

# Environment Act Licence

Manitoba  
Environment



Licence No. 1379

Issue Date JUNE 20, 1990

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

THIS LICENCE IS ISSUED TO:

**AIRPORT HOLDING CO. LTD.; APPLICANT**  
**(AIRPORT 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 north-east quarter of Section 5-13-8WPM in the Rural Municipality of Portage la Prairie, and the disposal of treated effluent by irrigation onto land owned by the Applicant or by surface discharge to Long Creek:

1. The Applicant shall ensure that all 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, prior to discharging of the wastewater treatment lagoon, take samples of the treated sewage, have the samples analysed for biochemical oxygen demand, fecal coliform content and total coliform content, and make the results available to the designated Environment Officer.
4. 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.
5. The Applicant shall not discharge effluent from the primary cell of the wastewater treatment lagoon, except to the secondary cell of the said lagoon.

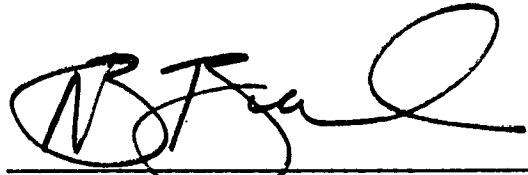
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6. The Applicant shall operate and maintain the wastewater treatment lagoon in such a manner that:
  - (a) the release of offensive odours is minimized;
  - (b) the organic loading on the primary cell of the wastewater treatment lagoon system, as indicated 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.
7. The Applicant shall discharge treated effluent from the wastewater treatment lagoon only onto lands owned by the Applicant or to Long Creek.
8. The Applicant shall ensure that when effluent is disposed of by irrigation:
  - (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 system 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 if effluent is disposed of by irrigation:
  - (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.
- 10. The Applicant shall ensure that if effluent is to be disposed of by irrigation, samples of treated sewage are submitted for conductivity and sodium adsorption ratio analyses prior to each irrigation season and that the results are made available to the designated Environment Officer.
- 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, 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.

13. 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 14 to a minimum thickness of one metre measured perpendicular to the face of the side wall.
14. 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.
15. 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.
16. 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.
17. 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 16.

18. The Applicant shall install a fence around the wastewater treatment lagoon to limit access by the public.
19. The Applicant shall complete the construction of the wastewater treatment lagoon on or before the first day of November, 1990.



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Norman B. Brandon  
Director, Environment Act

FILE NO.: 2984.0

## JUSTIFICATION FOR ALTERATION OF COMMISSION RECOMMENDATIONS

### AIRPORT HOLDING CO. LTD.; APPLICANT

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

#### CEC Recommendations

"6. The Applicant shall to the satisfaction of the Director, undertake the necessary investigation of the chemical quality of the treated effluent and the site to which effluent is to be discharged to establish the suitability of land application of effluent.

and,

"7. The Applicant shall not discharge effluent onto agricultural lands without the approval of the Director."

has been changed to the following Clauses:

"7. The Applicant shall discharge treated effluent from the wastewater treatment lagoon only onto lands owned by the Applicant or to Long Creek."

"8. The Applicant shall ensure that when effluent is disposed of by irrigation:

(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;

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- (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 system 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 if effluent is disposed of by irrigation:
- (a) select a minimum of ten representative sampling sites distributed over the effluent irrigation area;
  - (b) obtain one soil samples 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."
- "10. The Applicant shall ensure that ensure that if effluent is to be disposed of by irrigation, samples of treated sewage are submitted for conductivity and sodium adsorption ratio analyses prior to each irrigation season and that the results are made available to the designated Environment Officer."
- and,
- "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."

**Justification**

Effluent disposal by irrigation cannot be relied on because the effluent has a high salinity level. It is advisable to provide the Applicant with an alternative disposal option if the salinity level cannot be reduced. The acceptable environmental limits should be clearly indicated in the Licence so that the Applicant has a clear understanding of what is required.

**CEC Recommendation**

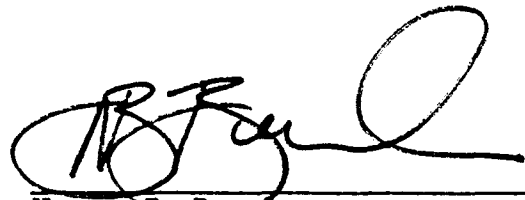
"15. The Applicant shall have the wastewater treatment system as licenced constructed prior to September 1st, 1990."

has been changed to the following Clause:

"19. "The Applicant shall complete the construction of the wastewater treatment lagoon on or before the first day of November, 1990."

**Justification**

The deadline for completion of the facility was extended by two months because the September 1, 1990 deadline would not provide an adequate amount of time to complete the project.



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Norman B. Brandon  
Director, Environment Act