

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Rural Municipality of St. Andrews
PROPOSAL NAME: St. Andrews Sewage Lagoon
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 4138.00

OVERVIEW:

On February 5, 1996, the Department received a Proposal dated January 31, 1996, compiled. IDG. Stanley Inc. submitted the Proposal on behalf of the proponent, Rural Municipality of St. Andrews, to construct and operate a new 2-cell sewage lagoon followed by a constructed wetland tertiary cell. The proposed lagoon will replace the Clandeboye sullage pit and will serve the domestic sewage disposal needs of the municipality. The Proponent proposes to locate the lagoon on the southwest quarter of section 36-15-4 EPM and that trucks will transport the sewage to the lagoon.

The Proponent proposes an effluent pump-out pit at the discharge end of the constructed wetland cell and provisions for pumping the effluent to the east side of the existing flood protection dike into the natural marsh.

The Proposal and supporting documentation prepared by IDG Stanley Inc., identifies the soil conditions as silty clay to a depth of 1.9 metres below surface underlain with clay to a depth of at least 40 metres. The Proposal is to construct a clay cut-off from the in-side toe of the dikes into the underlying clay layer.

The Department, on March 4, 1996, placed copies of the Proposal in the Public Registries located at Building 2, 139 Tuxedo Avenue; the Centennial Public Library; and the Selkirk Community Library and provided copies of the Proposal to the Interdepartmental Planning Board and TAC members. As well, the Department place public notification of the Proposal in the Winnipeg Free Press on Saturday, March 9, 1996, and the Selkirk Journal on Monday, March 11, 1996. The newspaper and TAC notification invited responses until April 4, 1996.

COMMENTS FROM THE PUBLIC:

Mr. Ron Dalmyn
Winnipeg, Manitoba

- method used to determine the ability of the proposed facility to achieve an effluent BOD of 30 milligrams per litre;
- the actions proposed to protect the integrity of the lagoon liner during dry periods; and
- requests a public hearing.

Ms Kathy Chory and Ms Phyllis Lemoine
Petersfield, Manitoba

- contamination of groundwater as a domestic drinking water source;
- facility will aggravate existing flooding problems;
- odours;
- increased truck traffic endangers public safety on the local roads;
- deterioration of roads by truck traffic;
- increased dust in the area as result of truck traffic;
- adverse impacts on ducks and geese using the natural marsh;
- adverse impacts on deer; and
- lateral seepage into local drainage ditches.

Richard and Leslie Masters
Petersfield, Manitoba

- confirmation of the assimilative capacity of the natural marsh and waterway is not exceeding and can accept the additional loading from the proposed facility.

Ms Myrtle Ingrum
Petersfield , Manitoba

- adverse impact on wildlife and water quality.

Mr. Paul Harrigan
Petersfield, Manitoba

- the marsh has already been impacted by Manitoba Hydro through Lake Winnipeg regulation additional stress on the marsh from the proposal;
- site is subject to flooding

Gerald and Irene Schmid
Petersfield , Manitoba

- the facility will aggravate runoff flooding problems;
- the proposal necessitates a partial removal of the flood protection dike;
- the groundwater level rises and fall with the lake level, which in turn is affected by wind set, and the soil in the area acts like a sponge soaking up any liquid, these will cause contamination of the aquifer;
- landfill study conducted of the area commented that the area is not acceptable for sewage lagoons due to the location of marsh/wet lands and regional groundwater is within 1 meter of the surface;
- the proposed location is within a 1 mile buffer zone around Petersfield established by the Selkirk and District Planning Board;
- guidelines issued by the Selkirk and District Planning Board respecting construction of sewage lagoons stipulates:
 - a) all sewage lagoons must be higher than 717 feet above sea level (the proposed site is at 710) and
 - b) the nearest dwelling must be more than 400 metres from the lagoon (the nearest home is 400 metres from the site);
- loss of natural habitat for animals and migratory birds;
- a development plan prepared by the Selkirk and District Planning Board declared that the Netley Marsh be designated a hazardous zone and be protected against any form of development.

Disposition:

The public concerns about the Proposal have been referred to the Proponent for review and response. The consultant provided a letter of response to the comments, questions, and concerns about the Proposal. The consultants response was provided to all original concerned citizens. A two week period was provided for the citizens to submit any outstanding concerns, questions, or comments. Mr. and Mrs. Schmid provided additional comment.

The Schmidts provided a letter from the Lands Branch of Natural Resources indicating that the Branch does not recommend development of a sewage lagoon at that site. Other concerns were the impact of the intermittent natural springs in the area on the lagoon liner and effect of the lagoon on local drainage. These comments were referred to Natural Resources for further consideration.

Natural Resources responded that the Lands Branch was of the opinion that prior to recommending disposal of the Crown property for the intended development a full environmental impact analysis is required to properly evaluate the environmental impact of the proposal. Natural Resources reconsidered the groundwater and drainage issues and concluded that no issues would prevent issuing an Environment Act Licence.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Highways

- no concerns with this development .

Natural Resources

- secondary cell not be shock chlorinated as this may kill off much of the bacterial flora in the wetland cell.

Disposition:

The responses were forwarded to the consultant.

The consultant advised that shock chlorination will not be used.

Historic Resources

- no concerns with regard to this project's potential to impact heritage resources.

Urban Affairs

- no comment.

Environment-Operations Division

- the proposal indicates the cut-off walls end below the high water level and the material in the berms is not identified, what method is used to prevent lateral seepage?
- to ensure that clay liner does not crack and to prevent freezing to the bottom of the cells there should water in the cells prior to the first freeze/thaw period;

- the statement that the primary cell provides 1 year retention is not supported by the design loading and capacity figures (assuming only 1/2 the cell volume can be considered for storage).

Disposition:

The responses were forwarded to the consultant.

- Revised drawing were submitted indicating that the lining system would incorporate clay cut-offs from the top of the dikes into the underlying clay layer.
- The consultant responded that the cells would be filled with 150 mm of water to prevent desiccation.
- The comment on the storage volume was not addressed.

Environment-Water Quality Management

- a third cell as an artificial wetland should improve effluent quality before it reaches Netley Marsh.

Canadian Environmental Assessment Agency

- an environmental assessment under *The Canadian Environmental Assessment Act* will be conducted by Western Economic Diversification.

Environment Canada provided advise to Western Economic Diversification. Environment Canada advised that

- it would be prudent to obtain laboratory confirmation of the hydraulic conductivity value of the soils to be used for construction of the lagoon;
- *In situ* measurements of the undisturbed hydraulic conductivity of these materials should be done; and that it would then be advisable to run a steady state ground water model on the area to determine what the effect of the computed seepage of contaminants out of the lagoon on the ambient ground water will be;
- the construction of the lagoon must be monitored to ensure that contractors do not cut corners during construction. and that soil sampling and analysis be required to ensure that the hydraulic conductivity standard is met;
- shock chlorination of the effluent in the case of inadequate treatment is not an option.

PUBLIC HEARING:

A public hearing is not recommended.

RECOMMENDATION:

The attached draft Licence be issued. Enforcement should be retained by the Approvals branch until soils test is completed.

PREPARED BY:

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Municipal & Industrial Approval

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