

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

Licence 2716RR	Raw Sewage	Final Effluent 24 Hour Composite										Final Effluent Grab Sample		
		TSS		BOD5		cBOD5		Ammonia	Ortho Phosphorus	Total Phosphorus	Total Nitrogen	Temp.	pH	E.Coli
		(mg/L)	(mg/L)*	(mg/L)	(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-Dec-13	44.3	137	30	>74	21	>36	9	1,599	3.89	4.9	45	16	6.59	9
2-Dec-13	46.1	6	30	14	21	5	9	1,541	3.91	4.9	45	16	6.54	430
3-Dec-13	44.9	4	30	nr	21	nr	9	1,575	4.41	4.8	45	16	6.50	9
4-Dec-13	42.9	6	30	9	21	4	9	1,584	4.59	4.9	45	16	6.63	93
5-Dec-13	42.1	7	29	9	20	4	9	1,588	4.49	4.9	45	15	6.59	93
6-Dec-13	43.7	ns	30	ns	20	ns	9	ns	ns	4.9	45	15	6.62	43
7-Dec-13	45.0	53	31	34	21	17	9	1,619	4.04	5.0	45	15	6.48	230
8-Dec-13	44.8	132	36	nr	21	nr	9	1,667	3.85	5.1	45	15	6.64	430
9-Dec-13	47.0	40	37	37	22	20	9	1,710	4.38	5.1	45	15	6.64	4,300
10-Dec-13	44.7	60	38	nr	22	nr	9	1,658	4.51	5.1	45	15	6.02	930
11-Dec-13	41.7	7	38	nr	23	nr	10	1,522	4.20	5.2	45	13	6.94	230
12-Dec-13	44.2	7	38	11	22	6	10	1,620	3.62	5.1	45	15	6.70	430
13-Dec-13	41.8	<3	37	13	21	6	9	1,597	3.97	5.2	45	15	6.68	43
14-Dec-13	44.9	7	37	10	20	5	9	1,681	3.95	5.2	45	15	6.53	9
15-Dec-13	45.1	6	37	13	20	5	9	1,634	3.84	5.2	45	15	6.73	38
16-Dec-13	47.6	7	37	14	20	10	9	1,666	4.33	5.2	45	15	6.55	4,300
17-Dec-13	41.9	6	36	8	19	5	9	1,581	4.40	5.2	45	15	6.65	93
18-Dec-13	44.3	5	35	8	18	6	9	1,731	4.53	5.3	45	15	6.58	43
19-Dec-13	43.9	6	35	9	17	5	8	1,632	3.74	5.3	45	15	6.66	43
20-Dec-13	43.6	5	34	8	17	6	8	1,584	3.34	5.2	45	15	6.62	<3
21-Dec-13	43.4	5	34	8	17	6	8	1,503	3.80	5.2	45	15	6.61	<3
22-Dec-13	50.6	6	34	9	17	5	8	1,857	4.35	5.2	45	14	6.46	23
23-Dec-13	44.3	6	32	8	15	6	8	1,575	3.74	5.2	45	15	6.45	93
24-Dec-13	46.0	5	21	9	15	7	8	1,641	3.92	4.9	44	15	6.62	7
25-Dec-13	40.1	6	20	10	15	6	8	1,477	3.65	4.8	44	15	6.52	4
26-Dec-13	40.2	9	20	10	15	7	8	1,648	4.13	4.8	44	15	6.46	4
27-Dec-13	42.5	6	20	10	15	6	8	1,718	4.37	4.8	44	15	6.70	43
28-Dec-13	42.5	6	20	10	14	7	8	1,595	3.99	4.9	45	14	6.63	<3
29-Dec-13	42.5	9	20	11	15	6	8	1,642	4.00	4.8	45	14	6.66	15
30-Dec-13	42.8	4	19	12	15	10	8	1,699	4.36	4.8	45	14	6.66	9
31-Dec-13	43.9	ns	15	ns	12	ns	7	ns	ns	4.7	44	14	6.66	23
<b>Max:</b>	50.6													
<b>Min:</b>	40.1													
<b>Average:</b>	<b>44.0</b>	<b>19</b>		<b>15</b>		<b>8</b>		<b>1,626</b>	<b>4.08</b>			<b>15</b>	<b>6.59</b>	
<b>Total Flow:</b>	<b>1363.4</b>													
<b>Geo.Mean:</b>														<b>43</b>

**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 98.6 ML/D per clause 27 of Licence 2716RR
- (6) Bracketed Coliform results not used in the Geometric Mean calculation
- (7) Raw wastewater flows in excess of 100 ML/D will by-pass the secondary process
- (8) Total Nitrogen results are calculated from TKN and nitrate values