

**APPENDIX B**

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**Existing Environment Act Licence**

## Whiteshell Colony Environment Act Licence #1377

### Chronological Duties

1. Ensure conditions of License are known. Copy of licence attached.
2. Before spraying:
  - ◆ Submit waste water samples from cell #2 to Enviro Test Lab as per condition #10 (2 liter sample – analysed for conductivity and sodium absorption ration). (1 liter brown bottle BOD<sub>t</sub> total & fecal – bacti sample bottles)
  - ◆ Submit waste water analysis results (from cell #2) prior to discharge to:  
Dennis Brown, Regional Director  
Manitoba Environment  
Eastern/Interlake Region  
Box 21450  
Steinbach MB R0A 2T3
3. **NEXT YEAR:**
  - ◆ Submit soil samples from irrigation area to private lab as per condition #9 (Private labs and Agricultural Lab – University of Manitoba; Natural Testing Laboratories; Independent Test Laboratories; etc.)
  - ◆ Request soil sample analysis required in condition 9 (c)
  - ◆ Location (on map or plan) of soil sampling locations
  - ◆ Results of soil sampling analysis (within 90 days of samplings) to Dennis Brown, Regional Director - Steinbach
4. If soil sample results exceed limits set in condition #11, irrigation must stop within two years and (according to condition #12) submit another proposal
5. Notify office (Maurice Bazin, Environment Officer @ 204-346-6062 at least **seven (7) days** prior to spraying
6. Prior to any discharge, ensure effluent complies with conditions #1, 2, 3, 4, and 5
7. Spraying must comply to condition #7 (distances) and must comply to condition #8 (application rates and acceptable land use)
8. Fence to be erected and maintained around facility
9. If system breakdown occurs, notify office **IMMEDIATELY**

June 1, 1999



Environment

Now  
WALTER  
GROSS

Building 2  
139 Tuxedo Avenue  
Winnipeg, Manitoba, CANADA  
R3N 0H6

## REGISTERED MAIL

File: 3087.00

June 12, 1990

Mr. Mike Gross  
Whiteshell Colony  
RIVER HILLS, Manitoba  
R0E 1T0

Dear Mr. Gross:

Enclosed herewith is Licence No. 1377 dated June 12, 1990, with attached "Justification for Alteration of Commission Recommendations", issued in accordance with the Manitoba Environment Act to Whiteshell Holding Co. Ltd. (Whiteshell Colony) in connection with the construction and operation of a wastewater collection system, the construction and operation of a wastewater treatment lagoon located on the SE $\frac{1}{4}$  33-12-11 EPM in the Rural Municipality of Whitemouth, and the operation of an effluent irrigation system with discharge of treated effluent onto land owned by Whiteshell Colony.

In addition to the attached Environment Act Licence requirements, please be informed that all other applicable federal, provincial and municipal regulations and by-laws must be complied with.

For further information on the administration and application of the Licence you may contact Mr. Larry Strachan of this Branch at 945-7071.

Yours truly,

N. B. Brandson  
Director  
Environment Act

Enclosures

cc: Distribution List  
cc: Ms. Stella K. Fedeniuk, P. Eng.  
Manitoba Water Services Board

# Environment Act Licence

Manitoba  
Environment



Licence No. 1377  
Issue Date JUNE 12, 1990

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

THIS LICENCE IS ISSUED TO:

WHITESHELL HOLDING CO. LTD.; APPLICANT  
(WHITESHELL COLONY)

The following limits, terms, and conditions shall be complied with in connection with the construction and operation of a wastewater collection system, the construction and operation of a wastewater treatment lagoon located on the south-east quarter of Section 33-12-11 EPM in the Rural Municipality of Whitemouth, and the operation of an effluent irrigation system with discharge of treated effluent onto land owned by the Applicant:

1. The Applicant shall ensure that all domestic sewage generated within the farm site is directed toward the wastewater treatment lagoon.
2. The Applicant shall ensure that no livestock waste or livestock wastewater is directed toward the wastewater treatment lagoon.
3. 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 coliform content of the effluent, as indicated by the MPN index, is in excess of 1500 per 100 millilitres of sample;
  - (d) between the first day of October of any year and the 15th day of May of the following year unless prior approval by the Director, is given;
  - (e) to the Whitemouth River.
4. The Applicant shall not discharge effluent from the primary cell of the wastewater treatment lagoon, except to the secondary cell of the lagoon.
5. 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 system, as indicated by the five day biochemical oxygen demand, is not in excess of 56 kilograms per hectare per day;
  - (c) the depth of sewage in the primary cell does not exceed 1.5 metres.
6. The Applicant shall discharge effluent from the wastewater treatment lagoon only onto lands owned by the Applicant.
7. The Applicant shall not discharge effluent:
- (a) within 300 metres of any dwelling not owned or lawfully controlled by the Applicant;
  - (b) within 60 metres of any surface watercourse or groundwater well;
  - (c) within 20 metres of any property boundary; or,
  - (d) where the surface slope of the land exceeds 3%.
8. The Applicant shall ensure that all treated effluent is disposed of by spray irrigation onto land owned by the Applicant and that:
- (a) effluent is only discharged to irrigate:
    - (i) actively growing cereal, forage or oil seed crops;
    - (ii) grasslands which will not be utilized for grazing:
      - A. by dairy cattle for at least 30 days after effluent is applied;
      - B. by livestock other than dairy cattle for at least 7 days after effluent is applied;
    - (iii) agriculture crops where irrigation does not take place during or for at least 7 days prior to harvesting of the crops;

- (b) when corn is grown, it is used solely for making silage;
  - (c) during 10 continuous hours in every 24-hour period, no application of effluent takes place;
  - (d) if ponding occurs during irrigation the gross depth of effluent applied during any application of effluent shall be reduced.
  - (e) if surface run-off occurs during irrigation, either
    - (i) the systems shall be shut down;
    - (ii) the irrigation site shall be moved; or,
    - (iii) the effluent application rate shall be reduced.
9. The Applicant shall, on an annual basis:
- (a) select a minimum of ten representative sampling sites distributed over the effluent irrigation area;
  - (b) obtain one soil sample from each sampling site, from a depth of 0-30 centimetres;
  - (c) subject the samples for analyses for pH, conductivity, sodium absorption ratio, calcium, magnesium, sodium, nitrate nitrogen; and,
  - (d) submit the results of such analyses to the Director within 90 days of the date of collection of the samples.
10. The Applicant shall, prior to each annual irrigation season, submit samples of the treated wastewater for conductivity and sodium adsorption ratio analyses and submit the results of the analyses to the Director.
11. The Applicant shall terminate the use of the effluent irrigation system within two years of any occasion on which the soil conductivity exceeds 6 millisiemens per centimetre and/or the sodium adsorption ratio exceeds 6 units in any five out of ten soil samples collected from the effluent irrigation area.

12. The Applicant shall file a Proposal pursuant to the Environment Act for an alternative effluent disposal method within one year of any occasion on which the soil conductivity exceeds 6 millisiemens per centimetre and/or the sodium adsorption ratio exceeds 6 units in any five out of ten soil samples collected from the effluent irrigation area.
13. The Applicant shall, in case of physical or mechanical breakdown of the wastewater collection and/or treatment system:
  - (a) notify the Director immediately;
  - (b) identify the repairs required to the wastewater collection and/or treatment system;
  - (c) complete the repairs in accordance with the written instructions of the Director.
14. The Applicant shall prior to the construction of dykes for the wastewater treatment lagoon:
  - (a) remove all organic topsoil from the area where the dykes will be constructed; or,
  - (b) remove all organic material for a depth of 0.3 metres and a width of 3.0 metres from the area where the dyke will be built, provided all the lagoon dykes are lined with clay or other suitable material as required by Clause 15 to a minimum thickness of one metre measured perpendicular to the face of the side wall.
15. The Applicant shall construct the wastewater treatment lagoon with clay or other suitable material such that all interior surfaces of the lagoon structure are underlain with a minimum of 1 metre of soil having a hydraulic conductivity of  $1 \times 10^{-7}$  centimetres per second or less.
16. 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.

17. The Applicant shall either:
- (a) subject undisturbed soil samples from each cell of the completed wastewater treatment lagoon 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; or,
  - (b) where undisturbed soil samples cannot be taken, test the soil of 4 plane surfaces of the wastewater treatment lagoon for hydraulic conductivity by an insitu field test method as prescribed by the designated Environment Officer.
18. The Applicant shall, not less than 2 weeks before the wastewater treatment lagoon is placed in operation, submit to the Director the results of the tests carried out pursuant to Clause 17.
19. The Applicant shall install a fence around the wastewater treatment lagoon to limit access by the public.
20. The Applicant shall notify the Director 7 days in advance of any effluent discharge from the wastewater treatment lagoon.
21. The Applicant shall complete the construction of the wastewater treatment lagoon on or before the first day of October, 1990.



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Norman B. Brandson  
Director, Environment Act



"JUSTIFICATION FOR ALTERATION OF COMMISSION RECOMMENDATIONS"

WHITESHELL HOLDING CO. LTD.; APPLICANT

The recommendations of the Manitoba Clean Environment Commission have been incorporated into the Licence with the following exceptions:

CEC Recommendation

"6. Prior to each irrigation season the Applicant shall obtain from lands selected to receive treated effluent representative soil samples from a depth of 0-30 centimeters and subject the samples for analyses for pH, conductivity, sodium adsorption ratio, calcium, magnesium, sodium and nitrate nitrogen, and the results of such analyses shall be submitted to the Director."

has been changed to the following Clause:

- "9. The Applicant shall, on an annual basis:
- (a) select a minimum of ten representative sampling sites distributed over the effluent irrigation area;
  - (b) obtain one soil sample from each sampling site, from a depth of 0-30 centimetres;
  - (c) subject the samples for analyses for pH, conductivity, sodium adsorption ratio, calcium, magnesium, sodium, nitrate nitrogen; and,
  - (d) submit the results of such analyses to the Director within 90 days of the date of collection of the samples."

Justification

The minimum number of representative sampling sites and the acceptable length of time to submit the results of the analyses must be included so that the Applicant has a clear understanding of what has to be done.

CEC Recommendation

"8. The Applicant shall discharge effluent from the wastewater treatment lagoon only onto lands owned by the Applicant, and only onto the pre-selected lands if deemed suitable for irrigation by the Director after the results required by Clauses 6 and 7 are considered."

has been changed to the following Clauses:

"6. The Applicant shall discharge effluent from the wastewater treatment lagoon only onto lands owned by the Applicant."

- "11. The Applicant shall terminate the use of the effluent irrigation system within two years of any occasion on which the soil conductivity exceeds 6 millisiemens per centimetre and/or the sodium adsorption ratio exceeds 6 units in any five out of ten soil samples collected from the effluent irrigation area."
- "12. The Applicant shall file a Proposal pursuant to the Environment Act for an alternative effluent disposal method within one year of any occasion on which the soil conductivity exceeds 6 millisiemens per centimetre and/or the sodium adsorption ratio exceeds 6 units in any five out of ten soil samples collected from the effluent irrigation area."

Justification

The acceptable environmental limits should be clearly indicated in the Licence so that the Applicant has a clear understanding of what is required.

Effluent application will be restricted to land owned by the Applicant.

**CEC Recommendation 19**

- "19. The Manitoba Water Services Board shall submit to the Director by September 1, 1990, a final report that contains an evaluation of the suitability for the intended irrigation of the treated effluent and the lands that would receive it, and the report shall also address the question of suitable land availability to accommodate both hog lagoon and domestic waste lagoon effluents."

has been deleted.

Justification

The Applicant was requested to submit the additional information prior to a Licence being issued. This additional information is available from the Public Registries.

Clause 21 has been added as follows:

- "21. The Applicant shall complete the construction of the wastewater treatment lagoon on or before the 1st day of October, 1990."

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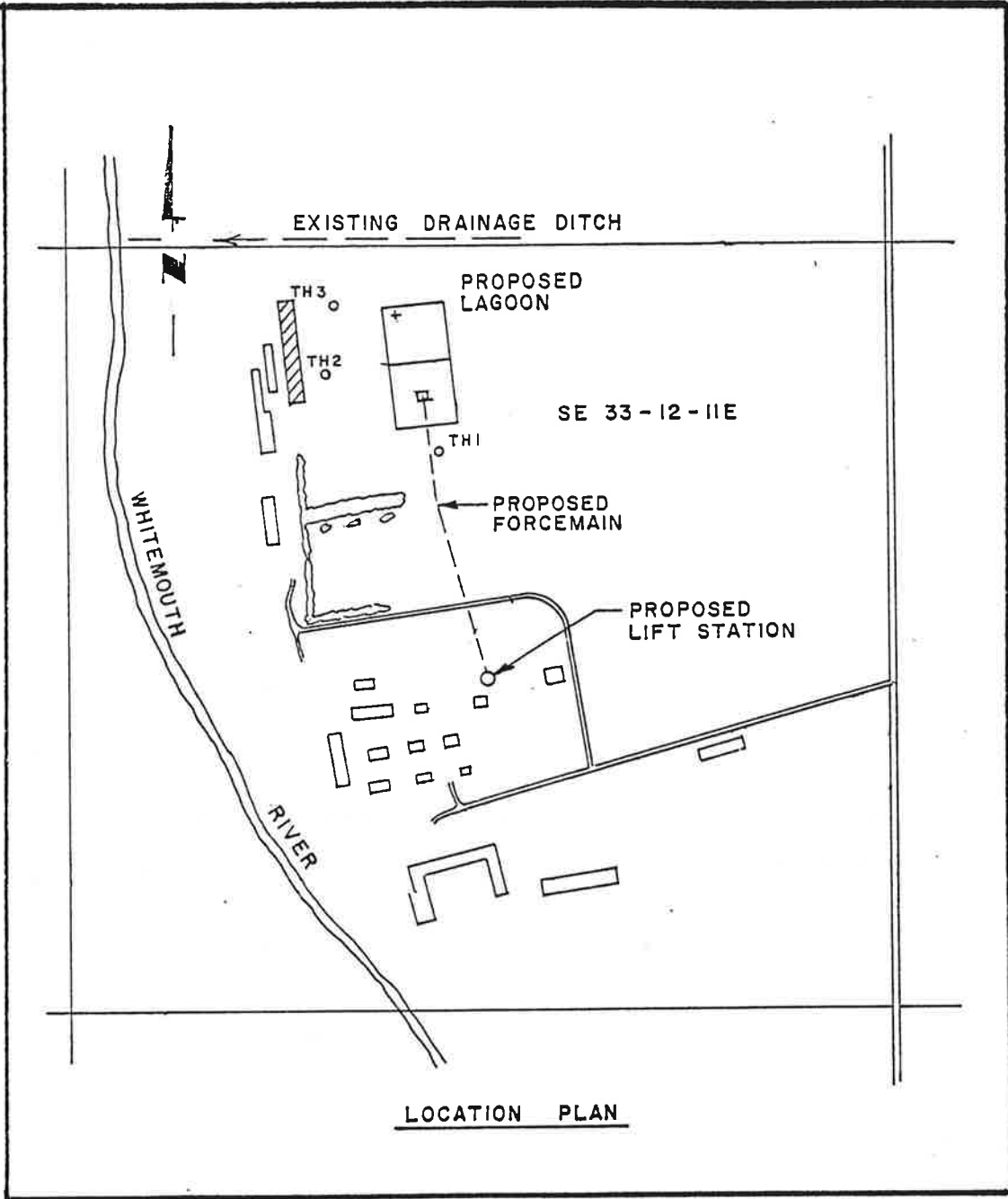
**Justification**

In order to ensure that human wastes are properly treated, a sewage treatment facility is required. The current method of handling these wastes is unacceptable.



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Norman B. Brandon  
Director, Environment Act



1 (TAKEN 1988)

DARK BROWN TOPSOIL