



December 15, 2023

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

Dear Mr. Turner:

RE: Monthly Report: **November 2023**

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

I trust this meets with your approval, should you have any questions please do not hesitate to contact me directly at (306) 580-1204 or Rui Li at (306) 535-5874.

Yours truly,

A handwritten signature in blue ink that reads "V. Campbell". The signature is written in a cursive, flowing style.

Vicki Campbell
Senior Manager, Capital, Growth & Operations
EPCOR Water Services

City of Regina - Wastewater Treatment Plant

November 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	61.62	47	4		7.79	17.7	207	0.34	7.18	7.0	2.4	< 0.30	< 0.030	2.6	9.3
02	62.50	52	4		7.51	17.7	215	0.38	7.19	48.4	3.2	2.41	< 0.030	5.2	11.8
03	62.75	51	3		7.18	17.9		0.37		7.4		0.86		3.6	11.6
04	63.25				7.58	17.6		0.38		8.8	2.4	0.58		3.3	9.2
05	69.20				7.45	17.6	204	0.41	7.42	9.4	3.0	1.99	< 0.030	4.7	9.3
06	66.26	125	7		6.70	17.4	200	0.38	7.18	12.2	3.2	0.40	< 0.030	3.1	8.5
07	62.50	58	1	1	7.55	17.2	213	0.35	7.19	8.0	3.0	< 0.30	< 0.030	2.7	7.9
08	65.07	172	12		7.68	16.9	217	0.41	7.14	9.4	2.4	0.39	< 0.030	3.3	9.6
09	65.51	99	2		7.74	16.9	224	0.42	7.16	10.2	3.2	0.65	< 0.030	3.4	10.2
10	64.24	68	3		7.75	16.7		0.44		10.0		1.26		3.9	10.4
11	62.42				7.01	16.6		0.38		7.0	2.1	1.00		3.4	10.3
12	64.47				7.07	16.8	211	0.32	7.33	9.0	< 2.0	0.69	< 0.030	2.7	8.4
13	64.83	67	1		7.00	16.8	203	0.40	7.28	8.8	2.6	1.37	< 0.030	3.9	8.5
14	64.55	172	2	3	7.50	16.8	206	0.31	7.21	6.8	2.5	0.59	< 0.030	2.9	8.1
15	63.50	68	3		7.51	17.0	219	0.32	7.21	7.1	2.7	0.56	< 0.030	3.0	8.7
16	61.24	79	1		7.60	17.0	215	0.35	7.21	6.4	2.2	0.41	< 0.030	2.7	8.7
17	61.09	51	1		7.76	17.1		0.34		6.6		0.31		2.3	8.7
18	63.75				7.97	17.0		0.31		5.8	2.4	0.53		2.6	8.9
19	64.36				7.77	16.9	206	0.30	7.23	5.8	2.1	1.05	< 0.030	3.0	7.8
20	60.75	48	3	1	7.70	16.6	204	0.38	7.21	10.8	2.6	0.96	< 0.030	3.2	9.1
21	62.16	23	< 1		7.79	16.6	210	0.34	7.17	6.6	2.2	0.32	< 0.030	2.4	8.0
22	64.16	22	1		7.17	16.4	250	0.36	7.14	7.6	3.5	0.40	< 0.030	2.6	8.5
23	63.76	29	< 1		7.90	16.3	219	0.38	7.16	8.4	3.1	0.53	< 0.030	2.9	9.6
24	64.15	62	3		7.93	16.1		0.38		7.4		0.88		3.2	9.7
25	63.59				7.86	16.0		0.44		8.0	3.0	1.40		3.7	10.8
26	64.56				7.98	16.1	201	0.44	7.14	8.8	2.8	1.90	< 0.030	4.4	11.1
27	62.99	37	< 1	3	7.64	16.4	203	0.50	7.08	9.4	3.7	0.70	< 0.030	3.2	9.3
28	61.11	42	3		7.09	16.2	218	0.42	7.11	8.2	3.0	< 0.30	< 0.030	2.6	8.4
29	62.10	46	3		7.74	16.1	219	0.42	7.17	7.8	2.9	< 0.30	< 0.030	2.5	8.8
30	61.55	26	4		7.85	16.1	210	0.43	7.13	8.2	3.4	0.44	< 0.030	2.6	8.8
Sum	1903.99														
Avg	63.47				7.56	16.8	212	0.38	7.19	10	3	1	< 0.030	3.2	9
Min	60.75				6.70	16.0	200	0.30	7.08	5.8	< 2.0	< 0.30	< 0.030	2.3	7.8
Max	69.20		12		7.98	17.9	250	0.50	7.42	48.4	3.7	2.41	< 0.030	5.2	11.8
Permit Limits			≤1,000					≤0.75		≤15	≤15	≤4	≤1.24		≤10

E. coli Geometric Mean = 2 MPN/100mL, Limit = 200 MPN/100mL

Plant Notes:

WSA Notes:

- Nov 2 & 13 - Unknown white crystal-like particles observed in composite samples.
- Nov 8, 9, 11 & 12 - CBOD results qualified. The QC standards exceeded acceptance criteria.
- Nov 13 - Total coliform and *E. coli* results qualified. The duplicate analysis exceeded acceptance criteria.
- Nov 14 - Enterococci result qualified. The incubator temperature briefly exceeded acceptance criteria.
- Nov 22 & 23 - CBOD results qualified. The blank exceeded acceptance criteria.

Creek Monthly Report to Water Security Agency

Tuesday, November 14, 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)	9.35	7.50	8.85	12.4	12.8	12.2
pH (Field Test for Creek Samples)	6.81	7.21	6.87	7.72	7.89	7.61
Temperature (Field Test)	1.6	16.8	8.4	0.9	1.7	1.8
Total Suspended Solids	21.7	6.8	17.8	15.0	12.5	5.3
Carbonaceous Biochemical Oxygen Demand	4.4	2.5	2.5	<2.0	<2.0	<2.0
Total Phosphorus	0.21	0.31	0.23	0.13	0.07	0.10
Total Kjeldahl Nitrogen	1.5	2.9	4.3	2.2	0.6	1.0
Ammonia Nitrogen	0.48	0.59	2.64	0.75	<0.30	<0.30
Nitrate Nitrogen	0.41	4.95	4.47	3.36	<0.25	2.12
Total Nitrogen	1.9	8.1	9.1	5.7	0.7	3.1
Phenol Alkalinity	0	0	0	0	0	0
Total Alkalinity	167	157	173	163	196	175
Carbonate	0	0	0	0	0	0
Bicarbonate	203	192	211	199	239	213
Chloride	331	206	231	241	28	164
Total Coliform	3,873	172	2,360	1,050	649	1,410
<i>E. coli</i>	210	2	687	20	12	7
Enterococci	185	3	1050	23	20	19
Total Hardness*	247	327	318	336	256	299
Calcium*	58	75	73	77	55	67
Magnesium*	25	34	33	35	29	32
Potassium*	14	18	16	18	6.6	13
Sodium*	212	165	170	185	72	140
Sulfate*	120	240	220	240	170	200
Total Dissolved Solids*		858				
Conductivity at 25°C*		1470				
Mercury*		0.000001				
Aluminum*		0.033				
Antimony*		0.0007				
Arsenic*		0.0010				
Barium*		0.086				
Beryllium*		<0.0001				
Boron*		0.31				
Cadmium*		0.00001				
Chromium*		0.0006				
Cobalt*		0.0003				
Copper*		0.020				
Iron*		0.077				
Lead*		0.0010				
Manganese*		0.15				
Molybdenum*		0.0091				
Nickel*		0.0020				
Selenium*		0.0012				
Silver*		<0.00005				
Strontium*		0.60				
Thallium*		<0.0002				
Uranium*		0.0008				
Vanadium*		0.0006				
Zinc*		0.042				

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).

All enterococci results qualified. The incubator temperature briefly exceeded acceptance criteria.

Nov 2 - Primary influent composite sampler issue. Sample may not be representative.

Nov 9 - Primary influent BOD result qualified. The QC standard exceeded acceptance criteria.

Nov 23 - Primary influent BOD result qualified. The blank exceeded acceptance criteria.

Primary Influent BOD Results (mg/L)

Nov 2 - 123; Nov 7 - 254; Nov 9 - 214; Nov 14 - 245; Nov 16 - 270; Nov 21 - 243; Nov 23 - 268; Nov 28 - 266; Nov 30 - 232