

Licence No.: 2463

Licence Issued: July 5, 2000

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

NORTHLANDS FIRST NATION; "the Licencee"

for the construction and operation of the Development being a sludge drying bed located on Section 21, Township 111, Range 24 WPM northeast of the Northlands First Nation at Lac Brochet, in accordance with the Proposal filed under The Environment Act on March 8, 2000, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

"accredited laboratory" means a laboratory accredited by the Standard Council of Canada (SCC), another accrediting agency recognized by Manitoba Conservation to be equivalent to the SCC, or at a laboratory which can demonstrate to Manitoba Conservation that it has the quality assurance/quality control (QA/QC) procedures in place equivalent to accreditation based on the Canadian Standard Can/CSA-Z753, extension of the international standard ISO 9000, Guide 25;

"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;

"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;

"in-situ" means on the site;

"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 earth surfaces against wave action or current;

"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; 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. The Licencee shall, in case of physical or mechanical breakdown of the sludge drying beds:
 - a. notify the Director immediately;
 - b. identify the repairs required;
 - c. undertake all repairs to minimize unauthorized discharges; and
 - d. complete the repairs in accordance with any written instructions of the Director.
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.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

3. The Licencee shall, prior to the construction of the dykes for the sludge drying beds remove all organic material from the area where the sludge drying beds will be constructed.
4. 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 1.5 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 metre measured perpendicular to the surface of the liner.
5. The Licencee shall construct and maintain a gas relief system under the liner for each cell of the sludge drying bed.
6. 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.

7. The Licencee shall notify the Director two weeks prior to commencing the installation of the liner and the gas relief system.
8. The Licencee shall not use the sludge drying bed for a period of two weeks after submitting to the Director, the reports and results of the tests carried out pursuant to Clause 4 of this Licence.
9. The Licencee shall operate and maintain the sludge drying bed in such a manner that the depth of liquid in any cell does not exceed 1.3 metres.
10. 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 October, 2001, two sets of "as constructed drawings" of the sludge drying beds.
11. The Licencee shall remove all the supernatant from the sludge drying bed and return the supernatant to the sewage treatment plant located on the Northland First Nation for treatment.
12. The Licencee shall install and maintain a fence around the sludge drying bed to limit access.
13. The Licencee shall submit a plan for groundwater monitoring in the area surrounding the sludge drying bed and shall obtain the Director's approval for the plan. The plan shall include: local geological and hydro-geological information; number, location, design of the groundwater monitoring wells; sampling frequency and parameters that will be analyzed.
14. The Licencee shall install groundwater monitoring wells in the area around the sludge drying bed and shall carry out the monitoring program in accordance with the plan approved by the Director.
15. The Licencee shall:
 - a. prepare an Operations and Maintenance Manual for the sludge drying bed facility that includes but is not limited to: methods of sludge placement, procedures for sludge removal, and types of vehicular traffic permitted on the drying bed floor, maintenance of the liners protective cover, liner repairs procedures; and
 - b. submit the Operations and Maintenance Manual for the approval of the Director.

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.

"original signed by"

Larry Strachan, P. Eng.
Director
Environment Act

Client File No.: 4510.00