January 30, 2025

M. Jean-François Durocher
Water Inspector – Provincial Officer
Ministry of the Environment, Conservation and Parks

Subject:

2024 - Performance Report for the Limoges Wastewater Facility

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M. Durocher,

The following document includes the 2024 Performance Report for the Limoges Wastewater Facility.

In this Performance Report, a summary of the Limoges Wastewater Facility will be discussed.

- Volumes and daily flow rates of wastewater
- Results of raw sewage and final effluent parameters
- Summary of operation and environmental challenges
- Maintenance and calibration of monitoring equipment

This document follows schedule C of the Environmental Compliance Approval No. 9447-B3AL5X approved on September 21st, 2018.

Sincerely,

(Prepared by)
Sébastien Cadieux,
Senior Water & Wastewater Operator/Compliance Officer

(Reviewed & Approved)
Nicholas Pigeon,
Director of Water & Wastewater

2024 Annual Performance Report for the Limoges Wastewater Facility

a) A summary and interpretation of all Influent, monitoring data, and a review of the historical trend of the sewage characteristics and flow rates.

The average daily flow of wastewater entering the Limoges Wastewater Facility in 2024 was 1443m^3/day. This represents 41% of the average day design capacity rated at 3500m^3/day. The maximum daily flow of wastewater entering the Limoges facility was 2560 m^3 during the month of August and the minimum was 867 m^3 in January.

See Appendix I, for a summary of all the Influent monitoring.

b) A summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in the Approval, including an overview of the success and adequacy of the Works.

See Appendix II, this includes all the effluent sampling results and loadings of required ECA parameters.

c) A summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year.

- The surface water sample table “Schedule D” as per ECA 9447-B3AL5X was sampled during 2024, no deviations to report.

Please see Appendix III for the schedule of 2025.

d) A summary of all operating issues encountered, and corrective actions taken.

During the 2024 operating year, the treatment facility functioned without significant operational disruptions. However, there were instances of non-compliance with effluent limits for specific parameters. These exceedances were primarily related to Total Ammonia and Total Suspended Solids (TSS). Detailed results and analysis of these non-compliances are provided in Appendix II.

To address these challenges, our operational staff conducted additional sampling throughout the treatment process to better understand the contributing factors. Additionally, we have engaged a new process engineer to implement strategies aimed at mitigating future exceedances and improving overall compliance.

As part of our long-term improvement plan, an Assimilative Capacity Study is currently being conducted for the Castor River to evaluate its ability to handle the treated effluent while maintaining environmental standards.

The following incident reference numbers were reported to the Ministry of the Environment, Conservation, and Parks (MECP) during 2024:

- 1-4N8BYT
- 1-4U0PLE
- 1-5KK4BL
- 1-9PZ600
- 1-AN09UQ
- 1-BNXVEL

These reports reflect our commitment to transparency and regulatory compliance. We are actively working on corrective actions to ensure consistent adherence to all effluent quality standards moving forward.

e) A summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works.

In addition to regular preventative maintenance, the following operational duties were performed.

- ***January,***

- Scada antenna radio at SPS#2, 3, 4 and 6 were upgraded with newer system, including new PLC for monitoring at the Water Treatment Plant
- Electrical transfer switch was installed at SPS #2 for the new generator. Generator system was tested and commissioned.

- ***March,***

- Replaced an Alternating switch for the pumps at SPS #7.

- ***May,***

- Cleaned all SPS with Nation's personnel and hydrovac truck

- ***June,***

- Cleaned and inspect BioCord East at Limoges Lagoon.

- ***September,***

- Flush and cleaning of all sanitary sewer lines in Limoges with Nation's personnel and hydrovac truck.
- Commissioning of new sanitary sewer force main at SPS #11

- ***October,***

- Cleaned all SPS with Nation's personnel and hydrovac truck
- Start annual maintenance program.
- Flow meter calibration with Capital Control**.**

- ***December***

- Cleaned all SPS with Nation's personnel and hydrovac truck

f) A summary of any effluent quality assurance or control measures undertaken.

Monitoring and recording of Effluent was taken during the 2024 period and the results are presented in the Analytical survey 2024, see Appendix II.

An average of 260 mg/L of coagulant (Aluminium sulphate) was the dosage added to the inlet wastewater pipe for the Limoges wastewater facility this year.

Additional in-house sampling was performed throughout the treatment process to identify all process are performing well. Ammonia levels are still a challenge in 2024, and we are still working towards a solution to improved results in 2025.

g) A summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer.

- ***October,***

- Annual Calibration of Flow meters.

h) A summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations:

i. When any of the design objectives is not achieved more that 50% of the time in a year, or there is an increasing trend in deterioration of Final Effluent quality.

N/A

ii. When the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity.

We are now at 41% of the rated inflow capacity of 3500m3/day.

i) A tabulation of the estimated volume of the sludge generated in the lagoon cells. Sludge volume is to be measured every five (5) years but may be estimated in the interim years. A summary of disposal locations and volumes of sludge disposed of must also be provided if sludge was disposed of during the reporting period.

The wastewater total influent flow and the average quality of parameters was used to calculate the amount of sludge produced in 2024.

	Alum (mg/L)	TSS (mg/L)	Flow (m3)	Total KG	
2024	260	171	526999		
KG	30117	90116		120233	Sludge

As per this table a total of 120233 Kg of sludge was produced in 2024.

Maintenance for the removal of the sludge in the settling cell is scheduled for 2025.

j) A summary of any complaints received, and any steps taken to address the complaints.

No complaints received.

k) A summary of all Bypasses, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events.

There was no Bypasses, Overflows or other abnormal events.

l) A summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Condition 10, including a report on status of implementation of all modification.

N/A.

m) A summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overall Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted.

The collection sewer system was flushed and inspected by the Nation's personnel to mitigate any issues in the infrastructure.

n) Any changes or updates to the schedule for the completion of construction and commissioning operation of major process(es) / equipment groups in the Proposed Works.

N/A.

Appendix I: Analytical Survey, Influent

Appendix II: Limoges, Wastewater Effluent & Loadings

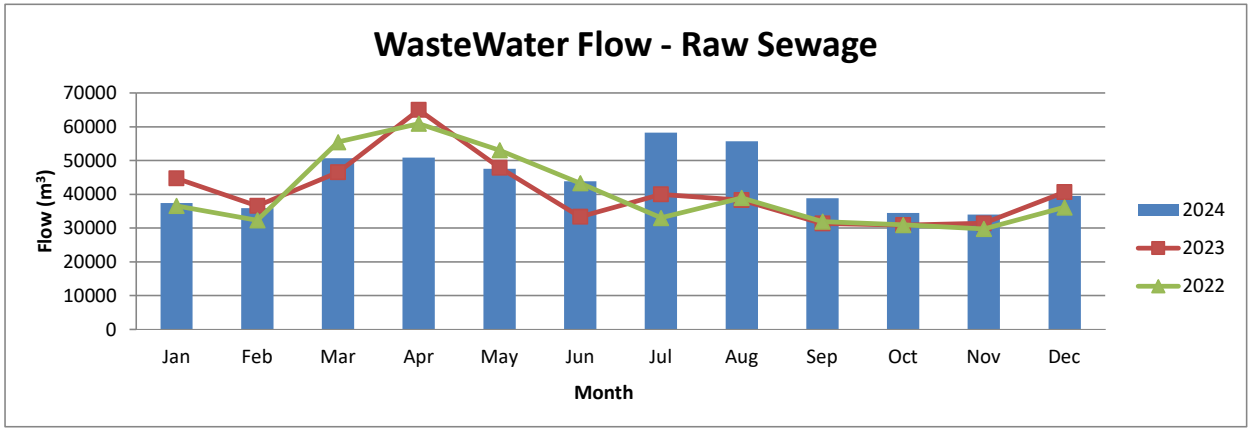
Appendix III: Sampling schedule 2024

APPENDIX I

Waste Water - Analytical survey

Limoges

2024		*Limit*	*Limit*	*Jan*	*Feb*	*Mar*	*Apr*	*May*	*Jun*	*Jul*	*Aug*	*Sep*	*Oct*	*Nov*	*Dec*	*Total*
RAW SEWAGE		*C of A*	*Federal*													
Total Flow	m^3			37358	35855	50698	50859	47582	43853	58269	55694	38804	34509	34023	39495	526999.5
Daily Ave. Flow	m^3/d	3500		1205	1236	1635	1754	1535	1462	1880	1797	1293	1113	1134	1274	1443
Max Flow	m^3/d			1581	1503	1975	2150	2060	1955	2311	2560	1521	1388	1344	1546	2560
Min Flow	m^3/d			867	996	1285	1302	1246	1151	1110	1253	1023	876	904	1028	867
BOD_5	*mg/l*			127.8	105.8	102.0	126.5	155.4	149.8	139.0	131.5	156.8	156.0	199.0	183	144.3
TSS	*mg/l*			177.0	145.0	121.5	165.8	179.2	155.5	158.0	191.3	181.3	145	196.3	234	170.8
TKN	*mg/l*			44.9	43.5	29.8	31.9	31.5	37.4	37.3	35.4	43.2	51.5	45.1	40.4	39.3
Ph at 25°C	*Ph unit*			7.7	7.8	7.7	7.8	7.7	7.7	7.7	7.8	7.9	7.9	7.7975	7.63	7.76
Ptot	*mg/l*			7.7	4.6	3.2	3.7	3.5	3.6	3.7	3.5	4.4	4.8	5.06	4.7	4.38
EFFLUENT																
Total Flow	m^3			41849	31440	48825	0	46395	33852	73412	56283	32784	30815	33896	41917	471467.6
Daily Ave. Flow	m^3/d			1350	1209	2292	0	1497	1411	2368	1816	1130	1130	1130	1130	1372
Max Flow	*m3/d*			1699	1499	2292	0	2064	2110	18948	2351	1955	1315	1430	1756	2368
$CBOD_5$	*mg/l*	5.0	25.0	0.60	3.25	5.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	1
TSS	*mg/l*	5.0	25.0	6.40	8.75	11.25	3.50	0.80	0.75	4.80	5.25	2.00	0.60	1.50	5.00	4
Ptot	*mg/l*	0.3		0.23	0.19	0.16	0.11	0.06	0.07	0.08	0.11	0.07	0.05	0.11	0.18	0.12
Unionized Ammonia	*mg/l*		1.25	0.05	0.03	0.04	0.01	0.00	0.00	0.03	0.15	0.06	0.00	0.01	0.04	0.04
T. Ammonia	*mg/l*	Summer 1 Winter 5		1.23	0.64	0.44	0.40	0.23	0.99	1.28	3.92	1.71	0.17	0.74	3.10	1.24



APPENDIX II

Limoges SAC: 1-800-268-6060

			1/03/24	1/10/24	1/17/24	1/24/24	1/31/24	Monthly average	2/07/24	2/14/24	2/21/24	2/28/24	Monthly average	3/06/24	3/13/24	3/20/24	3/27/24	Monthly average	4/03/24	4/10/24	4/17/24	4/24/24	Monthly average	5/01/24	5/08/24	5/15/24	5/22/24	21024-05-29	Monthly average	6/05/24	6/12/24	6/19/24	6/26/24	Monthly average
Effluent		***Limit***	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*		*mg/L*	*mg/L*	*mg/L*	*mg/L*		*mg/L*	*mg/L*	*mg/L*	*mg/L*		*mg/L*	*mg/L*	*mg/L*	*mg/L*		*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*		*mg/L*	*mg/L*	*mg/L*	*mg/L*	
CBOD5	8hr comp. - Weekly	5 mg/L	0	*0*	*0*	*0*	*3*	*0.60*	0	*4*	*4*	*5*	*3.25*	5	*5*	*3*	*7*	*5.00*	0	*0*	*0*	*0*	*0.00*	0	*0*	*0*	*0*	*0*	*0.00*	0	*0*	*0*	*3*	*0.75*
TSS	8hr comp. - Weekly	5 mg/L	0	6	9	9	8	*6.40*	*5*	8	10	12	*8.75*	*14*	13	8	10	*11.25*	*7*	0	0	7	*3.50*	*4*	0	0	0	0	*0.80*	*0*	0	3	0	*0.75*
Total phosphorus	8hr comp. - Weekly	0.3 mg/L	*0.12*	0.13	0.07	0.36	0.48	*0.23*	*0.21*	0.19	0.19	0.18	*0.19*	*0.11*	0.19	0.18	0.16	*0.16*	*0.14*	0.13	0.09	0.07	*0.11*	*0.07*	0.06	0.06	0.05	0.05	*0.06*	*0.07*	0.06	0.06	0.08	*0.07*
Total Ammonia Nitrogen	8hr comp. - Weekly	1 mg/L (May 1 - October 31), 5mg/L (November 1 - April 30)	*1.09*	1.12	1.08	1.39	1.47	*1.23*	*0.99*	0.63	0.53	0.42	*0.64*	*0.47*	0.51	0.54	0.24	*0.44*	*0.2*	0.92	0.36	0.12	*0.40*	*0.32*	0.27	0.22	0.15	0.19	*0.23*	*0.43*	0.98	1.14	1.42	*0.99*
Nitrate as Nitrogen	8hr comp. - Weekly	None	*7.39*	7.7	7.96	9.02	8.36	*8.09*	*8.58*	11.6	9.37	10	*9.89*	*8.35*	7.72	6.9	6.73	*7.43*	*5.58*	4.65	4.06	3.76	*4.51*	*3.24*	2.96	2.6	1.97	1.39	*2.43*	*0.96*	0.46	0.77	0.81	*0.75*
Nitrite as Nitrogen	8hr comp. - Weekly	None	*0.18*	0.18	0.2	0	0.05	*0.12*	*0.2*	0.15	0	0.09	*0.11*	*0.18*	0.08	0.12	0.06	*0.11*	*0.07*	0.1	0.13	1.56	*0.47*	*0.07*	0.05	0.05	0.05	0	*0.04*	*0.05*	0.33	0.96	0.52	*0.47*
Unionized Ammonia	8hr comp. - Weekly	Federal (1.25 mg/L)	*0.04*	0.05	0.06	0.06	0.06	*0.05*	*0.04*	0.03	0.02	0.02	*0.03*	*0.03*	0.04	0.05	0.02	*0.04*	*0.01*	0.02	0.01	0.01	*0.01*	*0.01*	0.01	0	0	0	*0.00*	*0*	0	0	0.01	*0.00*
E. Coli	8hr comp. - Weekly	200 org. per 100 ml	*0*	0	0	0	0	0.00	*0*	0	0	0	0.00	*43*	17	1	1	5.20	*18*	1	1	1	2.06	*0*	0	0	0	0	0.00	*0*	0	0	0	0.00
pH	8hr comp. - Weekly	Between 6.0 - 9.5 (Single sample result)	*7.79*	7.87	7.98	7.93	7.89	*7.89*	*7.83*	8.01	7.93	8.02	*7.95*	*8.03*	8.13	8.22	8.29	*8.17*	*8.12*	7.63	7.86	8.14	*7.94*	*7.79*	7.97	8.03	7.98	7.14	*7.78*	*7.03*	7.41	7.3	7.21	*7.24*
Hydrogen Sulphide	8hr comp. - Weekly	mg/L	*0*	0	0	0	0.01	*0.00*	*0*	0.02	0.01	0.01	*0.01*	*0.02*	0.02	0.02	0.01	*0.02*	*0.01*	0.01	0.01	0.01	*0.01*	*0*	0	0	0	0	*0.00*	*0.01*	0	0	0	*0.00*
Temperature	Grab sample																				11.3	10.2		*13.1*	16.9	17.1	22.2	20.7	*18.00*	*22.4*	16.4	24.1	23.2	*21.53*
Toxicity to Rainbow trout and Daphnia magna	Grab sample - Quarterly									0			*0.00*												0									

E.Coli (Monthly Geometric Mean Density) $\sqrt[n]{x_1 x_2 x_3 \cdots x_n}$

Limoges 

SAC: 1-800-268-6060

			7/03/24	7/10/24	7/17/24	7/24/24	7/31/24	Monthly average	8/07/24	8/14/24	8/21/24	8/28/24	Monthly average	9/04/24	9/11/24	9/18/24	9/25/24	Monthly average	10/02/24	10/09/24	10/16/24	10/23/24	10/30/24	Monthly average	11/06/24	11/13/24	11/20/24	11/27/24	Monthly average	12/04/24	12/11/24	12/18/24	12/24/24	12/31/24	Monthly average
Effluent		***Limit***	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*		*mg/L*	*mg/L*	*mg/L*	*mg/L*		*mg/L*	*mg/L*	*mg/L*	*mg/L*		*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*		*mg/L*	*mg/L*	*mg/L*	*mg/L*		*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	
CBOD5	8hr comp. - Weekly	5 mg/L	0	*0*	*0*	*0*	*0*	*0.00*	0	*0*	*0*	*0*	*0.00*	0	*0*	*0*	*0*	*0.00*	0	*0*	*0*	*0*	*0*	*0.00*	0	*0*	*0*	*0*	*0.00*	0	*0*	*0*	*0*	*0*	*0.00*
TSS	8hr comp. - Weekly	5 mg/L	*4*	0	9	4	7	*4.80*	*6*	12	3	0	*5.25*	*4*	0	4	0	*2.00*	*3*	0	0	0	0	*0.60*	*3*	0	3	0	*1.50*	*5*	7	8	5	0	*5.00*
Total phosphorus	8hr comp. - Weekly	0.3 mg/L	*0.07*	0.08	0.08	0.08	0.1	*0.08*	*0.09*	0.11	0.11	0.12	*0.11*	*0.11*	0.08	0.05	0.04	*0.07*	*0*	0.05	0.05	0.07	0.06	*0.05*	*0.07*	0.10	0.12	0.14	*0.11*	*0.18*	0.19	0.18	0.18	0.18	*0.18*
Total Ammonia Nitrogen	8hr comp. - Weekly	1 mg/L (May 1 - October 31), 5mg/L (November 1 - April 30)	*0.63*	1.06	0.87	1.49	2.35	*1.28*	*2.92*	2.57	3.96	6.21	*3.92*	*4.73*	1.86	0.14	0.11	*1.71*	*0.14*	0.12	0.19	0.25	0.16	*0.17*	*0.3*	0.53	0.94	1.19	*0.74*	*1.89*	2.61	3.21	3.98	3.79	*3.10*
Nitrate as Nitrogen	8hr comp. - Weekly	None	*1.32*	0.86	1.02	0.74	0.64	*0.92*	*0.4*	0.96	0.47	0.41	*0.56*	*0.54*	1.87	3.9	3.23	*2.39*	*2.99*	2.96	3.08	3.42	4.05	*3.30*	*4.18*	4.81	4.85	5.26	*4.78*	*5.97*	6.36	6.84	7.4	7.37	*6.79*
Nitrite as Nitrogen	8hr comp. - Weekly	None	*0.17*	0.17	0.24	0.12	0	*0.14*	*0.17*	0.12	0	0.31	*0.15*	*0.71*	1.43	0	0	*0.54*	*0*	0	0	0	0.08	*0.02*	*0*	0.06	0.17	0.27	*0.13*	*0.35*	0.38	0.38	0.35	0.4	*0.37*
Unionized Ammonia	8hr comp. - Weekly	Federal (1.25 mg/L)	*0*	0.01	0	0.01	0.13	*0.03*	*0.12*	0.09	0.16	0.24	*0.15*	*0.17*	0.05	0	0	*0.06*	*0*	0	0	0	0	*0.00*	*0*	0	0.02	0	*0.01*	*0.01*	0.02	0.03	0.03	0.12	*0.04*
E. Coli	8hr comp. - Weekly	200 org. per 100 ml	*0*	0	0	0	0	0.00	*0*	0	0	0	0.00	*0*	0	0	0	0.00	*1*	0	0	0	0	0.00	*0*	0	0	0	0.00	*0*	0	0	0	0	0.00
pH	8hr comp. - Weekly	Between 6.0 - 9.5 (Single sample result)	*7.12*	7.3	7.13	7.25	7.97	*7.35*	*7.99*	7.87	8.01	7.88	*7.94*	*7.95*	7.94	7.79	8.14	*7.96*	*7.75*	7.85	7.88	8.09	7.89	*7.89*	*7.68*	8.11	8.16	7.81	*7.94*	*7.91*	7.92	7.92	7.86	7.76	*7.87*
Hydrogen Sulphide	8hr comp. - Weekly	mg/L	*0*	0	0.01	0	0.01	*0.00*	*0*	0.02	0	0	*0.01*	*0*	0	0	0	*0.00*	*0*	0	0	0	0	*0.00*	*0*	0	0	0	*0.00*	*0*	0	0	0	0	*0.00*
Temperature	Grab sample		*24.5*	26.3	26.8	24	26.4	*25.60*	*21.4*	23.2	20.8	24.2	*22.40*	*20.7*	18.3	21.5	19.6	*20.03*	*19.4*	15.2	9.4	13.5	8.7	*13.24*	*11.5*	6.9	5.6	2.9	*6.73*	*2.2*	1.4	1.8	0.5	1.5	*1.48*
Toxicity to Rainbow trout and Daphnia magna	Grab sample - Quarterly										0															0									

Limoges

		CBOD5	TSS	Total phosphorus	Total Ammonia Nitrogen
Limit	***Effluent Flow Average(m3)***	***17.3 kg/day***	***17.3 kg/day***	***1.0 kg/day***	***3.5 kg/day (May 1 - Oct.31), 17.3 kg/day (Nov. 1 - April 30)***
January	1350	0.8	8.6	0.3	1.7
February	1209	3.9	10.6	0.2	0.8
March	1628	8.1	18.3	0.3	0.7
April	1788	0.0	6.3	0.2	0.7
May	1497	0.0	1.2	0.1	0.3
June	1411	1.1	1.1	0.1	1.4
July	2368	0.0	11.4	0.2	3.0
August	1816	0.0	9.5	0.2	7.1
September	1130	0.0	2.3	0.1	1.9
October	994	0.0	3.6	0.0	0.4
November	1130	0.0	1.7	0.1	0.8
December	1352	0.0	6.8	0.2	4.2

APPENDIX III

THE NATION - ANALYTICAL SURVEY - 2025

	Type	Frequency	07-Jan-25	14-Jan-25	21-Jan-25	28-Jan-25	04-Feb-25	11-Feb-25	18-Feb-25	25-Feb-25	04-Mar-25	11-Mar-25	18-Mar-25	25-Mar-25	01-Apr-25	08-Apr-25	15-Apr-25	22-Apr-25	29-Apr-25	06-May-25	13-May-25	20-May-25	27-May-25	03-Jun-25	10-Jun-25	17-Jun-25	24-Jun-25	01-Jul-25	08-Jul-25	15-Jul-25	22-Jul-25	29-Jul-25	05-Aug-25	12-Aug-25	19-Aug-25	26-Aug-25	02-Sep-25	09-Sep-25	16-Sep-25	23-Sep-25	30-Sep-25	07-Oct-25	14-Oct-25	21-Oct-25	28-Oct-25	04-Nov-25	11-Nov-25	18-Nov-25	25-Nov-25	02-Dec-25	09-Dec-25	16-Dec-25	23-Dec-25	30-Dec-25
LIMOGES			Every Tuesday																																																			
WWTP Influent sewage	8h./composite	1/w	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b	1b
Treated Effluent	8h./composite	1/w	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a
Treated Effluent (Trout)	Grab	Quaterly							1k												1k													1k															1k						
Castor (upstream-downstream)	Grab	Quaterly																																																				
Castor (upstream only)	Grab	bi-weekly			1e				1e				1e				1e				1e				1e				1e				1e			1e				1e				1e				1e				1e		
Castor (upstream-downstream)	Grab	Monthly	4e				4e				4e				4e				4e				4e				4e				4e				4e				4e				4e				4e				4e		
ST-ISIDORE			Samples can be taken any day of the month - Discharge as per ice covered																																																			
WWTP raw sewage	24h./composite	1/m	1f					1f				1f				1f				1f				1f				1f				1f				1f				1f				1f				1f				1f		
WWTP discharge (2)	Grab	2/w																1j		2i	2i	2i	2i																																
Receptor (upstream-downstream)	Grab	2/y																		2i			2i																																
ST-ALBERT			Samples can be taken any day of the month - Discharge as per ice covered																																																			
St-Albert cheese factory	Grab	1/2w		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d		1d
Raw sewage	24h./composite	1/m 24	1cc					1cc				1cc				1cc				1cc				1cc				1cc				1cc				1cc				1cc				1cc				1cc				1cc		
Effluent discharge (21/03 - 30/04)	Grab	4/d										1h		1h	1h		1h		1h																																					
Receptor (upstream-downstream)	Grab	2/y												1h					1h																																					
FOURNIER			Samples can be taken any day of the month																																																			
WWTP raw sewage	Grab	4/y						1c												1c														1c															1c						
WWTP effluent	Grab	1/m	1l					1l				1l				1l				1l				1l				1l				1l				1l				1l				1l				1l				1l		

24 : composite sample
a : CBOD5, TSS, Total phosphorus, T.Ammonia, Nitrate, Nitrite, E.Coli
b : BOD5, TSS, Total phosphorus, TKN, pH
c : CBOD5, TSS, TP, TKN, *pH*
d : CBOD5, TSS, TP, TKN, pH, NH3, NO2/NO3
e : CBOD5, TSS, TP, Tammonia, E.Coli, Dissolved Oxygen, *pH, Temperature, Un-ionized Ammonia* , Nitrate
f : CBOD5, TSS, TP, TKN
h : CBOD5, TSS, Total Phosphorus, Total Ammonia, H2S, pH
i : CBOD5, TSS, TP, TKN, Ammonia+Ammonia Nitrogen (NH3+NH4) as N, NO2, NO3, H2S (if odour present), E Coli
i : CBOD5, TSS, TP, pH, TKN, H2S (if odour present)
k: Toxicity to Rainbow trout and Daphnia magna
l : CBOD5, TSS, TP, TKN, Total Ammonia, NO2, NO3, E Coli, alcalinity