

Environment Act Licence Loi sur l'environnement Licence

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Licence No./Licence n° 1668 R
Issue Date/Date de délivrance May 12, 1993

Revised: July 27, 1998

**IN ACCORDANCE WITH THE MANITOBA ENVIRONMENT ACT (C.C.S.M. c. E125)
THIS LICENCE IS ISSUED PURSUANT TO SECTION 11(1) TO:**

GRASS RIVER HOLDING CO. LTD.; "the Licencee"

for the construction and operation of the Development being a wastewater collection system and a wastewater treatment lagoon located in the northwest quarter of Section 19, Township 18, Range 12 WPM in the Rural Municipality of Glenella and with discharge of treated effluent by irrigation onto agricultural land, in accordance with the Proposal filed under The Environment Act on May 30, 1991 and amended on May 8, 1998 and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

"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;

"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° 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 five days at a temperature of 20° C;

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

"HDPE" means high density polyethylene;

"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;

"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;

"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;

"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;

"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;

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

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

"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° 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; and

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

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 ensure that all domestic sewage generated within the farm site is directed toward the wastewater treatment lagoon.
2. The Licencee shall ensure that livestock wastes are not directed toward the wastewater treatment lagoon.
3. 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, as indicated by the five day biochemical oxygen demand, to the primary cell is not in excess of 56 kilograms per hectare per day; and
 - c) the depth of wastewater in the primary cell and secondary cell does not exceed 1.5 metres.
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 install and maintain a fence around the wastewater treatment lagoon to control access.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

6. 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 cut-off will be constructed.
7. The Licencee shall ensure that all treated effluent is disposed of by spray irrigation onto land owned by or under the control of the Licencee and that:
 - a) effluent is only discharged 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;
 - b) after agriculture crops are irrigated, harvesting of the crops does not take place for at least 7 days;
 - c) if corn has been grown, it is used solely for making silage;
 - d) for at least 10 continuous hours in every 24-hour period, no effluent is applied to the particular lands; and
 - e) if ponding or surface runoff occurs during application the gross depth of effluent applied during any application of effluent shall be reduced so that ponding or surface runoff does not occur.

8. 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 property boundary.
9. 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.
10. 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.
11. The Licencee shall implement an ongoing program to ensure that burrowing animals are removed from the site of the wastewater treatment lagoon.
12. 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 30 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; or
 - d) between the 15th day of September of any year and the 1st day of June of the following year.
13. The Licencee shall:
 - a) prepare "as constructed drawings" for the Development and shall label the drawings "As Constructed"; and
 - b) provide to the Director, on or before 1st day of June, 1999, two sets of "as constructed drawings" of the wastewater treatment lagoon.
14. The Licencee shall construct and maintain a continuous liner, including cover material, underlying the primary and secondary cells of the wastewater treatment lagoon, such that:
 - a) the liner is constructed from HDPE geomembrane;
 - b) the liner has a minimum thickness of 60 mils;
 - c) all sections of the liner are joined by double channel fusion seaming;
 - d) the liner shall be installed to a minimum elevation of 1.8 metres above the base of both the primary and secondary cells;
 - e) in accordance with ASTM Standard D-4437, the integrity of all field seams are tested by non-destructive test methods, a testing report is prepared and submitted to the Director within 30 days of commencing the installation of the liner; and
 - f) the liner 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.

15. The Licencee shall construct and maintain a gas relief system under the liner for the primary and secondary cells.
16. The Licencee shall ensure that if, in the opinion of the Director, significant erosion of granular material covering the liner occurs, rip rap 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.

REVIEW AND REVOCATION

- A. This Licence replaces Licence No. 1668 which is hereby rescinded.
- B. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has or is failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Director may, temporarily or permanently, revoke this Licence.
- C. If 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.



Larry Strachan, P. Eng.
Director
Environment Act

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