

**City of Winnipeg
Water and Waste Department
North End Water Pollution Control Centre Monitoring Data
April 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-Apr-16	177.8	14	20	8	4,657	2.19	2.1	26.1	12.5	6.98	240	240		
2-Apr-16	175.7	14	17	8	4,463	2.24	2.1	25.7	12.2	6.93	240	240		
3-Apr-16	161.1	10	18	9	4,155	2.22	2.1	25.4	12.2	6.90	93	43		
4-Apr-16	155.0	12	18	9	4,075	2.32	2.1	25.0	12.8	6.96	93	43		
5-Apr-16	186.0	23	24	16	5,244	2.89	2.2	24.6	12.5	6.95	430	430		
6-Apr-16	262.3	39	33	21	5,036	1.90	2.2	24.6	11.5	6.95	(4300)	(4300)		
7-Apr-16	216.4	15	20	10	4,025	1.65	2.3	24.8	11.6	6.99	300	300		
8-Apr-16	168.0	13	nr	nr	3,746	1.92	2.3	25.0	12.3	7.03	93	93		
9-Apr-16	158.5	12	18	8	4,233	2.37	2.4	25.1	12.5	6.95	430	240		
10-Apr-16	154.0	12	20	9	4,297	2.55	2.4	25.4	12.9	7.15	430	430		
11-Apr-16	154.3	9	25	9	4,504	2.42	2.4	25.9	12.9	7.04	93	93		
12-Apr-16	155.7	12	22	8	4,764	2.86	2.5	26.5	12.8	6.98	4,300	4,300		
13-Apr-16	157.9	6	23	8	4,469	2.95	2.5	27.0	13.2	6.95	2,400	2,400		
14-Apr-16	163.1	12	31	8	nr	nr	2.6	26.6	13.7	7.08	240	240		
15-Apr-16	359.8	94	48	30	5,361	1.69	2.7	26.8	13.2	6.90	930	240		
16-Apr-16	538.3	114	39	nr	2,944	0.63	2.7	26.8	9.5	7.21	(>110000)	(>110000)		
17-Apr-16	604.7	37	23	16	4,039	nr	2.6	26.7	8.2	7.55	(>110000)	(>110000)		
18-Apr-16	403.2	12	10	7	3,540	1.00	2.6	26.7	9.9	7.41	(>110000)	(>110000)		
19-Apr-16	365.7	20	14	nr	5,632	1.62	2.6	26.8	10.6	7.21	(930)	(93)		
20-Apr-16	337.4	17	14	8	4,724	1.40	2.6	26.9	11.1	7.25	430	74		
21-Apr-16	302.2	11	19	6	4,774	1.46	2.6	26.7	11.4	7.29	43	15		
22-Apr-16	260.7	12	nr	nr	4,328	1.62	2.6	26.5	nr	7.20	43	4		
23-Apr-16	236.7	14	16	6	4,402	1.67	2.6	26.3	nr	7.16	15	15		
24-Apr-16	218.2	7	15	6	3,840	1.72	2.6	26.1	nr	7.28	23	23		
25-Apr-16	211.5	7	19	6	4,166	2.01	2.6	26.0	12.2	7.17	43	43		
26-Apr-16	210.2	8	14	6	4,750	2.27	2.6	25.9	12.4	7.12	43	23		
27-Apr-16	200.0	8	20	nr	4,160	2.57	2.6	25.8	13.5	nr	43	43		
28-Apr-16	198.4	12	25	7	4,066	2.48	2.6	25.7	13.2	7.20	30	30		
29-Apr-16	188.1	9	19	7	3,911	2.56	2.6	25.7	12.1	6.98	93	43		
30-Apr-16	182.3	10	20	7	3,810	2.36	2.5	24.8	12.9	6.94	43	43		
Max:	604.7													
Min:	154.0													
Average:	242.1	20	22	10	4,349	2.06			12	7.09				
Total Flow:	7262.7										142	95		
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
- (8) Total Nitrogen results are calculated from TKN and nitrate values