

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPONENT:** Rural Municipality of Shellmouth-Boulton  
**PROPOSAL NAME:** Village of Inglis Wastewater Treatment Lagoon  
**CLASS OF DEVELOPMENT:** 2  
**TYPE OF DEVELOPMENT:** Waste/Scrap Wastewater Treatment Lagoon  
**CLIENT FILE NO.:** 141.10

### **OVERVIEW:**

On September 20, 1999, the Department received a Proposal from J. R. Cousin Consultants Ltd., on behalf of the Rural Municipality of Shellmouth-Boulton, to expand the existing Inglis wastewater lagoon, located in the southwest quarter section of Section 6, Township 23, Range 27. The expanded lagoon will accept pumped effluent from the Town of Inglis and trucked effluent from the Assessippi Ski Hill Development. The expansion will consist of the construction of an additional secondary cell, with a storage capacity of 8317 m<sup>3</sup>, west of the existing lagoon; the addition of a septic truck access; and a discharge spillway into the primary cell. The lagoon will be discharged (with a peak flow rate of 0.01 m<sup>3</sup>/sec) between June 15 and November 1 into the existing drainage ditch which leads to Bear Creek and eventually discharges, after approximately eight and a half kilometres, into the Shell River and subsequently to the Shellmouth Reservoir.

The existing lagoon had been operating under PSCC Licence #141.00 and therefore was not licenced as of the date of the Proposal. On October 4, 1999, the Department requested more information regarding the properties of the existing lagoon. The proposal was accepted on October 12, 1999.

The Department, on October 25, 1999, placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station), the Centennial Public Library and the office of the Rural Municipality of Shellmouth-Boulton. 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 Roblin Review on Tuesday, November 2, 1999. The newspaper and TAC notification invited responses until November 25, 1999.

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

No comments were received from the Public.

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

#### **Highways**

- *No concerns.*

**Conservation (Natural Resources)**

- *The effluent discharges will flow downstream via Bear Paw Creek into the Shell River, which provides spawning habitat for a variety of fish. Effluent should meet standards that will ensure the quality of the downstream receiving water is not compromised for cool water fish species. Efforts should be undertaken to ensure that additional nutrient input to the Shellmouth Reservoir does not occur.*
- *It is recommended that discharges only occur between June 15 and November 1 of each year and that effluent testing be completed to ensure that treatment standards are attained prior to release.*
- *It may be necessary to establish a minimum flow for the Shell River that must be met before effluent release can occur.*
- *Where possible, native plant species should be planted on the dikes of the new lagoon cell.*
- *The adjacent community of Roblin has recently undertaken an initiative to treat lagoon effluent via a man-made marsh system. The proponents should be encouraged to review this proposal.*

**Disposition:**

- The draft Licence includes a clause that requires the proponent to actively participate in any future nutrient reduction program, approved by the Director, for the Shell River and Shellmouth Reservoir.
- The draft Licence limits the discharge period to June 15 to November 1 and sets effluent limits for BOD, total coliforms and fecal coliforms.
- The nutrient reduction program referenced above may include such restrictions as setting a minimum flow for the Shell River that must be met before effluent release can occur.
- A clause requiring the planting of native grass species on the dykes of the new lagoon cell has been included in the draft Licence.

**Additional Comments – Received December 1, 1999:**

- *The underlying shale aquifer and sand and/or gravel aquifer, if present, are vulnerable to pollution from the surface in areas where the overburden is thin. Test drilling on the site has been limited to shallow depths. It is recommended that two properly located test holes be drilled to a depth of at least thirty feet. Should high permeability materials or an aquifer be encountered a minimum of three observation wells should be installed, preferably on the north, south and west sides of the proposed lagoon expansion.*
- *Should monitoring wells be installed it is recommended that water levels and water chemistry be taken prior to filling the proposed secondary cell and on a twice annual basis thereafter. Chemical parameters should include Ca, Mg, K, alkalinity, Cl, SO<sub>4</sub>, NO<sub>3</sub>, total P, TDS and health parameters.*
- *Care should also be taken in the design and construction of the truck unloading area that accidental spillage of effluent outside the dyke area can be contained and removed prior to entering surface or groundwater.*

Disposition:

- The proponent drilled two 30-foot test holes, located south and west of the proposed lagoon expansion.
- As designed, the truck unloading area slopes towards the lagoon to facilitate washing spilled effluent into the lagoon.
- Natural Resources reviewed the additional information provided by the Proponent. The following comments were received:
  - *High permeability zones or a usable aquifer are unlikely to be present above the shale. A minimum of excavation should be carried out. All test holes should be thoroughly grouted with bentonite or neat cement. Monitoring wells are not recommended at this time.*
  - Disposition: A clause in Schedule A attached to the Licence requires that all drill and sample holes be sealed with bentonite pellets after the field drilling and sampling has been completed. The draft Licence does not contain clauses requiring the installation of monitoring wells.

**Historic Resources**

- *No concerns.*

**Rural Development**

- *No comment.*

**Health**

- *No comment.*

**Late Comments – Received December 30, 1999:**

- *Ensure that groundwater is not at risk as the water table is at 4.2 m.*
- *Ensure prevention of pollutants or contaminated wastewaters from entering sewage disposal and municipal ditch systems; odour control and monitoring; and gasoline and diesel regulations if applicable.*

Disposition:

- Additional test holes were drilled.
- Effluent quality and odour control are addressed in the Licence. The proponent must comply with the requirements of *Manitoba Regulation 97/88R* respecting *Storage and Handling of Gasoline and Associated Products Regulation*.
- Health reviewed the additional information provided by the Proponent. No comments were received.

**Conservation (Environmental Operations Division)**

- *No comment.*

**Conservation (Water/Terrestrial Quality Management)**

- *Primary cell size: how were the loading rates of 50.8 kg/day and 20 kg/ha/day arrived at? Is it the proponent's intention to haul septage from the R.M. to the*

- expanded lagoon all year long, or will this be limited to periods when the ski hill facility is not open?*
- *Secondary cell size: The hydraulic loading figures used for calculating size of the secondary cell do not take into account any loading that may result from effluent trucked in from local R.M. residents.*
  - *Sewer facility: Hydraulic loading from trucked-in effluent has not been factored into the lagoon design. Only the 100 days of hydraulic loading from the ski hill have been incorporated into the design.*
  - *Lagoon drainage route: What, if any, are the water uses along the drainage route? Drawing L1 in Appendix 4 does not show the drainage route. The drainage route should be clearly marked in Figure 4 of Appendix 1.*
  - *Hydraulic loading information and calculations: The proposal does not provide any information as to the quality of the backwash water. As such, it is not possible to assess the potential impact that this aspect of the facility operation may have on aquatic life and water usage along the drainage route.*
  - *Basis for proposed site of lagoon expansion: The statements are contradictory. First the proposal states that the existing lagoon is northwest of the village; this is verified by the enclosed aerial photographs. The proposal then suggests that since the community is located directly south of the lagoon, there will be no odour problems because the typical prevailing winds are from the northwest.*
  - *Test holes: The proposal states that the four test holes terminated at a depth of 2.13 metres. Only TH#1 went down to this depth. TH#2, TH#3 and TH#4 terminated at approximately 1.8 m, 1.5 m, and 1.2 m, respectively. Figure 3 in Appendix 1 indicates a fifth test hole. Where is the log for this test hole?*
  - *Environmental impacts: The wastewater facility that presently services the village of Inglis discharges its treated effluent to a drain that empties into Bear Creek, Shell River and eventually the Shellmouth Reservoir. It is difficult to determine if an increase in effluent volume will impact negatively on the receiving waters. The proponents should strive to keep contaminant concentrations as low as possible, given the type of wastewater treatment proposed. The proponents should participate in a watershed/drainage basin management program should one be developed for the region in the future.*

Disposition:

- The loading rate to the existing primary cell during the 100 day ski season is 50.8 kg/ha/day, not 50.8 kg/day as Page 5 of the proposal states. For the rest of the year, the loading rate will be 20 kg/ha/day. Neither of these figures includes trucked effluent/septage from the surrounding area. The Proponent has indicated that septage from the rural area septic field systems will not be allowed to be dumped at the lagoon. However, if needed, the BOD capacity built into the lagoon for the ski hill could be used to accommodate dumping of the septage during the summer months up to a maximum total loading rate of 56 kg/ha/day.
- The lagoon was designed for the Village of Inglis, the trucked effluent from the Asessippi Ski Hill Development and the reject water from the proposed water treatment plant upgrade. In the summer, when the ski hill is not in operation, the lower hydraulic loading would allow for some trucked effluent/septage.

- The hydraulic loading from the trucked-in effluent replaces the hydraulic loading from the ski hill. Therefore, only the hydraulic loading from one source need be considered in the design.
- The Proponent advised that there are no water uses along the discharge route until, approximately 8.4 kilometres from the lagoon, the discharge route reaches the Shellmouth Reservoir. The first 8.4 kilometres of the discharge route is the bottom of a steep ravine.
- The Proponent provided information related to the estimated quality of the backwash water.
- The relative location of the community to the lagoon is restated accurately on Page 12 of the proposal. It is the nearest resident that is located directly south of the lagoon and should not be impacted by odours. The town is located approximately 520 metres southeast of the lagoon.
- The log for Test Hole #5 was provided by the proponent.
- The draft Licence includes a clause that requires the proponent to actively participate in any future nutrient reduction program, approved by the Director, for the Shell River and Shellmouth Reservoir.
- Water/Terrestrial Quality Management reviewed the additional information provided by the Proponent and had no further comments.

**Canadian Environmental Assessment Agency**

- *CEAA has indicated that application of The Canadian Environmental Assessment Act with respect to this proposal will not be required.*

**PUBLIC HEARING:**

A public hearing is not recommended.

**RECOMMENDATION:**

The Proponent should be issued a Licence for the construction and operation of the wastewater treatment lagoon in accordance with the specifications, terms and conditions of the attached draft Licence. Enforcement of the Licence should be assigned to the Approvals Branch until the soil testing has been completed.

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