

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPOSER: Wellwood Holding Co. Ltd.
PROPOSAL NAME: CanAm Colony Ltd. Wastewater Treatment Lagoon
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 5113.00

OVERVIEW:

On June 14, 2005, the Department received an Environment Act Proposal (EAP) on behalf of CanAm Colony Ltd. for the construction and operation a wastewater treatment lagoon to serve the CanAm Colony farmsite. The proposed facility will be located on NW 28-5-18WPM, approximately 2.5 km north of Margaret, in the Rural Municipality of Riverside. Treated wastewater from the wastewater treatment lagoon will be discharged between June 15th and November 1st of any year into natural drains which discharge into the Souris River.

The EAP indicates that clay type soils are not available at the site. A high density polyethylene artificial liner is proposed.

The Department, on June 20, 2005, placed copies of the EAP report in the Public Registries located at; 123 Main St. (Union Station); the St. James Assiniboia Public Library (Winnipeg); the Lakeland Regional Library; and the Manitoba Eco-Network and provided copies of the EAP report to the Canadian Environmental Assessment Agency (CEAA), the Clean Environment Commission, and TAC members. As well, the Department placed public notifications of the EAP in and in the Killarney Guide on Saturday, June 25, 2005. The newspaper and TAC notifications invited responses until July 25, 2005.

On July 28, 2005, Manitoba Conservation submitted pertinent comments and requests for additional information from the TAC to the consultant. No comments were received from the public. On July 29, 2005, Manitoba Conservation submitted responses from the TAC members to the appropriate Public Registries.

On August 5, 2005, Manitoba Conservation received responses from the consultant and the responses were forwarded to the appropriate TAC representatives for review and comment that same day. There were no further requests for additional information from the provincial TAC representatives.

COMMENTS FROM THE PUBLIC:

Rural Municipality of Riverside

- *Resolved that the municipality hereby agrees with the recommendation 6.0 of Envirotech Ag Systems Ltd. proposal and therefore have no objections to the Lagoon proposed for CanAm Colony Ltd.*

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Intergovernmental Affairs & Trade

- *Having reviewed the Environment Act Proposal by CanAm Colony Ltd. for a wastewater treatment lagoon on NW1/4 28-5-18WPM in the RM of Riverside, Community Planning Services has no concerns with the proposed development. The site and situation seem amenable to such development. The RM of Riverside Planning Scheme (i.e. Zoning By-law) recognizes such a non-public lagoon as an accessory use and structure in the “A” Rural District and the municipality may want to issue a Development Permit to recognize this proposed development under their By-law.*

Response From Proponent:

- The R.M. of Riverside has been notified by the proponent that a domestic wastewater treatment lagoon will be constructed. It is at their discretion on whether a Development Permit will need to be issued.

Disposition:

- The Rural Municipality of Riverside is aware of the proposal and resolved that the municipality agrees with the proposal and therefore have no objections to it.

Health

- *The proposal mentions a risk of groundwater contamination. Please ensure groundwater protection through synthetic or other liners;*
- *Please consider monitoring for groundwater contamination by regular sampling of nearby residential or community wells;*
- *Please consider leachate monitoring;*
- *Please ensure:*
 - *prevention of pollutants or contaminated wastewaters from entering municipal ditch systems;*

- *odor control and monitoring;*
- *gasoline and diesel regulations if applicable;*
- *effluent discharge as per regulation.*

Disposition:

- Limits, terms and conditions of the draft Environment Act Licence provide construction requirements and standard operating criteria regarding monitoring and controlling effluent discharges that are conventional for standard lagoons in Manitoba.

Historic Resources

- *No concerns.*

Sustainable Resources Management Branch

- *The proposal states that treated effluent from the new wastewater treatment facility will be discharged into a ravine that leads to a drainage tributary of the Souris River. The proposal indicates that the domestic water will be treated with a water softener which may result in high sodium adsorption ratios (SAR) in the effluent. The proponent should provide some level of confidence that a high SAR in the effluent will not negatively impact the vegetation of the riparian area through which it will pass.*
- *It is the responsibility of the proponent to inspect the construction site prior to and during construction to determine if any species listed as rare or endangered may be impacted by the development. The proponent needs to be aware that if rare or endangered species are present, removal or destruction of the species or their habitat may be in contravention of Subsection 10(1) “Prohibition” of The Endangered Species Act (Manitoba). Since many areas of the province have never been thoroughly surveyed, the absence of records of listed species in this area does not mean that listed species or other species or ecological communities of concern are not present. If species of concern are present, the proponent must contact the Biodiversity Conservation Section of the Wildlife and Ecosystem Protection Branch (Nicole Firlotte, 945-6998) to discuss possible mitigation options.*

Fisheries Branch has reviewed this proposal and has the following recommendations:

- *Given the diversity of fish species and habitat present in the Souris River, water quality is important. It is very likely that the majority of effluent dilution will occur in the Souris River and not the tributary given the time of discharge (after June 15th). Even with the recommendation to discharge no more than 0.07 m³/s to ensure a dilution rate of 2 parts river water and 1 part wastewater, we would like to see the proponent monitor water quality for SAR and ammonia at the*

confluence of the tributary with the Souris River to ensure that levels are within the Manitoba Surface Water Quality Standards, Objectives and Guidelines.

- *We would also like to ensure the proponent incorporate erosion and sediment control measures before, during and after the construction of the lagoon until the site is stabilized and the discharge route, in particular the ravine and entrance into the tributary, is monitored on a regular basis for erosion and measures are implemented as required.*
- *The West Souris River Conservation District is actively involved in enhancement and/or restoration of the watersheds within their district. It is important for the Colony to actively participate in these watershed level initiatives.*
- *The Consultant has indicated that the hydraulic loading on the primary and secondary cells of the proposed wastewater treatment lagoon is based on a maximum population of 120 to 150 persons. The Consultant has not specified the design period for the contributing sewage flows. This period should be stated in the proposal.*
- *The Consultant has indicated at page 6 Section 4.3 in the EIA Report, that it is proposed that the domestic water will be softened using a sodium based ion exchange system. The Consultant should indicate who would be responsible for ensuring this treatment process is carried out.*
- *The Consultant has indicated at page 11 Section 7.2 that it is difficult to predict the level of SAR that is anticipated in the treated wastewater due to the high variability of levels of softening salts that may be used and the quantity of water to be treated. Accordingly, the Licence for the operation of the lagoon should contain a requirement for conducting a monitoring program which should consist of the testing and reporting to the Director, Environmental Approvals, the level of SAR prior to each discharge of the lagoon for a specified period of time by the Director.*
- *The Licence should contain a requirement for the proponent to propose a plan for approval of the Director to ensure the level of SAR will not exceed the levels of Manitoba Water Quality Standards, Objectives and Guidelines.*
- *The Licence should contain a requirement for the Proponent to actively participate in any future watershed-based management study, plan and/or nutrient reduction program approved by the Director, for the Souris River and associated waterways and watersheds.*

Response From Proponent:

- Due to the variability in the amount and quality of water to be treated, in addition to differences in softening equipment, it is difficult to predict the final level of SAR that be expected in the treated effluent. As a result of this uncertainty, it is proposed that the treated effluent will be tested for SAR prior to discharge, in order to assess the immediate and long term effects that discharge into the riparian area may cause. A

soil monitoring program can also be implemented to test the level of SAR in the soil where the treated effluent is being discharged. It is proposed that soil sampling would be conducted on an annual basis for a minimum period of 3 years after the start of operation of the treatment facility, in order to determine whether an increase in SAR is occurring;

- The proposed construction site consists of agricultural land which is routinely cultivated for the production of annual crops. Based on the annual cropping practices, it is unlikely that rare or endangered species or habitat will be affected. Little or no modification will be required to the riparian area to which the treated effluent will be discharged, with the exception of erosion protection. Where natural habitat is affected caution will be exercised to protect and minimize disturbance of potentially sensitive or unique habitat;
- To ensure SAR and ammonia levels are within the Manitoba Surface Water Quality Standards, Objectives and Guidelines it is proposed that water quality will be monitored at the confluence of the tributary discharge to the Souris River. Discharge rates and treatment methods will be adjusted as necessary to meet the required standards;
- Erosion and sediment control measures as suggested by the Department of Fisheries and Oceans Canada will be implemented throughout and following the construction phase. Erosion protection devices consisting of either rip rap or concrete pads will be incorporated at the outfall into the ravine and entrance into the tributary. CanAm Colony will assume responsibility for regularly inspecting the discharge route for erosion and implementing the necessary remedial actions to prevent deterioration;
- CanAm Colony is committed to actively participating in the West Souris River Conservation District watershed initiatives;
- The wastewater treatment lagoon has been designed for a maximum of 120 people. It is anticipated that the maximum design capacity will not be realized for a period of at least 10 years. Based on the maximum hydraulic loading, discharge of treated effluent is planned only once per year, resulting in a design period of 365 days;
- CanAm Colony is responsible for the water softening process. It is their responsibility to monitor operation of the system and maintain its efficiency;
- CanAm Colony will abide and conform to all requirements specified in the Licence;
- CanAm Colony will abide and conform to all requirements specified in the Licence; and
- CanAm Colony will abide and conform to all requirements specified in the Licence.

Disposition:

- The wastewater treatment lagoon is to be constructed on land that has been previously cultivated;

- The draft Environment Act Licence contains Clauses that require the Licencee to conduct and report on a monitoring programs for ammonia and the SAR of effluent and of the Souris River for a minimum of five years and, if requested by the Director, propose a plan to reduce the concentrations of effluent constituents that relate to SAR;
- The site of the wastewater treatment lagoon is not adjacent to a surface water course of any significance and construction is proposed to occur in late summer or early fall;
- The draft Environment Act Licence contains Clauses that require the Licencee to construct and operate the wastewater treatment lagoon in such a manner as to prevent the disruption of natural wildlife and fish habitats;
- The draft Environment Act Licence contains a Clause that requires that the Licencee actively participate in any future watershed based management study, plan/or nutrient reduction program approved by the Director, for the Souris River, the Assiniboine River, the Red River, Lake Winnipeg and associated waterways and watersheds;
- The draft Environment Act Licence contains Clauses that require the Licencee to implement effective long-term sediment and erosion control measures to prevent soil-laden runoff, and/or silt from entering any watercourse and maintain or repair as necessary associated watercourses such that they are able to perform the operations for which they were designed and constructed; and
- The proposed design and operation of the wastewater treatment lagoon meet current standard requirements and the draft Licence contains clauses specific to the construction and operation requirements for wastewater treatment lagoons in Manitoba.

Water Quality Management Section

- *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 Souris River, the Assiniboine River, the Red River, Lake Winnipeg, and associated waterways and watersheds.*

Disposition:

- The draft Environment Act Licence contains a Clause that requires that the proponent actively participate in any future watershed based management study, plan/or nutrient reduction program approved by the Director, for the Souris River, the Assiniboine River, the Red River, Lake Winnipeg, and associated waterways and watersheds.

Transportation and Government Services

- *Manitoba Transportation and Government Services has reviewed the above-noted Environment Act Proposal as requested by J. T. Hreno in a letter dated June 20, 2005. The Department has no major concerns, but would like the proponent to be made aware of the following:*
 - *A borrow pit (no. 2) is proposed near Provincial Road (PR) 346. If the proposed borrow pit is within the 125' (38.1m) control zone along PR 346 (from edge of PR 346 right-of-way), a permit will be required from this Department.*
 - *Contacts in these regards:*

Richard Nichol
Senior Access Management Analyst (Winnipeg)
rnichol@gov.mb.ca
(204) 945-5658
Fax: (204) 945-0593

Keith Bogue
Regional Planning Technologist (Brandon)
kbogue@gov.mb.ca
(204) 726-6822
Fax: (204) 726-6836

Response From Proponent:

- Borrow pit (No. 2) was investigated as a potential site for acceptable material to construct a clay lined lagoon. This option is no longer being pursued, and will therefore not require any excavation at this site.

Disposition:

- The Department of Transportation and Government Services confirmed receipt of the response and indicated that it has no additional concerns with the project.

COMMENTS FROM FEDERAL REPRESENTATION:

Canadian Environmental Assessment Agency

- *Based on the responses to the survey, the application of the Canadian Environmental Assessment Act (the Act) will not be required for this project.*
- *Fisheries and Oceans Canada, Health Canada and Environment Canada indicated that they may be able to provide specialist information with respect to the project review.*

Department of Fisheries and Oceans Canada

- *No in-water construction is conducted during the spring spawning and incubation period of April 1 to June 15 in any year;*
- *The deposit of deleterious substances into water frequented by fish is prohibited under the Fisheries Act. Appropriate precautions must therefore be taken to ensure deleterious substances (e.g. gasoline, sediment, etc.) do not enter the watercourse;*
- *Rock riprap should be clean, free of fine materials (dirt and mud), and be of sufficient size to resist displacement during peak storm events;*
- *Effective sediment and erosion control measures are implemented. Any disturbed areas are seeded and re-vegetated or otherwise protected (e.g. cover exposed soils with biodegradable erosion control blankets) to prevent erosion. If re-vegetation cannot be undertaken within a reasonable time frame, or the work is conducted outside of the growing season, alternate erosion control measures are applied to stabilize exposed soils until re-vegetation occurs. Shoreline vegetation should not be removed to maintain bank stability.*

Disposition:

- The draft Environment Act Licence contains Clauses that require the Licencee to construct and operate the wastewater treatment lagoon in such a manner as to prevent the disruption of natural wildlife and fish habitats.

PUBLIC HEARING:

A public hearing was not requested.

RECOMMENDATION:

An Environment Act Licence should be issued in accordance with the attached draft. Enforcement of the Licence should be assigned to the Environmental Assessment and Licensing Branch until the required synthetic liner test report review has been completed.

PREPARED BY:

Robert Boswick, P. Eng.
Environmental Engineer
Manitoba Conservation
September 7, 2005

Telephone: (204) 945-6030
Fax: (204) 945-5229
E-mail Address: rboswick@gov.mb.ca