



Conservation and Water Stewardship

Climate Change and Environmental Protection Division
Environmental Approvals Branch
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CLIENT FILE NO.: 5562.00

May 2, 2012

Luc Lahaie, C.A.O.
R.M. of De Salaberry
Box 40
St. Pierre-Jolys, MB R0A 1V0

Dear Mr. Lahaie:

Enclosed is **Environment Act Licence No. 3004** dated May 2, 2012 issued in accordance with *The Environment Act* to the **R.M. of De Salaberry** for the construction and operation of the Development being a composting facility at NE 14-5-4 EPM in the Rural Municipality of De Salaberry, in accordance with the Proposal dated December 21, 2011.

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 Ryan Coulter, Environmental Engineer (204) 945-7023.

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 within 30 days of the date of the Licence.

Yours truly,

Tracey Braun, M.Sc.
Director
Environment Act

Enc.

c: Don Labossiere, Director, Environmental Compliance and Enforcement
Public Registries

NOTE: Confirmation of Receipt of this Licence No. 3004 (*by the Licencee only*) is required by the Director of Environmental Assessment and Licensing. Please acknowledge receipt by signing in the space provided below and faxing a copy (letter only) to the Department by May 16, 2012.

R.M. of De Salaberry

Date

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

LICENCE

Licence No. / Licence n° 3004

Issue Date / Date de délivrance May 2, 2012

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 10(1) / Conformément au Paragraphe 10(1)

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

THE RURAL MUNICIPALITY OF DE SALABERRY;
"the Licencee"

for the construction and operation of the Development being a composting facility at NE 14-5-4 EPM in the Rural Municipality of De Salaberry, in accordance with the Proposal dated December 21, 2011, 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 to be equivalent to the SCC, or be able to demonstrate, upon request, that it has the quality assurance/quality control (QA/QC) procedures in place equivalent to accreditation based on the international standard ISO/IEC 17025, or otherwise approved by the Director;

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

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

"**compost**" means solid mature product resulting from composting;

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

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

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

"noise nuisance" means an unwanted sound, in an affected area, which is annoying, troublesome, or disagreeable to a person:

- a) residing in an affected area;
- b) working in an affected area; or
- c) present at a location in an affected area which is normally open to members of the public;

if the unwanted sound

- d) is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director and within a 90-day period, from 5 different persons falling within clauses a), b) or c), who do not live in the same household; or
- e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses a), b) or c) and the Director is of the opinion that if the unwanted sound had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90-day period, from 5 different persons who do not live in the same household;

"odour nuisance" means a continuous or repeated odour, smell or aroma, in an affected area, which is offensive, obnoxious, troublesome, annoying, unpleasant or disagreeable to a person:

- a) residing in an affected area;
- b) working in an affected area; or
- c) present at a location in an affected area which is normally open to members of the public;

if the odour, smell or aroma

- d) is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director and within a 90-day period, from 5 different persons falling within clauses a), b) or c), who do not live in the same household; or
- e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses a), b) or c) and the Director is of the opinion that if the odour, smell or aroma had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90-day period, from 5 different persons who do not live in the same household;

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

"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;

"**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; and

"**wastewater**" means any liquid containing a pollutant as defined in *The Environment Act*, associated with or resulting from the Development which is discharged into the environment.

GENERAL TERMS AND CONDITIONS

This Section of the Licence contains requirements intended to provide guidance to the Licencee in implementing practices to ensure that the environment is maintained in such a manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

1. The Licencee shall implement a high standard of equipment maintenance and good housekeeping and operational practices with respect to the Development, at all times.
2. The Licencee shall reduce the production and dissemination of wastes by initiating and maintaining waste reduction and waste recycling programs.
3. In addition to any of the limits, terms or conditions specified in this Licence, the Licencee shall, upon the request of the Director:
 - a) sample, monitor, analyze and/or investigate specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, treatment, handling, disposal or emission systems, for such pollutants or ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, for such duration and at such frequencies as may be specified;
 - b) determine the environmental impact associated with the release of any pollutant(s) from the Development; or
 - c) provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, descriptions of sampling and analytical procedures being used, bioassay data, flow rate measurements and such other information as may from time to time be requested.
4. The Licencee shall, in the event of a release, spill, leak, or discharge of a pollutant or contaminant in an amount or concentration, or at a level or rate of release, that

exceeds the limit that is expressly provided under this Act, another Act of the Legislature, or an Act of Parliament, or in a regulation, licence, permit, order, instruction, directive or other approval or authorization issued or made under one of those Acts, immediately report the release, spill, leak, or discharge by calling 204-944-4888. The report shall indicate the nature of the release, leak, or discharge, the time and estimated duration of the event and the reason for the release, spill, leak, or discharge.

5. 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.
6. The Licencee shall carry out any remedial measures, modifications, or alterations, as deemed necessary by the Director, in respect to matters authorized under this Licence.
7. The Licencee shall submit all information required to be provided to the Director under this Licence, in writing, in such form (including number of copies) and of such content as may be specified by the Director, and each submission shall be clearly labelled with the Licence Number and Client File Number associated with this Licence.
8. 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.
9. The Licencee shall institute a pest control program at the Development in a manner acceptable to the Director.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Respecting Air Emissions – Limits

10. 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.
11. The Licencee shall not cause or permit a noise nuisance to be created as a result of the construction, operation or alteration of the Development, and shall take such steps as the Director may require to eliminate or mitigate a noise nuisance.
12. The Licencee shall not cause or permit an odour nuisance to be created as a result of the construction, operation or alteration of the Development, and shall take such steps as the Director may require to eliminate or mitigate an odour nuisance.

Respecting Chemical Storage and Spill Containment

13. 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.
14. The Licencee shall, in a manner approved by the Director, remove and dispose of all spilled dangerous goods.

Respecting Composting

15. The Licencee shall only conduct composting activities on a compost pad that consists of a minimum 0.5-metre thick compacted clay liner with a hydraulic conductivity of 1×10^{-7} cm/s or less.

16. The Licencee shall provide all weather access to the compost pad.
17. The Licencee shall establish the appropriate Carbon to Nitrogen ratio (C:N) for each batch of compost prior to beginning the composting process for that batch.
18. The Licencee shall only accept and use food waste, straw, mulch, yard trimmings, yard waste, garden waste, and leaves, or other material acceptable to the Director, as compost feedstock at the Development.
19. The Licencee shall generate compost at the Development that achieves the quality requirements and specifications as contained in the most recent edition of the Canadian Council of Ministers of the Environment publication entitled "*Guidelines for Compost Quality – PN1340*".
20. The Licencee shall not sell or make available to any third party compost generated at the Development that does not achieve the quality requirements and specifications as contained in the most recent edition of the Canadian Council of Ministers of the Environment publication entitled "*Guidelines for Compost Quality – PN1340*".
21. The Licencee shall direct all leachate generated from composting at the Development to the on-site leachate and stormwater drainage basin which shall have a minimum 1.0-metre thick compacted clay liner with a hydraulic conductivity of 1×10^{-7} cm/s or less.
22. The Licencee shall, prior to the construction of the composting pad and the dykes for the on-site leachate and stormwater drainage basin:
 - a) remove all organic topsoil from the area where the composting pad and 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.
23. The Licencee shall arrange with the designated Environment Officer 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 designated Environment Officer.
24. The Licencee shall take and test undisturbed soil samples, in accordance with Schedule "A" attached to this Licence, from the liners of the composting pad and on-site leachate and stormwater drainage basin; the number and location of samples and test methods are to be specified the designated Environment Officer up to a maximum of 30 samples.
25. The Licencee shall, not less than two weeks before the Development is placed in operation, submit to the Director the results of the tests carried out pursuant to Clause 24 of this Licence.

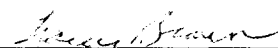
26. The Licencee shall not discharge leachate from the on-site leachate and stormwater drainage basin without prior written authorization from the Director.
27. The Licencee, from the date of this Licence until such time that the Director agrees to adjust the monitoring requirements, shall conduct a compost monitoring program that includes:
 - a) daily measurement of temperature;
 - b) weekly measurement of moisture content;
 - c) monthly measurements of ammonia and carbon dioxide; and
 - d) measurement of nitrate, sulphur, phosphorus, potassium, zinc, magnesium, iron, copper, boron, sodium, and calcium content of finished and cured compost.
28. The Licencee shall maintain a record of the sampling results, obtained pursuant to Clause 27 of this Licence, at the Development and shall provide those records to an Environment Officer upon request.
29. The Licencee shall submit the sampling results, obtained pursuant to Clause 27 of this Licence, in an annual report containing at minimum but not limited to:
 - a) the raw data collected; and
 - b) a discussion of the sampling and analytical portions of the program including any anomalies of sampling and analysis.
30. The Licence shall submit, to the Director prior to March 1 of each year beginning in 2013, the annual report required by Clause 29 of this Licence.
31. The Licencee shall maintain sufficient carbon source on site to achieve the desired C:N ratio as determined pursuant to Clause 17 of this Licence.
32. The Licencee shall, immediately upon placing compost into windrows and immediately after turning windrows undergoing active composting, cover compost windrows with cover material consisting of straw, wood chips, or another material acceptable to the Director.
33. The Licencee shall maintain sufficient cover material on site to facilitate compliance with Clause 32 of this Licence at all times.
34. The Licencee shall, within 60 days of the date of this Licence, establish an Operations Manual acceptable to the Director that describes, at a minimum, the compost management practices necessary to achieve compliance with Clauses 19 and 27 of this Licence.
35. The Licencee shall provide the necessary training to on-site personnel at the Development to achieve compliance with Clause 19 of this Licence.

Respecting Emergencies

36. The Licencee shall, within 60 days of the issue date of this licence, submit to the Director an emergency response contingency plan in accordance with the Canadian Centre for Occupational Health and Safety emergency planning guidelines.

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 the Licencee has not commenced construction of the Development within three years of the date of this Licence, the Licence is revoked.
- C. If, in the opinion of the Director, new evidence warrants a change in the specifications, limits, terms or conditions set out in this Licence, the Director may require the filing of a new proposal pursuant to the Environment Act.


Tracey Braun, M.Sc.
Director
Environment Act

Client File No.: 5562.00

Schedule "A" to Environment Act Licence No. 3004

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.

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, whichever 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.