

March 6, 2018

Ms. Tracey Braun, M.Sc.
Director
Environmental Approvals Branch
Manitoba Sustainable Development
Suite 160, 123 Main Street
Winnipeg, Manitoba R3C 1A5

Subject: RM of Gimli – Emergency Request to Dispose of RM of Gimli WWTP SBR 2
Biosolids / Sludge Solids at RM of Gimli Waste Disposal Ground

Dear Ms. Braun:

On behalf of the RM of Gimli, I am requesting that biosolids / sludge solids from the cleaning of the RM of Gimli wastewater treatment plant SBR 2 be permitted to be disposed of at the RM of Gimli Waste Disposal Ground (WDG) situated at SW 10-21 -03 EPM in the Province of Manitoba.

The RM of Gimli Disposal of Sludge Solids, Licence 2473 R, dated January 20, 2003 indicates the following in Clause 4 b:

4. The Licencee shall ensure that:

b. in the event of an emergency situation and with the approval of the Director, biosolids and sludge solids are disposed of at a waste disposal ground in accordance with its permit or Licence.”

The solids are proposed to be discharged to the current operating cell at the WDG that will be closed this year. The solids however, may not meet the WDG Permit No. 37416 limitation for the disposal of liquid wastes. It is likely the solids will have a slump of more than 150 mm using the Canadian Standards Association slump test.

The background, reasons for the request and an explanation for why the solids may not meet the slump test are outlined below:

- In December 2017 the wastewater treatment plant aeration piping in SBR 1 failed.
- The RM started to receive odour complaints around this time due to the loss of half of the plant's treatment capacity.
- To inspect and fix the aeration issue, the RM of Gimli pumped out SBR 1 to SBR 2. Following pumping, significant solids were found below the diffuser level as shown in the below photo since the solids settled with no aeration.



- The solids were slurried and removed by hydrovac truck and disposed of on top of the frozen emergency storage pond on site. It is likely that this disposal method resulted in increased odours from the site.
- Following the cleaning of SBR 1, it was discovered that the SBR 1 aeration pipe supports corroded and failed. This led to the failure of several aeration pipes and the complete loss of aeration in SBR 1.
- The material to repair SBR 1 was ordered immediately and SBR 1 was put back into service on Feb. 28, 2018. All diffusers were also replaced during this repair period.
- Since SBR 2 was constructed at the same time as SBR 1 and with the same material selections, the decision was made to take SBR 2 out of service to replace the supports and fix any broken pipes/diffusers immediately after the SBR 1 repair. It is likely that the SBR 2 aeration system failure is imminent and the impact of a failure would be severe if it occurred during the summer months. The repair of SBR 2 is being considered an emergency.
- SBR 2 mixed liquor is currently being pumped to SBR 1 and the water level is at about 1.8 m depth. The lowest pumpable level is anticipated to be reached on Thursday of this week. All parts to repair SBR 2 have been ordered and are currently on-site. The repairs can proceed immediately following the cleaning of the basin.
- It is anticipated that the quantity of solids accumulated below the diffuser level in SBR 2 will be less than those found in SBR 1, as the aeration system has not yet failed. In addition, the aeration system has been left on during the dewatering operation to keep the mixed liquor in suspension. Since the SBR 1 aeration failed, the mixed liquor solids settled out.
- To not cause additional odours at the wastewater treatment plant site, the RM of Gimli is requesting to dispose of any solids that cannot be pumped to SBR 1 to the waste disposal ground.
- Disposal of these solids to the digester is not desirable since these solids will settle to the bottom of the digester, requiring the digester to be taken out of service for cleaning. Nearby lagoons also do not wish to receive these solids as it will result in a violation of their licences and it will reduce their lagoon capacity.

- Since the quantity and characteristics of the solids is not yet known, we are assuming that the slump test will not be met and are requesting permission for the solids to be disposed of at the WDG anyways. The WDG is clay lined with a leachate collection system to an evaporation pond.
- A plan is needed to be in place BEFORE the water level in SBR 2 is below the diffuser level so that the remaining contents can be dealt with immediately prior to them going septic and causing additional odours on-site.

If you have any questions, please contact me by email at BMcIntosh@bt-consult.ca or by phone at 204-229-5681.

Sincerely,

Birchtree Consulting Ltd.



Bonnie McIntosh, M.Sc., P. Eng.
Project Manager

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