

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Manitoba Hydro
PROPOSAL NAME: Jenpeg Wastewater Lagoon
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 4917.00

OVERVIEW:

On March 11, 2003 the Department received an Environment Act Proposal (EAP) on behalf of Manitoba Hydro to construct and operate a 2-cell wastewater treatment lagoon located in NE 7-64-4 WPM at the Jenpeg Hydroelectric Generating Station in the Province of Manitoba. The lagoon would serve the station staffhouse while a spillway for delivery of truck hauled sewage from local domestic sources to the wastewater treatment lagoon was also included in the design. Effluent (treated wastewater) from the wastewater treatment lagoon would be discharged to a drainage ditch that would flow northward to an existing wetland that flows toward the northeast and empties to Cross Lake. Effluent would be discharged between June 15th and November 1st of any year. The existing sequencing batch reactor wastewater treatment plant currently in use will be decommissioned once the lagoon is placed into operation. It was also requested that a Preliminary Steps Environment Act Licence be provided to allow for site preparation while peat type soils were frozen, providing for easier soil movement than in wet state.

The Proposal and supporting documentation, prepared by Wardrop Engineering Inc., indicates that the lagoon would be constructed within a portion of the area confined by a previous lagoon. The Proposal also indicates that the soils at the site of the proposed lagoon consist of high plastic clay overlain by peat soil layers. Supporting documentation indicates that clay soil available at the site is expected to meet provincial standards regarding hydraulic conductivity of soils used for construction of wastewater treatment lagoons.

The Department, on March 21, 2003, placed copies of the EAP report in the Public Registries located at 123 Main St. (Union Station); the Centennial Public Library; the Manitoba Eco-Network; and the Thompson Public Library and provided copies of the EAP report to the Canadian Environmental Assessment Agency, the Interdepartmental Planning Board, and TAC members. As well, the Department placed public notifications of the EAP in the Thompson Nickel Belt News on Monday, March 24, 2003 and The Drum in the week of April 7, 2003. The newspapers and TAC notifications invited responses until April 28, 2003.

On March 24, 2003 Preliminary Steps Environment Act Licence No. 2595 PS was issued to Manitoba Hydro in connection with the undertaking of preliminary steps related to the construction of the proposed wastewater treatment lagoon.

There were no responses from the public during the response period. On May 9, 2003, Manitoba Conservation forwarded comments that had been received from the TAC

and federal government representation to the proponent. Additional information that would address the concerns presented in the comments was requested from the proponent.

On May 28, 2003 Manitoba Conservation received responses to the comments and requests for additional information.

On May 30, 2003, Manitoba Conservation distributed the responses to the TAC and federal government representation for review and comments if any.

On June 18, 2003, Sustainable Resource Management Branch responded, indicating that the concerns identified by the department were addressed by the new information. Recommendations regarding installation of the forcemain and future sludge and solids management practices for the proposed lagoon were also provided. There was no response from the federal government representation.

On July 9, 2003, Manitoba Conservation discussed several aspects of the lagoon design with the consultant. Several revisions were made and the consultant submitted revised plans on July 15, 2003. The revisions and the revised plans are referenced in the Licence relating to this Proposal.

COMMENTS FROM THE PUBLIC:

There were no comments from the public.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Historic Resources - *No concerns.*

Intergovernmental Affairs - *No concerns.*

Sustainable Resource Management Branch:

- *The proposal states that the population of the Whiskey Jack Treatment Centre is 10 people. This should be re-examined as the number of staff alone exceeds 10 people;*
- *Strict controls should be in place for the installation phase of the forcemain sewer. Close supervision, prohibiting the use of large rocks as backfill and joining of piping in accordance with manufacturers specifications are critical control points. The proponent should be required to monitor and report on these items to ensure that best industry practices are followed;*

- *The primary cell will only provide 50 days storage during winter months. This should be reviewed to ensure that no undue risk is created by insufficient storage capacity in the primary cell;*
- *It is suggested that the old primary cell be left intact and used for desludging purposed and to facilitate maintenance by receiving sludge wastes from the Powerhouse septic system;*
- *The proposal discusses the de-watering of sludges but does not explain how this will actually be done. Further clarification is needed in this regard as sludges cannot be sent to landfill until de-watered and cannot be disposed of by land application as there is no agricultural land in this area;*
- *The minimum freeboard elevations should be 1 metre. Monitoring should be carried out by the proponent to ensure that breaches of the lagoon do not occur;*
- *If feasible, the proponent should be required to pump and haul sewage (via truck) directly to the lagoon, instead of discharging directly to the Nelson River;*

- *It would be preferable to discharge the lagoon during the summer when the vegetation in the wetland is actively growing; and*
- *The proponent should be required to actively participate in any future watershed based management study, plan or nutrient reduction program approved by the Director for the adjacent natural wetland, Cross Lake, the Nelson River and associated waterways and watersheds.*

Disposition:

- The maximum number of people housed at the Whiskey Jack Treatment Centre would be 34. There is capacity in the proposed lagoon design to accommodate the extra load;
- Installation of the sewer forcemain is governed by the specifications included in the construction contact documents. These include prohibiting the use of large rocks as backfill and joining pipe as per best industry standards and manufacturers specifications. Monitoring of such activities will also take place as per construction specifications.

The Environment Act Licence does not apply limits or specifications to the forcemain;

- While the primary cell of the lagoon provides storage of 50 days, the combined storage of the primary and secondary cells is 300 days. This will allow sufficient storage during winter months;
- Sludge from the Jenpeg powerhouse RBC will be added to the primary cell of the new lagoon;

- The lagoon has a sludge storage capacity of 20 to 25 years. Sludge would be de-watered using conventional methods while disposal of at a licenced waste disposal ground.

The Environment Act Licence does not apply limits or requirements regarding sludge storage;

- The freeboard provided in the design of the proposed lagoon is at least 0.9 metre.
The revised plan for the lagoon indicates that the freeboard will be 1 metre;
- In the event of a lift station malfunction or a block in the forcemain, wastewater would fill the lift station. After the lift station's capacity was reached, wastewater would be directed through the lift station's emergency overflow into two overflow tanks, which will trigger an alarm. Once the overflow alarm sounds, staff will act to reduce the flow of wastewater to the lift station almost completely by informing the occupants of the staffhouse of the situation and shutting the water off if necessary. When the situation is remedied, Manitoba Hydro will pump out the wastewater collected in the overflow tanks to the lift station and direct it to the lagoon. If for some reason the situation persisted, a sewage-hauling vehicle would be hired to pump out the wastewater overflow tanks and carry the wastewater to the lagoon until the situation could be remedied. Therefore, overflow of raw wastewater directly to the Nelson River should not occur;
- Treated effluent could be released from the lagoon in the summer months assuming the wastewater in the secondary cell meets the water quality standards required. Manitoba Hydro will make every effort to release the wastewater effluent in the summer months to take advantage of the growth in the wetland; and
- Future watershed and/or nutrient studies in the locality of the Jenpeg generating station would certainly involve Manitoba Hydro's participation.

Health - *No concerns.*

Canadian Environmental Assessment Agency:

- *The April 25, 2003 CEAA response indicated that the application of the Canadian Environmental Assessment Act with respect to this project will not be required;*
- *Environment Canada and Department of Fisheries and Oceans Canada stated they have an interest in the project and would also be able to provide specialist advice;*
- *Fisheries and Oceans Canada indicate that there are no concerns pursuant to the Navigable Waters Protection Act. The Nelson River and Cross Lake are important fish habitats pursuant to the habitat protection provisions of the Fisheries Act. DFO-WD concludes that the proposed work will not likely result in the harmful alteration, disruption or destruction of fish habitat provided the work is carried out as described and appropriate mitigation measures are adhered to.*

PUBLIC HEARING:

A public hearing was not requested.

RECOMMENDATION:

An Environment Act Licence 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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July 16, 2003

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