

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPOSER: Riverbend Holding Co. Ltd.: Applicant
PROPOSAL NAME: Riverbend Colony Wastewater Treatment Lagoon
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 1162.10

OVERVIEW:

On July 23, 1998, the Department received a Proposal from Riverbend Holding Co. Ltd. to construct and operate a wastewater treatment lagoon to service the Riverbend Colony farmsite. The wastewater treatment lagoon will be located on northwest quarter of Section 33-9-13 WPM in the Rural Municipality of North Cypress. The Proposal indicated that treated wastewater will be discharged by spray irrigation onto agricultural land owned by the proponent.

The Proposal stated that well logs indicate that sandy clay can be encountered at the site to a depth of 3 metres over a sand layer and that groundwater is found at about 5 metres below ground elevation. Test pits on site showed that a thin layer of top soil was located over a medium to fine grained sand layer to a depth of 2.5 metres below ground surface. A layer of medium plastic clay of approximately 0.4 metres in thickness was then encountered followed by a fine grained sand layer. It was proposed to construct a liner of the medium plastic clay.

The Department, on July 23, 1998, placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station); the Centennial Public Library, the Western Manitoba Regional Library and provided copies of the Proposal to the Interdepartmental Planning Board and TAC members. As well, the Department placed a public notification of the Proposal in the Carberry News Express on August 18, 1998. The newspaper and TAC notification invited responses until August 31, 1998.

COMMENTS FROM THE PUBLIC:

- *Bill and Shirley Stadnyk have concerns about the Proposal. They live on and farm the northeast quarter of Section 33-9-13 WPM. They are concerned about the seepage from the facility affecting their water supply. They want adequate precautions taken to protect their water supply.*

Disposition:

- A meeting was held with Bill and Shirley Stadnyk to review the Proposal and their concerns.

- The draft Licence requires that the lagoon be constructed with a geosynthetic liner that will be tested during construction. The groundwater in the area is used as a water supply and is very susceptible to contamination. There is insufficient information in the Proposal supporting the use of local material for the liner.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Highways

- *No comment.*

Natural Resources

- *The Riverbend Colony is located ovetop of the southeastern portion of the Assiniboine Delta Aquifer, which is unconfined and very sensitive to contamination. Consideration should be given to requiring the installation of an additional liner as a backup.*
- *Water quality monitoring wells should be established, especially between the lagoon and the colony's water supply wells.*
- *Testing should be carried out to ensure that the land spreading does not overload the soil ecological systems and cause unacceptable groundwater contamination.*

Disposition:

- The draft Licence requires that the lagoon be constructed with a geosynthetic liner that will be tested during construction. The groundwater in the area is used as a water supply and is very susceptible to contamination. There is insufficient information in the Proposal supporting the use of local material for the liner.
- The Colony is currently using septic fields for sewage disposal. Groundwater monitoring wells will confirm the known historical seepage problem. Therefore groundwater monitoring results may not reflect the performance of the liner. A requirement for groundwater monitoring wells has not been included in the draft Licence.
- Periodic soil testing requirements have not been included because the nitrogen content of the effluent is low. Unlike livestock waste, the agricultural value of effluent irrigation with treated domestic wastewater is in the recycling of the water, not the nutrients. On a comparative basis treated domestic wastewater contains very little nutrient value. The draft Licence includes effluent irrigation requirements including the application of wastewater onto agricultural crops to provide for nutrient uptake by the plants.

Historic Resources

- *No concerns.*

Rural Development

- *There is a farm residence located approximately 1300 feet east of the proposed lagoon and lagoon odours may be an occasional concern for the occupants of this residence. A lagoon location southwest of the existing colony housing would provide better separation from the residences in the area.*
- *Groundwater issues are significant in this area, and a high degree of scrutiny and supervision of the lagoon liner would be desirable;*
- *No major concerns provided the lagoon is constructed with a liner and operated in accordance with the engineering recommendation.*

Disposition:

- The separation distance between the lagoon and the neighbouring residence exceeds the departmental guideline. In addition, the draft licence includes separation restrictions on effluent irrigation sites.
- In order to better control nuisance odours, the draft Licence limits the type of wastewater discharged to the treatment facility to domestic sewage.
- The draft Licence addresses the remaining issues.

Health

- *The need for fencing around the facility should be included to ensure public safety;*
- *Consideration should be given to including an odour nuisance clause;*
- *Effluent should not be discharged to a water course or a municipal ditch system. Effluent discharge should not occur in proximity to the colony's wells;*
- *The liner should provide the best possible groundwater protection for the area (Groundwater exists at 5 metres and the sandy soil is not the best protection available);*
- *Effluent discharge should follow established guidelines;*
- *Consideration should be given to the inclusion of a perimeter drainage swale to protect the structure from surface runoff flow.*

Disposition:

- The draft Licence requires the construction of a fence to limit public access.
- The odour nuisance clause is not included in the draft Licence because the facility is located in an agricultural area. However to better control nuisance odours, the draft Licence limits the type of wastewater discharged to the treatment facility to domestic sewage.
- The Proposal indicated that effluent would be discharged by irrigation and not by drainage into surface waterways. The draft Licence includes restrictions on irrigation sites.
- The draft Licence requires that the lagoon be constructed with a geosynthetic liner that will be tested during construction.

- The draft Licence does not include a requirement for a perimeter drain because surface runoff flow is not expected around the structure.

Environment-Operations Division

- *Laboratory results should be provided prior to discharge of the effluent;*
- *Irrigation of the effluent is limited to required set back distances and performed in such a manner as to not contaminate groundwater or cereal crops;*

Disposition:

The draft Licence addresses these issues.

Canadian Environmental Assessment Agency

- *The application of the Canadian Environmental Assessment Act with respect to this proposal will not be required.*

PUBLIC HEARING:

A public hearing is not required.

RECOMMENDATION:

A Licence should be issued in accordance with the attached draft. Enforcement of the Licence should be assigned to the Approvals Branch until the construction of the wastewater treatment lagoon, including the lining system, has been completed.

PREPARED BY:

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April 9, 1999

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