

**City of Winnipeg
Water and Waste Department
North End Water Pollution Control Centre Monitoring Data
November 2016**

Licence 2684 RRR	File # 1071.10	Final Effluent 24 Hour Composite							Final Effluent Grab Sample					
		Date	Raw Sewage Daily Flow ML**	TSS	BOD5	cBOD5	Ammonia	Ortho Phosphorus	Total Phosphorus	Total Nitrogen	Temp.	pH	Fecal Coliform	E.Coli
				(mg/L)	(mg/L)	(mg/L)	(kg NH3-N/day)	(mg/L-P)	(mg/L-P)*	(mg/L-N)*	(°C)	(units)	MPN/100 mL	
1-Nov-16	357.9	8	11	4	2,427	1.08	4.3	31.4	12.1	7.08	15	7		
2-Nov-16	187.4	10	10	6	2,211	2.12	4.2	30.9	16.2	6.94	23	23		
3-Nov-16	177.1	8	12	5	2,869	2.71	4.1	30.8	17.3	6.77	23	14		
4-Nov-16	172.1	7	11	5	2,789	3.24	4.1	31.2	17.7	6.70	74	15		
5-Nov-16	169.2	12	19	5	2,740	3.78	4.2	31.4	18.6	6.52	9	<3		
6-Nov-16	176.7	14	21	8	2,491	3.52	4.2	31.4	17.9	6.60	23	23		
7-Nov-16	170.9	12	22	8	2,820	3.53	4.2	31.5	17.7	6.70	150	43		
8-Nov-16	164.5	18	28	10	2,401	3.44	4.2	31.6	17.7	6.56	240	240		
9-Nov-16	160.5	16	33	11	2,856	4.52	4.2	31.8	18.0	6.77	240	93		
10-Nov-16	154.9	15	26	13	2,881	4.50	4.1	31.9	18.1	6.91	2,400	930		
11-Nov-16	145.4	17	24	9	2,676	3.64	4.1	31.8	17.9	6.62	240	93		
12-Nov-16	142.1	21	24	11	2,600	4.25	4.1	31.7	18.2	6.61	240	150		
13-Nov-16	142.4	17	33	12	2,250	4.04	4.0	31.3	17.9	6.61	93	43		
14-Nov-16	147.8	17	26	10	2,853	3.90	4.0	30.8	18.1	6.56	93	93		
15-Nov-16	189.1	17	21	9	3,612	3.36	3.9	30.5	17.2	6.69	2,400	930		
16-Nov-16	152.8	13	18	7	3,239	3.93	4.0	30.8	17.8	6.89	43	43		
17-Nov-16	151.4	14	18	7	3,467	4.50	4.0	30.9	17.8	6.64	43	43		
18-Nov-16	152.6	13	17	7	3,632	4.64	4.0	30.8	17.8	6.94	240	93		
19-Nov-16	146.2	13	17	8	3,157	4.00	4.0	30.6	17.6	6.78	240	240		
20-Nov-16	144.4	12	19	8	3,019	4.24	4.0	30.3	17.6	6.73	43	43		
21-Nov-16	150.3	11	14	6	3,230	4.09	4.0	30.3	17.8	6.62	93	43		
22-Nov-16	189.3	19	nr	nr	4,657	4.02	4.1	30.9	17.7	6.87	15	4		
23-Nov-16	208.6	10	28	4	3,693	2.78	4.1	31.0	15.3	6.78	150	74		
24-Nov-16	192.7	16	21	8	3,507	3.09	4.1	30.5	16.1	6.66	43	15		
25-Nov-16	157.2	13	13	5	2,579	3.38	4.1	30.6	16.3	6.75	43	43		
26-Nov-16	150.9	16	15	8	2,943	3.78	4.2	30.7	16.9	6.51	150	93		
27-Nov-16	145.8	15	14	7	3,061	3.94	4.2	30.8	17.3	6.57	240	93		
28-Nov-16	293.2	44	35	17	4,749	2.57	4.2	30.5	16.7	6.82	(430)	(430)		
29-Nov-16	361.2	41	34	13	3,829	1.38	4.1	30.0	11.8	6.83	(>110,000)	(110,000)		
30-Nov-16	240.8	8	14	6	2,745	1.68	4.0	29.8	12.3	6.92	(23)	(23)		
Max:	361.2													
Min:	142.1													
Average:	183.2	16	21	8	3,066	3.46			17	6.73				
Total Flow:	5495.3										94	50		
Geo.Mean:														

Notes:

(1) Effluent ammonia load based upon Raw Sewage flows and Final NH3-N concentrations

(2) nr - not recorded or no result; na - not analyzed; ns - no sample

(3) Where value is expressed as less than (<), the value is halved and used in the calculations

(4) * = 30 day rolling average

(5)** Flow, highlighted in bold, in excess of 380 ML/D per clause 26 of Licence 2684RRR

(6) Bracketed Coliform results not used in the Geometric Mean calculation

(7) Raw wastewater flows in excess of 400 ML/D will by-pass the secondary process and flows in excess of 675 ML/D will cause raw sewage to by-pass the plant