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

Licence 2684 RRR	File # 1071.10	Final Effluent 24 Hour Composite							Final Effluent Grab Sample			
Date	Raw Sewage Daily Flow	TSS	BOD5	cBOD5	Ammonia	Ortho Phosphorus	Total Phosphorus	Total Nitrogen	Temp.	pH	Fecal Coliform	E.Coli
	ML**	(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-Feb-16	132.2	6	25	8	4,217	1.71	3.5	42.6	15.1	6.95	14	14
2-Feb-16	135.3	9	30	6	3,924	1.68	3.4	42.4	14.5	6.91	20	11
3-Feb-16	129.2	9	26	7	4,017	1.95	3.4	42.5	14.4	7.07	43	23
4-Feb-16	130.1	12	41	8	4,294	2.03	3.3	42.5	14.9	6.91	93	21
5-Feb-16	129.5	10	47	8	4,092	2.15	3.2	42.5	14.9	6.98	43	43
6-Feb-16	124.4	10	32	7	4,081	2.94	3.2	42.5	14.3	7.01	2,400	2,400
7-Feb-16	124.2	13	52	8	4,075	3.40	3.2	42.4	14.5	7.08	930	930
8-Feb-16	126.8	10	32	8	4,235	3.12	3.1	42.3	14.4	6.93	23	23
9-Feb-16	124.5	13	34	8	4,009	3.03	3.1	42.3	14.2	7.01	93	43
10-Feb-16	129.6	10	30	8	4,185	2.56	3.1	42.3	13.9	7.09	9,300	1,500
11-Feb-16	128.7	12	35	7	4,236	2.64	3.0	42.3	13.9	6.97	43	43
12-Feb-16	129.1	12	nr	nr	4,687	2.38	3.0	42.4	13.9	7.02	74	74
13-Feb-16	120.2	13	32	7	4,063	2.04	3.0	42.5	13.3	7.02	930	430
14-Feb-16	119.0	14	42	7	3,962	2.07	2.9	42.4	13.7	7.13	930	930
15-Feb-16	125.0	12	52	9	4,062	2.11	2.9	42.4	14.3	7.01	2,400	2,400
16-Feb-16	124.9	12	38	14	3,971	1.71	2.8	42.2	13.9	7.04	240	240
17-Feb-16	128.1	13	36	nr	4,162	2.09	2.9	42.2	14.7	6.96	150	74
18-Feb-16	130.4	14	44	8	4,224	2.26	2.9	42.3	14.7	6.94	150	150
19-Feb-16	145.5	14	32	9	4,686	2.18	2.9	42.3	14.9	6.81	74	74
20-Feb-16	135.7	16	36	8	3,909	1.70	2.8	42.1	14.1	6.95	2,400	930
21-Feb-16	130.1	12	44	8	3,967	1.80	2.8	41.9	14.1	6.92	740	300
22-Feb-16	131.0	10	54	9	3,930	1.60	2.8	41.7	14.1	6.88	93	93
23-Feb-16	132.6	16	42	9	4,230	1.89	2.7	41.6	ns	ns	ns	ns
24-Feb-16	128.9	18	43	11	4,046	2.10	2.7	41.6	14.1	6.98	930	930
25-Feb-16	129.7	13	35	11	3,996	1.97	2.7	41.5	14.2	7.03	430	240
26-Feb-16	138.7	16	33	10	4,467	1.72	2.7	41.2	14.1	6.93	430	430
27-Feb-16	133.3	15	34	8	4,052	1.51	2.7	41.0	13.7	6.87	2,400	2,400
28-Feb-16	125.1	13	36	10	4,230	1.77	2.7	40.9	14.0	7.10	3,800	1,400
29-Feb-16	127.8	16	39	9	4,717	1.82	2.7	41.0	14.0	6.96	93	93
Max:	145.5											
Min:	119.0											
Average:	**129.3**	**13**	**38**	**9**	**4,163**	**2.14**			**14**	**6.98**		
Total Flow:	**3749.7**											
Geo.Mean:											**271**	**188**

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