



Water and Waste Department • Service des eaux et des déchets

November 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: OCTOBER 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 October 2016. We have included one corrective action report for a filtered water turbidity exceedence and one corrective action report for a positive total coliform in the distribution system.

The October 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 October 7th, there was no average turbidity reported for the raw analyzer due to an instrument error. On October 24th, filter #8 reported values above 1.0 NTU due to technician error. Please see the attached corrective action report for additional details. The turbidity results for the effluent from the filters met the licence requirements.

The October 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 October 13th, a positive total coliform result was reported for a routine sample at the SW01 location. On October 14th and 15th, 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 October 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.

Yours sincerely,

Original signed by:

R. Grosselle
Manager of Environmental Standards
Attachments

cc: (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

October 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
1/10/2016	1.32	0.03	0.06	0.06	0.15	0.01	0.08	0.04	0.05	0.09	0.11	0.01	0.04	0.04	0.05	0.01	0.06
2/10/2016	1.30	0.02	0.05	0.05	0.14	0.01	0.03	0.04	0.10	0.06	0.11	0.03	0.06	0.03	0.07	0.01	0.02
3/10/2016	1.18	0.03	0.06	0.10	0.11	0.03	0.09	0.04	0.10	0.06	0.14	0.03	0.07	0.03	0.06	0.02	0.06
4/10/2016	1.09	0.04	0.13	0.07	0.21	0.04	0.12	0.06	0.12	0.10	0.14	0.03	0.12	0.06	0.12	0.02	0.09
5/10/2016	1.20	0.04	0.11	0.07	0.20	0.04	0.07	0.06	0.14	0.06	0.12	0.06	0.09	0.05	0.15	0.00	0.01
6/10/2016	1.60	0.04	0.08	0.10	0.12	0.04	0.14	0.05	0.14	0.05	0.12	0.04	0.11	0.04	0.14	0.01	0.08
7/10/2016	1.65	0.06	0.12	0.08	0.19	0.04	0.15	0.05	0.08	0.08	0.11	0.04	0.13	0.08	0.10	0.02	0.12
8/10/2016	1.15	0.04	0.12	0.07	0.20	0.04	0.06	0.08	0.14	0.07	0.12	0.06	0.08	0.05	0.15	0.01	0.02
9/10/2016	1.16	0.02	0.04	0.08	0.11	0.01	0.10	0.03	0.09	0.03	0.08	0.02	0.09	0.03	0.06	0.01	0.08
10/10/2016	1.13	0.02	0.07	0.06	0.15	0.01	0.08	0.05	0.06	0.06	0.08	0.02	0.04	0.05	0.10	0.00	0.03
11/10/2016	1.10	0.02	0.06	0.06	0.09	0.01	0.03	0.04	0.10	0.04	0.09	0.03	0.08	0.03	0.09	0.01	0.01
12/10/2016	1.10	0.03	0.06	0.08	0.15	0.01	0.08	0.03	0.09	0.04	0.10	0.02	0.07	0.04	0.06	0.01	0.03
13/10/2016	1.12	0.02	0.06	0.06	0.14	0.00	0.06	0.05	0.07	0.07	0.08	0.02	0.04	0.05	0.09	0.00	0.03
14/10/2016	1.13	0.02	0.06	0.06	0.10	0.00	0.02	0.04	0.11	0.04	0.08	0.03	0.08	0.03	0.09	0.01	0.01
15/10/2016	1.09	0.03	0.05	0.09	0.14	0.01	0.11	0.04	0.10	0.04	0.09	0.03	0.07	0.04	0.06	0.01	0.03
16/10/2016	1.12	0.03	0.09	0.06	0.14	0.00	0.07	0.05	0.07	0.07	0.09	0.02	0.05	0.05	0.10	0.01	0.05
17/10/2016	1.13	0.02	0.06	0.06	0.10	0.00	0.02	0.04	0.10	0.05	0.09	0.04	0.09	0.04	0.10	0.01	0.01
18/10/2016	1.10	0.03	0.05	0.09	0.14	0.01	0.07	0.04	0.10	0.05	0.08	0.03	0.08	0.05	0.07	0.01	0.04
19/10/2016	1.10	0.03	0.07	0.06	0.15	0.00	0.07	0.06	0.07	0.08	0.10	0.03	0.05	0.05	0.11	0.01	0.05
20/10/2016	1.07	0.02	0.07	0.07	0.10	0.00	0.02	0.04	0.11	0.05	0.10	0.04	0.09	0.04	0.11	0.01	0.02
21/10/2016	1.03	0.04	0.05	0.09	0.14	0.01	0.07	0.04	0.11	0.05	0.09	0.03	0.09	0.05	0.07	0.01	0.06
22/10/2016	1.08	0.03	0.07	0.07	0.15	0.00	0.08	0.06	0.08	0.08	0.11	0.03	0.05	0.06	0.11	0.01	0.06
23/10/2016	1.40	0.02	0.06	0.07	0.11	0.00	0.04	0.04	0.11	0.06	0.13	0.05	0.09	0.04	0.13	0.01	0.02
24/10/2016	1.07	0.02	0.10	0.08	0.14	0.00	0.05	0.03	0.10	0.05	0.10	0.03	0.12	0.03	0.11	0.02	5.00
25/10/2016	1.08	0.03	0.14	0.05	0.14	0.00	0.05	0.05	0.09	0.08	0.12	0.03	0.11	0.02	0.10	0.00	0.04
26/10/2016	1.12	0.02	0.06	0.05	0.13	0.00	0.02	0.03	0.10	0.05	0.30	0.03	0.11	0.03	0.05	0.00	0.03
27/10/2016	1.26	0.02	0.07	0.06	0.12	0.00	0.05	0.03	0.08	0.06	0.12	0.03	0.12	0.03	0.10	0.01	0.03
28/10/2016	1.23	0.04	0.06	0.09	0.14	0.00	0.07	0.03	0.06	0.07	0.09	0.02	0.08	0.02	0.10	0.00	0.02
29/10/2016	1.30	0.03	0.08	0.07	0.23	0.00	0.05	0.05	0.11	0.07	0.12	0.03	0.05	0.02	0.09	0.00	0.03
30/10/2016	1.23	0.03	0.08	0.07	0.12	0.00	0.08	0.04	0.10	0.06	0.12	0.02	0.09	0.04	0.06	0.01	0.01
31/10/2016	1.13	0.04	0.06	0.12	0.18	0.00	0.08	0.03	0.06	0.07	0.09	0.02	0.09	0.03	0.09	0.01	0.03

Total Number of Measurements Taken, A:	13904	11201	11150	10980	14392	14134	12954	14098
Turbidity Standard for Monitoring Location (NTU):	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Number of Measurements Meeting Standard, B:	13904	11201	11150	10980	14392	14134	12954	14097
Compliance with Turbidity Standard, C = B/A X 100%:	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	99.993%

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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 Licence No. PWS-09-412-01	Turbidity (NTU)																	
	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-Oct-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
02-Oct-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
03-Oct-2016	0.89	1.14	0.12	<0.02	0.10	0.08	0.15	0.03	OL	OL	0.11	0.08	0.14	0.05	0.15	0.03	0.10	0.04
04-Oct-2016	0.87	1.15	0.11	0.07	0.11	0.09	0.14	0.05	0.13	0.06	0.12	0.10	0.12	0.04	0.12	0.06	0.16	0.06
05-Oct-2016	0.84	1.08	OL	OL	0.12	0.10	0.13	0.04	0.14	0.06	0.14	0.09	0.11	0.05	0.13	0.07	0.11	0.02
06-Oct-2016	1.05	1.32	0.12	0.04	0.16	0.11	0.16	0.06	0.16	0.06	0.09	0.06	0.14	0.06	0.10	0.05	0.10	0.03
07-Oct-2016	0.81	NR	0.16	0.06	0.19	0.14	OL	OL	0.17	0.06	0.15	0.08	0.11	0.05	0.15	0.07	0.15	0.06
08-Oct-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
09-Oct-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
10-Oct-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
11-Oct-2016	0.78	1.06	0.10	0.02	0.09	0.08	0.10	<0.02	0.09	0.04	0.11	0.07	0.09	0.03	OL	OL	0.07	<0.02
12-Oct-2016	0.73	1.09	0.16	0.02	0.13	0.10	0.15	0.03	0.12	0.03	0.10	0.05	0.10	0.04	0.12	0.05	0.18	0.02
13-Oct-2016	0.73	1.06	0.10	0.02	0.18	0.11	0.11	<0.02	0.11	0.04	0.11	0.07	0.12	0.02	0.09	0.05	0.08	<0.02
14-Oct-2016	0.84	0.96	0.09	<0.02	0.10	0.09	0.11	<0.02	0.11	0.04	0.11	0.07	0.10	0.03	0.10	0.07	0.08	<0.02
15-Oct-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
16-Oct-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
17-Oct-2016	1.04	1.05	0.09	<0.02	0.08	0.09	0.10	<0.02	0.10	0.05	0.09	0.07	0.10	0.04	OL	OL	0.08	0.02
18-Oct-2016	1.02	1.07	0.09	0.02	0.10	0.10	0.14	<0.02	0.08	0.03	0.08	0.06	0.14	0.05	0.08	0.05	0.10	0.04
19-Oct-2016	0.91	1.07	0.12	0.04	0.10	0.10	0.12	<0.02	0.11	0.04	0.09	0.08	0.10	0.03	0.22	0.06	0.29	0.06
20-Oct-2016	0.90	1.03	0.09	<0.02	0.09	0.09	0.12	<0.02	0.12	0.05	0.10	0.08	0.10	0.04	0.08	0.04	0.08	0.03
21-Oct-2016	0.85	0.98	0.10	0.02	0.11	0.11	0.13	<0.02	0.10	0.04	0.09	0.07	0.14	0.05	0.09	0.05	0.12	0.04
22-Oct-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
23-Oct-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
24-Oct-2016	0.90	0.98	0.08	<0.02	0.09	0.09	0.11	<0.02	0.08	0.03	0.09	0.08	OL	OL	0.11	0.03	0.11	0.05
25-Oct-2016	0.87	1.01	0.09	0.04	0.14	0.10	0.09	<0.02	0.08	0.03	0.10	0.09	0.10	0.04	OL	OL	0.13	0.03
26-Oct-2016	0.96	1.09	0.10	0.03	OL	OL	0.09	<0.02	0.11	0.05	0.11	0.09	0.11	0.03	0.10	0.03	0.09	<0.02
27-Oct-2016	0.90	1.03	0.07	0.02	0.10	0.08	0.15	0.02	OL	OL	0.08	0.07	0.15	0.03	0.09	0.02	0.08	<0.02
28-Oct-2016	1.11	1.21	0.10	0.03	0.10	0.10	OL	OL	0.09	0.03	0.09	0.07	0.09	0.02	0.11	0.04	0.12	<0.02
29-Oct-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
30-Oct-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
31-Oct-2016	1.06	1.13	0.09	0.03	0.10	0.13	0.17	0.03	0.09	0.03	0.09	0.08	0.09	0.02	0.13	0.08	0.10	<0.02
Total number of measurements taken, A:			19		19		18		18		20		19		17		20	
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:			19		19		18		18		20		19		17		20	
Compliance with Turbidity Standard, C= B/A X 100%:			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 water on October 7.

Report Compiled By: H.Demchenko

Approved in LIMS By: C.Diduck

Date Approved: 7-Nov-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 November 2016

Report Period: October 2016

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
1/10/2016	1.36	1.30	1.31	1.23
2/10/2016	1.33	1.17	1.28	1.11
3/10/2016	1.23	1.07	1.29	1.22
4/10/2016	1.07	1.01	1.20	1.11
5/10/2016	1.02	0.96	1.13	1.06
6/10/2016	1.06	0.97	1.13	1.06
7/10/2016	1.09	0.96	1.16	1.02
8/10/2016	1.12	1.04	1.19	1.08
9/10/2016	1.16	1.11	1.23	1.18
10/10/2016	1.16	1.10	1.24	1.18
11/10/2016	1.14	1.02	1.25	1.14
12/10/2016	1.14	1.09	1.29	1.23
13/10/2016	1.18	1.12	1.33	1.25
14/10/2016	1.19	1.09	1.34	1.25
15/10/2016	1.24	1.17	1.41	1.31
16/10/2016	1.12	1.06	1.29	1.24
17/10/2016	1.23	1.10	1.26	1.13
18/10/2016	1.27	1.19	1.18	1.09
19/10/2016	1.28	1.22	1.19	1.13
20/10/2016	1.21	1.14	1.12	1.04
21/10/2016	1.15	1.06	1.05	0.99
22/10/2016	1.18	1.12	1.05	1.03
23/10/2016	1.21	1.16	1.06	1.01
24/10/2016	1.21	1.11	1.11	0.99
25/10/2016	1.25	1.16	1.18	1.12
26/10/2016	1.23	1.18	1.16	1.11
27/10/2016	1.30	1.08	1.24	1.06
28/10/2016	1.18	1.13	0.99	0.80
29/10/2016	1.16	1.13	1.14	1.06
30/10/2016	1.16	1.12	1.05	1.02
31/10/2016	1.16	1.12	1.05	1.01

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%:	100.00	100.00

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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-09-412-01		Free Chlorine (mg/L)		Total Chlorine (mg/L)	Free Chlorine (mg/L)		Total Chlorine (mg/L)
Date	Analyser	Grab	Grab	Grab	Analyser	Grab	Grab
02-Oct-2016	NS	NS	NS	NS	NS	NS	NS
03-Oct-2016	1.25	1.36	1.51	1.23	1.34	1.50	
04-Oct-2016	1.12	1.17	1.40	1.25	1.26	1.50	
05-Oct-2016	1.01	0.99	1.30	1.11	1.16	1.35	
06-Oct-2016	1.11	1.12	1.30	1.15	1.15	1.37	
07-Oct-2016	1.09	1.10	1.24	1.17	1.26	1.43	
08-Oct-2016	NS	NS	NS	NS	NS	NS	
09-Oct-2016	NS	NS	NS	NS	NS	NS	
10-Oct-2016	NS	NS	NS	NS	NS	NS	
11-Oct-2016	1.17	1.22	1.36	1.27	1.31	1.43	
12-Oct-2016	1.11	1.16	1.36	1.27	1.32	1.47	
13-Oct-2016	1.13	1.24	1.42	1.29	1.31	1.53	
14-Oct-2016	1.16	1.26	1.38	1.31	1.35	1.52	
15-Oct-2016	NS	NS	NS	NS	NS	NS	
16-Oct-2016	NS	NS	NS	NS	NS	NS	
17-Oct-2016	1.37	1.35	1.54	1.30	1.34	1.49	
18-Oct-2016	1.24	1.31	1.42	1.16	1.22	1.37	
19-Oct-2016	1.28	1.29	1.46	1.19	1.20	1.42	
20-Oct-2016	1.26	1.27	1.42	1.15	1.23	1.35	
21-Oct-2016	1.13	1.21	1.39	1.04	1.06	1.28	
22-Oct-2016	NS	NS	NS	NS	NS	NS	
23-Oct-2016	NS	NS	NS	NS	NS	NS	
24-Oct-2016	1.23	1.22	1.47	1.13	1.12	1.34	
25-Oct-2016	1.25	1.31	1.48	1.19	1.16	1.38	
26-Oct-2016	1.25	1.31	1.44	1.17	1.17	1.36	
27-Oct-2016	1.44	1.44	1.68	1.37	1.42	1.58	
28-Oct-2016	1.17	1.18	1.35	1.08	1.17	1.31	
29-Oct-2016	NS	NS	NS	NS	NS	NS	
30-Oct-2016	NS	NS	NS	NS	NS	NS	
31-Oct-2016	1.20	1.20	1.39	1.06	1.09	1.27	
Total number of measurements taken, A:			20			20	
Chlorine Standard for Monitoring Location (mg/L):			0.50			0.50	
Number of measurements meeting standard, B:			20			20	
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-Nov-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: **October 2016**

Report Created: **Tuesday, November 01, 2016**

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	
01/10/2016	94.47	0.00	0.00	58.08	58.08	0.00	0.00	0.00	0.00	0.00	0.00	66.44	66.44	0.00	0.00	0.00	0.00	0.00	0.00	64.48	64.48	0.00	0.00	0.00	0.00	0.00	0.00	188.99	188.99	100.00
02/10/2016	94.54	0.00	0.00	57.42	57.42	0.00	0.00	0.00	0.00	0.00	0.00	65.67	65.67	0.00	0.00	0.00	0.00	0.00	0.00	63.75	63.75	0.00	0.00	0.00	0.00	0.00	0.00	186.84	186.84	100.00
03/10/2016	94.36	0.00	0.00	26.98	26.98	0.00	0.00	32.24	32.24	0.00	0.00	64.21	64.21	0.00	0.00	0.00	0.00	0.00	0.00	62.56	62.56	0.00	0.00	0.00	0.00	0.00	0.00	185.99	185.99	100.00
04/10/2016	93.83	0.00	0.00	0.00	0.00	0.00	0.00	62.63	62.63	0.00	0.00	64.11	64.11	0.00	0.00	0.00	0.00	0.00	0.00	62.77	62.77	0.00	0.00	0.00	0.00	0.00	0.00	189.51	189.51	100.00
05/10/2016	93.97	0.00	0.00	0.00	0.00	0.00	0.00	62.34	62.34	0.00	0.00	63.93	63.93	0.00	0.00	0.00	0.00	0.00	0.00	63.35	63.35	0.00	0.00	0.00	0.00	0.00	0.00	189.62	189.62	100.00
06/10/2016	94.08	0.00	0.00	0.00	0.00	0.00	0.00	61.23	61.23	0.00	0.00	62.75	62.75	0.00	0.00	0.00	0.00	0.00	0.00	61.86	61.86	0.00	0.00	0.00	0.00	0.00	0.00	185.85	185.85	100.00
07/10/2016	94.03	0.00	0.00	0.00	0.00	0.00	0.00	60.44	60.44	0.00	0.00	60.55	60.55	0.00	0.00	0.00	0.00	0.00	0.00	60.07	60.07	0.00	0.00	0.00	0.00	0.00	0.00	181.06	181.06	100.00
08/10/2016	94.10	0.00	0.00	0.00	0.00	0.00	0.00	56.93	56.93	0.00	0.00	57.94	57.94	0.00	0.00	0.00	0.00	0.00	0.00	57.86	57.86	0.00	0.00	0.00	0.00	0.00	0.00	172.74	172.74	100.00
09/10/2016	94.68	0.00	0.00	0.00	0.00	0.00	0.00	56.86	56.86	0.00	0.00	57.60	57.60	0.00	0.00	0.00	0.00	0.00	0.00	57.53	57.53	0.00	0.00	0.00	0.00	0.00	0.00	171.99	171.99	100.00
10/10/2016	94.66	0.00	0.00	0.00	0.00	0.00	0.00	56.47	56.47	0.00	0.00	57.95	57.95	0.00	0.00	0.00	0.00	0.00	0.00	57.59	57.59	0.00	0.00	0.00	0.00	0.00	0.00	172.00	172.00	100.00
11/10/2016	94.57	0.00	0.00	0.00	0.00	0.00	0.00	58.76	58.76	0.00	0.00	56.26	56.26	0.00	0.00	0.00	0.00	0.00	0.00	56.83	56.83	0.00	0.00	0.00	0.00	0.00	0.00	171.86	171.86	100.00
12/10/2016	94.55	0.00	0.00	0.00	0.00	0.00	0.00	75.99	75.99	0.00	0.00	47.21	47.21	0.00	0.00	0.00	0.00	0.00	0.00	59.63	59.63	0.00	0.00	0.00	0.00	0.00	0.00	182.83	182.83	100.00
13/10/2016	94.61	0.00	0.03	0.05	0.09	0.00	0.00	76.33	76.33	0.00	0.00	48.36	48.36	0.00	0.00	0.00	0.00	0.00	0.00	61.22	61.22	0.00	0.00	0.00	0.00	0.00	0.03	185.97	186.00	99.98
14/10/2016	94.59	0.00	0.00	0.00	0.00	0.00	0.00	71.27	71.27	0.00	0.00	48.32	48.32	0.00	0.00	0.00	0.00	0.00	0.00	66.42	66.42	0.00	0.00	0.00	0.00	0.00	0.00	186.00	186.00	100.00
15/10/2016	94.57	0.00	0.00	0.00	0.00	0.00	0.00	64.90	64.90	0.00	0.00	47.60	47.60	0.00	0.00	0.00	0.00	0.00	0.00	73.52	73.52	0.00	0.00	0.00	0.00	0.00	0.00	186.03	186.03	100.00
16/10/2016	94.56	0.00	0.00	0.00	0.00	0.00	0.00	65.03	65.03	0.00	0.00	47.74	47.74	0.00	0.00	0.00	0.00	0.00	0.00	73.25	73.25	0.00	0.00	0.00	0.00	0.00	0.00	186.02	186.02	100.00
17/10/2016	94.60	0.00	0.00	45.18	45.18	0.00	0.00	24.15	24.15	0.00	0.00	46.87	46.87	0.00	0.00	0.00	0.00	0.00	0.00	73.35	73.35	0.00	0.00	0.00	0.00	0.00	0.00	189.55	189.55	100.00
18/10/2016	94.44	0.00	0.00	71.70	71.70	0.00	0.00	0.00	0.00	0.00	0.00	45.91	45.91	0.00	0.00	0.00	0.00	0.00	0.00	73.40	73.40	0.00	0.00	0.00	0.00	0.00	0.00	191.00	191.00	100.00
19/10/2016	94.33	0.00	0.00	71.79	71.79	0.00	0.00	0.00	0.00	0.00	0.00	45.82	45.82	0.00	0.00	0.00	0.00	0.00	0.00	73.40	73.40	0.00	0.00	0.00	0.00	0.00	0.00	191.01	191.01	100.00
20/10/2016	94.34	0.00	0.00	70.16	70.16	0.00	0.00	0.00	0.00	0.00	0.00	44.85	44.85	0.00	0.00	0.00	0.00	0.00	0.00	35.19	35.19	0.00	0.04	36.97	37.02	0.00	0.04	187.17	187.21	99.98
21/10/2016	94.28	0.00	0.00	67.98	67.98	0.00	0.00	0.00	0.00	0.00	0.00	43.54	43.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.35	69.35	0.00	0.00	180.87	180.87	100.00		
22/10/2016	94.24	0.00	0.00	67.46	67.46	0.00	0.00	0.00	0.00	0.00	0.00	43.11	43.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	67.02	67.02	0.00	0.00	177.59	177.59	100.00		
23/10/2016	94.32	0.00	0.00	68.38	68.38	0.00	0.00	0.00	0.00	0.00	0.00	44.08	44.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.40	69.40	0.00	0.00	181.86	181.86	100.00		
24/10/2016	94.29	0.00	0.00	69.27	69.27	0.00	0.00	0.00	0.00	0.00	0.00	43.97	43.97	0.00	0.00	0.00	0.00	0.00	0.00	42.38	42.38	0.00	0.00	26.40	26.40	0.00	0.00	182.01	182.01	100.00
25/10/2016	94.19	0.00	0.00	70.02	70.02	0.00	0.00	0.00	0.00	0.00	0.00	44.09	44.09	0.00	0.00	0.00	0.00	0.00	0.00	67.93	67.93	0.00	0.00	0.00	0.00	0.00	0.00	182.04	182.04	100.00
26/10/2016	94.17	0.00	0.00	70.06	70.06	0.00	0.00	0.00	0.00	0.00	0.00	44.17	44.17	0.00	0.00	0.00	0.00	0.00	0.00	67.74	67.74	0.00	0.00	0.00	0.00	0.00	0.00	181.96	181.96	100.00
27/10/2016	93.64	0.00	0.36	36.27	36.62	0.01	0.06	33.79	33.87	0.00	0.17	16.34	16.52	0.00	0.00	0.00	0.00	0.01	0.01	38.70	38.71	0.01	0.06	23.45	23.52	0.03	0.66	148.55	149.24	99.54
28/10/2016	94.06	0.00	0.00	0.00	0.00	0.00	0.00	85.08	85.08	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	38.32	38.32	0.00	0.00	64.57	64.57	0.01	0.01	187.97	187.99	99.99
29/10/2016	93.91	0.00	0.00	0.00	0.00	0.00	0.00	85.14	85.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.30	39.30	0.00	0.00	63.54	63.54	0.00	0.00	187.98	187.98	100.00
30/10/2016	93.92	0.00	0.00	0.00	0.00	0.00	0.00	85.35	85.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.52	39.52	0.00	0.00	63.08	63.08	0.00	0.00	187.96	187.96	100.00
31/10/2016	94.08	0.00	0.00	0.00	0.00	0.00	0.00	85.28	85.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.72	39.72	0.00	0.00	62.96	62.96	0.00	0.00	187.96	187.96	100.00
Total [ML]:		0.00	0.39	850.77	851.16	0.01	0.06	1260.21	1260.28	0.01	0.18	1379.41	1379.60	0.00	0.00	0.00	0.00	0.01	0.01	1631.64	1631.65	0.01	0.10	546.75	546.86	0.04	0.74	5668.78	5669.56	

Water Volume [%]:
 Untreated: 0.00 %
 Below Dose: 0.01 %
 To Dose: 99.99 %

Submitted By (Print): D. Merredew

Signature: Original signed by D. Merredew

CORRECTIVE ACTION REPORT



WATER SYSTEM City of Winnipeg

WATER SYSTEM CODE: 252.00

LOCATION OF NON-COMPLIANCE INCIDENT (ex. Water Plant): City of Winnipeg Deacon WTP

OPERATOR: CARSON IKONEN

Signature: [Handwritten Signature]

TYPE OF NON-COMPLIANCE INCIDENT:

- Low disinfectant residual entering the distribution system, 21(1) MR 40/2007
- Low disinfectant residual in the distribution system, 22 MR 40/2007
- Filtered water turbidity exceeding the turbidity standard, 6(1) MR 41/2007
- Low positive total coliform (<10 CFU/100mL), 3 MR 41/2007
- Other

INITIAL TEST RESULTS:

DESCRIPTION OF CORRECTIVE ACTIONS TAKEN (attach additional sheets if required):

10/24/16 DATE

Instrument Tech forgot to place instrument into hold when calibrating Filter 8 Turbidimeter. NTU spiked to 5.00 due to calibration standard. Not actual water quality reading (see attached trend)

TEST RESULTS AFTER CORRECTIVE ACTIONS:

None

DATE: 10/24/16

(attach laboratory results if applicable)

Approved By Operator-In-Charge: Dan Merreux Original signed by: [Handwritten Signature]

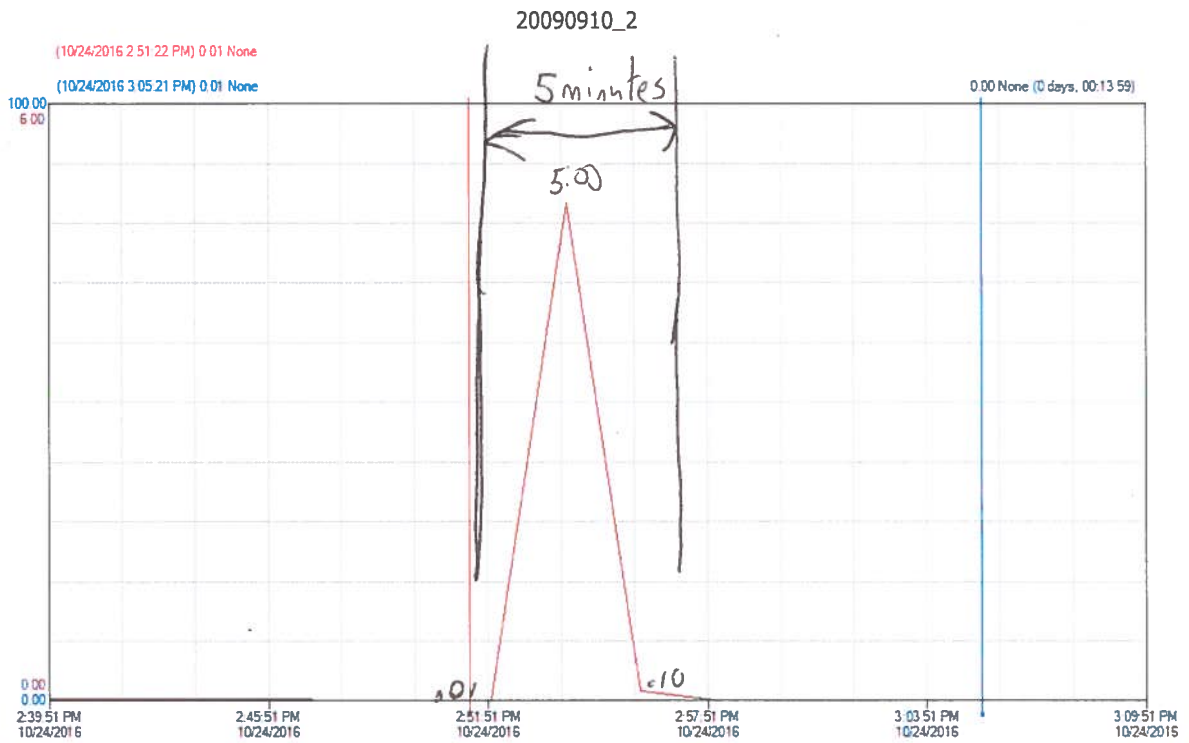
EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING.

DISTRIBUTION:

FORWARD THE ORIGINAL TO YOUR DRINKING WATER OFFICER WITH YOUR MONTHLY DISINFECTION OR TURBIDITY MONITORING REPORT

Contact your Drinking Water Officer with any comments, questions or concerns.

RETAIN A COPY FOR YOUR RECORDS



WTPSVHSSERVER.AT_F810A_REG IEU [BestFit - 00:00:00:492]

Tag Name	Description	Number	Server	Color	Units	Minimum	Maximum	ID Address	Time Offset	Source Tag	Source Server	Value at XI	Ve
<input checked="" type="checkbox"/> AT_F810A	Filter TKF800A Outlet T...	1	WTPSVH	None	None	0.00	100.00	WTPSVHSSERVER...	0:00:00:000	AT_F810A_R...	WTPSVHSSE...	0.00	0
<input checked="" type="checkbox"/> AT_F810A	Filter TKF800A Outlet T...	2	WTPSVH	None	None	0.00	6.00	WTPSVHSSERVER...	0:00:00:000			0.01	0

14:57 Filter 8 10/24/16
 Tech forgot to place
 Turb. Meter into Hold for
 Calibration. Not actual
 water Nth. But an
 Instrument Tech Error



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Friday, November 4, 2016

Our Incident/Report No: 04-2016
LIMS Reference No: **47656**
Incident Date: **October 13, 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

WATER SYSTEM, CODE	Winnipeg Public Water System, 252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist SW01
INCIDENT REPORTED BY	Courtney Diduck, Analytical Services Branch Head
TYPE OF NON-COMPLIANT INCIDENT	Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
DESCRIPTION OF CORRECTIVE ACTIONS	<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.
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)
SW01	487895	13-Oct-16	<1	1	2	0.87	1.05	15.5	0.24	12:17
SW01_Resample 1	488718	14-Oct-16	<1	<1	<1	0.76	1.02	15.3	0.25	16:30
SW01_Resample 1 Duplicate	488719	14-Oct-16	<1	<1	<1	NA	NA	NA	NA	NA
SW01_Resample 2	488720	15-Oct-16	<1	<1	<1	0.77	1.08	15.0	0.28	17:00
SW01_Resample 2 Duplicate	488721	15-Oct-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.