Manitoba
Conservation and Water Stewardship

Environmental Stewardship Division
Environmental Approvals Branch
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**CLIENT FILE NO.: 2755.20**

December 18, 2014

Denis Vielfaure
R3 Innovations Inc.
P.O. Box 100
La Broquerie MB R0A 0W0

Colleen Synchyshyn, C.A.O.
Town of Neepawa
Box 339
Neepawa MB R0J 1H0

Dear Mr. Vielfaure and Ms. Synchyshyn:

Enclosed is **revised Environment Act Licence No. 2870 R** dated December 18, 2014 issued to **R3 Innovations Inc.** and the **Town of Neepawa** for the operation and expansion of the Development, being a wastewater collection system and 1520 $m^3$/day hydraulic capacity industrial wastewater treatment facility (IWWTF) located at SW 35-14-15WPM in the Town of Neepawa with discharge of treated effluent to the effluent outfall pipeline with final discharge to the Whitemud River in accordance with the Proposal dated June 12, 2013 and subsequent information provided on November 25, 2013.

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 Peter Crocker, Environment Officer at 204 726-6565.

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 this notice.

Yours truly,

***"Original signed by"***
Tracy Braun, M.Sc.
Director
Environment Act

RESCINDED

c: Don Labossiere, Director, Environmental Compliance and Enforcement
Tim Prawdzik, Provincial Manager, Environmental Compliance and Enforcement
Public Registries

**NOTE: Confirmation of Receipt of this Licence No. 2870 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 January 8, 2015.**

**On behalf of the R3 Innovations Inc. and the Town of Neepawa** **Date**

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

THE ENVIRONMENT ACT
LOI SUR L'ENVIRONNEMENT

Manitoba

# LICENCE

**Licence No./Licence n°** **2870 R**

**Issue Date/Date de délivrance** **December 18, 2014**



**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) /Conformément au Paragraphes 11(1)**

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

**R3 INNOVATIONS INC.**
**AND**
**THE TOWN OF NEEPAWA**
**"the Licensees"**

for the operation and expansion of the Development, being a wastewater collection system and 1520 $m^3$/day hydraulic capacity industrial wastewater treatment facility (IWWTF) located at SW 35-14-15WPM in the Town of Neepawa with discharge of treated effluent to the effluent outfall pipeline with final discharge to the Whitemud River in accordance with the Proposal dated June 12, 2013 and subsequent information provided on November 25, 2013 and subject to the following specifications, limits, terms and conditions:

## DEFINITIONS

In this Licence,

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

**"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;

**"biosolids"** means accumulated organic solids, resulting from wastewater treatment processes. that have received adequate treatment to permit the material to be recycled;

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

**"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;

**"day"** or **"daily"** means any period of 24 consecutive hours;

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

**"effluent"** means treated wastewater flowing or pumped out of the wastewater treatment 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 appointed pursuant to *The Environment Act*;

**"Escherichia coli (*E.coli*)"** means the species of bacteria in the fecal coliform group found in large numbers in the gastrointestinal tract and feces of warm-blooded animals and man, whose presence is considered indicative of fresh fecal contamination, and is used as an indicator organism for the presence of less easily detected pathogenic bacteria;

**"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;

**"final discharge point"** means the effluent monitoring location past the UV disinfection facility of the wastewater treatment plant, at the actual end-of-pipe outfall location for the effluent following the wastewater treatment plant at or near the banks of the Whitemud River, unless otherwise re-designated in writing by the Director;

**"five-day biochemical oxygen demand ($BOD_5$)"** 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 ($CBOD_5$)"** 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;

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

**"hog processing facility"** means the HyLife Foods LP hog processing facility operating under Environment Act Licence No. 1102 R and all the supporting facilities located on that same property;

**"Industrial Services Agreement"** means a signed and legally binding agreement, arrived at between the Licencees and HyLife Foods LP 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 Licencees or HyLife Foods LP;

**"influent"** means all the untreated hog processing wastewater and sanitary sewage from the hog processing facility and the associated truck wash facility, being directed into the wet well prior to the fine screening stage;

**"IWWTF"** means the industrial wastewater treatment facility which includes the wastewater collection system, the wastewater treatment plant and the wastewater treatment lagoons;

**"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 or effluent 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

a) 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
b) 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;

**"Operator"** means a person certified to operate the IWWTF and employed by the Licencees to manage the functional day-to-day operation of the IWWTF within the constraints of this Licence;

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

**"process wastewater"** means all wastewater from the hog processing facility, including sanitary sewage and wastewater from the associated truck wash facility;

**"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;

**"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 and the preceding 29 consecutive days of reported data;

**"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;

**"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;

**"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;

**"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 which contains all treatment processes exclusive of the 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 Licencees 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 Licencees 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 any 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 Licencees 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 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 within 60 days of the samples being taken.

3. The Licencees shall actively participate in any future watershed-based management study, plan and/or nutrient reduction program, approved by the Director, for the Whitemud River and/or associated waterways and watersheds.

**Reporting Format**

4. The Licencees 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 labeled with the Licence Number and Client File Number associated with this Licence.

**Equipment Breakdown**

5. The Licencees 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 Licencees 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.

**Safety and Security**

7. The Licencees 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.

8. The Licencees 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.

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

10. The Licencees shall implement and continually maintain in current status, an Environmental Management System (EMS) for the Development which is acceptable to the Director.

11. The Licencees shall:
    a) install or utilize existing security fencing, acceptable to the Director, to enclose the wastewater treatment plants or components thereof, that are not enclosed in a building with a security system acceptable to the Director; and
    b) maintain the security system in a manner acceptable to the Director.

**Certification**

12. The Licencees 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.

13. The Licencees 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.

**Industrial Services Agreement**

14. The Licencees 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 IWWTF in terms of the design capability and/or in consideration of the actual performance of the IWWTF 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 Licencees shall notify the assigned Environment Officer not less than two weeks prior to beginning construction at the Development. The notification shall include the intended starting date of construction and the name of the contractor and contact person responsible for the construction.

16. The Licencees 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 Licencees 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*.

18. The Licencees 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.

19. The Licencees 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 discharge route and associated watercourses, and have an emergency spill kit for in-water use available on site during construction.

20. The Licencees shall not permit any pollutants to be directed into, or transported by, any surface drainage route leading off the property of the Development.

21. The Licencees 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.

22. The Licencees shall:
    a) clearly mark all those existing groundwater monitoring wells located on the property of the Development which have the potential to be disturbed by any construction activity involving the expansion and modification of the Development; and
    b) decommission any existing groundwater monitoring well(s) which are planned to be terminated or relocated (in the course of the construction activities) in a manner consistent with any applicable guidelines or requirements administered by the Manitoba Conservation and Water Stewardship.

**Respecting Operation of the Development**

23. The Licencees shall not accept wastewater, liquid sludge or manure into the IWWTF from any source other than the HyLife Foods hog processing facility and truck wash facility, except for seed as may be required by the IWWTF upon the start-up of the IWWTF modifications or to recover from a treatment process upset.

24. The Licencees shall operate and maintain the IWWTF in such a manner that, when measured immediately following the flow attenuation tank:
    a) the hydraulic loading does not exceed 1,520 cubic metres over any 24-hour period; and
    b) the organic loading does not exceed 6,023 kilograms of five-day biochemical oxygen demand over any 24-hour period.

25. The Licencees shall:
    a) stage the ramp-up of the operation of the IWWTF in accordance with the written instructions of the Operator of the IWWTF;
    b) limit the wastewater being directed into the IWWTF to only that wastewater which is generated at the HyLife Foods hog processing plant and truck wash facility while operating at a hog processing rate not exceeding 37,500 hogs per week averaged over any 12 month period; and
    c) continually monitor and manage the quality and quantity of the raw wastewater streams from the HyLife Foods hog processing facility and truck wash facility relative to the design limitations of the IWWTF and consistent with maintaining ongoing compliance with the limits, terms and conditions set out in this Licence.

26. The Operator of the IWWTF shall:
    a) provide written instructions to HyLife Foods, when necessary, with respect to managing the quality and quantity of any wastewater streams being directed from the hog processing facility and the truck wash facility to the IWWTF, clearly indicating the necessity for the instruction(s) and any critical timing associated with executing the instruction(s); and
    b) copy the Director on any written authorizations or instructions provided to HyLife Foods concerning the commissioning of the altered IWWTF and the ongoing management of the quality and quantity of any influent wastewater streams being directed into the wet well at the front of the IWWTF.

27. The Licencees 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.

28. The Licencees 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.

29. The Licencees 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.

30. The Licencee shall submit, to the Director for approval within 90 days of issuance of this Licence, an operational plan for the existing wastewater treatment lagoon, including plans to seal and/or decommission the discharge outlet from the facility.

31. The Licencees shall maintain a 1.0 metre freeboard at the existing wastewater treatment lagoon cells at all times.

32. The Licencees shall:
    a) transfer wastewater to the existing wastewater treatment lagoon at the Development, only under exceptional circumstances, for temporary wastewater storage purposes only;

b) transfer the stored wastewater from the existing wastewater treatment lagoon to the wastewater treatment plant for treatment and discharge only through the final discharge point; and
c) notify the Environment Officer on each occasion when the transfer of wastewater to the existing wastewater treatment lagoon occurs and keep a record of each transfer.

**Respecting Effluent Releases from the Development**

33. The Licencees shall release effluent from the Development only through the final discharge point which leads to the Whitemud River.

34. The Licencees shall not release any effluent from the Development if the quality of the effluent is such that:
a) the organic content in the effluent, as indicated by the five-day carbonaceous biochemical oxygen demand, is in excess of 25 mg/L, as determined from any composite sample of the effluent;
b) the total suspended solids content in the effluent is in excess of 25 mg/L, as determined from any composite sample of the effluent;
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 E. coli 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;
e) the concentration of total nitrogen in the effluent on any day is in excess of 15.0 milligrams per litre, as determined by the 30-day rolling average;
f) the concentration of total phosphorus in the effluent on any day is in excess of 1.0 milligrams per litre, as determined by the 30-day rolling average; or
g) the total ammonia is in excess of the concentration specified in Schedule 1 of this Licence, as determined by the pH of the effluent.

35. The Licencees shall not, on any day, release a quality of effluent from the Development which:
a) causes, or contributes to, the mixing zone for the effluent in the Whitemud River being acutely lethal to aquatic life passing through the mixing zone; or
b) which can be demonstrated to be acutely lethal to fish within the mixing zone for the effluent in the Whitemud River 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 strength 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, or by another toxicity testing method approved by the Director.

36. The Licencees shall not direct wastewater to the Town of Neepawa municipal wastewater treatment lagoon.

**Respecting Groundwater Protection**

37. The Licencees shall:
    a) develop and submit to the Director, for approval, a Groundwater Monitoring Program to encompass all groundwater zones that could potentially be impacted at the site of the Development by losses of untreated or partially treated wastewater or any spilled liquid chemicals or petroleum fuel; and
    b) submit an annual report to the Director each year on the findings of the approved Groundwater Monitoring Program.

38. The Licencees shall, upon learning that the approved Groundwater Monitoring Program has identified evidence of probable or certain groundwater contamination;
    a) file an action plan with the Director, as soon as possible, to identify and isolate the source(s) of the groundwater contamination; and
    b) implement remediation measures, to the satisfaction of the Director, and to the extent necessary to restore the impacted groundwater.

39. The Licencees shall, upon the suspicion or detection of any leaking or ruptured wastewater collection pipe or forcemain, immediately undertake an investigation, and upon confirmation of a leak or rupture, terminate or otherwise re-route all flows to the pipe or forcemain until the necessary repair has been completed.

**Respecting Air Emissions**

40. The Licencees 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 the odour nuisance.

41. The Licencees 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.

42. The Licencees shall prepare and maintain and make available to an Environment Officer upon request:
    a) an updated greenhouse gas inventory respecting the Development, by addressing carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride emissions; and
    b) a greenhouse gas management plan for the Development, including reduction strategies and targets.

**Respecting Solid Wastes**

43. The Licencees shall not undertake any on-site burning of solid waste.

44. The Licencees shall reduce the production and dissemination of wastes by initiating and maintaining waste reduction and waste recycling programs.

45. The Licencees shall not deposit solid waste into the environment except into a waste disposal ground operating under the authority of an Environment Act Licence or a permit issued pursuant to *Manitoba Regulation 150/91* or any future amendment thereof, where the operator of that facility has agreed to accept the solid waste.

**Respecting the Management of Sludge and Biosolids**

46. The Licencees shall transport all of the dewatered sludge and biosolids from the development:
    a) to an approved facility operating under a valid Environment Act Licence or permit; and
    b) in containers in such a manner to prevent the loss of sludge and biosolids or entrained fluids to the satisfaction of an Environment Officer.

47. The Licencees shall return all centrate resulting from the dewatering of the sludge and biosolids by centrifuges to the flow attenuation tank for treatment.

**Respecting the Effluent Monitoring Station**

48. The Licencees 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 IWWTF wastewater influent pipelines; and
        ii) the IWWTF wastewater effluent pipeline; 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 department ally 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 Monitoring, Record Keeping and Reporting of Effluent Releases**

49. The Licencees shall:
    a) continuously measure and record the daily and total monthly volume (cubic metres) of effluent released from the final discharge point of the Development to an accuracy within ±2 percent;
    b) once every week, on a full production day, collect a composite sample of the effluent at the final discharge point of the Development, and analyze it for:
        i) pH;
        ii) temperature (field);

iii) suspended solids (mg/L);
iv) five-day carbonaceous biochemical oxygen demand (mg/L); and
v) ammonia nitrogen (expressed as mg/L of N); and

c) once each day collect a composite sample of the effluent from the Development and analyze it for:
i) total nitrogen (as N); and
ii) total phosphorus (as P);

d) once each day at equal time intervals for a minimum of three (3) consecutive days per week, collect a grab sample of the effluent from the final discharge point of the Development and analyze it for:
i) fecal coliform (expressed as MPN per 100 millilitres of sample); and
ii) E. coli (expressed as MPN per 100 millilitres of sample); and
determine and record the monthly geometric mean for each of the fecal coliform and the E. coli counts based on all the data collected during each month for each coliform type;

e) determine and record the loadings of:
i) ammonia nitrogen (as kg/d of N);
ii) total nitrogen (as kg/d of N); and
iii) total phosphorus (as kg/d of P);
released to the Whitemud River on each sampling date; and

f) once every six months, collect a grab sample of the effluent at the final discharge point and have the sample analyzed by means of appropriate analytical methodologies to identify and quantify the presence of:
i) Cryptosporidium;
ii) Giardia;
iii) heavy metals;
iv) organochlorines;
v) active pharmaceutical ingredients (particularly suspected endocrine disrupting compounds) which may be associated with pork processing operations; and
vi) such other parameter(s) as may be requested by the Director;
until or unless otherwise specified by the Director.

50. The Licencees 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.

51. The Licencees shall submit monthly reports on applicable analytical values and information determined and recorded pursuant to Clauses 49 and 50 of this Licence, to the Director, in writing and in an electronic format acceptable to the Director, no later than 30 days after the end of the month during which the information was collected or compiled.

52. The Licencees 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.

53. The Licencees shall submit an annual report to the Environment Officer by February 28 of the following year including all records required by Clause 32 and Clause 52 of this Licence.

**Record Drawings**

54. The Licencees shall:
    a) prepare updated "record drawings" for the Development and shall label the drawings "Record Drawings"; and
    b) provide to the Director, within six months from the date of this Environment Act Licence, two electronic copies of the "record drawings".

**REVIEW OR REVOCATION**

A. This Licence replaces Environment Act Licence No. 2870 which is hereby rescinded.

B. If, in the opinion of the Director, the Licencees have failed or are failing to comply with any of the specifications, limits, terms or conditions set out herein, 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*.

RESCINDED

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

**File: 2755.20**

**Schedule 1 to Environment Act Licence No. 2870 R**

**Maximum Total Ammonia - Acute Toxicity Limits pursuant to Clause 34 (g)**

| Effluent pH | Total Ammonia (mg/L) |
|---|---|
| 6.50 | 48.83 |
| 6.60 | 46.84 |
| 6.70 | 44.57 |
| 6.80 | 42.00 |
| 6.90 | 39.16 |
| 7.00 | 36.09 |
| 7.10 | 32.86 |
| 7.20 | 29.54 |
| 7.30 | 26.21 |
| 7.40 | 22.97 |
| 7.50 | [illegible] |
| 7.60 | 17.03 |
| 7.70 | 14.4[illegible] |
| 7.80 | 12.14 |
| 7.90 | 10.13 |
| 8.00 | 8.41 |
| 8.10 | 6.95 |
| 8.20 | 5.73 |
| 8.30 | 4.71 |
| 8.40 | 3.88 |
| 8.50 | 3.20 |
| 8.60 | 2.65 |
| 8.70 | 2.20 |
| 8.80 | 1.84 |
| 8.90 | 1.56 |
| 9.00 | 1.32 |