



January 15, 2024

Mr. Don Turner
Environmental Project Officer
Water Security Agency
Suite 300 – 2365 Albert Street
Regina, SK S4P 4K1

Dear Mr. Turner:

RE: Monthly Report: **December 2023**

In compliance with the City of Regina “Permit to Operate a Sewage Works” # 0050853-07-00 please find attached the monthly report for December 2023.

I trust this meets with your approval, should you have any questions please do not hesitate to contact me directly at (306) 519-1178 or Rui Li at (306) 535-5874.

Yours truly,

A handwritten signature in blue ink, appearing to read "Rynette Moore-Guillaume".

Rynette Moore-Guillaume
Senior Manager, Capital, Growth & Operations
EPCOR Water Services

City of Regina - Wastewater Treatment Plant

December 2023

Final Effluent Results

Permit# 00050853-07-00

Date	Flow to Creek	Total Coliform	<i>E. coli</i>	Enterococci	Dissolved Oxygen (Field Test)	Temp. (Field Test)	Chloride (Field Test)	Total Phosphorus	pH @15±1°C	Total Suspended Solids	CBOD	Ammonia Nitrogen	Unionized Ammonia @15±1°C	Total Kjeldahl Nitrogen	Total Nitrogen
	(ML)	(MPN /100mL)			(mg/L)	(°C)	(mg/L)	(mg P/L)	(SU)	(mg/L)	(mg/L)	(mg N/L)	(mg N/L)	(mg N/L)	(mg N/L)
01	62.35	52	1		7.94	16.0		0.47		8.8		0.88		3.4	10.7
02	62.24				7.67	16.0		0.50		9.0	2.7	3.54		6.0	13.2
03	64.26				7.54	16.1	224	0.53	7.21	11.2	3.3	6.43	< 0.030	8.1	15.2
04	61.78	165	12		7.44	16.3	221	0.62	7.15	15.0	4.4	2.60	< 0.030	5.5	14.6
05	60.96	115	12	15	7.50	16.2	224	0.70	7.15	14.0	4.8	2.19	< 0.030	5.5	14.1
06	61.20	48	2		7.18	16.5	226	0.65	7.09	12.2	4.0	0.99	< 0.030	4.3	13.4
07	62.19	46	1		7.41	16.5	247	0.66	7.29	12.0	4.4	< 0.30	< 0.030	4.6	12.8
08	62.82	93	8		7.62	16.2		0.67		12.0		< 0.30		3.2	10.7
09	61.01				8.02	16.0		0.58		9.8	6.1	< 0.30		3.1	11.4
10	61.73				8.01	15.8	244	0.55	7.15	9.0	5.5	0.46	< 0.030	3.0	11.0
11	60.26	57	4		7.94	15.3	223	0.69	7.22	13.4	4.2	0.59	< 0.030	3.5	9.4
12	58.49	39	10	4	7.65	15.3	225	0.64	7.21	11.6	3.7	0.77	< 0.030	4.0	9.4
13	60.39	195	2		7.70	15.4	221	0.59	7.14	10.0	3.1	0.90	< 0.030	3.9	10.4
14	59.39	40	10		7.49	15.6	228	0.56	7.17	10.6	3.9	0.45	< 0.030	3.1	9.7
15	59.73	20	< 1		7.05	15.7		0.56		9.2		0.40		3.0	10.0
16	60.29				7.79	15.5		0.54		8.2	3.2	0.53		3.1	8.7
17	61.39				7.71	15.3	236	0.58	7.30	10.4	3.9	0.66	< 0.030	3.3	9.0
18	60.11	293	6		7.58	15.4	221	0.52	7.17	10.8	3.6	0.51	< 0.030	3.0	8.6
19	58.65	158	5	< 1	7.78	15.5	228	0.51	7.28	9.6	3.5	< 0.30	< 0.030	2.6	8.6
20	60.72	118	8		7.29	15.1	229	0.49	7.23	9.6	3.7	< 0.30	< 0.030	2.2	8.4
21	61.18	28	< 1		7.22	15.6	220	0.44	7.20	8.4	3.4	< 0.30	< 0.030	2.5	8.6
22	62.38	36	1		7.83	15.7		0.44		7.4		< 0.30		1.8	8.0
23	61.17				7.72	15.6		0.44		10.2	2.9	0.39		2.8	9.0
24	59.98				7.87	15.5	209	0.42	7.23	11.0	2.7	0.32	< 0.030	2.6	8.0
25	55.56	33	1	1	8.00	15.3	216	0.41	7.23	7.6	3.3	0.57	< 0.030	2.6	8.0
26	57.37	49	2		7.57	15.2	214	0.43	7.21	7.2	3.2	0.89	< 0.030	3.6	9.7
27	59.55	68	6		7.40	15.4	212	0.47	7.14	8.2	3.4	0.50	< 0.030	3.4	9.6
28	60.90	26	2		6.86	15.5	216	0.44	7.21	8.6	3.7	0.38	< 0.030	3.0	8.5
29	60.26	146	2		7.49	15.6		0.45		7.0		0.35		2.8	8.1
30	61.15				7.38	15.5		0.47		8.2	3.1	0.53		3.3	8.5
31	61.29				7.47	15.3	203	0.51	7.28	9.4	3.3	0.81	< 0.030	3.5	9.6
Sum	1880.75														
Avg	60.67				7.58	15.7	223	0.53	7.20	10	4	1	< 0.030	3.6	10
Min	55.56				6.86	15.1	203	0.41	7.09	7.0	2.7	< 0.30	< 0.030	1.8	8.0
Max	64.26		12		8.02	16.5	247	0.70	7.30	15.0	6.1	6.43	< 0.030	8.1	15.2
Permit Limits			≤1,000					≤0.75		≤15	≤15	≤4	≤1.24		≤10

E. coli Geometric Mean = 3 MPN/100mL, Limit = 200 MPN/100mL

Plant Notes:

WSA Notes:

Dec 18 & 19 - CBOD results qualified. Quality control standard and blank exceeded acceptance criterias.

Creek Monthly Report to Water Security Agency

Tuesday, December 5, 2023

Permit# 00050853-07-00

Test Description	Riske's Crossing	Final Effluent	Sidmar Crossing	Wascana above the Qu'Appelle	Qu'Appelle above the Wascana	Lumsden
Dissolved Oxygen (Field Test)	17.00	7.50	8.19	9.7	11.6	10.9
pH (Field Test for Creek Samples)	8.12	7.15	6.94	7.34	7.57	7.41
Temperature (Field Test)	1.2	16.2	6.7	0.9	1.3	1.3
Total Suspended Solids	15.4	14.0	83.0	10.4	12.4	10.9
Carbonaceous Biochemical Oxygen Demand	2.2	4.8	2.4	<2.0	1.7	1.3
Total Phosphorus	0.44	0.70	0.47	0.13	0.07	0.13
Total Kjeldahl Nitrogen	2.3	5.5	5.7	1.6	0.8	1.8
Ammonia Nitrogen	0.59	2.19	3.32	0.22	<0.30	0.33
Nitrate Nitrogen	0.46	8.42	4.56	5.48	<0.25	2.94
Total Nitrogen	2.8	14.1	10.5	7.1	0.9	4.8
Phenol Alkalinity	0	0	0	0	0	0
Total Alkalinity	255	147	161	175	204	198
Carbonate	0	0	0	0	0	0
Bicarbonate	311	180	197	213	248	241
Chloride	451	224	230	228	26	139
Total Coliform	196	115	54,800	365	326	206
<i>E. coli</i>	3	12	2,610	4	4	6
Enterococci	3	15	1730	28	10	16
Total Hardness*	424	316	341	361	264	301
Calcium*	91	74	79	82	58	68
Magnesium*	48	32	35	38	29	32
Potassium*	19	20	20	19	6.6	13
Sodium*	287	172	181	184	61	126
Sulfate*	240	240	260	260	150	190
Total Dissolved Solids*		951				
Conductivity at 25°C*		1480				
Mercury*		0.000002				
Aluminum*		0.042				
Antimony*		0.0009				
Arsenic*		0.0010				
Barium*		0.056				
Beryllium*		<0.0001				
Boron*		0.29				
Cadmium*		0.00004				
Chromium*		0.0055				
Cobalt*		0.0004				
Copper*		0.018				
Iron*		0.13				
Lead*		0.0010				
Manganese*		0.14				
Molybdenum*		0.0094				
Nickel*		0.0027				
Selenium*		0.0025				
Silver*		<0.00005				
Strontium*		0.42				
Thallium*		<0.0002				
Uranium*		0.0005				
Vanadium*		0.0006				
Zinc*		0.059				

Notes:

* Tests conducted by an external accredited laboratory.

Results are in mg/L except total coliforms, *E.coli*, enterococci (MPN/100mL), temperature (°C), conductivity (µS/cm) and pH (SU).

Riske's Crossing, Qu'Appelle above the Wascana, and Lumsden sample date is 19 Dec 2023.

Dec 19 - PI BOD result qualified. Quality control standard and blank exceeded acceptance criterias.

CBOD results for Riske's Crossing, Qu'Appelle above the Wascana, and Lumsden qualified. Quality control standard and blank exceeded acceptance criterias.

Primary Influent BOD Results (mg/L)

Dec 5 - 198; Dec 7 - 222; Dec 12 - 244; Dec 14 - 263; Dec 19 - 287; Dec 21 - 222; Dec 26 - 264; Dec 28 - 234