



Sustainable Development

Environmental Stewardship Division
Environmental Approvals Branch
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CLIENT FILE NO.: 5037.00

August 31, 2017

Mr. Craig Dryburgh
Diageo Canada Inc.
Box 2000
19107 Seagram Road
Gimli, MB R0C 1B0

Dear Mr. Dryburgh:

Enclosed is **revised Environment Act Licence No. 778R** issued to **Diageo Canada Incorporated** for the ongoing operation of the Development being a distillery for the manufacturing of distilled liquor products, a wastewater collection system, wastewater pre-treatment, a wastewater treatment lagoon and a wastewater treatment plant located at 19107 Seagram Road, Sections 20 and 29, Township 19, Range 4 EPM in the Rural Municipality of Gimli, in accordance with the Environment Act Proposal Report submitted on August 3, 2011 and the additional information submitted on January 23, 2012, December 11, 2013, July 8, 2015 and September 29, 2015, March 11, 2016, June 3, 2016, August 18, 2016, December 22, 2016 and January 12, 2017.

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 Mike Baert, Environment Officer at 204-785-5021.

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

Yours truly,

Tracey Braun, M.Sc.
Director
The Environment Act

Enc.

c: Don Labossiere/Donna Smiley/Mike Baert - Environmental Compliance and Enforcement
Siobhan Burland Ross – Environmental Approvals
Public Registries

NOTE: Confirmation of Receipt of this Licence No. 778 R (*by the Licensee only*) is required by the Director of Environmental Approvals. Please acknowledge receipt by signing in the space below and provide a copy (letter only) to the Department by September 15, 2017.

On behalf of Diageo Canada Incorporated

Date

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

LICENCE

Licence No. / Licence n° 778R

Issue Date / Date de délivrance August 31, 2017

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 Sections 11(1) and 14(2) / Conformément au Paragraphes 11(1) et 14(2)

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

DIAGEO CANADA INCORPORATED;
"the Licencee"

for the ongoing operation of the Development being a distillery for the manufacturing of distilled liquor products, a wastewater collection system, wastewater pre-treatment, a wastewater treatment lagoon and a wastewater treatment plant located at 19107 Seagram Road, Sections 20 and 29, Township 19, Range 4 EPM in the Rural Municipality of Gimli, in accordance with the Environment Act Proposal submitted on August 3, 2011 and the additional information submitted on January 23, 2012, December 11, 2013, July 8, 2015 and September 29, 2015, March 11, 2016, June 3, 2016, August 18, 2016, December 22, 2016 and January 12, 2017 and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

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

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"acute lethality" means a toxic effect resulting in death produced in an organism by a substance or mixture of substances within a short exposure period (usually 96 hours or less);

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

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

"boiler" means any combustion equipment fired with fossil fuel, biomass or a by-product derived from fossil fuel, for the purpose of generating hot water or steam;

"calibrate" means to determine, check, or rectify the graduation of any instrument giving quantitative measurement;

"CO" means carbon monoxide;

"composite sample" means a quantity of undiluted effluent composed of a minimum of 24 sequential series of discrete equal volumes of effluent collected at a rate proportionate to the flow rate of the effluent over a period of 24 consecutive hours;

"dangerous good" means a product, substance or organism as defined in *The Dangerous Goods Handling and Transportation Act*, or any amendments thereto;

"day" or "daily" means any 24-hour period;

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

"DDGS" means distillers dried grain with solubles;

"effluent" means treated or untreated wastewater flowing or pumped out of the wastewater treatment facility or any component of the facility;

"Environmental Management System (EMS)" means the part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy;

"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;

"flow proportional composite sample" means a combination of not less than ten individual samples of equal volumes of wastewater taken at equal increments of wastewater flow over a specified period of time;

"fugitive emissions" means particulate matter escaping from sources within the Development into the atmosphere other than through any of the emission stacks or vents;

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

"hazardous waste" means a product, substance or organism as defined in *The Dangerous Goods Handling and Transportation Act*, or any amendments thereto;

"hour" means any time span consisting of 60 consecutive minutes;

"Industrial Services Agreement" means a signed and legally binding agreement, arrived at between the Licencee and the R.M. of Gimli which outlines clear limits respecting the maximum daily and maximum weekly flow rates, as well as maximum daily and maximum weekly loading limits on such physical, chemical and biological parameters as may be requested by the Licencee and/or the R.M. of Gimli;

"influent" means water, wastewater or other liquid flowing into the wastewater treatment facility or any component of the facility;

"kg/d" means kilograms per day;

"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;

"MSDS" means material safety data sheets;

"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;

"NO_x" means oxides of nitrogen, including nitric oxide (NO) and nitrogen dioxide (NO₂), expressed collectively as a nitrogen dioxide equivalent;

"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;

"opacity" means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background;

"Operator" means a person certified to operate the wastewater collection system, wastewater pre-treatment, the wastewater treatment lagoon and the wastewater treatment plant employed by the Licencee to manage the functional day-to-day operation of the wastewater collection system, wastewater pre-treatment, the wastewater treatment lagoon and wastewater treatment plant within the constraints of this Licence;

"organic compounds" means chemical compounds containing carbon combined with hydrogen, and often also with oxygen, nitrogen and other elements;

"particulate matter" means any finely divided liquid or solid matter other than water droplets;

"particulate residue" means that part or portion of an atmospheric emission which is deposited onto a surface;

"point source" means any point of emission from a Development where pollutants are emitted to the atmosphere by means of a stack;

"process wastewater" means a liquid stream, containing or comprised of process water, including non-contact cooling water, or any chemicals used by the Development, which is designated for release into the environment;

"pollutant" means a pollutant as defined in *The Environment Act*;

"QA/QC" means quality assurance/quality control;

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

"R.M. of Gimli wastewater treatment plant" means the development located in the R.M. of Gimli operating in accordance with Environment Act Licence No. 2587 or any future revision thereof;

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

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

"solid waste" means solid waste as defined in *Manitoba Regulation 37/2016*, or any future amendments thereto, respecting waste disposal grounds, excluding waste rock;

"stack" means a duct, pipe, chimney, vent, opening or other structure through which pollutants are emitted to the atmosphere;

"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;

"thirty-day rolling average" means the arithmetic average of any daily reported data plus the preceding 29 consecutive days of reported data;

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

"undiluted" means free of extraneous sources of water which could feasibly be prevented from mixing with effluent streams prior to their discharge at their designated final discharge point(s), and not having water added for the purposes of meeting any effluent quality limits specified in this Licence;

"**VOC**" means volatile organic compounds;

"**visible emissions**" means any air-borne particulate matter which obscures visibility;

"**volatile organic compound (VOC)**" means any organic compound which participates in atmospheric photochemical reactions, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and carbonates, ammonium carbonate, and other compounds which may be exempt by the Director;

"**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 37/2016, 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, pumping system and equalization tank used for the collection and conveyance of domestic, commercial and industrial wastewater;

"**wastewater pre-treatment**" means the treatment and management of wastewater including pH adjustment and equalization prior to conveying the wastewater to the forcemain which flows to the R.M. of Gimli wastewater treatment plant;

"**wastewater treatment lagoon**" means the component of this development which consists of an impoundment into which wastewater is discharged for treatment and storage;

"**wastewater treatment plant**" means the central facility of wastewater treatment facilities at the Development which contains all treatment processes exclusive of the wastewater pre-treatment and wastewater collection system;

"**week**" or "**weekly**" means any period of 7 consecutive days; and

"**WHMIS**" means Workplace Hazardous Materials Information System.

GENERAL TERMS AND CONDITIONS

This Section of the Licence contains requirements intended to provide guidance to the Licensee 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;
 - c) conduct specific investigations in response to the data gathered during environmental monitoring programs; or
 - d) provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, descriptions of sampling and analytical procedures being used, bioassay data, flow rate measurements and such other information as may from time to time be requested.

2. 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 most current edition of Standard Methods for the Examination of Water and Wastewater or in accordance with equivalent preservation and analytical methodologies approved by the Director;
 - b) carry out all sampling of, and preservation and analyses on, soil, compost, and air samples in accordance with methodologies approved by the Director;
 - c) have all analytical determinations undertaken by an accredited laboratory; and
 - d) report the results to the Director, in writing and in an electronic format acceptable to the Director, within 60 days of the samples being taken.

Reporting Format

3. The Licencee shall submit all information required to be provided to the Director or Environment Officer under this Licence, in written and electronic format, in such form (including number of copies) and of such content as may be required by the Director or Environment Officer, and each submission shall be clearly labeled with the Licence Number and Client File Number associated with this Licence.

Equipment Breakdown

4. 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.

5. The Licencee shall, following the reporting of an event pursuant to Clause 4,
 - 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.

Safety and Security

- 6. The Licencee shall continually maintain an up-to-date inventory of any process and cleaning chemicals used and/or stored on-site that would be captured by any applicable federal/provincial WHMIS regulations and protocols, and make this information and applicable MSDS sheets available to an Environment Officer upon request.
- 7. The Licencee shall prepare, within 90 days of the date of issuance of this Licence, and maintain an emergency response contingency plan in accordance with the Canadian Centre for Occupational Health and Safety "Emergency Response Planning Guide" or other emergency planning guidelines acceptable to the Director.
- 8. The Licencee shall implement and continually maintain in current status, an Environmental Management System (EMS) for the Development which is acceptable to the Director.

Environmental Coordinator

- 9. The Licencee shall designate an employee, within 60 days of the date of issuance of this Licence, as the Licencee's Environmental Coordinator, whose job description will include assisting the Licencee in complying with the limits, terms and conditions in this Licence and assisting Senior Management of the Licencee to manage environmental issues at the Development. The name of the Environmental Coordinator shall be submitted in writing to the Director within 14 days of appointment and any subsequent appointment.

Certification

- 10. 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.
- 11. 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.

Future Studies

12. The Licencee shall actively participate in any future watershed based management study, plan or nutrient reduction program, approved by the Director.
13. 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 in accordance with the requirements of *Manitoba Regulation 173/2015* respecting Aquatic Invasive Species, or any future amendment thereof.

Industrial Services Agreement

14. The Licencee shall:
 - a) prepare and execute a current comprehensive and enforceable Industrial Services Agreement, which is acceptable to the Director, for the purposes of defining maximum daily and maximum weekly influent limits respecting volume and pollutant loading rates which would protect the operational integrity of the R.M. of Gimli wastewater treatment plant in terms of the design capability and/or in consideration of the actual performance of the R.M. of Gimli wastewater treatment plant relative to the effluent quality limits as specified in this Licence, or any revision thereof;
 - b) provide the Director with a copy of the Industrial Services Agreement upon being signed by all parties; and
 - c) provide the Director with a copy of any future revised Industrial Services Agreement.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Respecting Construction

15. The Licencee shall notify the designated Environment Officer not less than two weeks prior to beginning any construction at the Development. The notification shall include the intended starting date of construction and the name of the contractor responsible for the construction.
16. The Licencee shall obtain all necessary federal, provincial and/or municipal licences, authorizations, permits and/or approvals for construction of relevant components of the Development prior to commencement of construction.
17. 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 *Manitoba Regulation 37/2016* respecting *Waste Management*, or any future amendment thereof, or a Licence issued pursuant to *The Environment Act*.
18. The Licencee shall, during construction at the Development, operate, maintain and store all materials and equipment in a manner that prevents any deleterious substances (fuel, oil, grease, hydraulic fluids, coolant, paint, uncured concrete and concrete wash

water, etc.) from entering watercourses, and have an emergency spill kit for in-water use available on site during construction.

19. The Licencee shall pressure test the integrity of the connections of any new underground piping of the Development, which is intended to transport wastewater under pressure, before such pipe connections are backfilled with earth and make repairs as required.

Respecting Operation of the Development

20. The Licencee shall implement a high standard of equipment maintenance and good housekeeping and operational practices with respect to the Development, at all times.

21. The Licencee shall not direct pollutants into any surface drainage route leading off the property of the Development or into the local groundwater.

22. The Licencee shall only discharge wastewater effluent, including process wastewater, to Lake Winnipeg through a submerged 250 mm HDPE treated wastewater discharge pipe extending at least 305 metres into the lake from the shoreline as calculated at a water level of 217.3 metres above sea level.

23. The Licencee shall:

- a) construct and make available for use by an Environment Officer, at locations acceptable to the Director, secured and heated monitoring stations with direct access to:
 - i) the wastewater pre-treatment influent and effluent pipelines;
 - ii) the wastewater treatment plant influent and effluent pipelines; and
 - iii) the wastewater treatment lagoon outfall; and
- b) make the monitoring stations accessible to an Environment Officer at all times;
- c) install and maintain a continuous flow measuring devices, equipped with an interface compatible with departmentally owned ISCO sampler, at the monitoring stations or at a location acceptable to the Director which is capable of measuring the volume of effluent with an accuracy of ± 2 percent;
- d) have the flow measuring device re-calibrated every two years or on the request of an Environment Officer;
- e) submit to the Director a certificate of calibration, signed by a person qualified to calibrate the flow measuring device, for each flow measuring device within two weeks of the completion of each calibration, identifying the plus or minus percent error associated with each calibrated flow measuring device; and
- f) equip the monitoring stations 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.

Respecting Solid Wastes

24. The Licencee shall not undertake any on-site burning of solid waste.

25. The Licencee shall minimize the generation of domestic solid waste and maximize, wherever possible, the collection and recycling of recyclable wastes generated through the operation of the Development.
26. The Licencee shall not deposit domestic solid waste into the environment except into a waste disposal ground operating under the authority of a permit issued pursuant to *Manitoba Regulation 150/91 respecting Waste Disposal Grounds* or *Manitoba Regulation 37/2016 respecting Waste Management*, or any future amendment thereof, or a Licence issued pursuant to *The Environment Act*.

Respecting Dangerous Goods or Hazardous Waste

27. The Licencee shall not release dangerous goods or hazardous wastes into the wastewater collection system.
28. The Licencee shall comply with all the applicable requirements of:
 - a) *The Manitoba Dangerous Goods Handling and Transportation Act*, and regulations issued thereunder, respecting the handling, transport, storage and disposal of any dangerous goods brought onto or generated at the Development; and
 - b) *Manitoba Storage and Handling of Petroleum Products and Allied Products Regulation 188/2001*, or any future amendments thereto.
29. The Licencee shall collect, transport and store used oil or hydraulic fluids removed from on-site machinery in secure, properly labeled, non-leaking containers and shall regularly send them to a recycling or disposal facility approved to accept hazardous wastes.
30. The Licencee shall install and maintain spill recovery equipment at the Development at all times.
31. The Licencee shall provide containment for all vessels containing chemicals and in each area of the development where the chemicals are stored, loaded, transferred, used or otherwise handled, in compliance with the National Fire Code of Canada (2010), or any future amendment thereof, such that any product leakage or spillage and any contaminated liquid generated is contained within the Development and contamination of groundwater and surface water is prevented.

Respecting the Wastewater Pre-Treatment

32. The Licencee shall operate all components of wastewater pre-treatment, including the pH adjustment by caustic addition within the production building, equalization and the organic and hydraulic loading specifications, in accordance with the Industrial Service Agreement with the R.M. of Gimli required in Clause 14 of this Licence.

Respecting the Maintenance of the Wastewater Treatment Lagoon

33. The Licencee shall maintain the cells of the wastewater treatment lagoon with a continuous liner, including cut-offs, under all interior surfaces of the cells in accordance with the following specifications:
- a) the liner shall be made of clay;
 - b) the liner shall be at least one metre in thickness;
 - c) the liner shall have a hydraulic conductivity of 1×10^{-7} centimetres per second or less at all locations; and
 - d) the liners shall extend to an elevation of at least one metre above the maximum liquid level of each cell.
34. The Licencee shall, if in the opinion of the Director, significant erosion of the interior surfaces of the dykes occurs, repair the dyke and install riprap as necessary. The riprap shall be placed on the interior dyke surfaces from 0.6 metres above the high water mark to the bottom of the dykes to protect the dykes from wave action.
35. The Licencee shall provide and maintain a grass cover on the dykes of the wastewater treatment lagoon and shall regulate the growth of the vegetation so that the height of the vegetation does not exceed 0.3 metres on all dykes.
36. The Licencee shall annually remove by mechanical methods all reeds, rushes and trees located above the low water mark in every cell of the wastewater treatment lagoon.
37. The Licencee shall implement an ongoing program to remove burrowing animals from the site of the wastewater treatment lagoon.

Respecting the Operation of the Wastewater Treatment Lagoon

38. The Licencee shall provide a minimum of one month notification to the Director prior to placing the wastewater treatment lagoon into service and, when in service, operate the wastewater treatment lagoon in accordance with Clauses 39 to 44 of this Licence.
39. The Licencee shall operate and maintain the wastewater treatment lagoon in such a manner that:
- a) the organic loading on the primary cell, as indicated by the five-day biochemical oxygen demand, is not in excess of 56 kilograms per hectare per day;
 - b) the depth of liquid in the cells does not exceed 1.5 metres; and
 - c) a minimum 1.0 metre freeboard is maintained in the cells at all times.
40. The Licencee shall immediately notify the Director each time the operating depth of any cell of the wastewater treatment lagoon does not comply with the maximum operating depth and minimum freeboard requirements for that cell, as specified in Clause 39 of this Licence.
41. The Licencee shall, if reporting is required pursuant to Clause 40 of this Licence in two consecutive years:
- a) engage the services of a qualified consultant, acceptable to the Director, to undertake an investigation of the Development and related infrastructure, to

determine the ability or inability of the existing system to meet the hydraulic loading needs of the Development. The investigation shall include but not be necessarily limited to:

- i) diagnosis of the cause(s) of the recent exceedances of maximum operating depth;
 - ii) sources of infiltration into the wastewater system including the municipal infrastructure;
 - iii) current hydraulic loading of the system;
 - iv) lack of storage capacity due to sludge build-up within existing cells; and
 - v) the organic loading on the primary cell in terms of the five day biochemical oxygen demand;
- b) provide to the Director, within four months of the notification given pursuant to Clause 40 of this Licence, an engineering report describing in detail the results and observations concluded by virtue of the investigation; and
 - c) provide to the Director, within four months of the report provided pursuant to sub-Clause b) of this section, a remedial action plan in the form of a detailed engineering report describing recommended modifications, repairs or upgrading works to overcome excessive hydraulic loading of the system.
42. In accordance with Clause 38, when the wastewater treatment lagoon is in service the Licencee shall obtain weekly grab samples of the treated wastewater from the wastewater treatment lagoon and have them analyzed for:
- a) the organic content as indicated by the five-day carbonaceous biochemical oxygen demand and expressed as milligrams per litre;
 - b) the total suspended solids content expressed as milligrams per litre;
 - c) the unionized ammonia nitrogen expressed as milligrams per litre
 - d) the total phosphorus content expressed as milligrams per litre; and
 - e) the total nitrogen expressed as milligrams per litre.
43. The Licencee shall not discharge effluent from the wastewater treatment lagoon outfall, as sampled in the effluent monitoring station referred to in Clause 23 of this Licence, where:
- a) the organic content in the effluent, as indicated by the five-day carbonaceous biochemical oxygen demand is in excess of 25 mg/L;
 - b) the total suspended solids content in the effluent is in excess of 25 mg/L, unless the exceedance is caused by algae;
 - c) the fecal coliform content in 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 time intervals on each of a minimum of 3 consecutive days per week;
 - d) the unionized ammonia content of the effluent is in excess of 1.25 milligrams per litre expressed as nitrogen (N), at $15^{\circ}\text{C} \pm 1^{\circ}\text{C}$; or
 - e) the concentration of total phosphorus of the effluent is in excess of 1 milligram per litre as determined by the thirty-day rolling average.
44. The Licencee shall, when chlorine is used as a disinfecting agent for wastewater at the Development:

- 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.

Respecting Operation of the Wastewater Treatment Plant

45. The Licencee shall provide a minimum of one month notification to the Director prior to placing the wastewater treatment plant into service and, when in service, operate the wastewater treatment plant in accordance with Clauses 46 to 48 of this Licence.

46. The Licencee shall:

- a) take one composite sample of effluent from the wastewater treatment plant once each week;
- b) have the composite effluent sample analyzed for five day carbonaceous biochemical oxygen demand, field temperatures, field pH, ammonia, total phosphorus and total suspended solids;
- c) take three (3) grab samples of effluent from the wastewater treatment plant at equal time intervals once each week;
- d) have the grab samples analyzed for fecal coliform content;
- e) record the daily, average, peak, minimum, and total monthly volume of wastewater discharged from the wastewater treatment plant;
- f) report the results to the Director within 60 days of the samples and recordings being taken; and
- g) notwithstanding sub-clause f) above, if the results of the fecal coliform analysis exceed the discharge criteria specified in Clause 48 of this Licence, report the results to the Director immediately upon receipt of the results.

47. The Licencee shall:

- a) Once every three months, until four consecutive tests pass, and then once every six months in accordance with the protocol outlined in Environment Canada's "Biologic Test Method: Acute Lethality Test Using *Daphnia* spp.: EPS 1 RM/11 July 1990 with 1996 amendments", or any future amendment thereof, collect a bioassay sample of the effluent from the wastewater treatment plant and test the sample at 100 percent concentration for lethality;
- b) report the results to the Director within 30 days of the end of each month during which the lethality was determined; and
- c) recommence quarterly sampling as required by clause 47 (a) of this Licence in the event that one of the quarterly tests required by clause 47 (a) of this Licence fails.

48. The Licencee shall not discharge any wastewater from the wastewater treatment plant as sampled in the effluent monitoring station, referred to in Clause 23 of this Licence, where:

- a) the organic content of the effluent, as indicated by the five day carbonaceous biochemical oxygen demand, is in excess of 25 milligrams per litre;

- b) the total suspended solids content of the effluent is in excess of 25 milligrams per litre;
- c) the fecal coliform 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 time intervals on each of a minimum of 3 consecutive days per week;
- d) the total residual chlorine is in excess of 0.02 mg/L;
- e) the concentration of unionized ammonia is in excess of 1.25 mg/L, expressed as nitrogen (N), at $15^{\circ}\text{C} \pm 1^{\circ}\text{C}$;
- f) the pH is greater than nine; or
- g) the total phosphorus is in excess of 1.0 milligram per litre as determined by the monthly average.

Respecting Non-Contact Cooling Water

49. The Licencee shall:
- a) record the daily, monthly average, monthly peak, monthly minimum and total monthly volume of the non-contact cooling water discharged to Lake Winnipeg;
 - b) record the temperature and pH of the non-contact cooling water, based on a daily grab sample, prior to discharge to Lake Winnipeg; and
 - c) report the results to the Director, in a form acceptable to the Director, within 60 days of the recordings being taken.

Respecting Sludge Management

50. The Licencee shall operate and maintain the sludge management cells and the sludge management program in such a manner as to prevent the unauthorized discharge of sludge or wastewater to the environment.
51. The Licencee shall only apply de-watered sludge to land in accordance with the terms and conditions of an Environment Act Licence issued that authorizes that practice.

Respecting Waste Stillage and Liquid Wastes Disposal

52. The Licencee shall direct all liquid wastes from the DDGS production process which are not reused or recycled within the Development to a wastewater treatment plant licensed under *The Environment Act*.

Respecting Air Pollution Control Devices

53. The Licencee shall direct all air streams, which contain a pollutant(s) of concern to the Director, to a pollution control device which has been designed for and demonstrated to be capable of reducing, altering, eliminating or otherwise treating the pollutant(s).
54. The Licencee shall prepare, within 90 days of the issuance of this Licence, and maintain the following manuals which shall be kept at the Development and available for review upon request by an Environment Officer:

- a) a standard operating procedural manual and a maintenance schedule for each air emission pollution control device based on the manufacturer's specifications and recommendations;
 - b) an updated standard operating procedural manual and a maintenance procedure for each air emission pollution control device within 120 days of the addition, elimination or change regarding any air emission control device; and
 - c) a copy of the manufacturer operational and maintenance manual.
55. The Licencee shall not operate any process directing an emission to an air pollution control device at the Development unless:
- a) the operating and maintenance measures and status of the device are in full compliance with the approved procedures and timetables as per Clause 55;
 - b) all emissions from the process are directed to the fully operational air pollution control device;
 - c) all discharges of treated emissions from the air pollution control devices are immediately directed to a stack; and
 - d) the emissions do not contain concentrations of pollutants which:
 - i) are in violation of any other applicable legal instrument including an Act, Regulation or by-law; or
 - ii) otherwise create a significant negative environmental or health impact in the affected area.
56. The Licencee shall maintain a log of the most recent 24 month period to record any downtime of an air pollution control device due to either the breakdown or maintenance of that air pollution control device. The log shall be kept at the Development and shall be available upon request for inspection by an Environment Officer. The log shall record, at minimum, the following information:
- a) identification of the air pollution control device and the process(es) it serves;
 - b) time/date of log entry;
 - c) nature of event;
 - d) time and duration of event;
 - e) action taken;
 - f) the accumulated downtime of this air pollution control device for the events for each calendar year; and
 - g) approval of the Environmental Coordinator.
57. The Licencee shall handle, store and dispose of all pollutants collected by the air pollution control equipment in a manner suitable to their characterization as type of waste or dangerous good.

Respecting Air Emissions

58. The Licencee shall not emit particulate matter from the Development such that:
- a) particulate matter:
 - i) exceeds 0.23 grams per dry standard cubic metre calculated at 25 degrees Celsius and 760 millimetres of mercury, corrected to 12 percent

- carbon dioxide for processes involving combustion, from any point source of the Development;
 - ii) exhibits a visible plume with an opacity of greater than 5 percent at any point beyond the property line of the Development; or
 - iii) results in the deposition of visible particulate residue at any time beyond the property line of the Development; or
 - b) opacity from any point source of the Development equals or exceeds:
 - i) 20 percent as the average of any 24 consecutive opacity observations taken at 15 second intervals;
 - ii) 20 percent for more than 16 individual opacity observations within any 1 hour period; or
 - iii) 40 percent for any individual opacity observation.
59. The Licencee shall not emit sulphur compounds such that sulphur compounds exceed 0.2 percent by volume of the gases present calculated at a temperature of 20 degrees Celsius and a pressure of 101.3 kilopascals, at the point of emission.
60. The Licencee shall not cause or permit a safety hazard to be created as the result of airborne emissions from Development impacting any public roadway beyond the Development property boundaries.
61. 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.
62. 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 specify to eliminate or mitigate a noise nuisance.
63. The Licencee shall operate and maintain any boiler at the Development in accordance with the most recent version of the Environment and Climate Change Canada Multi-Sector Air Pollutants Regulation SOR/2016-151.

Respecting Air Emissions – Monitoring, Source Sampling, Analysis, Reporting

64. The Licencee shall, upon written request by the Director, provide and maintain a stack or stacks including all necessary sampling facilities for the sampling of air emissions at the Development. The stack or stacks shall be provided:
- a) at a location(s) and within a time frame satisfactory to the Director; and
 - b) to the specifications and in accordance with the most recent version of Manitoba Sustainable Development Guideline, *Guideline for Stack Sampling Facilities*, unless otherwise approved by the Director.
65. The Licencee, upon a written request from the Director, shall submit a detailed plan for any area of the Development which is acceptable to and approved by the Director, for the sampling and analysis of potential air pollutants, released as stationary point and fugitive emissions, including any compounds determined by the Director. The plan

shall identify the rationale for the sampling, the ways and means by which the sampling program will be implemented including any special measures or methods which would be necessitated by influencing factors such as unfavourable weather conditions, the need for large or additional sample volumes, the need for multiple sampling runs, the methods used for the sampling and the analysis for each compound, the detection level to be attained, a comprehensive QA/QC program, and other items as may be identified by the Director.

66. The Licencee shall perform all stack sampling in accordance with the most recent version of Manitoba Sustainable Development Report No. 96-07, *Interim Stack Sampling Performance Protocol*, unless otherwise approved by the Director.
67. The Licencee shall arrange the scheduling of the sampling program submitted pursuant to Clause 65 of this Licence such that a representative of Manitoba Sustainable Development could be available to monitor and audit the implementation of the sampling program.
68. The Licencee shall complete the sampling of emissions according to the approved plan submitted pursuant to Clause 65 of this Licence, within a timeframe to be determined by the Director.
69. The Licencee shall submit a report, for the approval of the Director, of the completed sampling and analysis plan approved pursuant to Clause 65 of this Licence, within 90 days of the receipt of the analytical results of that sampling plan. The report shall contain at minimum:
 - a) the raw data collected;
 - b) calculation of emission rates for all parameters;
 - c) a discussion of the sampling and analytical portions of the program including any anomalies of sampling and analysis; and
 - d) a discussion of the significance of the data gathered with specific attention to:
 - i) the significance for potential acute and chronic impacts to health or environment from exposure to concentrations of the compounds detected;
 - ii) the need for risk assessment of the impact of emissions;
 - iii) the need for the establishment of ambient air monitoring stations;
 - iv) the need for dispersion modeling of emissions;
 - v) results and conclusions of the QA/QC program; and
 - vi) other issues as may be determined by the Director.

Respecting Remedial Measures to Reduce VOC Emissions

70. The Licencee, upon written request from the Director, shall initiate remedial measures to reduce the impingement of emissions from the Development associated with the use of materials containing VOC substances, beyond the property boundaries of the Development, if in the opinion of the Director, based on representation to the Director from the community, or other significant forthcoming information, such emissions are

resulting in or could result in a negative impact to the community. The remediation shall be implemented to the satisfaction of the Director by such measures as:

- a) a reduction in VOC emissions by means of operational or equipment modifications;
- b) an appropriate dispersion of emissions by means of alterations to the stack design as approved by the Director;
- c) the treatment of emissions by an appropriate air pollution control device; or
- d) other appropriate approved alternative reduction measure(s).

Respecting Decommissioning

71. The Licencee shall submit within one (1) year prior to closure of the Development, for the approval of the Director, a formal detailed Decommissioning Plan for the Development.


Record Drawings

72. The Licencee shall:

- a) prepare "record drawings" for the Development and shall label the drawings "Record Drawings"; and
- b) provide to the Director, within four months from the date of this Licence, two electronic copies of the "record drawings".

REVIEW AND REVOCATION

- A. This Licence replaces Environment Act Licence No. 407 and Environment Act Licence No. 778, which are 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.


for _____
Tracey Braun, M.Sc.
Director
The Environment Act