



Sustainable Development

Environmental Stewardship Division
Environmental Approvals Branch
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File No. 3197.00

June 5, 2019

Stewart McDermid, Waste Water Maintenance Operator
c/o Sean Nedohin, Park Operations Manager
Box 130
Rennie MB R0E 1R0
Email: sean.nedohin@gov.mb.ca

Dear Stewart McDermid:

Re: MB Sustainable Development – Brereton Lake Wastewater Treatment Lagoon – Minor Alteration Approval - Environment Act Licence No. 1399

I am responding to the April 2, 2019 Notice of Alteration request, submitted by you, relative to a request for alteration to Environment Act Licence No. 1399 (Licence), originally issued for the construction and operation of the Development being a wastewater treatment lagoon located on portions of 32-11-15 EPM in the Whiteshell Provincial Park. The submission is considered a Notice of Alteration (NoA) pursuant to Section 14 of The Environment Act.

The intent of the NoA is two-fold:

- a) to change the discharge window from May 2 to May 31st of any year to an appropriate time period; and
- b) to remove the total coliform analysis and the total coliform limit as a condition for effluent discharge as the current wastewater effluent standards for wastewater treatment facilities do not include a total coliform limit to be met before the treated effluent is discharged.

Upon review of the NoA, I am satisfied that the identified changes in the environmental effects as would result from the proposed alterations will be insignificant. Therefore, pursuant to Section 14(2) of The Environment Act, I replace Clauses 1 and 2 of the Licence with the following and I add Clause 13 to the Licence as follows:

Respecting Operation

1. a) The Licencee shall not discharge effluent from the wastewater treatment lagoon:
 - i. where the organic content of the effluent, as indicated by the five day carbonaceous biochemical oxygen demand, is in excess of 25 milligrams per litre;
 - ii. where the fecal coliform content of the effluent, as indicated by the MPN index, is in excess of 200 per 100 millilitres of sample;
 - iii. where the total suspended solids content of the effluent is in excess of 25 milligrams per litre;

- iv. where the total phosphorus content of the effluent is in excess of 1 milligram per litre;
 - v. where the unionized ammonia content of the effluent is in excess of 1.25 milligrams per litre expressed as nitrogen (N), at $15^{\circ}\text{C} \pm 1^{\circ}\text{C}$;
 - vi. between the 1st day of November of any year and the 15th day of June of the following year;
 - vii. when flooding from any cause is occurring along the effluent drainage route; or
 - viii. when such a discharge would cause or contribute to flooding in or along the effluent drainage route.
- b) The Licencee shall, when chlorine is used as a disinfecting agent:
- i. notify the Director in advance;
 - ii. dechlorinate effluent prior to discharge;
 - iii. obtain grab samples prior to and daily during the discharge period and have them analyzed for total residual chlorine; and
 - iv. not discharge effluent where the concentration of the total residual chlorine is in excess of 0.02 milligrams per litre.
2. The Licencee shall maintain and operate 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;
 - c) the depth of liquid in the primary cell and the secondary cell does not exceed 1.5 metres; and
 - d) a 1.0 metre freeboard is maintained in the primary cell and the secondary cell at all times.

Respecting Monitoring and Reporting

13. a) The Licencee shall, prior to each effluent discharge campaign, obtain grab samples of the treated wastewater and have them analyzed for:
- i. the organic content as indicated by the five-day carbonaceous biochemical oxygen demand and expressed as milligrams per litre;
 - ii. the total suspended solids content expressed as milligrams per litre;
 - iii. the fecal coliform content as indicated by the MPN index and expressed as MPN per 100 millilitres per sample;
 - iv. the total phosphorus content expressed as milligrams per litre; and
 - v. the unionized ammonia nitrogen expressed as milligrams per litre.
- b) The Licencee shall immediately notify the Director each time the operating depth of any cell of the wastewater treatment lagoon does not comply with the maximum operating depth and minimum freeboard requirements for that cell as specified in Clause 2 of this Licence.
- c) The Licencee shall during each year maintain the following records and retain them for a minimum period of five calendar years:
- i. reports of visual inspections conducted a minimum of once per month;
 - ii. wastewater sample dates;
 - iii. original copies of laboratory analytical results of the sampled wastewater;

- iv. a summary of laboratory analytical results;
- v. cell isolation dates (i.e., valve operation records);
- vi. effluent discharge dates;
- vii. estimated effluent discharge volumes;
- viii. maintenance and repairs;
- ix. expansions to the collection system with associated capacity assessment;
- x. updated organization charts identifying all certified operators, including backup operators; and
- xi. a summary of any wastewater collection system overflows sanitary sewer overflows/combined sewer overflows.

d) The Licencee shall submit an annual report to the Environment Officer by February 28 of the following year including all records required by Clause 13(c) of this Licence.

All other clauses in Environment Act Licence No. 1399 remain in effect. This approval is contingent on your receiving an updated Environment Act Licence to be issued in the near future.

Should you have any questions concerning this approval, please contact Asit Dey, Environmental Engineer at (204)945-2614 or at asit.dey@gov.mb.ca.

Yours sincerely,



Cordella Friesen
Director,
The Environment Act

c: Sean Nedohin, Park Operations Manager
Scott Davies/Yvonne Hawryliuk/Larry Markwart, Environmental Compliance and Enforcement
Asit Dey, Environmental Approvals Branch
Public Registries

Environment Act Licence

Manitoba
Environment



Licence No. 1399
Issue Date AUGUST 23, 1990

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

THIS LICENCE IS ISSUED TO:

DEPARTMENT OF NATURAL RESOURCES: APPLICANT
(BRERETON LAKE WASTEWATER TREATMENT LAGOON)

The following limits, terms, and conditions shall be complied with in connection with the construction and operation of the phase 1 construction of a wastewater treatment lagoon located in Section 32-Township 11-Range 15 EPM in the Whiteshell Provincial Park and with discharge of treated effluent into a wetland draining into the Rennie River:

1. The Applicant 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 phosphorus content is in excess of 1.0 milligrams per litre;
 - (d) where the total coliform content of the effluent, as indicated by the MPN index, is in excess of 1500 per 100 millilitres of sample; and
 - (e) between the first day of June of any year and the first day of May of the following year.
2. The Applicant shall operate and maintain the wastewater treatment lagoon in such a manner that:
 - (a) the release of offensive odours is minimized;

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- (b) the organic loading on the primary cell of the wastewater treatment lagoon, 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 sewage in the primary cell does not exceed 1.5 metres.
- 3. The Applicant 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; and
 - (c) complete the repairs in accordance with the written instructions of the Director.
- 4. The Applicant shall, prior to the construction of the continuous clay core for the lagoon dykes, remove all organic top soil and organic material from the area where the dykes will be constructed.
- 5. The Applicant shall construct a structurally stable and continuous clay core for all the lagoon dykes, except the centre dyke between the cells, having a hydraulic conductivity of 1×10^{-7} centimetres per second or less and with a minimum thickness of 1 metre. The clay core shall extend into the in-situ clay underlying the lagoon structure a minimum of 0.3 metres.
- 6. The Applicant shall construct a structurally stable centre dyke between the adjoining cells with clay or other suitable material having a hydraulic conductivity of 1×10^{-5} centimetres per second or less.
- 7. The Applicant shall arrange with the designated Environment Officer a mutually acceptable time and date for any required soil sampling between the 15th day of May and the 15th day of October of any year, unless prior approval, by the Director, is given.
- 8. The Applicant shall advise the designated Environment Officer, one week prior to the intended commencement of construction of the clay core.

9. The Applicant shall subject undisturbed soil samples from the clay core wall and the under lying in-situ clay, to hydraulic conductivity tests, the number and location of samples to be specified by the designated Environment Officer up to a maximum of twenty samples.
10. The Applicant shall install a fence around the wastewater treatment lagoon to limit access.
11. The Applicant shall construct an all weather access road and dumping facility for truck hauled sewage. The dumping facility shall be constructed with a smooth hard surface that can be easily washed free of solids and maintained in a sanitary condition.
12. The Applicant shall, on or before the 1st of September, 1991, provide to the Director "as constructed" drawings of the wastewater treatment lagoon and all appurtenances.



Larry Strachan, P. Eng
Director
Environment Act

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