

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Grand Holding Co. Ltd.
PROPOSAL NAME: Grand Colony Wastewater Treatment Lagoon
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 4752.00

OVERVIEW:

On February 27, 2002, the Department received an Environment Act Proposal (EAP) on behalf of the Grand Colony Co. Ltd. to construct and operate a new 2-cell wastewater treatment lagoon to serve the farmsite. The proposed wastewater treatment lagoon would be located in NE 15-10-4 WPM in the Rural Municipality of Portage la Prairie. Effluent (treated wastewater) from the wastewater treatment lagoon would be discharged by irrigation to agricultural land owned by Grand Holding Co. Ltd. surrounding the wastewater treatment lagoon. Once the new wastewater treatment lagoon is commissioned, an existing wastewater treatment lagoon located in NW 15-10-4 WPM will be decommissioned.

The proposal and supporting documentation prepared by Cochrane Engineering Ltd., identified clay soils at the proposed site. The supporting documentation indicated that the clay soil is expected to meet provincial standards regarding hydraulic conductivity of soils used for construction of wastewater treatment lagoons.

The Department, on March 8, 2002, placed copies of the EAP report in the Public Registries located at 123 Main St. (Union Station); the Centennial Public Library and the Portage la Prairie City Library and provided copies of the EAP report to the Canadian Environmental Assessment Agency, the Clean Environment Commission, the R.M. of Portage la Prairie and TAC members. As well, the Department placed public notifications of the EAP in the Portage Daily on Saturday, March 16, 2002 and in the Portage Herald Leader on Tuesday, March 19, 2002. The newspapers and TAC notifications invited responses until April 12, 2001.

On April 17, 2002, Manitoba Conservation submitted responses from the public and TAC members to the appropriate Public Registries.

Four TAC responses were received and no letters from the public were received. On April 22, 2002, a letter, summarizing directly related items of interest presented by the TAC and public and requesting comments on these items of interest, was sent to the proponent's consultant. On July 9, 2002 Manitoba Conservation received a response to the request.

On July 12, 2002 the response was distributed to TAC representation for review and comment. No further comments resulted.

On July 29, 2002 the proponent was requested to provide additional information respecting the proposed method of removing and disposing of sludge from an existing lagoon that is to be decommissioned. On October 1, 2002 the proponent responded to the request.

COMMENTS FROM THE PUBLIC:

There were no comments from the public.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Transportation & Government Services

- *No concerns.*

Historic Resources

- *No concerns.*

Health

- *The health issues with this project are the minimization of odors and adequate fencing for safety reasons.*

Disposition:

- The Environment Act Licence for the lagoon requires that the release of offensive odours be minimized.
- The Environment Act Licence requires that the lagoon be fenced.

Sustainable Resource Management Branch

- *If the soils in this area are prone to leaching (the proponent suggests that the existing lagoon may be leaking) it is important to ensure that over-application of effluent on the agricultural land does not occur and that the effluent is applied to actively growing crops during the June-August period;*
- *As the proponent uses sodium for softening their well water, the SAR of the effluent should be monitored to ensure that the irrigation does not damage the receiving crops and soils. Should an alteration of the method of discharge be required in the future, is another method of discharge available to the proponent?*
- *The proponent should actively participate in any future studies that evaluate the effectiveness of effluent irrigation in protecting water and land resources.*

Disposition:

- The application of effluent for irrigation is proposed to be a maximum of 50 mm of precipitation in any year. This is only a proportion of the moisture needs of the crops, most of it being provided by normal precipitation. The application of moisture will typically be before or after the crop in any year, similar to the application of manure from the livestock operation and using the same equipment.
- The salinity of the soil is regularly monitored in conjunction with the soil tests which are done for the application of the appropriate amount of inorganic fertilizers or livestock manure. This will give an indication if there is an increase of the SAR of

the soil. Should this become a problem, there are a number of options that could be pursued. Firstly, the Colony is near to the Scott Drain, which is an improved drainage ditch that removes surface run-off from the area. Application could be made to drain the effluent to this drain. A further option would be to change the water conditioning system of the Colony, a fairly costly option but one which could be implemented as a final resort.

- The applicant could participate in future studies that evaluate the effectiveness of effluent irrigation in protecting water and land resources if requested to do so.

Environmental Approvals Contact

- *The environmental impacts that may result from the proposed sludge removal and disposal activities must be addressed.*

Disposition:

- Sludge will be removed from the existing primary cell and disposed of into the new, licenced wastewater treatment lagoon.

Prior to sludge removal from the existing lagoon, wastewater from the primary cell should be drained into the secondary cell and isolated to ensure that the heavy equipment can easily be mobilized within the primary cell. The sludge will be removed from the existing lagoon and transported to the new lagoon in covered tandem trucks.

After the new lagoon has been licenced, constructed and approved by Manitoba Conservation, the sludge will be added to the insides of the dyke slopes and incorporated into the topsoil. Any sludge applied within the top 0.3 m of the inside of the dyke (i.e. the freeboard area) will be covered with at least 15 cm of fill (topsoil) material. Following sludge application the dykes of the lagoon will be seeded to minimize erosion as proposed in the original Environment Act Proposal report.

The Colony has indicated that in 1996, during construction of the clay keyway, all sludge from the primary cell had been removed for disposal. Therefore it is anticipated that the existing lagoon contains no more than 0.15 m of liquid sludge on the floor of the primary cell. The secondary cell is not expected to contain any significant volume of sludge. Therefore, the new wastewater treatment lagoon should have more than adequate area for the sludge disposal.

Canadian Environmental Assessment Agency

- *The 2001 CEAA responses have indicated that application of The Canadian Environmental Assessment Act with respect to this proposal will not be required.*

PUBLIC HEARING:

A public hearing has not been requested.

RECOMMENDATION:

An Environment Act Licence may be issued in accordance with the attached draft. Enforcement of the Licence should be assigned to the Approvals Branch until the soil testing has been completed.

PREPARED BY:

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