

Environment Act Licence Loi sur l'environnement Licence

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Licence No./Licence n° 2652
Issue Date/Date de délivrance May 20, 2004

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

SAYISI DENE FIRST NATION; "the Licencee"

for the construction and operation of the Development being a sludge drying bed located in Sections 11 and 12-112-7 WPM adjacent to the Community of Tadoule Lake, in accordance with the Proposal filed under The Environment Act dated February 2, 2004, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

"**access road**" means a road that leads from an existing all weather road to the Development;

"**approved**" means approved by the Director in writing;

"**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;

"**HDPE**" means high density polyethylene;

"**high water mark**" means the line on the interior surface of a cell of the sludge drying bed 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;

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

"low water mark" means the line on the interior surface of a cell of the sludge drying bed which is normally reached when the cell is discharged;

"mil" means one-thousandth of an inch;

"riprap" means small, broken stones or boulders placed compactly or irregularly on dykes or similar embankments for protection of earthen surfaces against the wave action or current;

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

"supernatant" means the liquid remaining above the sludge solids after sedimentation.

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. In addition to 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 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, ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, and for such duration and at such frequencies as may be specified;
 - b) determine the environmental impact associated with the release of any pollutant 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.
2. 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.
3. The Licencee shall construct and maintain an all-weather access road to the sludge drying bed.

4. The Licencee shall construct a truck dumping station for truck hauled sludge. The truck dumping facility shall have a surface splash ramp with a smooth hard surface that can be easily washed free of solids.
5. The Licencee shall properly train or qualify individuals to carry out the operation of the Development.
6. The Licencee shall operate and maintain the sludge drying bed in such a manner that the release of offensive odours is minimized.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Respecting Construction:

7. 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 and the name of the contractor responsible for the construction.
8. The Licencee shall, prior to the construction of the dykes for the sludge drying bed remove all organic material from the area where the sludge drying bed will be constructed.
9. The Licencee shall construct and maintain a continuous liner underlying each cell of the sludge drying bed, 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 1.2 metres above the base of each cell;
 - 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;
 - f) the permeability of the liner shall not exceed 1×10^{-9} centimetres per second over the entire surface area of all cells of the sludge drying bed; and
 - g) the liner shall be covered with sand or other granular cover material to a minimum depth of 0.3 metres measured perpendicular to the surface of the liner.
10. The Licencee shall construct and maintain a gas relief system under the liner for each cell of the sludge drying bed.

11. The Licencee shall notify the Director two weeks prior to commencing the installation of the liner and the gas relief system.
12. The Licencee shall install and maintain a fence around the sludge drying bed to limit access. The fence shall be a minimum of 1.8 metres high and have a locking gate, which shall be locked at all times except to allow access to the sludge drying bed.
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 the 1st day of June, 2005, two copies of the "as constructed drawings" of the sludge drying bed.
14. 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*.
15. The Licencee shall locate 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* and future amendments thereof, respecting *Storage and Handling of Petroleum Products and Allied Products*.

Respecting Operation:

16. The Licencee shall, prior to the operation of the Development, receive the written approval of the Director for the testing report required by Clause 9. e) of this Licence.
17. The Licencee shall remove all the supernatant from the sludge drying bed and return the supernatant to the sewage treatment plant located on the Sayisi Dene First Nation for treatment.
18. The Licencee shall operate the sludge drying bed such that the depth of liquid in all cells does not exceed 1.0 metres. Freeboard in all cells, being the vertical distance from the top of the dyke to the liquid level, shall not be less than 0.65 metres.

19. The Licencee shall, in case of physical breakdown of the sludge drying bed:
 - a) notify the Director immediately;
 - b) identify the repairs required; and
 - c) complete the repairs in accordance with any written instructions of the Director.

Respecting Maintenance:

20. The Licencee shall maintain cover material consisting of sand or other granular material to a minimum depth of 0.3 metres measured perpendicular to the surface of the liner at all points over the liner.
21. The Licencee shall, if in the opinion of the Director, significant erosion of the interior surfaces of the dykes occurs, place riprap 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 limit any vegetation cover on the dykes of the sludge drying bed 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 sludge drying bed.
24. The Licencee shall implement a bird deterrent system for the Development. The effectiveness of the bird deterrent system shall be monitored and any necessary modifications shall be implemented.
25. The Licencee shall submit a biosolids disposal plan to the Director and receive the written approval of the Director prior to the removal of any biosolids from the Development.

MONITORING AND REPORTING SPECIFICATIONS

25. The Licencee shall, by June 1, 2005, submit for the approval of the Director an operating and maintenance manual for the Development. The manual shall include, but not be limited to, procedures for the operation of the Development, procedures for the inspection and repair of the liner, and seepage monitoring procedures, schedules and reporting protocols.

26. The Licencee shall install seepage monitoring wells in the area around the sludge drying bed and carry out a seepage monitoring program in accordance with the plan approved by the Director pursuant to Clause 25 of this Licence.

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 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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