



Water and Waste Department • Service des eaux et des déchets

October 7, 2015

Melanie Betsill
Office of Drinking Water
Manitoba Conservation and Water Stewardship
1007 Century Street
Winnipeg, Manitoba
R3H 0W4

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

Dear Ms. Betsill:

**RE: SEPTEMBER 2015 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 September 2015. We have included one corrective action report for a low chlorine residual in the distribution system.

The September on-line and grab sampling turbidity reports include results obtained for the Water Treatment Plant raw water and the eight filters. The turbidity results for the effluent from the filters met the licence requirements.

On September 10, a distribution system free chlorine result of 0.07 mg/L was reported at the SW03 location. As corrective actions to the low free chlorine result, we sampled upstream and downstream of the location, flushed the area and checked the infrastructure for possible closed or broken valves. Please see the attached corrective action report for additional details. The September 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.

The UV submission includes the summary report for September 2015 in accordance with Section 4.13, Table 2 of the Operating Licence. The UV licence requirement has been met in September.

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.

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
D.P. Sacher, P.Eng.
G. Patton, P.Eng.
T. Shanks, P.Eng.
A. J. Weremy, P.Eng.
C. Diduck



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

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

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

September 2015 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
1/09/2015	2.47	0.07	0.15	0.07	0.10	0.08	0.16	0.06	0.11	0.04	0.06	0.05	0.10	0.05	0.06	0.01	0.01
2/09/2015	2.53	0.09	0.15	0.08	0.13	0.09	0.25	0.05	0.09	0.03	0.06	0.06	0.07	0.04	0.06	0.01	0.02
3/09/2015	2.52	0.11	0.13	0.07	0.11	0.08	0.15	0.06	0.08	0.03	0.05	0.05	0.08	0.04	0.05	0.01	0.02
4/09/2015	2.51	0.10	0.15	0.07	0.09	0.07	0.15	0.04	0.10	0.04	0.05	0.05	0.09	0.04	0.07	0.01	0.01
5/09/2015	2.54	0.12	0.14	0.07	0.11	0.09	0.12	0.04	0.09	0.03	0.06	0.06	0.09	0.04	0.07	0.01	0.06
6/09/2015	2.43	0.12	0.16	0.06	0.10	0.08	0.16	0.05	0.07	0.03	0.06	0.05	0.13	0.04	0.05	0.01	0.01
7/09/2015	2.52	0.10	0.15	0.07	0.08	0.08	0.09	0.04	0.10	0.04	0.08	0.06	0.07	0.04	0.07	0.01	0.21
8/09/2015	2.65	0.07	0.09	0.06	0.11	0.08	0.16	0.05	0.07	0.03	0.07	0.07	0.10	0.04	0.09	0.01	0.04
9/09/2015	2.64	0.06	0.11	0.06	0.12	0.08	0.21	0.05	0.10	0.04	0.06	0.07	0.11	0.06	0.07	0.01	0.02
10/09/2015	2.76	0.06	0.11	0.08	0.10	0.10	0.13	0.04	0.08	0.04	0.07	0.07	0.13	0.05	0.20	0.01	0.05
11/09/2015	2.63	0.07	0.09	0.06	0.09	0.11	0.17	0.05	0.07	0.04	0.07	0.08	0.12	0.05	0.06	0.01	0.06
12/09/2015	2.70	0.05	0.10	0.05	0.07	0.11	0.19	0.05	0.10	0.05	0.06	0.07	0.14	0.05	0.09	0.01	0.02
13/09/2015	2.51	0.06	0.07	0.05	0.11	0.13	0.17	0.04	0.05	0.05	0.08	0.09	0.10	0.05	0.10	0.01	0.10
14/09/2015	2.39	0.04	0.09	0.04	0.09	0.11	0.18	0.05	0.09	0.04	0.06	0.08	0.14	0.05	0.07	0.01	0.02
15/09/2015	2.35	0.04	0.08	0.05	0.06	0.13	0.14	0.04	0.07	0.05	0.07	0.08	0.11	0.04	0.07	0.01	0.05
16/09/2015	2.35	0.05	0.07	0.04	0.09	0.12	0.20	0.04	0.05	0.04	0.07	0.09	0.13	0.04	0.08	0.01	0.04
17/09/2015	2.26	0.05	0.08	0.05	0.10	0.12	0.20	0.04	0.08	0.05	0.06	0.09	0.13	0.05	0.08	0.01	0.01
18/09/2015	2.25	0.05	0.08	0.05	0.06	0.14	0.16	0.04	0.08	0.05	0.07	0.09	0.11	0.05	0.07	0.01	0.04
19/09/2015	2.50	0.06	0.07	0.05	0.08	0.14	0.21	0.05	0.06	0.05	0.07	0.11	0.14	0.04	0.09	0.01	0.04
20/09/2015	2.85	0.05	0.11	0.05	0.11	0.11	0.17	0.05	0.10	0.05	0.07	0.07	0.12	0.06	0.07	0.01	0.02
21/09/2015	3.00	0.04	0.10	0.06	0.11	0.08	0.15	0.04	0.16	0.06	0.11	0.05	0.07	0.05	0.11	0.01	0.05
22/09/2015	2.57	0.06	0.07	0.05	0.09	0.08	0.15	0.05	0.06	0.05	0.10	0.05	0.10	0.06	0.08	0.01	0.06
23/09/2015	2.20	0.05	0.11	0.05	0.07	0.07	0.17	0.05	0.09	0.05	0.08	0.05	0.10	0.06	0.10	0.01	0.03
24/09/2015	2.17	0.05	0.11	0.06	0.11	0.10	0.13	0.05	0.11	0.04	0.07	0.05	0.06	0.05	0.10	0.01	0.05
25/09/2015	2.03	0.07	0.11	0.05	0.11	0.08	0.29	0.06	0.08	0.03	0.06	0.04	0.10	0.05	0.06	0.01	0.06
26/09/2015	2.78	0.06	0.11	0.05	0.07	0.08	0.16	0.05	0.10	0.04	0.11	0.05	0.11	0.05	0.16	0.01	0.09
27/09/2015	2.23	0.06	0.13	0.07	0.11	0.10	0.13	0.05	0.09	0.04	0.07	0.06	0.07	0.05	0.10	0.02	0.06
28/09/2015	1.91	0.09	0.10	0.06	0.12	0.09	0.16	0.06	0.08	0.04	0.09	0.06	0.13	0.06	0.08	0.02	0.03
29/09/2015	1.91	0.07	0.14	0.08	0.08	0.10	0.12	0.06	0.13	0.05	0.08	0.05	0.13	0.06	0.12	0.02	0.09
30/09/2015	1.66	0.08	0.16	0.06	0.18	0.08	0.21	0.06	0.13	0.03	0.08	0.05	0.09	0.05	0.08	0.01	0.08

Total Number of Measurements Taken, A:	15753	12966	14608	13056	16529	16356	15137	15980
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:	15753	12966	14608	13056	16529	16356	15137	15980
Compliance with Turbidity Standard, C = B/A X 100%:	100%	100%	100%	100%	100%	100%	100%	100%

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2015\09-September

Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew



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 AA		Raw Water		Filter 1		Filter 2		Filter 3		Filter 4		Filter 5		Filter 6		Filter 7		Filter 8	
Date	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	
01-Sep-2015	2.14	2.38	0.18	0.12	0.10	0.08	0.09	0.07	0.11	0.05	0.06	0.03	<0.05	0.05	0.06	0.04	0.05	<0.02	
02-Sep-2015	2.04	2.47	0.09	0.10	0.10	0.10	0.12	0.08	0.08	0.04	0.08	0.03	0.08	0.05	0.06	0.04	0.09	<0.02	
03-Sep-2015	2.01	2.59	0.09	0.10	0.11	0.09	0.14	0.09	0.09	0.04	0.07	0.03	0.06	0.05	0.05	0.03	0.05	<0.02	
04-Sep-2015	1.83	2.41	0.11	0.13	0.09	0.08	0.10	0.06	0.12	0.06	0.08	0.03	0.07	0.05	0.07	0.04	0.09	<0.02	
05-Sep-2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
06-Sep-2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
07-Sep-2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
08-Sep-2015	2.18	2.64	0.08	0.06	0.10	0.09	0.11	0.08	0.07	0.03	0.05	0.03	0.05	0.06	0.05	0.04	0.05	<0.02	
09-Sep-2015	2.01	2.55	0.12	0.09	0.09	0.08	0.09	0.07	0.11	0.05	0.07	0.04	0.09	0.08	0.07	0.05	0.06	0.02	
10-Sep-2015	2.14	2.46	0.08	0.05	0.09	0.08	0.10	0.08	0.08	0.03	0.07	0.04	0.07	0.07	0.10	0.06	0.08	0.03	
11-Sep-2015	2.13	2.50	0.09	0.06	0.08	0.06	0.13	0.10	0.09	0.03	0.08	0.04	0.08	0.08	0.06	0.05	0.07	0.02	
12-Sep-2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
13-Sep-2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
14-Sep-2015	2.26	2.34	0.11	0.06	0.07	0.05	0.07	0.11	0.08	0.04	0.05	0.04	0.08	0.09	0.07	0.06	0.06	0.03	
15-Sep-2015	1.72	2.33	0.07	0.03	0.07	0.05	0.10	<0.02	0.07	0.02	0.08	0.05	0.09	0.08	0.11	0.06	0.10	0.03	
16-Sep-2015	1.88	2.28	0.09	0.04	0.11	0.06	0.13	0.13	0.08	0.02	0.08	0.04	0.07	0.09	0.07	0.04	0.06	<0.02	
17-Sep-2015	1.89	2.19	0.10	0.06	0.07	0.05	0.09	0.12	0.09	0.04	0.06	0.04	0.07	0.10	0.07	0.05	0.06	0.02	
18-Sep-2015	1.66	2.21	0.11	0.05	0.11	0.06	0.11	0.13	0.12	0.03	0.09	0.05	0.07	0.10	0.11	0.07	0.10	0.02	
19-Sep-2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
20-Sep-2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
21-Sep-2015	1.82	2.98	0.06	0.03	0.07	0.05	0.07	0.05	0.07	0.02	0.07	0.06	0.07	0.05	0.07	0.06	0.07	0.03	
22-Sep-2015	1.67	2.16	0.09	0.05	0.11	0.07	0.14	0.10	0.08	0.04	0.07	0.06	0.08	0.05	0.07	0.06	0.07	0.02	
23-Sep-2015	1.82	2.05	0.12	0.07	0.08	0.05	0.09	0.06	0.12	0.05	0.09	0.07	0.09	0.04	0.10	0.06	0.08	0.03	
24-Sep-2015	1.68	2.02	0.08	0.05	0.09	0.07	0.10	0.08	0.08	0.03	0.07	0.03	0.07	0.04	0.06	0.05	0.09	0.03	
25-Sep-2015	1.61	2.00	0.09	0.05	0.11	0.06	0.17	0.09	0.12	0.04	0.11	0.03	0.12	0.05	0.11	0.04	0.15	0.02	
26-Sep-2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
27-Sep-2015	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
28-Sep-2015	1.66	1.83	0.08	0.07	0.08	0.06	0.14	0.10	0.09	0.04	0.08	0.04	0.10	0.07	0.08	0.06	0.08	0.04	
29-Sep-2015	1.66	1.84	0.10	0.08	0.10	0.08	0.11	0.09	0.09	0.09	0.07	0.05	0.08	0.05	0.10	0.07	0.09	0.04	
30-Sep-2015	1.57	1.78	0.09	0.08	0.13	0.11	0.14	0.10	0.10	0.05	0.12	0.05	0.08	0.05	0.08	0.05	0.07	0.03	
Total number of measurements taken, A:			21		21		21		21		21		21		21		21		21
Turbidity Standard for Monitoring Location (NTU):			0.30		0.30		0.30		0.30		0.30		0.30		0.30		0.30		0.30
Number of measurements meeting standard, B:			21		21		21		21		21		21		21		21		21
Compliance with Turbidity Standard, C= B/A X 100%:			100%		100%		100%		100%		100%		100%		100%		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-Oct-15



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

Water System Code: **252.00**
Licence Number: **PWS-09-412 AA**
Report Created: 01 October 2015

Report Period: September 2015

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/09/2015	1.08	0.78	1.05	0.78
02/09/2015	1.21	0.73	1.21	0.74
03/09/2015	1.24	1.13	1.25	1.14
04/09/2015	1.23	1.06	1.22	1.08
05/09/2015	1.08	0.91	1.02	0.82
06/09/2015	1.12	0.90	1.04	0.81
07/09/2015	1.32	1.15	1.24	1.05
08/09/2015	1.25	1.12	1.21	1.08
09/09/2015	1.18	1.10	1.15	1.06
10/09/2015	1.17	1.09	1.18	1.10
11/09/2015	1.18	1.10	1.18	1.09
12/09/2015	1.12	1.03	1.13	1.02
13/09/2015	1.07	1.00	1.11	1.04
14/09/2015	1.08	1.01	1.07	1.01
15/09/2015	1.13	1.04	1.10	0.96
16/09/2015	1.14	1.08	1.11	1.05
17/09/2015	1.21	1.10	1.22	1.13
18/09/2015	1.17	1.04	1.29	1.05
19/09/2015	1.17	1.11	1.31	1.21
20/09/2015	1.11	1.03	1.18	1.06
21/09/2015	1.07	0.96	1.07	0.95
22/09/2015	1.14	1.08	1.09	0.97
23/09/2015	1.32	1.16	1.24	1.12
24/09/2015	1.27	1.11	1.22	1.06
25/09/2015	1.07	0.93	1.02	0.91
26/09/2015	1.09	1.04	1.04	0.99
27/09/2015	1.09	1.03	1.00	0.92
28/09/2015	1.07	0.96	1.03	0.90
29/09/2015	1.07	0.98	1.10	1.02
30/09/2015	1.12	1.01	1.08	0.90

Total Number of Measurements, A:	21055	20965
Minimum Free Chlorine Standard:	0.50	0.5
Number of Measurements Meeting Standard, B:	21055	20965
COMPLIANCE, C = B/A X 100%:	100	100

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2015\09-September

Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew



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 AA		Free Chlorine (mg/L)		Total Chlorine (mg/L)	Free Chlorine (mg/L)		Total Chlorine (mg/L)
Date	Analyser	Grab	Grab	Analyser	Grab	Grab	
	01-Sep-2015	1.22	1.22	1.38	1.00	1.12	1.30
02-Sep-2015	1.32	1.36	1.51	1.27	1.27	1.43	
03-Sep-2015	1.25	1.34	1.48	1.26	1.19	1.37	
04-Sep-2015	1.19	1.31	1.45	1.27	1.22	1.36	
05-Sep-2015	NS	NS	NS	NS	NS	NS	
06-Sep-2015	NS	NS	NS	NS	NS	NS	
07-Sep-2015	NS	NS	NS	NS	NS	NS	
08-Sep-2015	1.32	1.32	1.49	1.23	1.04	1.32	
09-Sep-2015	1.18	1.26	1.46	1.15	1.20	1.34	
10-Sep-2015	1.16	1.15	1.33	1.18	1.24	1.38	
11-Sep-2015	1.15	1.14	1.29	1.14	1.14	1.29	
12-Sep-2015	NS	NS	NS	NS	NS	NS	
13-Sep-2015	NS	NS	NS	NS	NS	NS	
14-Sep-2015	1.07	1.08	1.22	1.07	1.13	1.24	
15-Sep-2015	1.07	1.01	1.19	1.14	1.17	1.35	
16-Sep-2015	1.09	1.08	1.26	1.06	1.10	1.28	
17-Sep-2015	1.23	1.12	1.26	1.28	1.19	1.33	
18-Sep-2015	1.21	1.14	1.31	1.33	1.21	1.37	
19-Sep-2015	NS	NS	NS	NS	NS	NS	
20-Sep-2015	NS	NS	NS	NS	NS	NS	
21-Sep-2015	1.07	1.05	1.19	1.10	1.11	1.31	
22-Sep-2015	1.13	1.10	1.24	1.10	1.05	1.18	
23-Sep-2015	1.24	1.10	1.23	1.24	1.18	1.32	
24-Sep-2015	1.18	1.22	1.32	1.10	1.18	1.30	
25-Sep-2015	1.00	1.01	1.14	0.94	1.00	1.11	
26-Sep-2015	NS	NS	NS	NS	NS	NS	
27-Sep-2015	NS	NS	NS	NS	NS	NS	
28-Sep-2015	1.10	1.12	1.34	0.95	0.95	1.15	
29-Sep-2015	1.12	1.20	1.32	1.07	1.16	1.34	
30-Sep-2015	1.16	1.27	1.42	1.17	1.23	1.39	
Total number of measurements taken, A:		21			21		
Chlorine Standard for Monitoring Location (mg/L):		0.50			0.50		
Number of measurements meeting standard, B:		21			21		
Compliance with Chlorine Standard, C= B/A X 100%:		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-Oct-15



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

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

WATER TREATMENT PLANT UV REPORT

Report Period: **September 2015**

Report Created: **Thursday, October 01, 2015**

Date	Transmittance %	UVR-D100A Water Volume [ML]				UVR-D200A Water Volume [ML]				UVR-D300A Water Volume [ML]				UVR-D400A Water Volume [ML]				UVR-D500A Water Volume [ML]				UVR-D600A Water Volume [ML]				Total Water Volume [ML]				% Volume Treated To Dose	
		Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total	Untreated	Below	To	Total		
01/09/2015	95.77	0.00	0.00	56.03	56.03	0.00	0.00	0.00	0.00	0.00	0.00	69.04	69.04	0.00	0.00	6.81	6.81	0.00	0.00	0.00	0.00	0.00	0.00	67.82	67.82	0.00	0.00	199.70	199.70	100.00	
02/09/2015	95.80	0.00	0.00	61.38	61.38	0.00	0.00	0.00	0.00	0.00	0.00	68.78	68.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	69.78	69.83	0.00	0.05	199.93	199.98	99.98	
03/09/2015	95.89	0.00	0.00	61.84	61.84	0.00	0.00	0.00	0.00	0.00	0.00	69.08	69.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.20	72.20	0.00	0.00	203.12	203.12	100.00	
04/09/2015	95.86	0.00	0.00	62.33	62.33	0.00	0.00	0.00	0.00	0.00	0.00	69.34	69.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	72.11	72.11	0.00	0.00	203.78	203.78	100.00	
05/09/2015	95.70	0.00	0.00	63.80	63.80	0.00	0.00	0.00	0.00	0.00	0.00	68.19	68.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	71.55	71.65	0.00	0.10	203.53	203.63	99.95	
06/09/2015	95.68	0.00	0.00	73.24	73.24	0.00	0.00	0.00	0.00	0.00	0.00	47.33	47.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	75.27	75.32	0.00	0.05	195.84	195.89	99.97	
07/09/2015	95.73	0.00	0.00	72.22	72.22	0.00	0.00	0.00	0.00	0.00	0.00	46.86	46.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	75.10	75.15	0.00	0.05	194.18	194.23	99.97	
08/09/2015	95.90	0.00	0.00	39.33	39.33	0.00	0.00	35.30	35.30	0.00	0.00	45.97	45.97	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	74.01	74.01	0.00	0.00	194.61	194.62	100.00	
09/09/2015	96.08	0.00	0.00	0.00	0.00	0.00	0.00	77.28	77.28	0.00	0.00	44.82	44.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	72.84	72.89	0.00	0.05	194.94	194.99	99.97	
10/09/2015	96.11	0.01	0.01	0.00	0.02	0.00	0.00	77.20	77.20	0.00	0.00	18.78	18.78	0.00	0.00	26.96	26.96	0.00	0.00	0.00	0.00	0.00	0.15	71.89	72.04	0.01	0.16	194.83	195.01	99.91	
11/09/2015	95.99	0.00	0.00	0.00	0.00	0.00	0.00	77.14	77.14	0.00	0.00	0.00	0.00	0.00	0.00	46.15	46.15	0.00	0.00	0.00	0.00	0.00	0.10	71.60	71.70	0.00	0.10	194.90	195.00	99.95	
12/09/2015	96.19	0.00	0.00	0.00	0.00	0.00	0.00	80.89	80.89	0.00	0.00	27.39	27.39	0.00	0.00	60.67	60.67	0.00	0.25	0.01	0.25	0.00	0.00	25.80	25.80	0.00	0.25	194.76	195.00	99.87	
13/09/2015	96.16	0.00	0.00	0.00	0.00	0.00	0.00	82.29	82.29	0.00	0.00	43.51	43.51	0.00	0.00	69.27	69.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	195.07	195.07	100.00
14/09/2015	96.32	0.00	0.00	0.00	0.00	0.00	0.00	82.11	82.11	0.00	0.00	24.66	24.66	0.00	0.00	60.10	60.10	0.00	0.00	0.00	0.00	0.00	0.10	32.02	32.12	0.00	0.10	198.88	198.98	99.95	
15/09/2015	96.43	0.00	0.18	41.49	41.67	0.00	0.00	47.46	47.46	0.00	0.00	15.91	15.92	0.00	0.27	17.03	17.30	0.00	0.00	20.67	20.67	0.15	0.15	61.42	61.72	0.15	0.60	203.99	204.74	99.63	
16/09/2015	96.42	0.00	0.00	0.09	0.09	0.00	0.00	84.44	84.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.00	43.00	0.00	0.50	79.99	80.49	0.00	0.50	207.52	208.02	99.76	
17/09/2015	96.42	0.00	0.27	21.92	22.19	0.00	0.00	67.63	67.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.89	24.89	0.00	0.24	76.73	76.98	0.00	0.52	191.17	191.69	99.73	
18/09/2015	95.36	0.00	0.00	57.66	57.66	0.00	0.00	54.14	54.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.39	20.39	0.00	0.69	76.28	76.96	0.00	0.69	208.46	209.15	99.67	
19/09/2015	96.38	0.00	0.00	54.53	54.53	0.00	0.00	52.07	52.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.39	37.39	0.00	0.00	67.32	67.32	0.00	0.00	211.31	211.31	100.00	
20/09/2015	96.30	0.00	0.00	51.96	51.96	0.00	0.00	49.67	49.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37.67	37.67	0.00	0.00	63.70	63.70	0.00	0.00	203.01	203.01	100.00	
21/09/2015	96.17	0.00	0.00	18.60	18.60	0.00	0.00	61.96	61.96	0.00	0.00	9.09	9.09	0.00	0.00	42.04	42.04	0.00	0.00	36.39	36.39	0.00	0.00	42.85	42.85	0.00	0.00	210.93	210.93	100.00	
22/09/2015	96.20	0.00	0.00	0.00	0.00	0.00	0.00	71.18	71.18	0.00	0.00	29.30	29.30	0.00	0.00	41.31	41.31	0.00	0.00	0.00	0.00	0.00	0.05	73.19	73.25	0.00	0.05	214.98	215.03	99.98	
23/09/2015	96.20	0.00	0.00	46.86	46.86	0.00	0.00	19.41	19.41	0.00	0.00	72.22	72.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.52	76.52	0.00	0.00	215.01	215.02	100.00	
24/09/2015	96.19	0.00	0.00	62.60	62.60	0.00	0.00	0.00	0.00	0.00	0.00	70.30	70.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	74.06	74.06	0.00	0.00	206.95	206.95	100.00	
25/09/2015	96.13	0.00	0.00	59.51	59.51	0.00	0.00	0.00	0.00	0.00	0.00	67.66	67.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	69.07	69.12	0.00	0.05	196.25	196.29	99.98	
26/09/2015	96.11	0.00	0.00	59.74	59.74	0.00	0.00	0.00	0.00	0.00	0.00	68.10	68.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	69.19	69.34	0.00	0.15	197.03	197.17	99.93	
27/09/2015	95.91	0.00	0.00	59.62	59.62	0.00	0.00	0.00	0.00	0.00	0.00	67.90	67.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	69.23	69.28	0.00	0.05	196.74	196.79	99.97	
28/09/2015	95.99	0.00	0.00	52.06	52.06	0.00	0.00	24.10	24.10	0.01	0.01	58.85	58.87	0.00	0.00	14.86	14.86	0.00	0.05	0.00	0.05	0.00	0.00	38.03	38.03	0.01	0.06	187.91	187.98	99.96	
29/09/2015	95.23	0.00	0.00	56.05	56.05	0.00	0.00	56.59	56.59	0.00	0.00	74.11	74.11	0.00	0.00	0.00	0.00	0.00	0.00	27.99	27.99	0.00	0.00	47.86	47.86	0.00	0.00	262.61	262.61	100.00	
30/09/2015	95.53	0.00	0.00	31.45	31.45	0.00	0.00	28.79	28.79	0.01	0.01	58.97	58.99	0.00	0.00	0.00	0.00	0.05	0.05	34.15	34.26	0.00	0.00	66.39	66.39	0.06	0.06	219.74	219.87	99.94	
		0.01	0.46	1164.32	1164.79	0.00	0.00	1129.65	1129.66	0.02	0.02	1236.17	1236.21	0.00	0.27	385.19	385.47	0.05	0.35	282.55	282.95	0.15	2.54	1903.81	1906.50	0.25	3.65	6101.68	6105.58		

Water Volume [%]:
 Untreated: 0.00 %
 Below Dose 0.06 %
 To Dose 99.94 %

Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew



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Friday, October 2, 2015

Our Incident/Report No: **07-2015**

LIMS Reference No: **43752**

Incident Date: **September 10, 2015**

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

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM, CODE	Winnipeg Public Water System, 252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist SW03
INCIDENT REPORTED BY	Courtney Diduck, Analytical Services Branch Head
TYPE OF NON-COMPLIANT INCIDENT	1. Low disinfection residual in the distribution system, 22(1) MR 40/2007
DESCRIPTION OF CORRECTIVE ACTIONS	<u>Environmental Standards:</u> IMMEDIATELY: Re-sampled original location and tested additional samples upstream and downstream for free/total chlorine, turbidity and temperature, and contacted the ODW. <u>Water Services:</u> Water Services Division was contacted and the area was checked for closed valves and spot flushed. Spot flushing resolved the issue and free chlorine residuals were re-established to acceptable levels.
TEST RESULTS	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)
SW03	446009	10-Sep-15	<1	<1	<1	0.07	0.23	15.1	0.34	10:08
SW03_Upstream	446595	10-Sep-15	NA	NA	NA	0.62	0.81	17.0	0.14	11:29
SW03_Downstream	446596	10-Sep-15	NA	NA	NA	0.20	0.36	15.1	0.31	10:25
SW03_Resample	446640	11-Sep-15	NA	NA	NA	0.75	0.88	16.5	0.13	10:24
SW03_Upstream Resample	446724	11-Sep-15	NA	NA	NA	0.69	0.90	16.3	0.14	10:36
SW03_Downstream Resample	446725	11-Sep-15	NA	NA	NA	0.69	0.87	16.6	0.12	10:53

NOTES/COMMENTS:

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