



Sustainable Development

Environmental Stewardship Division
Environmental Approvals Branch
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CLIENT FILE NO.: 5634.00

August 16, 2018

Harry Hofer, Manager
Glenway Holding Co. Ltd.
Box 182
Dominion City MB R0A 0H0

Dear Mr. Hofer:

Enclosed is **Environment Act Licence No. 3276**, issued to **Glenway Holding Co. Ltd.** for the construction, operation and maintenance of the Development being a wastewater collection system, a meat processing and slaughter plant, two forcemain connections, and an expanded wastewater treatment lagoon system in accordance with the Proposal filed under The Environment Act.

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 Diane Oertel, Environment Officer, at 204-345-1486. Please note that for clauses 20-22 of this Licence, the designated Environment Officer of the Approvals Branch is Asit Dey, who may be contacted at asit.dey@gov.mb.ca or at 204-945-2614.

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 sincerely,

Tracey Braun, M.Sc.
Director

Environmental Approvals Branch

c: Don Labossiere/Tyler Kneeshaw /Diane Oertel, Environmental Compliance and Enforcement
Asit Dey, Environmental Approvals; Peter Grieger, Southman Engineering
Public Registries

NOTE: Confirmation of Receipt of this Licence No. 3276 (by the Licensee only) is required by the Director of Environmental Approvals. Please acknowledge receipt by signing in the space below and scan a copy of this letter to asit.dey@gov.mb.ca by August 29, 2018.

On behalf of Glenway Holding Co. Ltd.

Date

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

LICENCE

Licence No. / Licence n°

3276

Issue Date / Date de délivrance

August 15, 2018

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 Paragraphe 11(1)

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

GLENWAY HOLDING CO. LTD.;

"the Licencee"

for the construction, operation and maintenance of the Development being a wastewater collection system, a meat processing and slaughter plant, two forcemain connections, and an expanded wastewater treatment lagoon system consisting of two primary cells and a secondary cell with a (227-day) total hydraulic storage capacity of 9,775 cubic metres (approximately, 43 cubic metres per day average) for the design population of 150 that is located on portions of east half of 2-3-3 EPM in the Municipality of Emerson-Franklin and with discharge of treated effluent via a constructed swale to an oxbow of the Roseau River, in accordance with the Proposal filed under The Environment Act on February 1, 2013, and the additional information submitted on April 28, 2016, December 31, 2016, and August 30, 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;

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

"**Approvals Branch**" means the Environmental Approvals Branch of Manitoba Sustainable Development, or any future branch responsible for issuing licenses under The Environment Act;

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

"approved facility" means a facility operating in accordance with the requirements of The Environment Act and the regulations thereunder;

"ASTM" means the American Society for Testing and Materials;

"base" means the exposed and finished elevation of the bottom of any cell of the wastewater treatment lagoon;

"bentonite" means specially formulated standard mill grade sodium bentonite conforming to American Petroleum Institute Specification 13-A;

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

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

"composting" means a managed process of bio-oxidation of a solid heterogeneous organic substrate including a thermophilic phase;

"day" means any 24-hour period;

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

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

"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;

"field storage" means solid livestock manure that is stored in the open air other than in a manure storage facility in accordance with Manitoba Regulation MR 42/98 respecting Livestock Manure and Mortalities Management or any future amendment thereof;

"five-day biochemical oxygen demand (BOD₅)" means that part of the oxygen demand usually associated with biochemical oxidation of organic matter within 5 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;

"flooding" means the flowing of water onto lands, other than waterways, due to the overtopping of a waterway or waterways;

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

"high water mark" means the line on the interior surface of the primary and secondary cells which is normally reached when the cell is at the maximum allowable liquid level or the line of the exterior of the perimeter dykes which is reached during local flooding;

"hydraulic conductivity" means the quantity of water that will flow through a unit cross-sectional area of a porous material per unit of time under a hydraulic gradient of 1.0;

"influent" means water, wastewater, or other liquid flowing into a wastewater treatment facility;

"in-situ" means on the site;

"low water mark" means the line on the interior surface of the primary and secondary cells which is normally reached when the cell is discharged;

"Live Weight Killed (LWK)" means the total weight of animals slaughtered;

"manure storage facility" means, in accordance with Manitoba Regulation MR 42/98 respecting Livestock Manure and Mortalities Management or any future amendment thereof, a structure, earthen storage facility, molehill, tank or other facility for storing or treating manure or where it is stored or treated, and includes any permanent equipment or structures in or by which manure is moved to or from the storage facility, but does not include the following:

- a) a field storage site;
- b) a vehicle or other mobile equipment used to transport or dispose of manure;
- c) a gutter or pit used to contain liquid or semi-solid manure for less than 30 days for the purpose of moving the manure to a storage facility;
- d) a collection basin; or
- e) a temporary composting site for manure;

"meat processing and slaughter plant" means a plant where livestock is slaughtered or meat products are produced or both;

"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;

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

"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 clause s 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 clause s 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 the company or person who is responsible for the day-to-day maintenance and operation of the Development;

"primary cell" means the first in a series of cells of a wastewater treatment lagoon system and which is the cell that receives the untreated wastewater;

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

"riprap" means small, broken stones or boulders placed compactly or irregularly on dykes or similar embankments for protection of earth surfaces against wave action or current;

"SAR" means sodium adsorption ratio;

"**secondary cell**" means a cell of the wastewater treatment lagoon system which is a cell that receives partially treated wastewater from the primary cell and retains the wastewater for a period of time;

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

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

"**sodium adsorption ratio**" means the dimensionless value where:

$$\text{SAR} = \frac{0.044 \times \text{Sodium concentration}}{\sqrt{(0.025 \times \text{Calcium concentration}) + (0.041 \times \text{Magnesium concentration})}};$$

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

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

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

"**WWTL**" means wastewater treatment lagoon.

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.

Wastewater Source

1. The Licencee shall direct all wastewater generated within the Glenway Colony, including from the meat processing and slaughter plant, toward the wastewater treatment lagoon or other approved wastewater treatment facilities.

Future Sampling

2. 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.

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 labelled with the Licence Number and Client File Number associated with this Licence.

Respecting Odour Nuisance

4. 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.

Equipment Breakdown or Process Upset

5. The Licencee shall, in the case of physical or mechanical equipment breakdown or process upset where such breakdown or process upset results or may result in the

release of a pollutant in an amount or concentration, or at a level or rate of release, that causes or may cause a significant adverse effect, immediately report the event by calling the 24-hour environmental accident reporting line at 204-944-4888 (toll-free 1-855-944-4888). The report shall indicate the nature of the event, the time and estimated duration of the event and the reason for the event.

6. The Licencee shall, following the reporting of an event pursuant to Clause 5:
 - a) identify the repairs required to the mechanical equipment;
 - b) undertake all repairs to minimize unauthorized discharges of a pollutant;
 - c) complete the repairs in accordance with any written instructions of the Director; and
 - d) submit a report to the Director about the causes of breakdown and measures taken, within one week of the repairs being done.
7. The Licencee shall, during construction and operation of the Development, report spills of fuels or other contaminants to an Environment Officer in accordance with the requirements of Manitoba Regulation 439/87 respecting Environmental Accident Reporting or any future amendment thereof.

Respecting SAR Reduction

8. The Licencee shall, as may be requested by the Director if the Director determines that effluent discharge is causing or contributing to deleterious impacts on the associated discharge watercourses, propose a plan, for approval by the Director of the Environmental Approvals Branch, that the Licencee will implement to reduce the concentration of effluent constituents that create SAR levels that exceed levels specified in Manitoba Regulation 96/2011 respecting Water Quality Standards, Objectives and Guidelines.

Future Studies

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

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Respecting Construction – General

10. 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(s) of construction and the name(s) of the contractor(s) responsible for the construction.

11. The Licencee shall:
 - a) comply with the requirements of The Heritage Resources Act and, if heritage resources (including human remains) are encountered during the construction of the Development, suspend construction and immediately notify the Manitoba Historic Resources Branch.
 - b) 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;
 - c) not construct the wastewater treatment lagoon or wastewater collection system during periods of heavy rain;
 - d) place and/or isolate all dredged and construction material where it will not erode into any watercourse;
 - e) 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;
 - f) routinely inspect all erosion and sediment control structures and immediately complete any necessary maintenance or repair;
 - g) 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
 - h) use rock that is free of silt and clay for riprap.
12. 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 lagoon, the discharge route and associated watercourses, and have an emergency spill kit for in-water use available on site during construction.
13. The Licencee shall dispose of non-reusable construction debris from the Development at a waste management facility operating under the authority of a permit issued pursuant to Manitoba Regulation 37/2016 respecting Waste Management Facilities, or any future amendment thereof, or a Licence issued pursuant to The Environment Act.
14. The Licencee shall locate all 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.
15. 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.

16. The Licencee shall install and maintain a fence around the wastewater treatment lagoon to limit access. The fence shall be a minimum of 1.2 meters high and have a locking gate, which shall be locked at all times except to allow access to the wastewater treatment lagoon.

Respecting Construction – Continuous Clay Soil Liners

17. The Licencee shall, prior to the construction of the dykes for the proposed secondary cell no. 3 of the wastewater treatment lagoon:
 - a) remove all organic topsoil from the area where the dykes will be constructed; or
 - b) remove all organic material for a depth of 0.3 metres and a width of 3.0 metres from the area where the liner will be constructed.
18. The Licencee shall construct and maintain primary cell no. 1, primary cell no. 2 and secondary cell no. 3 of the wastewater treatment lagoon as identified in Schedule “A” to this Licence with a continuous liner under all interior surfaces of each cell 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 liner shall be constructed to an elevation of 2.5 metres above the floor elevation of each cell.

Respecting Biosolids Management

19. The Licencee shall, prior to the approved commissioning of secondary cell no. 3 of the wastewater treatment lagoon as identified in Schedule “A” to this Licence, submit a report to the Director of Environmental Approvals Branch for review and approval respecting the impact of biosolids and sludge solids buildup on the operating depth of the wastewater treatment lagoon. The report should also include an assessment of options for the beneficial reuse of biosolids and sludge solids, details of the sampling and analysis of results, and proposed actions relative to the ultimate disposal of the biosolids and sludge solids.

Respecting Soil Liner Sampling, Testing, and Reporting

20. The Licencee shall arrange with the designated Environment Officer of the Approvals Branch a mutually acceptable time and date for any required soil

sampling between the 15th day of May and the 15th day of October of any year, unless otherwise approved by the Environment Officer.

21. The Licencee shall take and test undisturbed soil samples, in accordance with Schedule "B" to this Licence, from the soil liners of the wastewater treatment lagoon; the number and location of samples and test methods to be specified by the designated Environment Officer of the Approvals Branch up to a maximum of 20 samples.
22. The Licencee shall, not less than 2 weeks before any new or upgraded clay-lined cell of the wastewater treatment lagoon as identified on Schedule "A" to this Licence is placed in operation, submit for the approval of the Environment Officer of the Approvals Branch the results of the tests carried out pursuant to Clause 21 of this Licence.

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.

Respecting Operation – WWTL

25. The Licencee shall operate and maintain the wastewater treatment lagoon in such a manner that:
 - a) the organic loading on the primary cells, 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 primary cells and the secondary cell does not exceed 1.5 metres; and
 - c) a 1.0 metre freeboard is maintained in the primary cells and the secondary cell at all times.
26. The Licencee shall not discharge effluent from the wastewater treatment lagoon :
 - a) where 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) where the total suspended solids content of the effluent is in excess of 25 milligrams per litre, unless the exceedance is caused by algae;
 - c) where the fecal coliform content of the effluent, as indicated by the MPN index, is in excess of 200 per 100 millilitres of sample;
 - d) where the unionized ammonia content of the effluent is in excess of 1.25 milligrams per litre expressed as nitrogen (N), at $15^{\circ}\text{C} \pm 1^{\circ}\text{C}$;
 - e) where the total phosphorus content of the effluent is in excess of 1.0 milligrams per litre unless in compliance with Clauses 54 and 56 of this Licence;
 - f) between the 1st day of November of any year and the 15th day of June of the following year;
 - g) when flooding from any cause is occurring along the effluent drainage route; or
 - h) when such a discharge would cause or contribute to flooding in or along the effluent drainage route.
27. The Licencee shall discharge the wastewater treatment lagoon over at least a two-week period, while accelerating discharge as necessary to maintain normal operation of the wastewater treatment lagoon.

Respecting Disinfection – General

28. 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.

Respecting Discharge of Effluent by Spray Irrigation

29. The Licencee shall:
- a) during construction of the secondary cell or during the repair of the primary cells until approved commissioning of the secondary cell no. 3 as identified in Schedule “A” to this Licence, pump effluent from the wastewater treatment lagoon for spray irrigation purposes in a manner such that it does not affect or de-stabilize the integrity of the clay liner; and
 - b) not discharge effluent from the wastewater treatment lagoon by spray irrigation upon approved commissioning of the secondary cell no. 3 as identified in Schedule “A” to this Licence.

30. The Licencee shall not discharge effluent from the wastewater treatment lagoon by spray irrigation between the 15th day of October of any year and the 15th day of May of the following year.
31. The Licencee shall, when discharging effluent by spray irrigation:
- a) dispose of all effluent onto land owned by the Licencee;
 - b) only discharge effluent to irrigate:
 - i) actively growing cereal, forage or oil seed crops;
 - ii) grasslands which will not be utilized for grazing:
 - A. by dairy cattle for at least 30 days after effluent is applied; or
 - B. by livestock other than dairy cattle for at least 7 days after effluent is applied;
 - c) not harvest agriculture crops for at least 7 days after the crops are irrigated with effluent;
 - d) use any corn irrigated with effluent solely for making silage;
 - e) not apply effluent to particular lands for more than 10 continuous hours in every 24-hour period;
 - f) if ponding or surface runoff occurs during application, reduce the gross depth of effluent applied during any application of effluent so that ponding or surface runoff does not occur; and
 - g) if wind conditions cause the effluent to drift within the restricted zones outlined in Clause 32 of this Licence, stop the spray irrigation until the wind conditions subside.
32. The Licencee shall not discharge effluent, by spray irrigation:
- a) within 300 metres of any dwelling not owned or lawfully controlled by the Licencee;
 - b) within 100 metres of any surface watercourse or groundwater well; or
 - c) within 100 metres of any adjoining property boundary.

Respecting Maintenance of the WWTL

33. The Licencee shall, if in the opinion of the Environment Officer, significant erosion of the interior surfaces of the dykes occurs, repair the dyke to the satisfaction of the Environment Officer. Upon approval of the Environment Officer, install riprap as necessary. The riprap shall be placed on the interior dyke surfaces from 0.6 metres above the high water mark to 0.6 metres below the low water mark to protect the dykes from wave action.
34. 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.

35. 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.
36. The Licencee shall implement an ongoing program to remove burrowing animals from the site of the wastewater treatment lagoon.

Respecting Operation – Meat Processing and Slaughter Plant

37. The Licencee shall limit the rate of hog and poultry processing at the meat processing and slaughter plant to a maximum production capacity of 53,200 kilograms of live weight animals killed per year.
38. The Licencee shall direct all delivered, live and unloaded animals as soon as possible into the hog and poultry receiving facility for processing and shall not exceed the total holding capacity on any day.
39. The Licencee shall remove all offal, entrails, blood, bones, feathers, dead-on-arrival hogs and birds, and solids from the holding barn and processing plant regularly to a composting facility, which is permitted or licensed under The Environment Act or to a third party rendering facility, approved by the Director, which is licensed under The Environment Act and with vehicles utilizing containment provisions satisfactory to the Environment Officer.
40. The Licencee shall not direct pollutants into any surface drainage route leading off the property of the meat processing and slaughter plant, into the local groundwater, or onto the soil surface.

Respecting Solid Waste Management - Meat Processing and Slaughter Plant

41. The Licencee shall not undertake any on-site burning of solid waste.
42. 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 meat processing and slaughter plant.
43. The Licencee shall:
 - a) collect all chicken manure and dry hog manure associated with the Meat Processing and Slaughter Plant of this Development, and associated bedding from the unloading dock, truck trailers and holding pens into designated waste containers; and
 - b) direct all chicken manure and dry hog manure and associated bedding to a field storage, to a manure storage facility operating under the authority of a

- permit issued pursuant to Manitoba Regulation 42/98 respecting Livestock Manure and Mortalities Management or any future amendment thereof, or to a waste management facility operating under the authority of a permit issued pursuant to Manitoba Regulation 37/2016 respecting Waste Management Facilities or any future amendment thereof or a Licence issued pursuant to The Environment Act; or
- c) manage all chicken manure and dry hog manure and associated bedding in accordance with Manitoba Regulation 42/98 respecting Livestock Manure and Mortalities Management or any future amendment thereof.
44. The Licencee shall dispose of all solid waste generated at the meat processing and slaughter plant, which is not recycled, only to a waste management system operating under the authority of a permit issued pursuant to Manitoba Regulation 37/2016 respecting Waste Management Facilities or any future amendment thereof, or a Licence issued pursuant to The Environment Act.
45. The Licencee shall not deposit domestic solid waste into the environment except into a waste management facility operating under the authority of a permit issued pursuant to Manitoba Regulation 37/2016 respecting Waste Management Facilities or any future amendment thereof, or a Licence issued pursuant to The Environment Act.

Respecting Dangerous Goods or Hazardous Waste

46. The Licencee shall not release dangerous goods or hazardous wastes into the wastewater collection system.
47. 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 meat processing and slaughter plant; and
 - b) Manitoba Storage and Handling of Petroleum Products and Allied Products Regulation 188/2001, or any future amendments thereto.
48. The Licencee shall install and maintain at all times spill recovery equipment at the meat processing and slaughter plant.
49. 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.

Respecting Process Wastewater

50. The Licencee shall operate and maintain an effective filtration screening system to treat all process wastewater generated from the meat processing and slaughter plant prior to discharging to the Glenway colony's wastewater collection system.
51. The Licencee shall direct all solids from the filtration screening system to a composting facility, which is permitted or licensed under The Environment Act or to an off-site rendering facility that is licensed under The Environment Act or under the appropriate legislation of another corresponding jurisdiction.

MONITORING AND REPORTING

General

52. 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 "Standard Methods for the Examination of Water and Wastewater" or in accordance with an equivalent analytical methodology approved by the Director;
 - b) carry out all sampling of, and preservation and analyses on, soil or other 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 or in a format acceptable to the Director, within 60 days of the samples being taken.

Respecting Monitoring – WWTL

53. The Licencee shall, prior to each effluent discharge campaign, obtain grab samples of the treated wastewater and have them analyzed for:
 - a) the organic content as indicated by the five-day carbonaceous biochemical oxygen demand (CBOD₅) and expressed as milligrams per litre;
 - b) the fecal coliform content as indicated by the MPN index and expressed as MPN per 100 millilitres per sample;
 - c) the total suspended solids content expressed as milligrams per litre;
 - d) the unionized ammonia nitrogen expressed as milligrams per litre; and
 - e) the total phosphorus content expressed as milligrams per litre;

Respecting Total Phosphorus

54. The Licencee shall, for a period of at least two years following the approved commencement of operation of the secondary cell no. 3 of the wastewater treatment lagoon and prior to the effluent encountering any other surface water, conduct effluent phosphorous testing at three times during each discharge event and at each of the three following monitoring locations: at the end of the discharge pipe, at the midpoint of the constructed swale, and at the endpoint of the constructed swale. The samples shall be preserved and analyzed in accordance with the requirements of Clause 52 of this Licence.
55. The Licencee shall provide a report along with the testing results and discussion on the effectiveness of trickle discharge on nutrient reduction to the designated Environment Officer, for review and approval, before December 31 of each year.
56. The Licencee, at the end of two years of the trickle discharge trial, may request a permanent suspension of Clause 26(e) based on the monitoring results.

Respecting Monitoring and Reporting – SAR

57. The Licencee shall conduct a monitoring program for the Sodium Adsorption Ratio of effluent, prior to each discharge from the wastewater treatment lagoon, for a minimum of three years.
58. The Licencee shall, prior to each effluent discharge campaign, obtain grab samples of the treated wastewater and have them analyzed for:
 - a) total calcium;
 - b) total magnesium; and
 - c) total sodium.
59. The Licencee shall, not less than 30 days after the results of the sample analysis are available, submit to the Director the results of the monitoring program carried out pursuant to Clause 57 of this Licence.

Respecting Records Maintenance and Reporting - WWTL

60. The Licencee shall during each year maintain the following records and retain them for a minimum period of five calendar years:
 - a) reports of visual inspections of the wastewater treatment lagoon conducted at a minimum of once per month;
 - b) wastewater sample dates;
 - c) original copies of laboratory analytical results of the sampled wastewater and water;
 - d) a summary of laboratory analytical results;

- e) cell isolation dates (i.e., valve operation records);
 - f) effluent discharge dates;
 - g) estimated effluent discharge volumes;
 - h) maintenance and repairs;
 - i) expansions to the collection system with associated capacity assessment; and
 - j) updated organization charts identifying all certified operators, including backup operators; and
 - k) a summary of any wastewater collection system overflows.
61. The Licencee shall submit an annual report to the Environment Officer by February 28 of the following year including all records required by Clause 60 of this Licence.

Respecting Operating Depth and Freeboard Non-Compliance Events

62. 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 25 of this Licence.
63. The Licencee shall, if reporting is required pursuant to Clause 62 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 wastewater treatment lagoon and related infrastructure, to determine the ability or inability of the existing system to meet the hydraulic loading capacity of the community. 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;
 - v) the organic loading on the primary cell in terms of the five day biochemical oxygen demand; and
 - vi) operating procedures;
 - b) provide to the Director, within four months of the notification given pursuant to Clause 62 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.

Respecting Initial Characterization


64. The Licencee shall, during the first year of operation of the Development following the issuance of this Licence that a discharge must occur, obtain and analyze grab samples of the effluent during each effluent discharge campaign and report the results of the analysis in accordance with Schedule "C" attached to this Licence.

Respecting Record Drawings

65. The Licencee shall:
- a) prepare updated "record drawings" for the Development and shall label the drawings "record drawings"; and
 - b) provide to the Environment Officer of the Approvals Branch, within four months of the commissioning of the Development, two electronic copies of the "record drawings" of the Development.

REVIEW AND REVOCATION

- A. 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.
- B. 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.

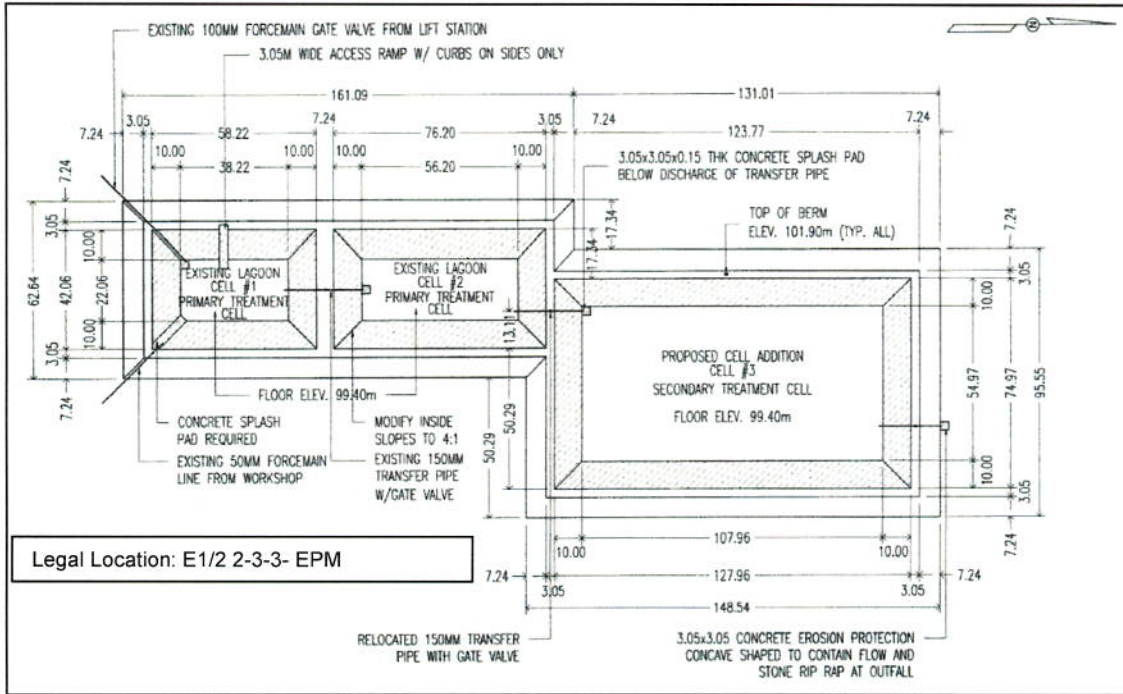


Tracey Braun, M.Sc.
Director
The Environment Act

FILE: 5634.00

Schedule "A" to Environment Act Licence No. 3276

Facility layout pursuant to Clauses 18, 19, 22, and 29



Not to Scale

Schedule "B" to Environment Act Licence No. 3276

Soil Sampling and Testing Pursuant to Clause 21

Soil Sampling:

1. The Licencee shall provide a drilling rig, acceptable to the designated Environment Officer, to extract soil samples from the liner which is not placed or found at the surface of the lagoon structure. This includes all wastewater treatment lagoons constructed with clay cutoffs at the interior base of the dyke or with a clay cutoff in the centre of the dyke. The drill rig shall have the capacity to drill to the maximum depth of the clay cutoff plus an additional 2 metres. The drill rig shall be equipped with both standard and hollow stem augers. The minimum hole diameter shall be 5 inches.
2. For lagoon liners placed or found at the surface of the lagoon structure, the Licencee shall provide a machine, acceptable to the designated Environment Officer, capable of pressing a sampling tube into the liner in a straight line motion along the centre axis line of the sample tube and without sideways movement.
3. Soil samples shall be collected and shipped in accordance with ASTM Standard D 1587 (Standard Practice for Thin-Walled Tube Sampling of Soils), D 4220 (Standard Practice for Preserving and Transporting Soil Samples) and D 3550 (Standard Practice for Ring-Lines Barrel Sampling of Soils). Thin-walled tubes shall meet the stated requirements including length, inside clearance ratio and corrosion protection. An adequate venting area shall be provided through the sampling head.
4. At the time of sample collection, the designated Environment Officer shall advise the Licencee as to the soil testing method that must be used on each sample. The oedometer method may be used for a sample were the Environment Officer determines that the soil sample is taken from an undisturbed clay soil which has not been remoulded and which is homogeneous and unweathered. The triaxial test shall be used for all samples taken from disturbed and remoulded soils or from non homogenous and weathered soils.
5. The Licencee shall provide a report on the collection of soil samples to the designated Environment Officer and to the laboratory technician which includes but is not limited to: a plot plan indicating sample location, depth or elevation of sample, length of advance of the sample tube length of soil sample contained in the tube after its advancement, the soil test method specified by the Environment Officer for each soil sample and all necessary instructions from the site engineer to the laboratory technician.
6. All drill and sample holes shall be sealed with bentonite pellets after the field drilling and sampling has been completed.

Schedule "B" to Environment Act Licence No. 3276 (cont'd)

Soil Testing Methods:

1. Triaxial Test Method
 - a) The soil samples shall be tested for hydraulic conductivity using ASTM D 5084 (Standard Test Method for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter).
 - b) Soil specimens shall have a minimum diameter of 70 mm (2.75 inches) and a minimum height of 70 mm (2.75 inches). The soil specimens shall be selected from a section of the soil sample which contains the most porous material based on a visual inspection. The hydraulic gradient shall not exceed 30 during sample preparation and testing. Swelling of the soil specimen should be controlled to adjust for: the amount of compaction measured during sample collection and extraction from the tube and the depth or elevation of the sample. The effective stress used during saturation or consolidation of the sample shall not exceed 40 kPa (5.7 psi) or the specific stress level, that is expected in the field location were the sample was taken, which ever is greater.
 - c) The complete laboratory report, as outlined in ASTM D 5084, shall be supplied for each soil sample collected in the field.

2. Oedometer Test Method
 - a) The soil samples shall be tested for hydraulic conductivity using ASTM D 2435 (Standard Test Method for One-Dimensional Consolidation Properties of Soils).
 - b) Soil specimens shall have a minimum diameter of 50 mm (2 inches) and a minimum height of 20 mm (0.8 inches). The soil specimens shall be selected from a section of the soil sample which contains the most porous material based on a visual inspection. The soil specimen shall be taken from an undisturbed soil sample. The soil specimen shall be completely saturated.
 - c) The complete laboratory report, as outlined in ASTM D 2435, shall be supplied for each soil sample collected in the field.

Schedule "C" to Environment Act Licence No. 3276

Initial Characterization of Wastewater Pursuant to Clause 64

Facility Size: Very Small (<500 m³/day)

Facility Type: Facultative wastewater treatment lagoon – intermittent discharge

Effluent Sampling:

During the first year of operation:

1. Obtain a representative grab sample of the discharging effluent near the beginning of the discharge period and near the end of the discharge period (i.e., two samples for each discharge event); and
2. Determine the temperature of each sample at the time of sampling.

Effluent Analysis:

1. For each grab sample, have the grab 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) if chlorine was used as a disinfecting agent, total residual chlorine expressed as milligrams per litre;
 - h) total ammonia nitrogen expressed as milligrams per litre;
 - i) nitrate-nitrite nitrogen expressed as milligrams per litre;
 - j) total Kjeldahl nitrogen (TKN) expressed as milligrams per litre;
 - k) dissolved phosphorus expressed as milligrams per litre;
 - l) total phosphorus expressed as milligrams per litre; and
 - m) pH.

Effluent Reporting:

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