

**Licence No.: 2215**

**Licence Issued: August 21, 1996**

In accordance with the Manitoba Environment Act (C.C.S.M. c. E125)

THIS LICENCE IS ISSUED TO:

**RURAL MUNICIPALITY OF WESTBOURNE; "the Licencee"**

for the construction and operation of the Development being a wastewater collection system and a wastewater treatment lagoon located on the south-east quarter of Section 5-17-12 WPM in the Rural Municipality of Westbourne and with discharge of treated effluent into a drainage ditch which empties into Jackfish and Seagull Lake, in accordance with the Proposal filed under The Environment Act on February 22, 1996, 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;

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

**"cut-off"** means a vertical-side trench filled with compacted clay or a wall constructed from compacted clay;

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

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

**"fecal coliform"** means aerobic and facultative, Gram-negative, nonspore-forming, rod-shaped bacteria capable of growth at 44.5 degrees Celsius, 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 degrees Celsius;

**"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;

**"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;

**"industrial wastewater"** means wastewater derived from an industry activity which manufactures, handles or

processes a product;

**"in-situ"** means on the site;

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

**"livestock waste"** means manure from livestock;

**"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;

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

**"sewage"** means household wastewater that contains human waste;

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

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

### **GENERAL TERMS AND CONDITIONS**

1. The Licencee shall direct all sewage generated within the Unincorporated Village District of Plumas toward the wastewater treatment lagoon or other approved sewage treatment facilities.
2. 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 primary cell, as indicated by 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 primary cell or secondary cells does not exceed 1.5 metres.
3. The Licencee shall, in case of physical or mechanical breakdown of the wastewater treatment system:
  - a. notify the Director immediately;
  - b. identify the repairs required to the wastewater 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.
4. The Licencee shall, for a period of five years commencing with the first discharge of effluent from the wastewater treatment lagoon:
  - a. take one grab sample of effluent from the wastewater treatment lagoon during each discharge period;
  - b. have the grab sample of effluent analyzed for five day biochemical oxygen demand, fecal coliform content, total coliform content, field temperature, field pH, ammonia and non-filterable residue content using methods from the latest edition of Standard Methods for the Examination of Water and Wastewater or using other methods approved by the Director; and
  - c. report the results to the Director within 60 days of the samples being taken.
5. Notwithstanding any of the following specifications, 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, handling, treatment, and disposal systems, for such pollutants, ambient quality, aquatic toxicity, seepage characteristics and discharge rates, and for such duration and frequencies as may be specified; and/or
  - b. determine the environmental impact associated with the release of any pollutants from the Development; and/or
  - c. provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, bioassay data, flow rate measurements and such other information as may from time to time be requested.
6. 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" published jointly by the American Public Health Association, the American Waterworks Association and the Water Pollution Control Federation, or in accordance with an equivalent analytical methodology approved by the Director; and
  - b. ensure that all analytical determinations are undertaken by an accredited laboratory.
7. Unless otherwise specified, all information required to be provided to the Director under this Licence shall be 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**

8. The Licencee shall, prior to the construction of the dykes for the expansion to 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.
9. The Licencee shall construct and maintain the wastewater treatment lagoon with a continuous liner, including cutoffs, under all interior surfaces of the cells 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  $6.7 \times 10^{-7}$  centimetres per second or less; and
  - d. the liner shall be constructed to an elevation of 2.5 metres above the floor elevation of both the primary and the secondary cells.
10. The Licencee shall ensure that if, in the opinion of the Director, significant erosion of the interior surfaces of the dykes occurs, 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.
11. The Licencee shall install and maintain a fence around the wastewater treatment lagoon to control access.

12. The Licencee shall construct and maintain an all-weather access road and a sewage and septage dumping station for truck hauled sewage and septage. The dumping facility shall have a inclined splash ramp with a flat, smooth and hard surface that can be easily washed free of solids.
13. 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.
14. 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 1st day of November of any year and the 15th day of June of the following year.
15. 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 October 1, 1996, two sets of "as constructed drawings" of the wastewater treatment lagoon.

#### **REVIEW AND REVOCATION**

- A. This Licence replaces Licence No. 2074 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, 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.

"original signed by"

**Larry Strachan, P. Eng.**  
**Director**  
**Environment Act**

**Client File No.: 4021.10**