Dey, Asit (SD)

From: Dey, Asit (SD)
Sent: September 7, 2018 11:57 AM
To: 'sam@townofthepas.ca'; 'Jason Cousin'
Cc: Burland Ross, Siobhan (SD); Huculak, Cristal (SD); Matthews, Rob (MWS) (Rob.Matthews@gov.mb.ca); Assefa, Bereket (CON) (Bereket.Assefa@gov.mb.ca); Kennedy, Joy (SD)
Subject: 2018-09-07_request.for.additional.info_the.town.of.the.pas_file 144.40
Attachments: 2018-09-07_additional.information.request_the.town.of.thepas_file144.40.pdf

Hello Jason and Sam,

The preliminary review of your proposal has been completed. No public comments were received during the public comment period.

Please find attached a list of required additional information along with several comments from the TAC for which responses are not required.

If you need any clarification, please feel free to contact me.

Thanks,

Regards,

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List of Required Additional Information

1. Please update the engineering drawings with the cross section details including the type of liner material present in the existing aerated cell and in the dewatering cell.
2. Please comment on whether the existing aeration cell is able to treat the proposed design year 20 organic load. Does the existing aeration cell require any alteration?
3. Does the Town have an enforceable Industrial Services Use Agreement with Berscheid Meat Industries?
4. Per Table A in Section 2.5.2 of the EAP, the dykes of the proposed SAGR cells will be constructed to an elevation above the 100 year flood elevation from Grace Lake. Please comment on the 100-year flood plain elevation for the proposed site and please indicate the elevation of top of the dykes of the proposed SAGR cells and the existing aerated cell.
5. Section 2.9 of the EAP states that Environment Act Licence No. 2209 S1issued to operate the lagoon after the 1996 upgrades limited the lagoon to an organic capacity of 510 kg BOD5/day at a flow rate of 3,563 m per day and a useable lagoon volume of 82,030 m3. Could you please comment on whether the discharge pipe is located at least 0.3m above the floor and whether the usable volume calculation excluded the volume associated with the dead space below the discharge pipe?
6. Per the Environment Act Proposal, the wastewater treatment lagoon will be operated like a wastewater treatment plant; please comment what will be the project's biosolid management strategy after commissioning of the SAGR cells?
7. Please comment on the installation method for the baffle curtain.
8. During our site visit on June 27, 2018, severe erosion was observed on the inside dyke of the lagoon near the truck dumping station. Please note that the truck dumping station and the inside slope of the dyke are required to be repaired. Please submit a Notice of Alteration at your earliest convenience.
9. Please comment on how the wastewater will be treated during desludging of the existing aerated lagoon. It appears from Section 2.8.2.3 that the biosolids from the existing dewatering cell will be land applied. Is there any plan to decommission the existing dewatering cell?
10. Can the proponent provide information on other water uses of Grace Lake?
11. Can the proponent demonstrate that the volume of the mixing zone does not exceed 10% of volume of those portions of the receiving waters available for mixing or a 100 m radius, whichever is less?
12. The Proposal indicates that alum is the proposed method of phosphorus removal using an alum addition system into the gravity sewer system upstream. Can the proponent indicate where in the gravity sewer system alum will be added? Can the proponent describe how the alum dosage would be determined?
13. Maps from detailed soil reports indicate that the proposed system located on NW 2-56-26EPM is a nutrient management zone N4. Under Section 14(1) of the Nutrient Management

Regulation (62/2008), a wastewater system cannot be located in a Zone N4. The proponent should obtain services of a pedologist to confirm the classification of the land parcel. Attached (Page 4) is the most recent listing of pedologists. If a pedologist reports that the site is confirmed to be a Zone N4 and the Proponent still wants to locate a wastewater treatment and disposal system in this location, the Proponent will need to apply in writing to the Director of the Water Science and Watershed Management Branch, Box 14, 200 Saulteaux Cres, Winnipeg, Manitoba, R3J 3W3 for authorization.

14. Biosolids application rate calculations were made using an incorrect phosphorus test. As a result, the application rates are too high. The Proponent has used the Olsen-P test on biosolids as available phosphorus; this test is for soil and provides an index of the likelihood of crop response to phosphorus fertilizer. It is not appropriate for biosolids and even in soils it does not measure plant available P. The Proponent should estimate plant available P in the biosolids as a percentage of total phosphorus (total phosphorus is under "Metals in Soil by CRC ICPMS" in the lab analysis they provided). The proposal refers to an EPA 1995 publication which suggests 50% of total P is plant available, and using this 50% estimate and an application rate of 2x crop P removal for canola of 74 kg P_2O_5/ha (2x37 kg/ha - Table 2.4 in the proposal), the correct primary cell rate is 7.5 dry tonnes/ha and the dewatering cell rate is 10.6 dry tonnes/ha. Please note, biosolid application is not permitted on land with a soil test which is above 60 ppm Olsen-P in the top 15 cm.

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

1. The proponent has indicated that no soil classification of the soils was available for the land parcels proposed for land application of sludge. With a list of legal land descriptions, this office can provide Agriculture Capability for Nutrient Management Zone information for most fields around The Pas.
2. The following effluent standards should be in place for The Pas wastewater treatment lagoon as per the Manitoba Water Quality Standards, Objectives and Guidelines Regulation (196/2011).
    - BOD5 25 mg/L,
    - TSS 25 mg/L,
    - Total Phosphorus <1 mg/L,
    - Fecal Coliforms or Escherichia coli 200 organisms / 100mL
    - Total Ammonia mg/L, as outlined in Table 1 of Manitoba Water Quality Standards, Objectives, and Guidelines using Equations 3 & 6 and based on effluent pH.
3. Water Quality Management Section recommends that the proponent be required to collect a bioassay sample of the effluent for testing the sample at 100 percent concentration for acute lethality to trout (EPS 1/RM/13 Second Edition – December 2000).

4. The Water Quality Management Section recommends effluent monitoring as would be required of a medium (>2,500 – 17,500 m3/day) sized wastewater treatment plant, rather than as a wastewater treatment lagoon, as the facility will function as a wastewater treatment plant. Additionally, the Water Quality Management Section recommends weekly sampling for total ammonia.
5. Further, the Nutrient Management Regulation (62/2008) requires setbacks as Nutrient Buffer Zones when applying nutrients as follows:
   - A groundwater feature 15m;
   - a wetland, bog, marsh or swamp other than a major wetland bog, marsh or swamp setback distance between the water's edge and the high water mark;
   - A lake or reservoir designated as vulnerable - setback distance 30m;
   - A lake or reservoir, not designated as vulnerable - setback distance 15m;
   - A river, creek or stream designated as vulnerable - setback distance 15m;
   - A river, creek or stream not designated as vulnerable, a 3rd order drain or higher or a major wetland, bog, marsh or swamp, a constructed retention pond - setback distance 3m; and
   - The total area of the setbacks, due to the Nutrient Buffer Zones mentioned above, should be excluded from the land base calculations when determining the area of land necessary for land application. Class 6 and 7 soils are Nutrient Management Zone N4 and no nutrients should be applied to this soil as per the Nutrient Management Regulation (62/2008). The total area of Class 6 soils Zone N4 must be excluded from the land base calculations used to determine the area of land necessary.
6. Additionally, the Nutrient Management Regulation (62/2008) requires that no person shall apply nutrients to fields between November 10 of one year and April 10 of the following year.
7. The Water Quality Management Section is concerned with any discharges that have the potential to impact the aquatic environment and/or restrict present and future uses of the water. Therefore it is recommended that the license require the proponent to actively participate in any future watershed based management study, plan/or nutrient reduction program, approved by the Director.

Pedologists

(Revised September 2018)

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