

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPONENT:** Rural Municipality of Gimli  
**PROPOSAL NAME:** Gimli Industrial Park – Sludge Disposal System  
**CLASS OF DEVELOPMENT:** 2  
**TYPE OF DEVELOPMENT:** Waste/Scrap  
**CLIENT FILE NO.:** 4522.00

### **OVERVIEW:**

On April 11, 2000, the Department received a Proposal from J. R. Cousin Consultants Ltd. on behalf of the Rural Municipality of Gimli for a Development to operate a biosolids disposal program. The sludge from the Gimli Industrial Park wastewater treatment plant will be removed and spread on land owned by the municipality. The lands onto which the sludge will be applied are located in Parcel B Plan 31970 in Sections 12-19-3E, 13-19-3E, 7-19-4E and 18-19-4E in the Rural Municipality of Gimli. Two sections of the proposal were clarified by a letter dated April 18, 2000.

The Department, on May 8, 2000, placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station), the Centennial Public Library and the Rural Municipality of Gimli Office in Gimli. As well, copies of the Proposal were provided to the Interdepartmental Planning Board and TAC members. The Department placed a public notification of the Proposal in the Interlake Spectator on Monday, May 15, 2000. The newspaper and TAC notification invited responses until June 12, 2000.

### **COMMENTS FROM THE PUBLIC:**

No comments were received from the Public.

### **COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:**

#### **Highways and Government Services**

- *No concerns.*

#### **Conservation - Natural Resources**

- *No concerns.*

#### **Historic Resources**

- *No concerns.*

#### **Intergovernmental Affairs**

- *No comment.*

### **Health**

- *No comment.*

### **Conservation – Environment Operations Division**

- *It is not clear what time of year the sludge will be applied onto the land. Page 5, Section 2.6.3 seems to indicate that spreading will occur in the fall. In the past the R. M. of Gimli has had to dispose of digester sludge approximately twice per year.*
- *It is not clear if samples will be taken on the plot of land where the sludge is to be applied prior to application. How many samples are typically required?*
- *The application indicates that the biosolids will be injected; however, in the past the sludge was applied onto the alfalfa and hay crops via dribble bar on a tanker truck. Typically, manure is not injected or incorporated into forage crops, it is applied onto the surface of them. A clear distinction should be made as to the method of application and on to what crops the sludge will be applied. Will the municipality be purchasing the necessary application equipment or will this service be contracted out?*
- *The digester sludge should be applied onto agricultural land at a rate to allow uniformity of spreading and to ensure that ponding does not occur.*
- *A distinction should be made regarding the disposal of the sludge on agricultural land. If applied as a fertilizer, similar to manure, the sludge should be applied onto agricultural land at a rate of application similar to that allowed in Section 12 (1) of the Livestock Manure and Mortalities Regulation.*
- *There is no mention of application setback distances. Minimum distances from property boundaries, watercourses, drainage ditches, etc. should be established.*
- *The proposal does not provide a schedule of land spreading areas. Application should not take place near Area 1 and the north half of Area 2, as both of these proposed locations are near a residence.*
- *If application is to match crop nutrient requirements, sampling more than once every 12 years would be appropriate.*
- *Furrow injection onto existing forage may not be very practical. Usually forages are spread on the surface only via dribble bar or sprayer close to the ground. This should be clarified and confirmed up front and not later when there are odours.*
- *No mention of pathogen sampling is made. Sampling protocol should include sampling for pathogenic organisms.*

### **Disposition:**

- The Proponent has indicated that sludge will be applied to the specified lands twice per year (spring and fall).
- A composite soil sample is required from each field onto which biosolids will be applied prior to the application of biosolids. Each field of 24 hectares or less is to be sampled from a minimum of twelve representative sites or a minimum of one sample site per two hectares for larger fields. Sampling protocols are included in the draft Licence as Schedule A.
- Due to the proximity of the areas to residences, residential areas and recreation areas, application of the biosolids by injection is appropriate for odour and vector control.

- The rate of application of biosolids is limited in the draft Licence to a maximum 15 tonnes per hectare, on a dry weight basis, and a maximum of 100 kilograms plant-available nitrogen added to the land from all sources per hectare during any year in which biosolids are applied.
- Standard setback requirements from residences, waterways, and exposed aquifers were proposed and have been included in the draft Licence.
- The proponent has indicated that sludge would be applied to Areas 4 and 5 between the runways.
- Standard sampling protocols are included in the draft Licence as Schedule A. Biosolids sampling is required every year. Soil sampling is required from each field prior to biosolids application.
- The draft Licence applies only to application of biosolids by injection, as proposed.
- Anaerobic digestion (30 days retention, temperature  $\geq 20^{\circ}\text{C}$ ) or an equivalent pathogen reduction process approved by the Director is required prior to removal of biosolids for land application. The Proponent indicated that the clarigester sludge is held for 6 months at  $\geq 30^{\circ}\text{C}$ . Sampling for pathogenic organisms is not a requirement of the draft Licence.

#### **Conservation – Environment Water Quality Management**

- *Section 2.2 states that the R.M. of Gimli leases the land from the Province; however, on several occasions in the remainder of the proposal the R.M. of Gimli is listed as the land owner.*
- *Does the wastewater treatment plant process only domestic waste, or does it also process industrial waste?*
- *Why are the six proposed disposal areas grouped into three zones in Section 2.3?*
- *Where are the test holes and polishing pond, described in Section 2.6.2, located in relation to the proposed sludge disposal areas?*
- *Section 2.6 often switches between imperial and metric units when discussing land area, application rates, volume of sludge, etc. Units of measure should be consistent throughout the proposal and preferably in metric.*
- *The proposal should indicate the method used in collecting the soil samples and which, if any, of the data were derived from composite samples. If soil results exist for each individual area then these data should be available in the proposal.*
- *Heavy metals analysis is a general licence requirement for most biosolids disposal operations from similar wastewater lagoons and treatment plants, and as such I do not agree that the proponents should be exempt from performing this analysis.*
- *Section 2.8 states that monitoring of biosolids and soils will take place following the application process. It may be prudent to also have samples analyzed prior to application to ensure that the proposed application rate is acceptable.*

#### **Disposition:**

- The Rural Municipality of Gimli owns some of the land and leases some land from the Province of Manitoba. The draft Licence requires that biosolids be applied to land owned by the municipality.

- The Gimli Industrial Park wastewater treatment plant treats municipal wastewater, which is primarily domestic wastewater but may contain some industrial wastewater.
- The six areas were previously identified by the Proponent in this manner. For the purposes of sludge application and soil sampling, the three zones described on page 3 of the Proposal should be used.
- The Proponent provided a map indicating the location of the polishing pond and test holes, which are located north of Area 1.
- The Proponent indicated that composite soil samples were taken for each of the three zones. One soil sample per five acres was taken.
- The standard sampling and analysis requirements for biosolids disposal operations are included in the draft Licence.
- Sampling of the biosolids and the soil is required prior to biosolids application.

#### **Canadian Environmental Assessment Agency**

- *The application of the Canadian Environmental Assessment Act (the Act) with respect to this project will not be required. However, the following federal department provided comments:*

##### *Environment Canada*

- *Section 2.6.2 refers to a 1995 soil investigation done in the vicinity of the sewage treatment plant, but it is not clear how this site relates to the proposed sludge disposal sites. Are they in the same area?*
- *What time of year is being referred to in Section 2.6.3? Contrary to what is stated, we would expect overdosing to occur if sludge were to be applied when plant growth is slow and nutrient uptake is limited (i.e. very early spring, late summer or fall).*
- *Section 2.6.3 indicates that certain monitoring will be done in the sludge application area, while section 2.7.1 indicates that annual sampling and analysis programs typically required by Manitoba Conservation are not required in this instance. The specific monitoring to be done should be clearly specified in the report.*
- *Section 2.6.3 indicates that biosolids will be injected at a minimum of 15 cm below the soil surface, while section 2.8 suggests that a shallower depth (6.35 cm) may be used.*
- *Section 3.0 indicates that land application may begin in August 2000, while section 2.8 indicates that public notice will be given by March 15 of every year. Has notice already been given for 2000? If not, will public notice be given for the year 2000 if activity should occur this year?*
- *Although the map in Figure 2 is of poor quality, it appears that proposed Disposal Areas 3, 4, and 5 are immediately adjacent to the Gimli Motorsport Park, which is used on most weekends during the summer. There is no discussion of possible impact on the park, or mitigative measures to be implemented if warranted (such as limited application dates, injection depth, etc.).*
- *We recommend that, in addition to the information outlined in Section 2.8, this section include more specific application and monitoring protocols to be followed including when certain areas will be used; minimum injection depths; person*

*responsible for the program; locations and parameters for sampling and analysis; sealing of groundwater sampling boreholes; limitation on application dates to periods of active plant growth; and any training requirements for the person who will be applying the sludge.*

Disposition:

- The Proponent provided a map indicating the location of the polishing pond and test holes, which are located north of Area 1.
- The Proponent has indicated that sludge will be applied to the specified lands twice per year (spring and fall). The rate of biosolids application is restricted to a maximum of 100 kilograms plant-available nitrogen added to the land from all sources per hectare during any year in which biosolids are applied.
- Standard sampling protocols are included in the draft Licence as Schedule A.
- The draft Licence specifies application of biosolids via injection to a depth of 15 cm.
- The draft Licence includes the odour nuisance clause, which prohibits application of sludge in any manner which causes an odour nuisance to neighbouring properties.

**PUBLIC HEARING:**

A public hearing is not recommended.

**RECOMMENDATION:**

The Proponent should be issued a Licence subject to the specifications, limits, terms and conditions of the attached draft. The Licence should be assigned to the Eastern-Interlake Region.

Issuance of the attached draft Licence will require a revision to Licence 2140 S2 R issued to the Rural Municipality of Gimli for the upgrading and operation of the Gimli Industrial Park sewage treatment plant. Section 18 of Licence 2140 S2 R, respecting the disposal of sludge solids, should be amended as in the attached draft revised Licence.

PREPARED BY:

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