



Water and Waste Department • Service des eaux et des déchets

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September 7, 2016

Melanie Betsill  
Office of Drinking Water  
Manitoba Sustainable Development  
1007 Century Street  
Winnipeg, Manitoba R3H 0W4

Our File: 040-18-18-55-00

Dear Ms. Betsill:

**RE: AUGUST 2016 WATER QUALITY COMPLIANCE  
SUBMISSION FOR THE CITY OF WINNIPEG WATER SUPPLY SYSTEM**

Please find attached on-line and grab turbidity summary reports, on-line and grab chlorine summary reports and the UV summary report for the Water Treatment Plant for August 2016. We have included one corrective action report for a positive total coliform in the distribution system.

The August on-line and grab sampling turbidity reports include results obtained for the Water Treatment Plant raw water and the eight filters. Please note that on August 10, the maximum turbidity for Filter 3 was greater than 0.3 NTU, and on August 25, the maximum turbidities on Filters 2, 3, 5, 6, and 8 were greater than 0.3 NTU; the elevated turbidities occurred for short periods of time which did not exceed 12 consecutive hours. The turbidity results for the effluent from the filters met the licence requirements.

The August on-line and grab sampling chlorine reports include results obtained for the Deacon Booster Pumping Station at the Water Treatment Plant. The free chlorine results at the Water Treatment Plant met the licence requirements.

On August 16<sup>th</sup>, a positive total coliform result was reported for a routine sample at the NW03 location. On August 17<sup>th</sup> and 18<sup>th</sup>, the location was resampled and results were reported to be negative. Our resampling also indicated that the chlorine levels at the location were normal and provided adequate disinfection. Please see the attached corrective action report for additional details.

The August UV summary report includes results obtained for the six UV reactors at the Water Treatment Plant. The UV disinfection results met the licence requirements.

Please let me know of any concerns or questions respecting this submission. I may be reached by telephone at 204-986-8359 or by e-mail at [rgrosselle@winnipeg.ca](mailto:rgrosselle@winnipeg.ca).

Yours sincerely,

*Original signed by:*

R. Grosselle  
Manager of Environmental Standards  
Attachments

c:(e-mail)

Dr. L. Richards, Winnipeg Regional Health Authority  
Dr. H. Chang, Winnipeg Regional Health Authority  
Dr. S. Roberecki, Manitoba Health, Healthy Living and Seniors  
M. L. Geer, CPA, CA  
G. Patton, P.Eng.  
T. Shanks, P.Eng.  
M. Szmon, P.Eng.  
C. Diduck

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**CITY OF WINNIPEG**  
**WATER AND WASTE DEPARTMENT**  
**WATER SERVICES**

Water System Code: **252.00**  
 Licence Number: **PWS-09-412-01**

**WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT**

**August 2016 Turbidity (NTU)**

Date	Raw	Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
	Avg	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
1/08/2016	2.24	0.06	0.14	0.10	0.15	0.10	0.21	0.07	0.18	0.06	0.12	0.08	0.09	0.03	0.08	0.02	0.07
2/08/2016	2.37	0.06	0.14	0.09	0.16	0.13	0.17	0.07	0.14	0.05	0.11	0.07	0.12	0.03	0.07	0.02	0.03
3/08/2016	2.95	0.08	0.12	0.08	0.15	0.11	0.18	0.06	0.09	0.06	0.12	0.08	0.19	0.04	0.07	0.03	0.07
4/08/2016	2.73	0.10	0.17	0.09	0.14	0.11	0.26	0.09	0.14	0.07	0.11	0.07	0.14	0.03	0.08	0.02	0.07
5/08/2016	2.85	0.09	0.16	0.09	0.16	0.12	0.14	0.07	0.14	0.06	0.11	0.09	0.10	0.03	0.09	0.02	0.08
6/08/2016	2.90	0.10	0.12	0.08	0.16	0.11	0.21	0.06	0.14	0.06	0.11	0.08	0.15	0.04	0.05	0.03	0.08
7/08/2016	1.54	0.10	0.18	0.08	0.11	0.10	0.21	0.08	0.15	0.06	0.10	0.08	0.12	0.03	0.10	0.02	0.09
8/08/2016	1.85	0.08	0.17	0.07	0.12	0.11	0.13	0.05	0.10	0.05	0.08	0.10	0.14	0.02	0.07	0.02	0.03
9/08/2016	3.05	0.11	0.14	0.07	0.14	0.11	0.21	0.05	0.11	0.11	0.07	0.09	0.14	0.03	0.04	0.02	0.06
10/08/2016	2.89	0.07	0.23	0.06	0.30	0.08	0.41	0.03	0.22	OL	OL	0.08	0.22	0.02	0.21	0.01	0.15
11/08/2016	2.60	0.08	0.19	0.05	0.16	0.11	0.19	0.06	0.16	0.05	0.17	0.09	0.17	0.02	0.10	0.02	0.04
12/08/2016	3.00	0.08	0.20	0.05	0.15	0.10	0.23	0.06	0.15	0.04	0.09	0.10	0.19	0.03	0.05	0.03	0.11
13/08/2016	3.10	0.12	0.15	0.05	0.16	0.10	0.25	0.05	0.09	0.04	0.10	0.10	0.21	0.04	0.11	0.03	0.12
14/08/2016	3.27	0.12	0.24	0.07	0.11	0.11	0.27	0.06	0.16	0.04	0.11	0.12	0.16	0.03	0.15	0.03	0.15
15/08/2016	3.55	0.11	0.24	0.06	0.19	0.12	0.18	0.05	0.17	0.06	0.10	0.09	0.23	0.04	0.08	0.04	0.10
16/08/2016	3.20	0.05	0.15	0.07	0.13	0.09	0.16	0.07	0.13	0.05	0.09	0.02	0.06	0.03	0.05	0.02	0.05
17/08/2016	3.26	0.08	0.12	0.03	0.10	0.09	0.18	0.07	0.10	0.06	0.11	0.02	0.07	0.02	0.05	0.01	0.06
18/08/2016	3.41	0.07	0.14	OL	OL	0.08	0.18	0.08	0.14	0.06	0.12	0.02	0.04	0.02	0.04	0.01	0.06
19/08/2016	3.11	0.07	0.16	0.03	0.14	0.07	0.21	0.07	0.15	0.07	0.12	0.03	0.06	0.02	0.06	0.01	0.10
20/08/2016	3.61	0.06	0.15	0.07	0.09	0.10	0.14	0.06	0.14	0.05	0.09	0.03	0.09	0.02	0.07	0.01	0.02
21/08/2016	3.53	0.06	0.09	0.07	0.14	0.07	0.18	0.05	0.08	0.05	0.09	0.02	0.09	0.02	0.03	0.02	0.07
22/08/2016	3.92	0.06	0.14	0.06	0.14	0.07	0.09	0.07	0.13	0.06	0.09	0.03	0.05	0.02	0.10	0.01	0.08
23/08/2016	3.45	0.06	0.17	0.08	0.09	0.10	0.16	0.07	0.16	0.06	0.11	0.04	0.10	0.03	0.04	0.03	0.04
24/08/2016	4.09	0.09	0.10	0.09	0.16	0.09	0.22	0.08	0.11	0.05	0.12	0.04	0.11	0.04	0.11	0.03	0.11
25/08/2016	4.58	0.04	0.24	0.06	0.32	0.08	0.35	0.06	0.29	0.04	0.49	0.04	0.35	0.02	0.18	0.02	0.38
26/08/2016	4.59	0.11	0.20	0.11	0.19	0.11	0.23	0.09	0.20	0.08	0.15	0.05	0.14	0.05	0.07	0.02	0.12
27/08/2016	4.30	0.08	0.18	0.09	0.18	0.10	0.14	0.10	0.15	0.07	0.14	0.05	0.07	0.04	0.13	0.01	0.08
28/08/2016	3.70	0.07	0.10	0.10	0.12	0.11	0.21	0.09	0.18	0.05	0.12	0.04	0.12	0.03	0.10	0.01	0.03
29/08/2016	3.47	0.07	0.18	0.08	0.19	0.09	0.17	0.07	0.12	0.06	0.12	0.03	0.09	0.03	0.07	0.01	0.09
30/08/2016	3.99	0.06	0.14	0.07	0.15	0.09	0.11	0.08	0.16	0.05	0.08	0.04	0.05	0.02	0.08	0.01	0.01
31/08/2016	4.20	0.06	0.10	0.08	0.11	0.09	0.17	0.06	0.17	0.04	0.08	0.04	0.09	0.02	0.03	0.01	0.05

Total Number of Measurements Taken, A:	16251	13102	15870	13099	15651	16256	14893	15885
Turbidity Standard for Monitoring Location (NTU):	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Number of Measurements Meeting Standard, B:	16251	13099	15866	13099	15650	16255	14893	15883
Compliance with Turbidity Standard, C = B/A X 100%:	100.00%	99.98%	99.98%	100.00%	99.99%	99.99%	100.00%	99.99%

OL: Offline

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Submitted By (Print): D. Minor

Signature: Original signed by D. Minor



CITY OF WINNIPEG  
 WATER AND WASTE DEPARTMENT  
 ENVIRONMENTAL STANDARDS DIVISION

**WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT**

Water System Code: 252.00		Turbidity (NTU)																	
Licence No. PWS-09-412-01																			
Date	Raw Water		Filter 1		Filter 2		Filter 3		Filter 4		Filter 5		Filter 6		Filter 7		Filter 8		
	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	
01-Aug-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
02-Aug-2016	1.94	2.30	0.13	0.05	0.19	0.12	0.15	0.12	0.11	0.05	0.13	0.08	0.08	0.07	0.06	0.02	0.07	0.03	
03-Aug-2016	1.94	NA	0.12	0.04	0.10	0.07	0.17	0.13	0.10	0.04	0.09	0.07	0.10	0.09	0.11	0.06	0.12	0.07	
04-Aug-2016	2.07	2.71	0.16	0.10	0.13	0.09	0.13	0.11	0.13	0.06	0.06	0.05	0.09	0.08	0.09	0.04	0.28	0.03	
05-Aug-2016	1.95	NA	0.12	0.08	0.15	0.10	0.14	0.12	0.19	0.04	0.15	0.08	0.08	<0.02	0.12	0.02	0.10	0.03	
06-Aug-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
07-Aug-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
08-Aug-2016	2.20	2.61	0.09	0.07	0.11	0.07	0.12	0.10	0.15	0.07	0.10	0.06	0.13	0.08	0.06	0.02	0.06	0.03	
09-Aug-2016	2.42	3.12	0.11	0.09	0.13	0.07	0.16	0.13	0.10	0.03	0.08	0.04	0.09	0.10	0.07	0.02	0.09	0.04	
10-Aug-2016	2.64	2.99	0.15	0.14	0.12	0.10	0.16	0.14	0.11	0.05	OL	OL	0.09	0.09	OL	OL	0.08	0.03	
11-Aug-2016	2.47	3.15	0.09	0.09	0.14	0.08	0.11	0.12	0.11	0.10	0.12	0.07	0.07	0.12	0.06	0.03	0.24	0.05	
12-Aug-2016	2.48	3.15	0.10	0.11	0.09	0.06	0.12	0.14	0.27	0.05	0.11	0.06	0.24	0.13	0.27	0.03	0.06	0.05	
13-Aug-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
14-Aug-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
15-Aug-2016	2.55	3.34	0.17	0.19	0.22	0.10	0.18	0.17	0.16	0.08	0.18	0.07	0.09	0.16	0.09	0.03	0.08	0.05	
16-Aug-2016	2.71	3.09	0.11	0.05	0.11	0.06	0.13	0.09	0.11	0.06	0.29	0.04	0.10	0.02	0.07	0.03	0.07	0.05	
17-Aug-2016	2.72	4.68	0.14	0.06	0.14	0.08	0.14	0.09	0.14	0.06	0.06	0.04	0.09	0.02	0.08	0.02	0.09	0.03	
18-Aug-2016	2.70	2.92	0.16	0.08	OL	OL	0.14	0.09	0.17	0.07	0.13	0.06	0.08	0.02	0.09	0.02	0.11	0.04	
19-Aug-2016	2.76	3.01	0.20	0.10	0.16	0.08	0.14	0.09	0.16	0.08	0.12	0.08	0.09	0.03	0.10	0.02	0.08	0.03	
20-Aug-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
21-Aug-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
22-Aug-2016	3.19	3.13	0.15	0.06	0.10	0.06	0.14	0.07	0.11	0.04	0.11	0.05	0.10	0.02	0.10	0.03	0.07	0.03	
23-Aug-2016	2.56	3.20	0.13	0.06	0.14	0.08	0.16	0.10	0.13	0.04	0.10	0.06	0.12	0.05	0.09	0.02	0.10	0.04	
24-Aug-2016	3.24	NA	0.16	0.08	0.19	0.12	0.14	0.09	0.14	0.07	0.07	0.05	0.11	0.04	0.12	0.04	0.11	0.05	
25-Aug-2016	3.22	NA	0.15	0.08	0.15	0.11	0.16	0.13	0.15	0.08	OL	OL	0.09	0.05	OL	OL	0.09	0.04	
26-Aug-2016	3.10	NA	0.18	0.11	0.19	0.12	0.19	0.11	0.16	0.08	0.09	0.06	0.11	0.04	0.11	0.04	0.16	0.10	
27-Aug-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
28-Aug-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
29-Aug-2016	3.34	3.12	0.14	0.07	0.18	0.10	0.14	0.08	0.14	0.05	0.10	0.03	0.10	0.03	0.11	0.02	0.11	0.02	
30-Aug-2016	3.26	3.35	0.12	0.04	0.13	0.08	0.16	0.09	0.15	0.07	0.10	0.04	0.08	0.03	0.10	0.03	0.07	<0.02	
31-Aug-2016	3.05	NA	0.13	0.02	0.14	0.06	0.18	0.08	0.15	0.02	0.10	0.03	0.12	0.04	0.13	0.02	0.13	<0.02	
<b>Total number of measurements taken, A:</b>			22		21		22		22		20		22		20		22		
<b>Turbidity Standard for Monitoring Location (NTU):</b>			0.30		0.30		0.30		0.30		0.30		0.30		0.30		0.30		
<b>Number of measurements meeting standard, B:</b>			22		21		22		22		20		22		20		22		
<b>Compliance with Turbidity Standard, C= B/A X 100%:</b>			100%		100%		100%		100%		100%		100%		100%		100%		

NS: No Sample NA: Not Analyzed OL: Off-Line

**Comments:**

Analysers reading was unstable at time of sample collection for the raw on August 3, 5, 24, 25, 26 and 31.

Report Compiled By: H.Demchenko

Approved in LIMS By: C.Diduck

Date Approved: 7-Sep-16



WATER TREATMENT PLANT FREE CHLORINE ON-LINE MONITORING REPORT  
Deacon Booster Pumping Station

Water System Code: 252.00  
Licence Number: PWS-09-412-01  
Report Created: 01 September 2016

Report Period: August 2016

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/08/2016	1.17	1.05	1.12	1.03
02/08/2016	1.11	0.91	1.05	0.90
03/08/2016	1.21	1.02	1.04	0.79
04/08/2016	1.02	0.96	0.94	0.79
05/08/2016	1.17	1.08	1.01	0.94
06/08/2016	1.18	1.06	0.99	0.90
07/08/2016	1.10	1.05	0.91	0.84
08/08/2016	1.30	1.00	0.97	0.81
09/08/2016	1.39	1.13	1.07	0.95
10/08/2016	1.37	0.68	1.36	0.86
11/08/2016	1.10	0.97	1.07	0.94
12/08/2016	1.09	1.01	1.16	1.02
13/08/2016	1.05	0.96	1.13	0.97
14/08/2016	1.06	0.96	1.05	0.96
15/08/2016	0.99	0.86	1.06	0.96
16/08/2016	1.00	0.88	1.08	1.02
17/08/2016	1.04	0.90	1.06	0.97
18/08/2016	0.98	0.88	1.00	0.86
19/08/2016	0.96	0.82	0.92	0.77
20/08/2016	1.13	0.98	1.10	1.02
21/08/2016	1.10	0.97	1.12	1.04
22/08/2016	1.16	1.05	1.19	1.10
23/08/2016	1.27	0.81	1.24	1.05
24/08/2016	1.26	1.00	1.23	1.08
25/08/2016	1.05	0.61	1.08	0.68
26/08/2016	1.02	0.53	1.06	0.85
27/08/2016	1.18	1.09	1.17	1.07
28/08/2016	1.21	1.05	1.26	1.11
29/08/2016	1.07	1.02	1.10	0.99
30/08/2016	1.08	1.02	1.11	1.03
31/08/2016	1.07	0.99	1.09	0.99

Total Number of Measurements, A:	21605	21603
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	21605	21603
COMPLIANCE, C = B/A X 100%:	100	100

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Submitted By (Print): D. Minor

Signature: Original signed by D. Minor



CITY OF WINNIPEG  
WATER AND WASTE DEPARTMENT  
ENVIRONMENTAL STANDARDS DIVISION

**WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT**

Water System Code: 252.00		Deacon Booster Pumping Station Branch 1			Deacon Booster Pumping Station Branch 2		
Licence No. PWS-09-412-01							
Date	Free Chlorine (mg/L)		Total Chlorine (mg/L)	Free Chlorine (mg/L)		Total Chlorine (mg/L)	
	Analyser	Grab	Grab	Analyser	Grab	Grab	
01-Aug-2016	NS	NS	NS	NS	NS	NS	
02-Aug-2016	1.09	1.07	1.27	1.02	1.08	1.27	
03-Aug-2016	1.22	1.19	1.37	1.14	1.13	1.39	
04-Aug-2016	1.02	1.10	1.32	0.93	0.93	1.08	
05-Aug-2016	1.16	1.17	1.32	1.02	0.99	1.27	
06-Aug-2016	NS	NS	NS	NS	NS	NS	
07-Aug-2016	NS	NS	NS	NS	NS	NS	
08-Aug-2016	1.24	1.22	1.34	0.97	1.10	1.24	
09-Aug-2016	1.17	1.20	1.45	0.99	1.05	1.26	
10-Aug-2016	1.96	1.89	2.12	1.68	1.75	1.89	
11-Aug-2016	1.09	1.05	1.29	1.12	1.12	1.27	
12-Aug-2016	1.07	1.02	1.26	OL	1.23	1.38	
13-Aug-2016	NS	NS	NS	NS	NS	NS	
14-Aug-2016	NS	NS	NS	NS	NS	NS	
15-Aug-2016	1.00	1.10	1.25	1.09	1.12	1.25	
16-Aug-2016	0.94	1.04	1.24	1.04	1.00	1.17	
17-Aug-2016	1.06	1.16	1.32	1.11	1.12	1.30	
18-Aug-2016	0.95	1.02	1.14	0.98	0.99	1.15	
19-Aug-2016	0.94	1.00	1.16	0.85	0.94	1.09	
20-Aug-2016	NS	NS	NS	NS	NS	NS	
21-Aug-2016	NS	NS	NS	NS	NS	NS	
22-Aug-2016	1.15	1.22	1.43	1.18	1.28	1.43	
23-Aug-2016	1.33	1.31	1.60	1.29	1.31	1.48	
24-Aug-2016	1.25	1.38	1.55	1.21	1.31	1.49	
25-Aug-2016	1.23	1.33	1.50	1.18	1.28	1.49	
26-Aug-2016	1.27	1.26	1.46	1.13	1.18	1.39	
27-Aug-2016	NS	NS	NS	NS	NS	NS	
28-Aug-2016	NS	NS	NS	NS	NS	NS	
29-Aug-2016	1.10	1.11	1.24	1.08	1.13	1.30	
30-Aug-2016	1.17	1.13	1.28	1.21	1.13	1.26	
31-Aug-2016	1.14	1.18	1.36	1.14	1.18	1.34	
<b>Total number of measurements taken, A:</b>			22		22		
<b>Chlorine Standard for Monitoring Location (mg/L):</b>			0.50		0.50		
<b>Number of measurements meeting standard, B:</b>			22		22		
<b>Compliance with Chlorine Standard, C= B/A X 100%:</b>			100%		100%		

NS: No Sample NA: Not Analyzed OL: Off-Line

Comments:

Report Compiled By: H.Demchenko

Approved in LIMS By: C.Diduck

Date Approved: 7-Sep-16



**CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT  
WATER SERVICES

Water System Code: 252.00  
Licence Number: PWS-09-412-01

**WATER TREATMENT PLANT UV REPORT**

Report Period: **August 2016**      Report Created: **Thursday, September 01, 2016**

Date	Transmittance %			UVR-D100A			UVR-D200A			UVR-D300A			UVR-D400A			UVR-D500A			UVR-D600A			Total			% Volume Treated To Dose				
	Untreated	Below	To	Untreated	Below	To	Untreated	Below	To	Untreated	Below	To	Untreated	Below	To	Untreated	Below	To	Untreated	Below	To	Untreated	Below	To					
01/08/2016	93.46	0.00	75.46	75.46	0.00	0.00	0.00	0.00	0.00	48.26	48.26	0.00	0.00	0.00	0.00	78.30	78.30	0.00	0.00	0.00	0.00	0.00	202.02	202.02	100.00				
02/08/2016	93.68	0.00	75.55	75.55	0.00	0.00	0.00	0.00	0.00	48.34	48.34	0.00	0.00	0.00	0.00	78.12	78.12	0.00	0.00	0.00	0.00	0.00	202.01	202.01	100.00				
03/08/2016	93.17	0.00	75.37	75.37	0.00	0.00	0.00	0.00	0.00	48.08	48.08	0.00	0.00	0.00	0.00	44.01	44.01	0.00	0.05	34.47	34.52	0.00	201.94	201.99	99.98				
04/08/2016	93.43	0.00	75.03	75.03	0.00	0.00	0.00	0.00	0.00	47.87	47.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.11	79.11	0.00	202.01	202.01	100.00				
05/08/2016	93.59	0.00	74.85	74.85	0.00	0.00	0.00	0.00	0.00	47.96	47.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.22	79.22	0.00	202.04	202.04	100.00				
06/08/2016	93.64	0.00	75.01	75.01	0.00	0.00	0.00	0.00	0.00	48.29	48.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.40	79.40	0.00	202.70	202.70	100.00				
07/08/2016	93.59	0.00	76.81	76.81	0.00	0.00	0.00	0.00	0.00	49.50	49.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.27	81.27	0.00	207.58	207.58	100.00				
08/08/2016	93.90	0.00	79.39	79.39	0.00	0.00	0.00	0.00	0.00	50.64	50.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.01	83.01	0.00	213.04	213.04	100.00				
09/08/2016	93.71	0.00	79.36	79.36	0.00	0.00	0.00	0.00	0.00	50.66	50.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	82.98	82.98	0.00	213.00	213.00	100.00				
10/08/2016	92.63	0.00	27.89	27.90	0.00	0.00	24.77	24.77	0.00	40.32	40.32	0.00	0.00	0.00	0.00	22.11	22.11	0.14	0.18	28.34	28.66	0.14	143.31	143.75	98.70				
11/08/2016	94.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.76	76.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	226.50	226.50	100.00				
12/08/2016	94.03	0.00	0.00	0.00	0.00	0.00	63.58	63.58	0.00	74.83	74.83	0.00	0.05	9.87	10.02	0.05	40.99	41.04	0.00	0.00	42.14	42.14	0.00	231.50	231.61	99.95			
13/08/2016	93.92	0.00	0.00	0.00	0.00	0.00	70.61	70.61	0.00	72.68	72.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74.10	74.10	0.00	217.39	217.39	100.00				
14/08/2016	93.96	0.00	0.00	0.00	0.00	0.00	68.25	68.25	0.00	70.77	70.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	70.98	70.98	0.00	210.00	210.00	100.00				
15/08/2016	93.86	0.00	0.00	0.00	0.00	0.00	67.72	67.72	0.00	70.71	70.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.59	71.59	0.00	210.02	210.02	100.00				
16/08/2016	93.74	0.00	0.00	0.00	0.00	0.00	67.57	67.57	0.00	70.57	70.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.85	71.85	0.00	209.99	209.99	100.00				
17/08/2016	93.37	0.00	0.00	0.00	0.00	0.00	67.35	67.35	0.00	70.49	70.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.17	72.17	0.00	210.01	210.01	100.00				
18/08/2016	93.42	0.00	0.00	0.00	0.00	0.00	68.55	68.55	0.00	71.58	71.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.30	72.30	0.00	212.43	212.43	100.00				
19/08/2016	93.39	0.00	0.00	0.00	0.00	0.00	84.16	84.16	0.00	48.93	48.93	0.00	0.00	0.24	0.24	0.00	0.00	0.00	0.00	81.43	81.43	0.00	215.75	215.75	100.00				
20/08/2016	93.58	0.00	0.00	0.00	0.00	0.00	84.99	84.99	0.00	48.98	48.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	82.04	82.04	0.00	216.01	216.01	100.00				
21/08/2016	93.68	0.00	0.00	0.00	0.00	0.00	84.98	84.98	0.00	48.98	48.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	82.04	82.04	0.00	216.01	216.01	100.00				
22/08/2016	93.76	0.00	0.00	0.00	0.00	0.00	85.02	85.02	0.00	48.92	48.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	82.09	82.09	0.00	216.02	216.02	100.00				
23/08/2016	93.18	0.12	59.08	59.32	0.03	0.03	24.42	24.48	0.00	48.79	48.79	0.00	0.00	0.00	0.00	0.04	61.75	61.80	0.00	0.00	20.59	20.59	0.15	215.63	215.97	99.84			
24/08/2016	92.81	0.00	72.28	72.28	0.09	0.09	0.35	0.52	0.00	62.78	62.78	0.00	0.00	0.00	0.00	0.03	76.16	76.23	0.00	0.00	0.00	0.12	211.58	211.82	99.89				
25/08/2016	91.56	0.01	19.55	19.57	0.00	0.00	22.29	22.29	0.00	0.01	34.94	34.96	0.00	0.00	0.00	0.00	37.14	37.14	0.00	0.00	0.00	0.01	113.93	113.95	99.98				
26/08/2016	92.41	0.00	8.73	8.73	0.00	0.00	76.20	76.21	0.00	0.09	19.21	19.30	0.00	0.00	24.54	24.54	0.02	0.02	39.54	39.57	0.00	203.92	204.05	99.94					
27/08/2016	92.94	0.00	0.00	0.00	0.00	0.00	84.99	84.99	0.00	0.00	0.00	0.00	0.00	0.00	49.71	49.71	0.00	0.00	0.00	0.00	0.00	214.97	214.97	100.00					
28/08/2016	93.25	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	49.60	49.60	0.00	0.00	80.39	80.39	0.00	215.00	215.00	100.00					
29/08/2016	93.54	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	49.74	49.74	0.00	0.00	80.23	80.23	0.00	214.98	214.98	100.00					
30/08/2016	93.81	0.00	0.00	0.00	0.00	0.00	85.01	85.01	0.00	0.00	0.00	0.00	0.00	0.00	49.64	49.64	0.00	0.00	80.23	80.23	0.00	214.87	214.87	100.00					
31/08/2016	93.81	0.00	0.00	0.00	0.00	0.00	85.00	85.00	0.00	0.00	0.00	0.00	0.00	0.00	47.41	47.41	0.00	0.00	78.84	78.84	0.00	211.05	211.05	100.00					
		0.12	0.14	874.36	874.62	0.12	0.12	1460.04	1460.29	0.00	0.10	1421.85	1421.95	0.00	0.05	280.84	280.89	0.05	0.25	553.55	553.85	0.14	0.23	1806.59	1806.96	0.44	0.89	6397.23	6398.55

**Water Volume Pq:**

Untreated: 0.01 %  
Below Dose: 0.01 %  
To Dose: 99.98 %

Submitted By (Print): D. Minor

Signature: Original signed by D. Minor



Water and Waste Department • Service des eaux et des déchets

Wednesday, August 31, 2016

**Our Incident/Report No: 02-2016**

LIMS Reference No: **47126**

Incident Date: **August 16, 2016**

Ms. Melanie Betsill  
Drinking Water Officer  
Manitoba Sustainable Development, Office of Drinking Water  
1007 Century Street  
Winnipeg MB R3H 0W4

## **RE: CORRECTIVE ACTION REPORT**

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<b>WATER SYSTEM, CODE</b>	Winnipeg Public Water System, 252.00
<b>LOCATION OF NON-COMPLIANT INCIDENT</b>	<b>Winnipeg 3-Dist NW03</b>
<b>INCIDENT REPORTED BY</b>	Courtney Diduck, Analytical Services Branch Head
<b>TYPE OF NON-COMPLIANT INCIDENT</b>	Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
<b>DESCRIPTION OF CORRECTIVE ACTIONS</b>	<u>Environmental Standards:</u> AS SOON AS POSSIBLE: Re-sampled original location until two consecutive negative results were reported. Also tested for turbidity, free/total chlorine, temperature and contacted the ODW.
<b>TEST RESULTS</b>	See Attached

### NOTES/COMMENTS:

1. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division and/or the Office of Drinking Water

**EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING**

N:\Environmental Standards\Analytical Services\Government Agencies\Office of Drinking Water\Corrective Action Reports





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Sample Name	Sample Number	Date Sampled	bacColiEsch-QT (MPNU/100mL)	bacColiTotal-QT (MPNU/100mL)	bacHPC (cfu/mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity-field (ntu)	Time Sampled (hrs)
NW03	482401	16-Aug-16	<1	1	<1	1.16	1.46	17.1	2.36	09:20
NW03_Resample 1	482992	17-Aug-16	<1	<1	<1	0.77	0.99	16.7	0.95	15:50
NW03_Resample 1 Duplicate	483042	17-Aug-16	<1	<1	<1	NA	NA	NA	NA	NA
NW03_Resample 2	483046	18-Aug-16	<1	<1	<1	0.79	1.02	17.2	0.35	15:56
NW03_Resample 2 Duplicate	483047	18-Aug-16	<1	<1	<1	NA	NA	NA	NA	NA

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. N/R-No Result due to laboratory/analyst error.
3. N/A-Not Analyzed.