

Licence No.: 2313 S1
Licence Issued: March 18, 1998

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

THE TOWN OF ROBLIN; "the Licencee"
STAGE 1 LICENCE

pursuant to Sections 11(11) and 14(2) of the Act for the construction of the engineered wetland component of the Development, being a wastewater treatment lagoon, a low pressure pivot type irrigation system, an engineered wetland and hybrid poplar irrigation plantation proposed pursuant to The Environment Act on July 15, 1996, May 13, 1997, August 18, 1997, August 29, 1997 and September 8, 1997, located on the North East Quarter of Section 20, Township 25, Range 28 WPM, and the South West Quarter of Section 28, Township 25, Range 28 WPM, in the Rural Municipality of Shell River, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

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

"engineered wetland" means a designed and man-made system composed of a basin containing soil at the bottom with emergent and submergent vegetation, animal life, and water that simulates natural wetlands for treatment of wastewater effluent.

SPECIFICATIONS

1. The Licencee shall prepare and submit to the Director for approval on or before April 30, 1998, specifications for the seeding of the engineered wetland which shall as a minimum include:
 - a. plant species and propagule type;
 - b. plant distribution (vegetative zonation);
 - c. planting (including time restraints);
 - d. fertilization; and
 - e. water level control and site maintenance.

CONSTRUCTION REQUIREMENTS

2. The Licencee shall, prior to the construction of the dykes for the engineered wetland:
 - a. remove all organic top soil from the area where the dykes will be constructed; or
 - b. remove all organic material for a depth of 0.3 metres under the base where the cut-off will be constructed.
3. The Licencee shall construct and maintain the dykes of the engineered wetland with cutoffs, with the following specifications:
 - a. the cutoffs shall be made of clay;
 - b. the cutoffs shall be at least one metre in thickness;
 - c. the cutoffs shall have a hydraulic conductivity of 1×10^{-7} centimeters per second or less;
 - d. the cutoffs shall be constructed to the top of the dykes;
 - e. interior slopes shall not be steeper than three horizontal to one vertical; and
 - f. exterior slopes shall be three or more horizontal to one vertical for prevention of erosion.
4. Where, in the opinion of the Director, erosion of the interior surfaces of the wetland dykes occurs, the Licencee shall ensure that rip rap is placed on the interior dyke surfaces to a height of 0.6 metres above the design water level.

5. The Licencee shall post warning signs around the wetland development with the number of signs and wording of the signs to be approved by the Director.
6. The Licencee shall ensure that non-corrosive pipe or other material generally accepted for sewers shall be specified for the piping requirements in the engineered wetland. Provisions shall be made to prevent settling of the piping structures under load. Where structures are partially or completely submerged in ice conditions, a flexible piece of pipe shall be installed to allow for some movement of structure.
7. The Licencee shall ensure that interconnecting piping for multiple unit installations which may be operated in series shall be valved or provided with other arrangements to regulate flow between structures.
8. The Licencee shall ensure the discharge structure from the engineered wetland is adjustable so that the depth in the wetland may be modified as needed.

"original signed by"

Larry Strachan, P. Eng.

Director

Environment Act

Client File No.: 107.40