

Dey, Asit (CWS)

From: Dey, Asit (CWS)
Sent: July-28-15 9:56 AM
To: 'jrcousin@jrcc.ca'
Cc: Burland Ross, Siobhan (CWS)
Subject: Re: Request for Additional Information_File 5774.00 Dauphin River First Nation Wastewater Treatment Lagoon

Hello Jason,

The preliminary review of the above proposal has been completed. No public comments were received.

The following additional information is needed to address comments received from the Technical Advisory Committee on the proposal. The comments are as follows:

Manitoba Conservation and Water Stewardship – Groundwater Management Section

The selected site for the lagoon at NE27-34-5W is referenced as Site 2 in the geotechnical investigation report. Information from two test holes estimated the clay ranging in depth from 4.6 to 6.1 m (15 to 20 feet) below ground surface. The clay at this site is categorized as a silty, sandy clay and was observed to be fissured and containing silt inclusions. The hydraulic conductivity testing of a remolded clay soil sample determined a $k = 5.2 \times 10^{-7}$ cm/s, greater than the 1×10^{-7} cm/s which is required for an earthen liner. Based on these results, the geotechnical investigation report contained in Appendix C states "If site 2 is selected as the preferred site for the proposed wastewater lagoon, a detailed geotechnical investigation, encompassing the footprint of the site, would be required to confirm the soil stratigraphy, hydraulic conductivity and related soil characteristics at the site. Alternatively, a geosynthetic liner should be considered for this site".

As recommended in the geotechnical investigation report, a detailed geotechnical investigation should be carried out to ensure the proposed lagoon site and design meets guideline requirements for lagoon construction in Manitoba. This will help ensure an adequate protection of the local groundwater resources underlying and surrounding the proposed lagoon site.

It is recognized that the EAP proposal states that additional geotechnical testing is currently underway.

Manitoba Conservation and Water Stewardship – General Land Use

- The EAP highlights that the peat from the construction of the lagoon needs to be disposed and there will also be peat from the road construction. Will the peat be salvaged or what is the disposal plan for this peat including where will it be hauled?
- If the clay on site is not sufficient for the construction of the lagoon what is the contingency plan regarding finding an alternate location?
- A Crown Land Work Permit or a Letter of Authorization will be required under the Approvals Section prior to any work commencing.

Manitoba Conservation and Water Stewardship – Environment Compliance and Enforcement

- The drainage route seems unnecessarily long, and runs along the existing ditch beside PR 513. The location of the connection between the drainage ditch and Dauphin River is not clear on the plan. There are several houses located in the area in which it would appear that the discharge would be made into the river.

- Based on the submission by the proponent in application for a Crown Lands Permit for this site, the intention is to include a Waste Transfer Station at this location as well. Design must be confirmed to ensure that separate access for these two facilities does not conflict.

Manitoba Conservation and Water Stewardship – Environment Approvals Branch

- According to Section 2.5.6.1 of the Environment Act Proposal, each household serviced by a 4500 L (1 Imp gallon) septic tank will produce 6.6 kg BODs per year. Please comment on how the above organic loading per year was calculated.

Please find below several comments from the Technical Advisory Committee provided for your information only; responses are not required.

Manitoba Conservation and Water Stewardship – Water Control Works and Drainage Licensing Section

All water control works require licensing under the *Water Rights Act*. Additionally, and in consideration of the nature of the land in the area, that it is peat/marsh land that floods in close proximity to Lake Winnipeg, we recommend that the lagoon be flood proofed by design, if that has not already been considered. _

Any inquiries in this regard may be directed to the local *Water Resource Officer*. Their contact information may be found at:

http://www.gov.mb.ca/conservation/waterstewardship/licensing/pdf/areas_of_focus_jan_23_12.pdf

Manitoba Infrastructure and Transportation – Highway Planning and Design Branch

- Under The Highways and Transportation Act permits are required from MIT for:
 - o any new, modified or relocated access to a Provincial Road or Access Road;
 - o any structures (including advertising signs, wells, septic fields, etc.) on, under or above the ground within the 38.1 meter (125 ft) Controlled Area adjacent to Provincial Roads;
 - o discharging of water or other liquid materials into a ditch of a Limited Access Highway, Provincial Road or Access Road; or
 - o placing any trees or plantings within 15.2 metres (50 feet) of the edge of right-of- way of a Limited Access Highway, Provincial Road or Access Road.
- An underground utility agreement will be required for any pipelines that will go under any Provincial Road (PR) or Provincial Trunk Highway (PTH).
- MIT West Central Region has concerns with the effluent discharge rate and how it would affect the drainage within the highway right-of-way. On July 7, 2015, MIT contacted JR Cousins Consultants Ltd (JRCC) to discuss concern and we were advised of the following:
 - o The effluent will be released through a 200mm diameter pipe into an open ditch along the north side of the lagoon access. The discharge rate will have minimal effect to the existing drainage. The lagoon has been proposed to release once a year, preferably in the late fall (Sept/Oct) and expect the release to last approximately 2 weeks.
 - o Currently the PR ditch has been holding water and causes a concern with the existing standing water and the proposed effluent release. JRCC advised MIT that they will be submitting a proposal and part of that proposal is re-grading of the existing ditch to ensure there is proper drainage from the lagoon to the existing 900mm through-grade culvert in PR 513 into the Dauphin River.

For details on permit applications and underground utility agreements, please contact Ms. Cheri Percival, Regional Planning Technologist, at (204) 622-2377 or via email at Cheri.Percival@gov.mb.ca.

We will finalize the review of your Environment Act Proposal following receipt of the required information, if deemed satisfactory.

If you require any clarification or if you need any additional information, please feel free to contact me.

Thanks,

Regards,

Asit Dey

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