

**City of Winnipeg
Water and Waste Department
North End Water Pollution Control Centre Monitoring Data
December 2013**

Licence 2684 RRR	Raw Sewage	Final Effluent 24 Hour Composite							Final Effluent Grab Sample			
		TSS	BOD5	cBOD5	Ammonia	Ortho Phosphorus	Total Phosphorus	Total Nitrogen	Temp.	pH	Fecal Coliform	E.Coli
1-Dec-13	124.4	31	25	14	3,993	4.71	5.2	37	16	6.76	1,500	1,500
2-Dec-13	114.6	25	26	12	2,967	4.42	5.2	37	16	6.72	210	23
3-Dec-13	138.0	31	nr	nr	3,987	4.64	5.3	37	16	6.72	23	9
4-Dec-13	131.3	28	27	14	3,677	4.87	5.3	38	15	6.86	230	21
5-Dec-13	142.7	32	30	14	4,168	4.68	5.3	38	15	6.82	430	150
6-Dec-13	131.0	26	23	12	3,824	4.65	5.3	38	15	6.75	43	15
7-Dec-13	127.1	33	27	13	3,636	5.10	5.4	38	15	6.93	430	230
8-Dec-13	128.8	34	nr	nr	3,799	4.89	5.4	38	16	6.81	430	230
9-Dec-13	134.9	31	28	14	3,804	4.63	5.4	38	15	6.73	43	43
10-Dec-13	125.5	33	nr	nr	3,664	4.93	5.4	38	15	6.75	430	150
11-Dec-13	130.9	28	nr	nr	3,941	4.62	5.5	39	13	7.13	43	23
12-Dec-13	122.5	30	24	13	3,747	4.49	5.6	39	14	6.75	230	230
13-Dec-13	129.1	30	26	13	4,041	4.65	5.6	39	15	6.90	930	930
14-Dec-13	125.4	30	24	13	3,913	4.84	5.6	39	15	6.71	430	430
15-Dec-13	124.3	32	24	13	3,901	4.68	5.6	39	15	6.92	43	15
16-Dec-13	127.1	24	23	14	3,851	4.30	5.6	39	15	6.80	150	43
17-Dec-13	130.1	28	18	11	4,136	4.33	5.7	39	15	6.86	43	43
18-Dec-13	133.3	20	19	10	4,373	4.72	5.7	40	15	6.85	21	15
19-Dec-13	129.8	24	19	11	4,218	5.04	5.7	40	14	6.95	93	23
20-Dec-13	128.9	21	22	11	3,866	4.37	5.7	40	15	6.93	93	15
21-Dec-13	127.5	24	19	10	3,749	4.57	5.8	40	15	6.74	1,500	230
22-Dec-13	123.7	23	19	11	3,675	4.51	5.8	40	15	6.71	4,300	2,300
23-Dec-13	126.8	25	20	11	3,805	4.07	5.7	40	14	6.80	4,300	230
24-Dec-13	130.9	17	19	11	3,587	3.63	5.7	40	14	6.94	930	930
25-Dec-13	110.3	19	19	10	3,264	3.96	5.7	40	15	6.77	750	430
26-Dec-13	113.9	25	22	12	4,135	4.83	5.7	40	15	6.71	930	930
27-Dec-13	124.8	21	23	11	4,517	4.71	5.7	41	ns	ns	ns	ns
28-Dec-13	118.5	25	19	10	3,923	4.35	5.6	41	15	6.99	7,500	930
29-Dec-13	120.3	24	21	12	3,981	4.36	5.6	41	14	7.10	930	430
30-Dec-13	123.7	23	23	12	3,933	4.39	5.6	41	13	7.03	4,300	930
31-Dec-13	132.1	27	22	11	4,255	4.45	5.6	41	12	6.93	150	75
Max:	142.7											
Min:	110.3											
Average:	126.8	27	23	12	3,882	4.56			15	6.85		
Total Flow:	3932.0											
Geo.Mean:											322	129

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