Manitoba

Conservation

Environmental Stewardship Division
Environmental Assessment and Licensing Branch
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FAXED
CLIENT FILE NO.: 5387.00

July 24, 2009

Ms. Meghan Cuvelier Klassen, C.A.O.
RM of Riverside
110 Rea Street
Box 126
Dunrea MB R0K 0S0

Dear Ms. Klassen:

Enclosed is Revised Environment Act **Licence No. 2895** dated July 24, 2009 issued in accordance with The Environment Act to **Rural Municipality of Riverside** for the construction, operation and maintenance of the Development being a wastewater treatment lagoon in NE 19-5-16WPM in the Rural Municipality of Strathcona to service the Community of Ninette, rural residents of the Rural Municipalities of Riverside and Strathcona, and various camps, cottages and resorts in the area and with discharge of treated effluent from the wastewater treatment lagoon to a bog area which flows into Grass Lake in accordance with the proposal filed under The Environment Act on December 3, 2007 and subsequent information provided in correspondence dated May 28, 2009 and letters dated June 2, 2009.

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.

For further information on the administration and application of the Licence, please feel free to contact Rob Boswick, Environmental Engineer at (204) 945-6030.

Pursuant to Section 27 of The Environment Act, this licencing 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

Tracey Braun, M. Sc.
Director
Environment Act

Enc.
c: Don Labossiere, Director, Environmental Approvals
Public Registeries
Jason Bunn, P.Eng

NOTE: **Confirmation of Receipt of this Licence No. 2895 *(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 August 7, 2009.**

_____ _____
On behalf of Rural Municipality of Riverside **Date**

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

THE ENVIRONMENT ACT
LOI SUR L'ENVIRONNEMENT

LICENCE

Manitoba

Licence No. / Licence n° 2895

Issue Date / Date de délivrance July 24, 2009

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 DONNÉÉ À:

RURAL MUNICIPALITY OF RIVERSIDE; "the Licencee"

for the construction, operation and maintenance of the Development being a wastewater treatment lagoon in NE 19-5-16WPM in the Rural Municipality of Strathcona to service the Community of Ninette, rural residents of the Rural Municipalities of Riverside and Strathcona, and various camps, cottages and resorts in the area and with discharge of treated effluent from the wastewater treatment lagoon to a bog area which flows into Grass Lake in accordance with the proposal filed under The Environment Act on December 3, 2007 and subsequent information provided in correspondence dated May 28, 2009 and letters dated June 2, 2009 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 an assigned Environment Officer, in writing;

"appurtenances" means machinery, appliances, or auxiliary structures attached to a main structure to enable it to function, but not considered an integral part of it;

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

"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;

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

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

"fecal coliform" means aerobic and facultative, Gram-negative, nonspore-forming, rod-shaped bacteria capable of growth at 44.5 ^{o}C, and associated with fecal matter of warm-blooded animals;

"five-day biochemical oxygen demand" means that part of the oxygen demand usually associated with biochemical oxidation of organic matter within 5 days at a temperature of 20^{o}C;

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

"high water mark" means the line on the interior surface of the aerated and storage 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 aerated and storage cells which is normally reached when the cell is discharged;

"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;

"PVC" means polyvinyl chloride;

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

"rip rap" 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;

"secondary cell" means a cell of the wastewater treatment lagoon system which is the cell that receives partially treated wastewater from the primary cell;

"septage" means the sludge produced in individual on-site wastewater disposal systems such as septic tanks;

"sewage" means household and commercial wastewater that contains human waste;

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

"sludge solids" means solids in sludge;

"Standard Methods for the Examination of Water and Wastewater" means the most recent edition of Standard Methods for the Examination of Water and Wastewater published jointly by the American Public Health Association, the American Waterworks Association and the Water Environment Federation;

"total coliform" means a group of aerobic and facultative anaerobic, Gram-negative, nonspore-forming, rod-shaped bacteria, that ferment lactose with gas and acid formation within 48 hours at 35 ^{o}C, and inhabit predominantly the intestines of man or animals, but are occasionally found elsewhere and include the sub-group of fecal coliform bacteria;

"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.

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 direct all sewage generated within the Community of Ninette and the surrounding area toward the wastewater treatment lagoon or other approved sewage treatment facilities.

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; 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.

3. 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) have all analytical determinations undertaken by an accredited laboratory; and
   c) report the results to the Director, in writing or in a format acceptable to the Director, within 60 days of the samples being taken.

4. The Licencee shall, in case of physical or mechanical breakdown of the wastewater collection and/or treatment system:
   a) notify the Director immediately;
   b) identify the repairs required to the wastewater collection and/or treatment system;
   c) undertake all repairs to minimize unauthorized discharges of wastewater; and
   d) complete the repairs in accordance with any written instructions of the Director.

5. 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.

6. The Licencee shall comply with the provisions of the Department of Fisheries and Oceans Canada/Manitoba Natural Resources publication, *"Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat"* (May, 1996).

7. The Licencee shall ensure that the operation of the Development is carried out by individuals properly trained and qualified to do so.

8. 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 required by the Director.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

9. The Licencee shall notify the assigned Environment Officer not less than two weeks prior to beginning construction of the Development. The notification shall include the intended starting date of construction.

10. The Licencee shall:
   a) conduct all ditch related work activities during no flow or dry conditions and not during the April 1 to June 15 fish spawning and incubation period;
   b) not construct the wastewater treatment lagoon or wastewater collection system during periods of heavy rain;
   c) place and/or isolate all dredged and construction material where it will not erode into any watercourse;
   d) implement effective long-term sediment and erosion control measures to prevent soil-laden runoff, and/or silt from entering any watercourse during construction and until vegetation is established; and

e) routinely inspect all erosion and sediment control structures and immediately complete any necessary maintenance or repair.

11. The Licencee shall, during construction of the wastewater treatment lagoon, 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.

12. The Licencee shall, prior to the construction of the dykes for 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.

13. The Licencee shall construct and maintain continuous liners, including cover material, underlying the primary and secondary cells of the wastewater treatment lagoon, such that:
    a) the liners are constructed from PVC geomembrane;
    b) the liners have a minimum thickness of 30 mils;
    c) all sections of the liners are joined by dual track seaming;
    d) the liners are installed in accordance with ASAE Standard EP340.2 for the Installation of Flexible Membrane Linings;
    e) the liner shall be installed to a minimum elevation of 2.8 metres above the bases of the primary and secondary cells;
    f) non-destructive test methods are used to test the integrity of:
        i) all field seams joining sections of the liners in accordance with ASTM Standard D 7177-05; and
        ii) all other field seams in accordance with ASTM Standard D 4437-99;
    g) the hydraulic conductivity of the liners shall not exceed 3×10^{-9} centimetres per second over the entire surface area of the liners;
    h) a testing report is prepared and submitted to the Director within 30 days of commencing the installation of the liners; and
    i) the liners shall be covered with sand or other granular cover material to a minimum depth of 0.3 metre measured perpendicular to the surface of the liner.

14. The Licencee shall construct and maintain effective gas relief systems under the liners of the wastewater treatment lagoon.

15. The Licencee shall notify the Director one week prior to commencing the installation of the gas relief systems and the liners of the wastewater treatment lagoon.

16. The Licencee shall not cover the liners of or use these cells of the wastewater treatment lagoon until receiving the approval of the Director of the report submitted pursuant to sub-Clause 13 h) of this Licence.

17. The Licencee shall operate and maintain the wastewater treatment lagoon in such a manner that:
    a) the release of offensive odours is minimized;
    b) the organic loading on the wastewater treatment lagoon, in terms of the five-day biochemical oxygen demand, is not in excess of 56 kilograms per hectare per day; and
    c) the depth of liquid in the cells does not exceed 1.5 metres.

18. 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 biochemical oxygen demand, is in excess of 25 milligrams per litre;
    b) where the fecal coliform content of the effluent, as indicated by the MPN index, is in excess of 200 per 100 millilitres of sample;
    c) where the total coliform content of the effluent, as indicated by the MPN index, is in excess of 1500 per 100 millilitres of sample;
    d) between the 1st day of November of any year and the 15th day of June of the following year;
    e) when flooding from any cause is occurring along the effluent drainage route; or
    f) when such a discharge would cause or contribute to flooding in or along the effluent drainage route.

18. 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.

19. The Licencee shall construct and maintain an all-weather access road and a sewage dumping station for truck handled sewage. The dumping facility shall have a surface splash ramp with a smooth hard surface that can be easily washed free of solids.

20. The Licencee shall not discharge septage into the wastewater treatment lagoon between the 15th day of October of any year and the 1st day of June of the following year.

21. The Licencee shall, if in the opinion of the Director, significant erosion of the interior surfaces of the dykes occurs, repair the dyke and install rip rap as necessary. The rip rap shall be placed on the interior dyke surfaces from 0.6 metres above the high water mark to at least 0.6 metres below the low water mark to protect the dykes from wave action.

22. 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.

23. 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.

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

25. 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 Regulation* or any future amendment thereof.

26. The Licencee shall discharge the wastewater treatment lagoon at a rate that optimizes the opportunity for nutrients in the effluent to be assimilated in the bog area of the discharge route prior to reaching the main body of Grass Lake while not challenging the normal operation of the wastewater treatment lagoon.

27. The Licencee shall actively participate in any current or future watershed-based management study, plan and/or nutrient reduction program, approved by the Director, for Grass Lake and Pelican Lake and associated waterways and watersheds.

MONITORING AND REPORTING

28. 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 biochemical oxygen demand 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; and

c) the total coliform content as indicated by the MPN index and expressed as MPN per 100 millilitres per sample.

29. The Licencee shall submit to the Director for approval, within three months of the date of this Licence, a groundwater investigation and monitoring plan for the site of the Development to monitor for liner integrity.

30. The Licencee shall, for a period of at least five years following the commencement of operation of the wastewater treatment lagoon under this Licence, obtain samples of effluent during the beginning, middle and end of each effluent discharge campaign from the secondary cell of the wastewater treatment lagoon. The samples shall be preserved, analyzed and reported in accordance with the requirements of Clause 3 of this Licence, and shall be analyzed for:
a) total Kjeldahl nitrogen;
b) nitrate-nitrite nitrogen
c) ammonia nitrogen;
d) total dissolved phosphorus;
e) total particulate phosphorus;
f) total inorganic phosphorus;
g) pH;
h) temperature; and
i) total suspended solids.

31. The Licencee shall, for a period of at least five years following the commencement of operation of the wastewater treatment lagoon under this Licence and during each discharge campaign, obtain samples of water from the receiving surface body of water. These samples shall be obtained from a central location within the east-most component of Grass Lake. The same central location shall be used for each year of sampling and analysis. Required and requested samples shall also be obtained in each year from the same location(s) in the spring prior to each discharge campaign and in late August. The samples shall be preserved, analyzed and reported in accordance with the requirements of Clause 3 of this Licence, and shall be analyzed for:
a) chlorophyll *a*;
b) total Kjeldahl nitrogen;
c) nitrate-nitrite nitrogen
d) ammonia nitrogen;
e) total dissolved phosphorus;
f) total particulate phosphorus;
g) total inorganic phosphorus;
h) pH;
i) temperature; and
j) total suspended solids.

32. The Licencee shall report the results from the sampling required by Clauses 30 and 31 of this Licence to the Director in accordance with the requirements of Clause 3 c) of this Licence.

33. The Licencee shall:
    a) during each year maintain records of:
        i) wastewater sample dates;
        ii) original copies of laboratory analytical results of the sampled wastewater; and
        iii) effluent discharge dates;
    b) make the records being maintained pursuant to sub-Clause 33 a) of this Licence available to an Environment Officer upon request; and
    c) keep the maintained records of any one calendar year available for inspection for a period of three years following the respective calendar year in which they were recorded.

34. The Licencee shall maintain a record of all septage, sewage and wastewater hauled to the wastewater treatment lagoon, including the number of loads on a daily and weekly basis, the volume of each load, the name of the hauler, and the source of the contents of each load according to the type of waste and the name and location of each property serviced. The Licencee shall submit an annual report of all the waste hauling information to the Director by the 15th of January of the following year.

35. The Licencee shall, during construction and operation of the Development:
    a) immediately report any reportable spills to Manitoba Conservation's Accident Reporting Line at (204) 944-4888; and
    b) provide a follow-up report to the Director on a reportable environmental accident outlining the cause(s) and proposing corrective action to prevent reoccurrence.

36. The Licencee shall:
    a) prepare updated "as constructed drawings" for the Development and shall label the drawings "As Constructed"; and
    b) provide to the Director, on or before the 30th day of November, 2010, two sets of "as constructed drawings" of the wastewater treatment lagoon.

DECOMMISSIONING OF COMMUNITY OF NINETTE WASTEWATER TREATMENT LAGOON

37. The Licencee shall, after placing the wastewater treatment lagoon into operation, prevent any additional wastewater or septage from being discharged into the wastewater treatment lagoon associated with Licence No. 832.

38. The Licencee shall, unless otherwise approved by the Director, within one year of placing the wastewater treatment lagoon into operation:
    a) remove the wastewater from the wastewater treatment lagoon associated with Licence No. 832 and transport it to the new wastewater treatment lagoon or discharge the treated effluent in accordance with Licence No. 832;
    b) dewater the sludge in the wastewater treatment lagoon associated with Licence No. 832;
    c) remove all of the sludge from the wastewater treatment lagoon associated with Licence No. 832; and
    d) dispose of the sludge from the wastewater treatment lagoon associated with Licence No. 832;
        i) within the lined areas of the cells of the new wastewater treatment lagoon; or
        ii) at a waste disposal ground operated under the authority of:
            A) a permit issued under Manitoba Regulation 150/91; or
            B) a Licence issued pursuant to The Environment Act;
    e) level the site to the original grade; and
    f) return the site to natural vegetation.

REVIEW AND REVOCATION

A. Licence No. 832 is rescinded upon approved commissioning of the new wastewater treatment lagoon and decommissioning of the wastewater treatment lagoon associated with Licence No. 832 in accordance with this Licence.

B. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has or is failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Director may, temporarily or permanently, revoke this Licence.

C. If the Licencee has not commenced construction of the Development within three years of the date of this Licence, the Licence is revoked.

D. 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
Environmental Assessment and Licensing Branch

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