

Environment Act Licence Loi sur l'environnement Licence

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Licence No./Licence n° 2145 S2
Issue Date/Date de délivrance February 22, 1996

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

THIS LICENCE IS ISSUED TO:

DEPARTMENT OF NORTHERN AFFAIRS: "the Licence"
(STAGE 2 LICENCE)

for the construction and operation of the Development being a sewage collection system and a sewage treatment plant located on northwest quarter of Section 21, Township 64, Range 20 EPM in the Community of God's Lake Narrows and with discharge of treated effluent into God's Lake, in accordance with the Proposal filed under the Environment Act on June 13, 1995 and amendments received on June 27, 1995, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this Licence,

"affected area" means a geographical area affected by an odour nuisance;

"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;

"composite sample" means a quantity of wastewater consisting of a minimum of 10 equal volumes of effluent collected at approximately equal time intervals;

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

"effluent" means treated wastewater flowing or pumped out of the wastewater treatment facility;

"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 5 days at a temperature of 20°C;

"grab sample" means a quantity of wastewater taken at a given place and time;

“influent” means water, wastewater, or other liquid flowing into a wastewater treatment facility

“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;

“odour nuisance” means a continuous or repeated odour, smell or aroma, in an affected area, which is offensive, obnoxious, troublesome, annoying, unpleasant, or disagreeable to a person:

- (a) residing in the affected area;
- (b) working in the affected area; or
- (c) present at a location in the affected area which is normally open to the members of the public;

if the odour, smell or aroma

- (d) is the subject of at least 5 written complaints in a form satisfactory to the Director and from 5 different persons falling within clauses (a), (b) or (c), who do not live in the same household, received by the Director within a 90 day period; or
- (e) is the subject of at least one written complaint in a form satisfactory to the Director from a person falling within clauses (a), (b) or (c) and the Director is of the opinion that if the odour, smell or aroma had occurred in a more densely populated area there would have been at least 5 written complaints from 5 different persons who do not live in the same household within a 90 day period;

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

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

“sludge solids” means solids in sludge;

“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;

“UV disinfection” means a disinfection process for treating wastewater using ultraviolet radiation;

“waste disposal ground” means an area of land designated by a person, municipality, provincial government agency, or crown corporation for the disposal of waste and approved for use in accordance with Manitoba Regulation 150/91;

“wastewater” means the spent or used water of a community or industry which contains dissolved and suspended matter;

“sewage” means household and commercial wastewater that contains human waste;

GENERAL REQUIREMENTS

1. The Licencee shall direct all wastewater generated within the community of God's Lake Narrows toward the sewage treatment plant or other approved sewage treatment facilities.
2. The Licencee shall limit the sewage load on the sewage treatment plant to the design capacities as follows:
 - (a) hydraulic loading not to exceed 45.5 cubic metres over any 24 hour period;
 - (b) organic loading, in terms of biochemical oxygen demand (BOD₅), not to exceed 24 kilograms over any 24 hour period;
 - (c) total suspended solids loading not to exceed 24 kilograms over any 24 hour period; and
 - (d) influent ammonia (NH₃) concentration not to exceed 50 milligrams per litre.
3. The Licencee shall, in case of physical or mechanical breakdown of the wastewater collection and/or the sewage treatment plant:
 - (a) notify the Director immediately;
 - (b) identify the repairs required to the wastewater collection and/or the sewage treatment plant; and
 - (c) complete the repairs in accordance with any written instructions of the Director.
4. The Licencee shall install, operate and maintain an effluent discharge pipeline from the sewage treatment plant into God's Lake so that all the effluent is discharged a minimum of 45 metres from the nearest shoreline. The Licencee shall ensure that the effluent pipeline is equipped with a functioning heat trace tape or adequate soil cover to prevent freezing of the effluent in the pipeline.
5. The Licencee shall ensure that the sewage treatment plant is not located within a distance of 100 metres from the nearest residence.
6. The Licencee shall ensure that wastewater and/or sludge are not spilled in the area around the sewage treatment plant.
7. The Licencee shall construct an all-weather access road and dumping facility for truck hauled wastewater. The dump station shall be equipped with an influent pipe fitted with a quick-coupler. All trucks used to deliver wastewater to the treatment plant shall be equipped with a flexible hose and matching adapters for the quick-coupler. All wastewater delivered to the sewage treatment plant shall be discharged through the hose and influent pipe into the trash tank below the liquid surface.
8. The Licencee shall not cause or permit an odour nuisance to be created as a result of the construction or the operation of the Development, and shall take steps as the Director may require to eliminate or mitigate an odour nuisance.

DISCHARGE LIMITS, TERMS AND CONDITIONS

9. The Licencee shall not discharge effluent from the sewage treatment plant, as sampled in the UV disinfection chamber near the point of discharge from the chamber, where:
 - (a) the organic content of the effluent, as indicated by the five day biochemical oxygen demand, is in excess of 30 milligrams per litre;
 - (b) the non-filterable residue content of the sewage effluent is in excess of 30 milligrams per litre;
 - (c) the fecal coliform content of the effluent, as indicated by the MPN index, is in excess of 200 per 100 millilitres of sample;
 - (d) the total coliform content of the effluent, as indicated by the MPN index, is in excess of 1500 per 100 millilitres of sample; or
 - (e) the ammonia concentration of the effluent is in excess of 1.0 milligrams per litre.
10. The Licencee shall ensure that the sludge solids are disposed at a waste disposal ground operated under a permit issued in accordance with Manitoba Regulation 150/91 and in accordance with that permit.

MONITORING AND REPORTING SPECIFICATIONS

11. The Licencee shall provide a means of accessing the programmable logic controller from the sewage treatment plant to obtain the process time information and elapsed process time information.
12. The Licencee shall provide a heated and secured effluent monitoring station acceptable to the Director and equipped with:
 - (a) a direct access way for an effluent sampling line to a location near the discharge from the UV disinfection chamber;
 - (b) an electrical power source of 15 amperes at 110 volts; and
 - (c) a connection cable and plug to link an ISCO portable automated sampler with an isolated contact closure type output of at least 25 millisecond duration from the programmable logic controller which signals the effluent discharge cycle.
13. The Licencee shall:
 - (a) take one composite sample of effluent from the sewage treatment plant during the discharge period once each month ;
 - (b) take one grab sample of effluent from the sewage treatment plant during the discharge period once each month ;
 - (c) have the composite effluent samples analyzed for five day biochemical oxygen demand, 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;
 - (d) have the grab sample analyzed for fecal coliform content and total coliform 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

- (e) report the results to the Director within 60 days of the samples being taken.
14. The Licencee shall, during the three month period following the commissioning of the UV disinfection system:
- (a) take grab samples of effluent from the sewage treatment plant during the discharge period once each week ; and
 - (b) have the grab samples analyzed for non-filterable residue content, fecal coliform content and total coliform 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.
15. The Licencee shall:
- (a) prepare "as constructed drawings" for the Development, including the sewage treatment facility and the effluent discharge pipeline complete with final elevations, and shall label the drawings "As Constructed Drawings"; and
 - (b) provide to the Director, on or before March 1, 1997, two sets of "as constructed drawings" of the Development.
16. The Licencee shall, on or before the 1st day of February of each year, provide to the Chief of the God's Lake First Nation, an annual report of the results of the effluent monitoring, carried out pursuant to Clauses 13 and 14 of this Licence, for the previous calendar year.

REVIEW AND REVOCATION

17. This Licence shall be reviewed by the Director if any studies or monitoring programs undertaken pursuant to this Licence or otherwise, give rise to new evidence to warrant a change to this Licence.
18. 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 herein, the Director may revoke, temporarily or permanently, this Licence.



Larry Strachan, P. Eng.
Director
Environment Act