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Manitoba Conservation and Climate
Environmental Stewardship Division
Environmental Approvals Branch
1007 Century Street
Winnipeg, MB R3H 0W4

Attention: Laura Pyles, A/Director

**RE: SEWPCC BIOLOGICAL NUTRIENT REMOVAL AND UPGRADE PROJECT – 2021
QUARTER 2 SUMMARY REPORT**

The City of Winnipeg is submitting Quarter 2 Summary Report for the South End Water Pollution Control Centre (SEWPCC) Biological Nutrient Removal and Upgrade Project operating under Environmental Act License No. 2716RR as required by Manitoba Conservation and Climate on March 12, 2021. This report summarizes the work tasks required to complete the SEWPCC Upgrades required to meet the Environmental Act License requirements for the period of April 1 to June 30, 2021.

The following summarizes the works conducted on key areas of the upgrade project.

- a) ***list of tasks and proposed completion dates such that the construction and commissioning of the upgraded wastewater treatment plant shall be completed as soon as possible and in order to meet the effluent limits as specified in Clause 28 of the License.***

Secondary Clarifiers 1 & 2

The secondary clarifiers (SC) 1 & 2 have been removed from the critical path and will be refurbished following the commissioning and stable operation of the biological nutrient removal bioreactor (BNR). Refurbishment works on SC 1 & 2 have been taken off line with the start of testing in SC 4 & 5. The full refurbishment of SC 1 & 2 is expected to be completed Q4 2021.

Grit and Screening Building (Area G) Demonstration Testing

The work in Area G remains at 95% complete for this period. Continued deficiency items and commissioning delays have continued to push the area hand over. The expected hand over is Q4 2021.

Secondary Clarifiers 4 & 5 Demonstration testing

Demonstration testing was started on SC 4 during this period with it entering into stable operation period. SC 5 entered into pre-testing preparing to start demonstration testing once SC4 completed stable operation period. The works are approximately 98% complete for this reporting period. Stable operation and handover of SC4 and 5 is expected in Q3, 2021.

High Rate Clarification system, Demonstration Test

The high rate clarifiers testing and commissioning is ongoing. Demonstration testing and hand over is expected by Q4 2021 and is 90% complete for this reporting period. No change in this area over this time period.

Chemical Building Testing

On going testing and deficiency clean up occurred during this period. Work is estimated at 97% complete with operational handover by the end of Q4 2021.

Biological Nutrient Removal, Demonstration Test using chemical addition for phosphorus removal (Licence Conditions)

Testing and deficiency remediation continued through this period. At the end of Q2 2021, the contractor started to fill the BNR tanks to start quality checks on instrumentation and equipment. Wet testing of the BNR equipment to commence beginning of Q3. Demonstration testing of the BNR to commence once SC 4 & 5 are stable and operating in Q3. Continued shipping delays of the IFAS Media from Korea is a risk to the start of the demonstration testing. The works are approximately 87% complete.

Raw Sewage Pump #2, Demonstration Test

The raw sewage pump #2 to be installed and tested during the low flow period of 2021/2022. Currently it is 10% complete. No change on this item.

HPO Tanks conversion to Fermenters and Biofilter, Demonstration Test

Work on the HPO Tank conversion to fermenters will occur once seeding of the BNR is completed and stable. No work has started on this area. An estimated completion is Q3 2022.

Substantial Performance

Currently substantial completion is estimated for Q3 2022.

- a) Measures the City will take such that the requirements to meet the total phosphorus limit of 1.0 mg/L in effluent can be met as soon as possible without any further delay.***

At this point in the construction process there is no effective temporary phosphorus removal system that can be added. Once the BNR is stable, chemical trimming will be implemented to control phosphorus before the fermenters are commissioned and operating.

Status of the trimming process will be updated on future reports and once a detailed schedule of events can be provided. World wide shipping disruptions have resulted in delays in the shipping of the IFAS Media which will affect the demonstration testing. Currently stable operation of BNR is still expected in Q4 2021. Chemical trimming using ferric chloride will begin once BNR is in stable operation to maintain licence compliance.

Table 1. SEWPCC Contract 4 Tasks and Schedule Milestone Dates:

Area	Contractual Dates	% Previously Reported	% Complete Current	Expected Completion	Work Remaining
Secondary Clarifiers 1 & 2	March 20, 2019	0	5	Q4 2021	SC 1&2 have been shut down and drained
Grit and Screening Building (Area G) Demonstration Testing	August 18, 2019	95	95	Q2 2021	Commissioning and Deficiencies
Secondary Clarifiers 4 & 5 Demonstration testing	July 30, 2019	95	98	Q2 2021	Testing of SC 4 & 5 ongoing
High Rate Clarification system, Demonstration Test	April 6, 2020	90	90	Q4 2021	Commissioning and Deficiencies
Chemical Building Testing	April 6, 2020	96	97	Q2, 2021	Commissioning and Deficiencies
Biological Nutrient Removal, Demonstration Test using chemical addition for phosphorus removal (Licence Conditions)	August 10, 2020	82	87	Q3 2021	Commissioning and Deficiencies – QA/QC checks in prep for start of testing
Raw Sewage Pump #2, Demonstration Test	March 20, 2021	10	10	Q1 2022	Commissioning and Deficiencies
HPO Tanks conversion to Fermenters and Biofilter, Demonstration Test with biological nutrient removal system	July 18, 2021	0	0	Q3 2022	Work to start once BNR complete
Substantial Performance	August 29, 2021	67	68	END Q3 2022	

Should you have any questions on the SEWPCC Biological Nutrient Removal and Upgrade Project, please contact me at 204-986-4408 or by email at cjavra@winnipeg.ca.

Sincerely,



For Colin Javra, P. Eng.
Project Director, Winnipeg Sewage Treatment Program

Attachment

CJ/dr

- c: K. Harman., Manitoba Conservation and Climate (email)
- Y. Hawryliuk, MSc, Manitoba Conservation and Climate (email)
- B. Assefa, P. Eng., Manitoba Conservation and Climate (email)
- M. Geer, CPA, CA, Water and Waste Department (email)
- C. Carroll, P. Eng., Water and Waste Department (email)
- C. Wiebe, P. Eng., CAMP, Water and Waste Department (email)
- M. Paetkau, P. Eng., Water and Waste Department (email)