



Environment and Climate Change
Environmental Stewardship Division
Environmental Approvals Branch
Box 36, 14 Fultz Blvd
Winnipeg, MB R3Y 0L6

November 3, 2023
Client File No.: 1069.10
Our File No.: S-926, EMS
020-17-08-11-00
020-17-08-11-0N

Attention: Agnes Wittmann, Director

RE: QUARTERLY PROGRESS REPORT FOR SEWPCC BIOLOGICAL NUTRIENT REMOVAL AND UPGRADE PROJECT: JULY 1 – SEPTEMBER 30, 2023

The City of Winnipeg (City) is pleased to submit the 2023 Quarter 3 Progress Report for the South End Sewage Treatment Plant (SEWPCC) Biological Nutrient Removal and Upgrade Project operating under Environmental Act Licence No. 2716 RR as required by Manitoba Conservation and Climate Notice of Alteration dated April 14, 2022. The work conducted on key areas of the upgrade project for the period of July 1 to September 30, 2023 is summarized in this report.

Area S: Secondary Clarifiers (SC) 1 & 2

Rehabilitation and demonstration testing completed; area handed over to the City.

Area G: Grit and Screening Building

The work in Area G is 99% complete. The system is operating and under City control. Ongoing automation deficiencies and document close out are pending completion. Full hand over to the City revised to early Q4 2023.

Area G: Raw Sewage Pump #2

Hand over packages are being prepared with final deficiencies being remediated in preparation for hand over. Due to documentation delivery, expected handover is revised to Q4 2023.

Area K: High Rate Clarification (HRC) System

The Contractor has completed functional and performance testing and started demonstration testing with hand over expected late Q3 to Q4 2023. System is operational with continued optimization prior to handover.

Area C: Chemical/Electrical Building

All documents were submitted and the Chemical area handed over to the City for operation. Electrical portion is in final deficiencies in preparation for handover.

Area R: Biological Nutrient Removal (BNR)

The BNR system is operating and City continues to optimize the performance. The Contractor is finalizing hand over packages with expected hand over revised to Q4 2023.

Area U: UV Upgrades

The UV upgrades have been completed and the system can treat up to 225 MLD. The Contractor is working on automation deficiencies and preparing hand over packages.

Areas D: HPO Tank Conversion to Fermenters

Work on the HPO Tank conversion to fermenters continued with final cleaning and concrete restoration of tanks. The completion date for commissioning and achieving full biological stability ranges from Q4 2023 to Q2 2024.

Areas T: Biofilter Odour Control

The conversion of HPO tanks to biofilter containment has been completed. Installation of the biofilter media is expected in October with commissioning early Q1 2024.

Key Project Risks

Additional oversight and assistance by the project team continues with the contractor. This increased level of effort is required to ensure all works are completed, and priority focus on critical path items remain. This has been successful in progressing the HRC through to demonstration testing.

Performance Updates


The Total Phosphorus limit of 1.0 mg/L and Total Nitrogen limit of 15 mg/L in the final effluent are being met under normal flow conditions.

With the SEWPCC plant converted to a BNR system, it allowed for the introduction of ferric chloride for chemical trimming of all primary effluent. This, along with the increased biological growth in the BNR tanks, has allowed the City to achieve final effluent concentrations below 1 mg/L TP and 15 mg/L TN. Laboratory results can be found on the City's website at winnipeg.ca/wwcompliance.

The City continues to utilize the measures within the contract to move the contractor toward project completion in order to meet the licence requirements.

Should you have any questions on the SEWPCC Biological Nutrient Removal and Upgrade Project, please contact Cynthia Wiebe at 204-986-5210 or by email at cwiebe@winnipeg.ca.

Sincerely,

A solid black rectangular box used to redact the signature of Cynthia Wiebe.

Cynthia Wiebe, P. Eng., CAMP
Manager of Engineering Services

ATTACHMENT: Table 1

CJ/jkm

- c: Y. Hawryliuk, MSc, Environment and Climate (email)
- S. Burland Ross, M. Eng., P.Eng., Environment and Climate (email)
- N. Suresh, P. Eng., Environment and Climate (email)
- T. W. Shanks, M. Eng., P. Eng., Water and Waste Department (email)
- C. Carroll, P. Eng., Water and Waste Department (email)
- L. McCusker, P. Eng., Water and Waste Department (email)
- R. Dewitt, P. Eng., Water and Waste Department (email)

Table 1: SEWPCC Contract 4 Schedule Milestone Dates

Area	Contract Dates	% Complete				Expected Completion	Work Remaining
		June	July	Aug	Sept		
Secondary Clarifiers 1 & 2	March 20, 2019	99%	100%			Complete	Final close out is tied to the plant total performance
Secondary Clarifiers 4 & 5 Demonstration Test	July 30, 2019	100%				Complete	Final close out is tied to the plant total performance
Grit and Screening Building (Area G) Demonstration Test	August 18, 2019	97%	97%	98%	99%	Q3 2023 Q4 2023	Final testing for preparation of handover including document completion
Raw Sewage Pump #2, Demonstration Test	March 20, 2021	99%	100%			Complete	Final close out is tied to the plant total performance
High Rate Clarification System, Demonstration Test	April 6, 2020	96%	97%	98%	99%	Q3 to Q4 2023	Continuation with demonstration testing
Chemical/Electrical Building Testing	April 6, 2020	100%				Complete	Final close out is tied to plant total performance
BNR Demonstration Test	August 10, 2020	99%	99%	99%	99%	Q3 2023 Q4 2023	Outstanding manuals and test reports require submittal prior to hand over
HPO Tank conversion to Fermenters and Biofilter	July 18, 2021	67%	68%	75%	85%	Q3 2023 Q4 2023 to Q2 2024	Cleaning, concrete restoration and process conversion works ongoing; testing and commissioning
Substantial Performance	August 29, 2021	85%	87%	89%	90%	Q3 2023 Q4 2023 to Q2 2024	