



November 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: **October 2023**

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

October 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	63.99				7.14	19.6	196	0.36	7.18	6.6	4.2	0.81	< 0.030	3.0	7.7
02	62.77	345	5	13	7.45	19.7	203	0.35	7.16	7.0	3.2	1.01	< 0.030	3.4	7.7
03	62.86	210	2		7.18	19.6	203	0.37	7.16	8.2	3.4	< 0.30	< 0.030	2.3	6.5
04	64.05	214	5		7.69	19.1	211	1.19	7.14	23.3	5.8	0.32	< 0.030	3.6	7.7
05	62.85	74	4		7.74	18.4	202	0.47	7.18	10.2	3.7	0.36	< 0.030	2.8	7.5
06	61.84	108	3		7.84	18.6		0.38		7.4		0.40		2.7	8.4
07	62.72				7.53	18.9		0.36		8.4	3.5	0.60		2.8	7.2
08	62.11				7.51	19.1	205	0.39	7.24	8.2	3.5	0.48	< 0.030	2.5	6.8
09	63.55	126	4		7.32	18.8	206	0.46	7.21	13.6	3.7	1.32	< 0.030	3.5	7.5
10	63.08	39	5	10	7.17	18.6	208	0.56	7.23	13.0	4.1	0.42	< 0.030	2.8	7.4
11	63.33	132	3		7.28	18.4	210	0.49	7.18	10.4	3.8	< 0.30	< 0.030	2.4	7.4
12	64.24	83	4		7.60	18.3	210	0.39	7.13	8.4	3.7	4.87	< 0.030	7.1	11.6
13	61.37	78	1		7.23	18.5		0.34		7.0		1.20		3.7	10.4
14	62.36				7.57	18.5		0.38		7.6	2.4	0.73		3.4	9.7
15	65.13				7.93	18.4	203	0.45	7.17	4.8	2.5	0.96	< 0.030	3.7	8.8
16	64.13	921	23	6	7.49	18.8	201	0.45	7.12	12.8	2.9	0.53	< 0.030	3.2	8.1
17	62.32	157	14		7.27	18.8	206	0.48	7.14	10.0	3.2	0.43	< 0.030	3.1	8.7
18	63.21	173	4		6.82	18.9	206	0.44	7.13	9.0	2.8	0.37	< 0.030	2.7	8.8
19	61.89	370	12		7.29	19.0	202	0.43	7.20	8.2	3.0	< 0.30	< 0.030	2.6	8.4
20	62.48	98	3		7.41	18.6		0.45		8.6		0.31		3.3	9.4
21	62.40				7.68	18.6		0.41		7.8	2.7	0.67		2.8	8.5
22	64.71				7.63	18.7	214	0.64	7.19	7.6	2.8	0.96	< 0.030	3.1	8.1
23	65.72	166	15	3	7.28	18.2	208	0.40	7.22	8.5	2.7	0.45	< 0.030	2.9	7.6
24	62.80	109	2		7.68	17.9	210	0.54	7.10	10.0	2.9	0.43	< 0.030	2.8	7.7
25	61.90	186	10		7.42	17.9	219	0.46	7.17	8.6	2.8	0.42	< 0.030	3.0	8.5
26	61.91	219	5		7.54	17.8	228	0.46	7.18	11.0	3.0	< 0.30	< 0.030	2.7	8.3
27	58.62	60	3		7.92	17.6		0.41		8.0		< 0.30		2.5	7.7
28	63.10				7.71	17.6		0.37		7.8	2.5	0.50		2.8	7.8
29	63.62				7.85	17.5	217	0.40	7.14	8.6	2.8	0.63	< 0.030	3.1	7.4
30	63.20	179	6	6	7.35	17.3	213	0.43	7.30	9.4	3.3	< 0.30	< 0.030	2.8	7.6
31	62.11	54	2		7.67	17.4	216	0.38	7.14	7.4	2.9	< 0.30	< 0.030	2.5	8.4
Sum	1950.37														
Avg	62.92				7.49	18.5	209	0.45	7.17	9	3	1	< 0.030	3.1	8
Min	58.62				6.82	17.3	196	0.34	7.10	4.8	2.4	< 0.30	< 0.030	2.3	6.5
Max	65.72		23		7.93	19.7	228	1.19	7.30	23.3	5.8	4.87	< 0.030	7.1	11.6
Permit Limits			≤1,000					≤0.75		≤15	≤15	≤4	≤1.24		≤10

E. coli Geometric Mean = 5 MPN/100mL, Limit = 200 MPN/100mL

Plant Notes:

Oct 27 – Flow was diverted to the lagoon for future treatment during a SaskPower power outage that also tripped our main breakers. The breakers were reset and the process was restarted with minimal interruption as power was restored.

WSA Notes:

Chloride testing from Oct 1 to Oct 18 was done via external accredited laboratory.

Creek Monthly Report to Water Security Agency

Tuesday, October 10, 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)	9.14	7.17	6.23	10.6	9.99	9.98
pH (Field Test for Creek Samples)	7.45	7.23	6.92	7.52	7.43	7.40
Temperature (Field Test)	8.4	18.6	11.9	8.8	9.2	10.1
Total Suspended Solids	30.6	13.0	5.4	10.3	39.7	25.0
Carbonaceous Biochemical Oxygen Demand	8.9	4.1	<2.0	<2.0	2.0	<2.0
Total Phosphorus	0.27	0.56	0.22	0.16	0.18	0.16
Total Kjeldahl Nitrogen	1.7	2.8	2.9	1.2	1.0	0.9
Ammonia Nitrogen	<0.30	0.42	1.98	<0.30	<0.30	<0.30
Nitrate Nitrogen	<0.25	4.42	3.74	2.83	<0.25	1.26
Total Nitrogen	1.8	7.4	7.0	4.0	1.1	2.2
Phenol Alkalinity	0	0	0	0	0	0
Total Alkalinity	157	131	142	145	172	164
Carbonate	0	0	0	0	0	0
Bicarbonate	192	160	173	177	210	200
Chloride*	89	208	205	181	24	105
Total Coliform	1,200	39	3,870	2,500	1,400	2,280
<i>E. coli</i>	13	5	116	50	71	32
Enterococci	110	10	76	36	40	58
Total Hardness*	285	294	305	318	218	270
Calcium*	65	65	68	70	46	59
Magnesium*	30	32	33	35	25	30
Potassium*	11	19	19	16	6.6	12
Sodium*	76	164	162	146	55	106
Sulfate*	150	240	240	240	130	190
Total Dissolved Solids*		826				
Conductivity at 25°C*		1350				
Mercury*		0.000003				
Aluminum*		0.10				
Antimony*		0.0008				
Arsenic*		0.0015				
Barium*		0.034				
Beryllium*		<0.0001				
Boron*		0.36				
Cadmium*		0.00001				
Chromium*		0.0025				
Cobalt*		0.0003				
Copper*		0.027				
Iron*		0.10				
Lead*		0.0012				
Manganese*		0.11				
Molybdenum*		0.0064				
Nickel*		0.0019				
Selenium*		0.0015				
Silver*		<0.00005				
Strontium*		0.39				
Thallium*		<0.0002				
Uranium*		0.0004				
Vanadium*		0.0007				
Zinc*		0.044				

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).

Primary Influent BOD Results (mg/L)

Oct 3 - 236; Oct 5 - 245; Oct 10 - 220; Oct 12 - 214; Oct 17 - 246; Oct 19 - 221; Oct 24 - 246; Oct 26 - 235; Oct 31 - 233