milligrams per litre;
 - k) temperature; and
 - l) pH.

Schedule A to Environment Act Licence No. 3118 R (cont'd)

2. Have the quarterly sample analyzed for:
 - a) fluoride;
 - b) nitrate;
 - c) nitrate + nitrite;
 - d) total extractable metals and metal hydrides (full range);
 - e) chemical oxygen demand (COD);
 - f) organochlorine pesticides;
 - g) polychlorinated biphenyls (PCBs);
 - h) polycyclic aromatic hydrocarbon (PAHs);
 - i) cyanide (total);

 - j) pH;
 - k) volatile organic compounds;
 - l) mercury;
 - m) phenolic compounds;
 - n) surfactants;
 - o) acute toxicity; and
 - p) chronic toxicity.

3. Have the daily sample analyzed for total residual chlorine (TRC), if required.

Effluent Reporting:

1. Report the results to the Director, in writing and 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.