

**City of Winnipeg
Water and Waste Department
North End Water Pollution Control Centre Monitoring Data
September 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-Sep-16	143.1	11	13	5	2,634	4.38	4.0	30.5	20.7	6.57	240	43		
2-Sep-16	141.3	9	12	5	2,812	4.74	4.0	30.6	20.6	6.62	430	150		
3-Sep-16	156.5	24	22	11	3,177	4.80	4.1	30.9	19.6	6.65	93	43		
4-Sep-16	362.1	41	27	18	2,586	1.72	4.1	30.6	20.1	6.50	(>110,000)	(>110,000)		
5-Sep-16	169.5	12	7	3	1,129	1.92	4.0	30.5	19.5	6.54	230	43		
6-Sep-16	157.3	7	8	4	1,872	2.95	4.0	30.3	19.8	6.62	1,500	1,500		
7-Sep-16	157.9	10	10	5	2,906	3.42	4.0	30.7	20.1	6.58	4,300	430		
8-Sep-16	188.6	8	12	5	2,772	2.97	4.0	30.8	19.7	6.81	9,300	9,300		
9-Sep-16	151.5	10	13	5	2,561	3.63	4.0	31.0	20.2	6.70	930	930		
10-Sep-16	137.3	12	12	5	2,416	3.51	4.0	31.1	20.3	6.55	300	93		
11-Sep-16	141.5	10	14	4	2,278	4.14	4.0	31.5	20.4	6.60	240	240		
12-Sep-16	146.9	10	18	4	2,217	3.51	4.0	31.7	20.1	6.70	43	43		
13-Sep-16	143.0	7	18	4	2,545	3.88	4.0	31.8	20.0	6.68	2,400	2,400		
14-Sep-16	146.6	12	21	5	2,843	4.68	4.1	32.2	20.1	6.69	430	430		
15-Sep-16	144.1	10	18	5	2,608	4.68	4.2	32.8	20.3	6.68	1,500	740		
16-Sep-16	160.4	10	15	5	2,839	4.70	4.3	33.2	20.4	6.64	23	23		
17-Sep-16	135.9	12	21	6	2,310	4.43	4.4	34.0	20.9	6.42	430	43		
18-Sep-16	133.4	12	22	6	2,628	5.11	4.4	34.4	19.4	6.59	30	23		
19-Sep-16	138.9	13	17	6	2,638	4.16	4.5	34.7	20.3	6.58	43	23		
20-Sep-16	129.2	11	23	6	2,598	4.45	4.5	34.6	20.1	6.51	110,000	46,000		
21-Sep-16	138.3	12	19	6	2,986	4.36	4.6	34.7	20.3	6.49	93	93		
22-Sep-16	129.9	11	25	8	2,975	4.99	4.7	34.9	20.3	6.55	93	43		
23-Sep-16	131.5	17	24	6	3,169	5.11	4.7	34.9	20.4	6.80	43	43		
24-Sep-16	163.1	39	41	25	3,343	4.59	4.8	34.9	20.1	6.63	300	140		
25-Sep-16	316.8	17	25	10	2,845	1.82	4.8	34.3	18.9	6.54	(930)	(150)		
26-Sep-16	154.6	10	12	4	1,901	2.47	4.7	33.9	18.9	6.68	23	9		
27-Sep-16	139.8	12	19	6	2,754	3.99	4.7	33.9	19.5	6.58	21	15		
28-Sep-16	125.2	12	16	6	2,653	4.97	4.7	33.9	19.7	6.64	43	23		
29-Sep-16	135.9	13	24	6	3,017	5.32	4.7	34.1	19.8	6.71	93	21		
30-Sep-16	148.2	12	17	5	3,438	5.15	4.8	34.1	20.1	6.71	23	23		
Max:	362.1													
Min:	125.2													
Average:	158.9	14	18	7	2,648	4.02			20	6.62				
Total Flow:	4768.1													
Geo.Mean:											239	124		

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