

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPOSAL NAME:** Thompson Airport Wastewater Treatment Lagoon

**PROPOSER:** 4033515 Manitoba Association Inc.  
(Thompson Regional Airport Authority)

**CLASS OF DEVELOPMENT:** 2

**TYPE OF DEVELOPMENT:** Waste/Scrap Wastewater Treatment Lagoons

**CLIENT FILE NO.:** 5203.00

### **OVERVIEW:**

On June 28, 2006, the Department received a Proposal from Stantec Consulting Ltd. on behalf of the Thompson Regional Airport Authority for the construction and operation of a wastewater treatment lagoon to serve the Thompson Municipal Airport and adjacent buildings. The lagoon will be located at the Thompson Municipal Airport, on Parcels A and B, Plan 7394 PLTO (N DIV) in 78 and 79-3 WPM in the Local Government District of Mystery Lake. The treated wastewater from the wastewater treatment lagoon will be discharged between July 1 and October 31 of any year into an unnamed creek which flows approximately 8 kilometers southwest to the Burntwood River.

The Department, on July 31, 2006, placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station), the Winnipeg Public Library, the Manitoba Eco-Network and the Thompson Public Library. Copies of the Proposal were also provided to the Technical Advisory Committee (TAC) members. The Department placed a public notification of the Proposal in the Thompson Nickel Belt News on Monday, August 7, 2006. The newspaper and TAC notification invited responses until September 5, 2006.

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

No responses were received from the public notification.

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

#### **Agriculture, Food and Rural Initiatives**

- *No concerns.*

#### **Conservation - Sustainable Resource & Policy Management**

- *No concerns.*

#### **Culture, Heritage and Tourism - Historic Resources**

- *No concerns.*

### **Water Stewardship**

- *On page 3, the proponent indicates that the lagoon effluent will be piped from the lagoon to the unnamed receiving creek. The proponent should provide information on erosion control measures to be employed at the outlet of the pipe.*
- *The Water Quality Management Section is concerned with any discharges that have the potential to impact the aquatic environment and/or restrict present and future uses of the water. Therefore it is recommended that the license require the proponent to actively participate in any future watershed based management study, plan/or nutrient reduction program, approved by the Director, for the Burntwood River and associated waterways.*
- *Section 3.1 suggests that a 60 mil high density polyethylene (HDPE) liner will be used to prevent seepage. However, it is unclear what monitoring will be provided to check the integrity of the proposed HDPE liner.*
- *According to sections 1.0 and 2.9 there is an existing sewage treatment system and two existing wells used for non-potable purpose respectively. It is unclear whether the consultant collected any baseline groundwater quality data.*
- *The proposed activities should not degrade the groundwater and surface water qualities on adjacent properties and make these unsuitable for use as drinking water sources. The consultant should identify such activities and recommend appropriate mitigation measures if required.*

### **Proponent Response (September 28, 2006):**

- Erosion control measures will be provided during construction and as part of the permanent discharge system.
- The proponent would participate in future watershed management programs.
- The HDPE liner is tested during construction to make sure joints are leak proof and there are no holes in the material. The liner is bedded and covered with sand to protect it. The lagoon water level will be monitored to ensure no unusual drop in water level. We also will install two permanent water monitoring wells (piezometers) which would allow monitoring of water quality.
- No baseline groundwater quality data was obtained as there are no domestic wells at the airport and none are expected in the future.
- The activities should not degrade the groundwater and surface water qualities. The system is confined and includes an integrated truck dump, lift station, and forcemain to lagoon and a treated effluent piped discharge from the lagoon to the receiving creek.

### **Disposition:**

After receiving the additional information from the proponent, Water Stewardship had no further comments or concerns.

### **Health**

- *Stantec Consulting mentions that an environmental assessment would be required (Appendix D, 3.4). Is this what is included in sections 3.0-3.2 of the application or does this refer to something else?*
- *It seems that further testing to assure a permafrost free zone is yet to be done (section 2.10). Is the presence of a permafrost-free zone a requirement to proceed?*
- *Concerning the impact on surface and groundwater: Are ammonia levels ever tested prior to lagoon discharge to assure an acceptable level? I am also curious about the possibility of substances at an airport that are not routinely tested for (e.g. medications, chemicals) ending up in the lagoon system, especially in light of recent and potentially on-going restrictions on carry-on liquid items. This concern is not necessarily unique to this proposed system, but a small waterway such as is being used for discharge here would not have the diluting effect of a larger waterway. How are such liquid substances disposed of at the airport? Could more extensive testing of the waterway be performed at some point? Perhaps additional staff training and public education could help mitigate such risks.*
- *Concerning socioeconomic impact: The use of local labour resources to complete the project would have a beneficial impact on the community.*
- *I would also be interested to know that a back-up person has been adequately trained to run the lagoon system in case of spills/emergencies while the primary operator is away.*

### **Proponent Response (September 28, 2006):**

- Environmental assessment is not used in the formal sense here. It relates to the Licence Application and responses by stakeholders. The stakeholders have responded that a formal Environmental Assessment is not required.
- The presence of a permafrost-free zone is not a requirement. The presence of permafrost may trigger additional design measures.
- Lagoons are not normally tested for ammonia. June 15 is generally considered a safe date with respect to ammonia. We have extended that date to July 1.
- The project will likely be put out to public tender. Bidders usually utilize local labor and contractors.
- The proponent will have a certified operator and at least one backup employee who is familiar with system operations.

### **Disposition:**

After receiving the additional information from the proponent, no further comments were received from Manitoba Health. This was assumed to indicate that the original comments were satisfied.

### **Transportation and Government Services**

- *No comments received.*

### **Intergovernmental Affairs**

- *No concerns.*

### **Canadian Environmental Assessment Agency**

- *Following a review by all federal departments with a potential interest in the proposed development, the application of the CEAA will be required.*
- *Environment Canada has offered to provide specialist advice with respect to the project. Health Canada and DFO have provided specific comments with respect to the project.*

### **Health Canada**

- *The application should indicate to what level the lagoon and associated works would be flood protected.*
- *Could a temperature differential of the lagoon to the surrounding area cause visibility (fog) or icing safety issues at the nearby landing strip, etc. under certain climatic conditions?*
- *The design and operation of a lift station should satisfy provincial (or equivalent) fall protection and confined space entry guidelines.*
- *The application does not indicate whether the truck dump pad will incorporate safety devices for backing up (e.g. bollards, 0.3 m curbing).*
- *While the facility doesn't appear to be located near residential areas or schools, it may be prudent to provide signage to warn any trespassers of the water/thin ice hazard.*

### **Proponent Response (September 28, 2006):**

- The lagoon dyke top will be a minimum of 1.4 m above the existing ground which will be adequate protection against any regional flooding.
- Lagoons do not normally cause any special fog or icing issues and are considered the same as other surface water sources. The Thompson airport area has considerable surrounding natural surface water sources with creeks and muskeg.
- The design and operation of the lift station will satisfy Provincial safety guidelines.
- The truck dump will be a reinforced concrete pad over a receiving manhole near the lift station. The pad will be suitably protected. There is no truck dump at the lagoon.
- Signage can be provided. The lagoon is in an isolated area.

### **Health Canada Response (October 19, 2006):**

- *Figure 1.0 depicts a Manhole Truck Dump design that may present a fall hazard to users. Can the proponent outline the specific mitigation measures (e.g. platforms, fall arrest system, training) that will be incorporated into the design and operation that would reduce the likelihood of the safety concerns (e.g. falls, confined spaces) for entrants of the manhole and lift station?*

Proponent Response (December 7, 2006):

- The Thompson Airport Authority commits to training airport maintenance personnel to satisfy the requirements of Manitoba Workplace, Health and Safety. The safety equipment will include:
  - One (1) manwinch complete with fall arrest system (Cat. No. MLR 52-75GC)
  - One (1) manwinch tripod, structural aluminum tubing, adjustable locking legs, 300 lb. capacity (Cat. No. MLR51)
  - One (1) automatic brake action, positive cable payout, 60'x 2/16" galvanized cable. Max 1000 lbs. Line Pull (Cat. No. MLR 8440)
  - Two (2) safety harnesses, full body, universal size (Cat. No. NON P12 05)
  - Two (2) 4.5 metre safety rope complete with snap hook (Cat. No. MLR 201 CL 15)
  - One (1) multi-gas monitor capable of detecting oxygen, hydrogen sulfate, LEL complete with 115 V charger, spare batteries, motorized sampling pump and calibration kit.
  - One (1) industrial self-contained breathing apparatus complete with face piece.
  - One (1) confined space ventilation kit (Cat. No. ASI SVB-E8CBVP)

Disposition:

After receiving the additional information from the proponent, no further comments were received from Health Canada. This was assumed to indicate that the original comments were satisfied.

**Fisheries and Oceans Canada**

- *Construction of the outfall pipes into the tributary should not occur between September 1 and June 30 of any given year to prevent disturbance to spawning fish or developing fry. Any in-water construction should be isolated from the watercourse using a turbidity curtain or sandbag berm or similar structure to prevent sediment from affecting downstream areas in the watercourse.*
- *The outfalls should be adequately armoured to prevent erosion to the banks and bed of the creek during discharge events. Rocks should be clean, free of fines and of sufficient size to resist displacement during high flow events in the creek. Rocks should also be placed such that they do not interfere with fish passage or movement in the creek at any flows.*
- *Effective sediment and erosion control techniques should be used to prevent sediment from entering the water body. All disturbed soils should be revegetated preferably with deep rooted plants native to the area to prevent erosion. Disturbed areas should be protected with mulch or biodegradable erosion control blankets to prevent erosion until vegetation takes hold.*

- *All applicable measures in the “Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat (DFO and MNR 1996) should be followed.*

Proponent Response (September 28, 2006):

- Construction of the outfall pipe will not occur between September 1 and June 30. Suitable sediment control during construction will be provided.
- The outfall will be suitably armored with stone riprap.
- Sediment and erosion control techniques will be utilized. DFO will be consulted for their opinion.
- The measures in the “Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat” (DFO & MNR, 1996) will be used as a guide.

Disposition:

After receiving the additional information from the proponent, no further comments were received from DFO. This was assumed to indicate that the original comments were satisfied.

**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 Environmental Assessment and Licensing Branch until the liner testing has been completed and the Development is commissioned.

PREPARED BY:

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January 30, 2007  
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