



Conservation and Climate

Environmental Stewardship Division
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File No.: 1071.10

March 12, 2021

Chris Carroll
Manager of Wastewater Services Division
City of Winnipeg
110-1199 Pacific Avenue
Winnipeg MB RE3 3S8
ccarroll@winnipeg.ca

Dear Chris Carroll:

Re: North End Water Pollution Control Centre – Interim Phosphorous Reduction Plan - Environment Act Licence No. 2684 RRR

The City of Winnipeg's North End Water Pollution Control Centre (NEWPCC) remains out of compliance with Environment Act Licence No. 2684 RRR. Further to our letter to the City dated December 5, 2019 and meetings with you throughout 2020, you were required to develop and implement an interim phosphorous reduction plan to reduce the phosphorous concentration in effluent at the NEWPCC prior to completion of the planned nutrient removal upgrades.

Thank you for submission of the NEWPCC Interim Phosphorous Removal Detail Review and Benchscale Testing report dated December 17, 2020. You are required to submit a Notice of Alteration for the implementation of the interim phosphorous reduction program by April 30, 2021. The Notice of Alteration must include the following:

1. A description of the analysis of the capacity of existing clarifiers and digesters to support the conclusion that the ability to reduce phosphorous is limited by the current capacity of these processes. This description should include seasonal impacts on this capacity (e.g., solids washout in spring) to support the conclusion that available capacity decreases during high flow months.
2. A summary of the modelling work that has been carried out to support the conclusions that a phosphorous concentration of 1.0 mg/L cannot be achieved and that the interim phosphorous process cannot be carried out during maximum month flows.
3. A description of the proposed benchscale tests that have been/will be carried out during high flows including the potential impact on phosphorous removal.

4. A description of the proposed interim phosphorous removal plan with a detailed schedule/timelines for all aspects of the plan including operational changes, design and construction of additional infrastructure, and development and implementation of monitoring and reporting plans.
5. A detailed discussion on how the new infrastructure proposed to be installed in Item #4 above can potentially be re-used in the final upgraded facility.
6. A table summarizing the expected annual per cent reduction of phosphorous concentration and load in effluent from the NEWPCC for 2023, 2024, 2025, 2026, 2027 and 2028 and the assumptions used to calculate the reduction. The assumptions must include consideration of expected rural, industrial and city growth and the resultant impact on the ability of the interim solution to reduce phosphorous in effluent.
7. A discussion on how much dosing of ferric chloride can be increased immediately with current infrastructure and a plan with timelines for doing so. This plan must be included in the schedule reference in Item #4 above.
8. A description of the option identified in the December 17, 2020 report to dose ferric chloride at the West End and South End facilities, including what additional work would need to be done to investigate this option, expected benefits and timelines.
9. A description of the proposed process for ongoing optimization of the interim phosphorous reduction plan. The description will include the plan for gradual increasing of ferric chloride dosing, what operational changes are required, parameters to be monitored and how the monitoring results will be used to assess the impacts on plant operations, how high flow months will be incorporated into the operation, and a plan for reporting ongoing optimization. For certainty, the plan may reference a target phosphorous concentration but optimization shall not be limited by this target.
10. A description of the plan for assessing the ability to further reduce phosphorous once the biosolids facilities are upgraded. The plan shall include a schedule and a list of factors that will be included in the assessment.
11. With respect to the overall upgrades planned for the North End Water Pollution Control Centre including implementation of Phase 1, 2 and 3 of the project, please provide an update on the status of each phase of the project and the timelines to complete the project.

The City remains out of compliance regarding the effluent discharge limit for phosphorus and other parameters as outlined in Environment Act Licence No. 2684 RRR and is subject to enforcement action at any time. The environmental health of Manitoba's watercourses including in particular the Red River and Lake Winnipeg is a top priority for Manitoba and it is therefore vital that the City of Winnipeg comes into compliance on this critical infrastructure on an expedited basis.

Should you require clarification concerning the foregoing please contact Siobhan Burland Ross, Engineering Manager, at 204-793-6487 or at Siobhan.BurlandRoss@gov.mb.ca.

Yours sincerely,

A black rectangular redaction box covering the signature of Shannon Kohler.

Shannon Kohler, Director
The Environment Act

cc: Moira Geer, Michelle Petkau, Colin Javra - City of Winnipeg
Kristal Harman, Yvonne Hawryliuk - Environmental Compliance and Enforcement
Nicole Armstrong - Water Branch, Agriculture and Resource Development
Siobhan Burland Ross, Asit Dey - Environmental Approvals Branch
Public Registries