



Water and Waste Department • Service des eaux et des déchets

Environmental Standards Division • Division des Normes Environnementales

November 7, 2018

Derek Clarke
Office of Drinking Water
Manitoba Sustainable Development
Box 6000
Gimli, Manitoba R0C 1B0

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

Dear Mr. Clarke:

**RE: OCTOBER 2018 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 2018. We are also submitting two corrective action reports for positive total coliforms 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. 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 1, positive total coliform results were reported for routine samples at the NW06 and SW07 locations. On October 2 and 4, the locations were resampled and results were reported negative. On October 2, a positive total coliform result was reported for a routine sample at the NW02 location. On October 3 and 4, the location was resampled and results were reported negative. All samples and resamples had normal chlorine levels. Please see the attached corrective action reports 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 can be reached by telephone at 204-986-8359 or by e-mail at rgrosselle@winnipeg.ca.

Yours sincerely,

Original signed by R. Grosselle:

R. Grosselle
Manager of Environmental Standards

Enclosures

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



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 2018 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
1/10/2018	1.15	0.02	0.05	0.03	0.06	0.01	0.04	0.01	0.03	0.06	0.07	0.05	0.07	0.05	0.06	0.01	0.02
2/10/2018	1.33	0.03	0.05	0.04	0.05	0.01	0.05	0.01	0.04	0.06	0.09	0.04	0.08	0.05	0.08	0.01	0.02
3/10/2018	1.24	0.02	0.05	0.03	0.07	0.01	0.04	0.01	0.03	0.05	0.11	0.04	0.08	0.04	0.10	0.02	0.06
4/10/2018	1.14	0.02	0.05	0.03	0.07	0.01	0.05	0.01	0.04	0.08	0.10	0.06	0.08	0.05	0.07	0.02	0.08
5/10/2018	1.07	0.03	0.05	0.03	0.05	0.01	0.08	0.01	0.06	0.08	0.13	0.04	0.10	0.07	0.10	0.03	0.10
6/10/2018	1.06	0.03	0.06	0.04	0.09	0.01	0.03	0.01	0.06	0.07	0.14	0.04	0.10	0.05	0.11	0.05	0.06
7/10/2018	1.05	0.03	0.07	0.04	0.08	0.02	0.07	0.02	0.04	0.08	0.12	0.06	0.07	0.05	0.10	0.05	0.10
8/10/2018	0.98	0.03	0.05	0.03	0.08	0.02	0.08	0.01	0.14	0.13	0.17	0.05	0.10	0.06	0.08	0.04	0.10
9/10/2018	0.96	0.03	0.06	0.05	0.06	0.02	0.08	0.01	0.05	0.06	0.17	0.04	0.09	0.05	0.09	0.05	0.07
10/10/2018	0.91	0.03	0.06	0.04	0.08	0.04	0.06	0.01	0.03	0.04	0.08	0.04	0.07	0.04	0.09	0.07	0.11
11/10/2018	1.44	0.03	0.09	0.04	0.10	0.04	0.10	0.03	0.06	0.06	0.07	0.07	0.09	0.05	0.08	0.06	0.13
12/10/2018	0.76	0.06	0.08	0.06	0.08	0.05	0.16	0.02	0.09	0.06	0.10	0.05	0.13	0.08	0.11	0.07	0.14
13/10/2018	0.91	0.04	0.09	0.06	0.11	0.06	0.08	0.02	0.11	0.05	0.14	0.05	0.15	0.05	0.11	0.10	0.11
14/10/2018	0.60	0.04	0.11	0.04	0.10	0.07	0.13	0.02	0.05	0.05	0.08	0.06	0.10	0.05	0.15	0.06	0.15
15/10/2018	0.64	0.04	0.06	0.03	0.09	0.05	0.12	0.02	0.06	0.06	0.14	0.05	0.11	0.07	0.08	0.06	0.12
16/10/2018	0.83	0.05	0.08	0.06	0.08	0.06	0.10	0.01	0.05	0.05	0.12	0.05	0.10	0.05	0.09	0.08	0.11
17/10/2018	1.02	0.04	0.09	0.05	0.09	0.11	0.14	0.02	0.04	0.06	0.12	0.06	0.09	0.06	0.11	0.09	0.14
18/10/2018	1.01	0.05	0.09	0.04	0.10	0.09	0.17	0.03	0.07	0.07	0.10	0.08	0.12	0.06	0.09	0.08	0.16
19/10/2018	1.04	0.06	0.08	0.04	0.07	0.09	0.19	0.02	0.07	0.07	0.12	0.06	0.13	0.09	0.12	0.08	0.16
20/10/2018	1.12	0.06	0.10	0.07	0.10	0.11	0.15	0.02	0.08	0.07	0.14	0.06	0.13	0.06	0.13	0.11	0.15
21/10/2018	1.13	0.05	0.11	0.05	0.10	0.16	0.21	0.04	0.05	0.07	0.14	0.07	0.11	0.07	0.13	0.10	0.17
22/10/2018	1.08	0.06	0.08	0.08	0.14	0.08	0.23	OL	OL	0.09	0.12	0.09	0.14	0.07	0.12	0.06	0.17
23/10/2018	1.02	0.05	0.09	0.09	0.15	0.03	0.09	OL	OL	0.07	0.16	0.08	0.13	0.08	0.11	0.02	0.07
24/10/2018	1.01	0.06	0.08	0.10	0.15	0.03	0.10	OL	OL	0.07	0.12	0.08	0.14	0.07	0.12	0.02	0.07
25/10/2018	1.00	0.06	0.10	0.11	0.14	0.03	0.11	0.03	0.08	0.06	0.12	0.07	0.14	0.07	0.12	0.02	0.04
26/10/2018	0.98	0.05	0.11	0.09	0.16	0.04	0.07	0.03	0.09	0.05	0.11	0.07	0.10	0.06	0.12	0.03	0.07
27/10/2018	0.94	0.04	0.09	0.07	0.15	0.03	0.09	0.02	0.04	0.07	0.09	0.09	0.13	0.05	0.12	0.02	0.08
28/10/2018	0.93	0.05	0.07	0.08	0.12	0.03	0.09	0.03	0.08	0.05	0.11	0.05	0.13	0.08	0.11	0.02	0.16
29/10/2018	0.92	0.05	0.09	0.10	0.14	0.03	0.05	0.02	0.07	0.04	0.11	0.05	0.09	0.05	0.11	0.03	0.05
30/10/2018	0.93	0.04	0.10	0.08	0.15	0.04	0.10	0.03	0.04	0.07	0.08	0.09	0.13	0.05	0.11	0.03	0.08
31/10/2018	0.97	0.05	0.09	0.09	0.14	0.04	0.10	0.03	0.08	0.05	0.12	0.07	0.13	0.08	0.09	0.04	0.08

Total Number of Measurements Taken, A:	14552	11697	14607	11017	15119	13653	13478	15077
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:	14552	11697	14607	11017	15119	13653	13478	15077
Compliance with Turbidity Standard, C = B/A X 100%:	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%

OL Off-line

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2018\10-October

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-09-412-01																			
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-Oct-2018	1.06	1.13	0.08	<0.02	0.09	0.04	0.10	0.02	0.10	0.02	0.07	0.06	0.08	0.06	0.08	0.04	OL	OL	
02-Oct-2018	1.04	1.07	0.12	0.02	0.12	0.04	0.13	<0.02	0.12	0.02	0.13	0.06	OL	OL	0.14	0.05	0.14	0.03	
03-Oct-2018	1.20	1.20	0.11	0.03	0.09	0.05	0.08	<0.02	0.08	0.02	0.07	0.06	0.09	0.06	OL	OL	0.10	0.04	
04-Oct-2018	1.22	1.17	0.08	<0.02	OL	OL	0.10	<0.02	0.11	0.02	0.11	0.08	0.09	0.07	0.09	0.06	OL	OL	
05-Oct-2018	1.12	1.07	0.09	0.02	0.09	0.04	OL	OL	OL	OL	0.11	0.10	0.10	0.08	0.09	0.06	0.09	0.05	
06-Oct-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
07-Oct-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
08-Oct-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
09-Oct-2018	1.00	0.95	0.08	0.03	0.09	0.05	0.09	0.02	OL	OL	0.11	0.16	OL	OL	0.10	0.06	0.07	0.08	
10-Oct-2018	1.01	0.92	OL	OL	0.12	0.06	0.12	0.04	0.11	0.02	0.10	0.04	0.09	0.06	OL	OL	0.10	0.10	
11-Oct-2018	1.02	0.98	0.10	0.04	OL	OL	0.14	0.08	0.13	0.04	0.10	0.06	0.11	0.08	0.11	0.06	OL	OL	
12-Oct-2018	0.84	0.81	0.16	0.05	0.11	0.08	OL	OL	0.13	0.05	0.12	0.09	0.16	0.11	0.12	0.08	0.12	0.13	
13-Oct-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
14-Oct-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
15-Oct-2018	0.74	0.63	0.19	0.04	0.20	0.06	OL	OL	0.22	0.03	0.11	0.06	0.15	0.08	0.11	0.06	OL	OL	
16-Oct-2018	0.70	0.58	0.14	0.04	0.10	0.06	0.11	0.08	0.11	0.02	OL	OL	OL	OL	0.12	0.07	0.11	0.11	
17-Oct-2018	1.04	1.01	OL	OL	OL	OL	0.11	0.11	0.11	0.04	0.12	0.07	0.13	0.08	0.11	0.07	0.13	0.14	
18-Oct-2018	0.96	0.99	0.09	0.04	0.10	0.06	OL	OL	0.12	0.05	0.10	0.08	0.15	0.09	0.17	0.07	OL	OL	
19-Oct-2018	0.88	1.04	0.12	0.05	0.12	0.07	0.12	0.15	OL	OL	0.11	0.09	0.15	0.11	0.12	0.08	0.10	0.13	
20-Oct-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
21-Oct-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
22-Oct-2018	0.92	1.03	0.12	0.03	OL	OL	0.14	0.04	OL	OL	0.14	0.07	0.12	0.12	0.10	0.08	0.14	0.16	
23-Oct-2018	0.95	0.98	0.11	0.04	0.10	0.11	OL	OL	OL	OL	0.11	0.07	0.14	0.11	0.12	0.07	0.10	0.04	
24-Oct-2018	0.94	0.94	0.12	0.04	0.12	0.11	0.14	0.02	OL	OL	0.12	0.08	OL	OL	0.14	0.08	0.11	0.05	
25-Oct-2018	0.96	0.98	0.14	0.05	0.14	0.12	0.14	0.03	0.20	0.07	OL	OL	0.12	0.09	0.17	0.09	0.13	0.04	
26-Oct-2018	0.88	0.93	0.17	0.09	0.13	0.14	0.13	0.04	0.12	0.05	0.10	0.06	0.11	0.09	OL	OL	0.11	0.05	
27-Oct-2018	NA	NA	NA	NA	NA	NA	NA	NA	0.12	0.03	NA	NA	NA	NA	NA	NA	NA	NA	
28-Oct-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
29-Oct-2018	0.86	0.89	0.12	0.05	0.12	0.11	0.12	0.04	OL	OL	OL	OL	0.10	0.09	0.15	0.09	0.11	0.05	
30-Oct-2018	0.90	0.88	OL	OL	OL	OL	0.15	0.05	0.13	0.04	0.11	0.07	0.12	0.09	0.13	0.06	0.14	0.08	
31-Oct-2018	0.97	0.97	0.11	0.04	0.12	0.10	OL	OL	0.14	0.04	0.11	0.08	0.15	0.11	0.16	0.07	0.14	0.05	
Total number of measurements taken, A:			19		17		16		16		19		18		19		17		
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		17		16		16		19		18		19		17		
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:

Report Compiled By: H.Demchenko

Authorized in Sample Manager By: C.Diduck

Date Authorized: 7-Nov-18



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 2018

Report Period: October 2018

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/10/2018	1.37	1.22	1.25	1.14
02/10/2018	1.32	1.07	1.28	1.19
03/10/2018	1.29	1.07	1.20	1.11
04/10/2018	1.21	0.97	1.15	1.02
05/10/2018	1.31	1.14	1.21	1.11
06/10/2018	1.17	1.06	1.22	1.14
07/10/2018	1.13	1.08	1.18	1.11
08/10/2018	1.12	1.08	1.20	1.13
09/10/2018	1.20	1.08	1.26	1.15
10/10/2018	1.15	1.06	1.26	1.14
11/10/2018	1.30	1.19	1.27	1.12
12/10/2018	1.27	1.16	1.24	1.13
13/10/2018	1.31	1.14	1.26	1.15
14/10/2018	1.38	1.28	1.39	1.16
15/10/2018	1.26	1.18	1.30	1.16
16/10/2018	1.26	1.15	1.28	1.17
17/10/2018	1.24	1.18	1.10	1.04
18/10/2018	1.16	1.09	1.11	1.02
19/10/2018	1.08	1.01	1.18	1.11
20/10/2018	1.11	1.05	1.17	1.13
21/10/2018	1.23	1.17	1.25	1.21
22/10/2018	1.17	1.08	1.18	1.07
23/10/2018	1.18	1.10	1.18	1.12
24/10/2018	1.21	1.10	1.21	1.14
25/10/2018	1.17	1.07	1.19	1.10
26/10/2018	1.24	1.12	1.21	1.13
27/10/2018	1.20	1.13	1.23	1.11
28/10/2018	1.24	1.10	1.29	1.17
29/10/2018	1.20	0.68	1.19	0.90
30/10/2018	1.16	1.08	1.13	1.08
31/10/2018	1.20	1.11	1.20	1.15

Total Number of Measurements, A:	21587	21586
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	21587	21586
COMPLIANCE, C = B/A X 100%:	100.00	100.00

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2018\10-October

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							
Date	Free Chlorine (mg/L)		Total Chlorine (mg/L)	Free Chlorine (mg/L)		Total Chlorine (mg/L)	
	Analyser	Grab	Grab	Analyser	Grab	Grab	
01-Oct-2018	1.40	1.38	1.62	1.30	1.31	1.51	
02-Oct-2018	1.23	1.23	1.46	1.29	1.36	1.50	
03-Oct-2018	1.39	1.32	1.52	1.23	1.25	1.39	
04-Oct-2018	1.25	1.22	1.45	1.13	1.13	1.29	
05-Oct-2018	1.38	1.23	1.43	1.21	1.16	1.30	
06-Oct-2018	NA	NA	NA	NA	NA	NA	
07-Oct-2018	NA	NA	NA	NA	NA	NA	
08-Oct-2018	NA	NA	NA	NA	NA	NA	
09-Oct-2018	1.37	1.39	1.55	1.25	1.31	1.44	
10-Oct-2018	1.11	1.11	1.31	1.17	1.26	1.39	
11-Oct-2018	1.30	1.35	1.54	1.27	1.36	1.51	
12-Oct-2018	1.24	1.27	1.45	1.26	1.31	1.50	
13-Oct-2018	NA	NA	NA	NA	NA	NA	
14-Oct-2018	NA	NA	NA	NA	NA	NA	
15-Oct-2018	1.19	1.23	1.41	1.24	1.34	1.45	
16-Oct-2018	1.20	1.26	1.40	1.25	1.31	1.46	
17-Oct-2018	1.21	1.23	1.39	1.08	1.16	1.35	
18-Oct-2018	1.18	1.23	1.43	1.15	1.17	1.33	
19-Oct-2018	1.03	1.09	1.28	1.20	1.16	1.31	
20-Oct-2018	NA	NA	NA	NA	NA	NA	
21-Oct-2018	NA	NA	NA	NA	NA	NA	
22-Oct-2018	1.22	1.30	1.47	1.19	1.27	1.47	
23-Oct-2018	1.21	1.24	1.43	1.21	1.26	1.42	
24-Oct-2018	1.23	1.24	1.43	1.23	1.27	1.46	
25-Oct-2018	1.11	1.18	1.38	1.12	1.19	1.37	
26-Oct-2018	1.37	1.38	1.63	1.23	1.32	1.52	
27-Oct-2018	NA	NA	NA	NA	NA	NA	
28-Oct-2018	NA	NA	NA	NA	NA	NA	
29-Oct-2018	1.00	1.18	1.41	1.12	1.20	1.30	
30-Oct-2018	1.15	1.15	1.35	1.13	1.19	1.34	
31-Oct-2018	1.25	1.25	1.47	1.26	1.26	1.44	
Total number of measurements taken, A:		22			22		
Chlorine Standard for Monitoring Location (mg/L):		0.50			0.50		
Number of measurements meeting standard, B:		22			22		
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

Authorized By: C.Diduck

Date Authorized: 7-Nov-18



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 2018**

Report Created: **Thursday, November 01, 2018**

Date	Transmittance %	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose	
		Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]					
		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		Untreated
01/10/2018	95.38	0.00	0.64	4.93	5.58	0.00	0.00	17.23	17.23	0.00	0.00	51.30	51.30	0.00	14.18	32.55	46.73	0.00	0.00	63.13	63.13	0.00	0.00	0.00	0.00	0.00	14.82	169.15	183.97	91.94	
02/10/2018	95.50	0.00	0.00	21.49	21.49	0.00	0.09	33.27	33.36	0.00	0.00	15.06	15.06	0.00	0.00	36.52	36.52	0.00	0.00	44.84	44.84	0.00	0.00	29.45	29.45	0.00	0.09	180.63	180.72	99.95	
03/10/2018	95.50	0.00	0.00	0.00	0.00	0.13	0.13	27.09	27.36	0.00	0.00	0.00	0.00	0.00	0.00	56.44	56.44	0.00	0.00	57.36	57.36	0.00	0.00	53.68	53.68	0.13	0.13	194.57	194.83	99.86	
04/10/2018	95.21	0.00	0.00	0.00	0.00	0.00	0.06	15.43	15.49	0.00	0.00	0.00	0.00	0.00	0.00	61.66	61.66	0.00	0.00	61.75	61.75	0.00	0.00	57.80	57.80	0.00	0.06	196.65	196.70	99.97	
05/10/2018	95.16	0.00	0.00	0.00	0.00	0.00	0.00	45.34	45.34	0.00	0.00	0.00	0.00	0.00	0.30	45.99	46.29	0.00	0.00	60.77	60.77	0.00	0.14	33.98	34.12	0.00	0.44	186.09	186.52	99.77	
06/10/2018	95.23	0.00	0.00	0.00	0.00	0.00	0.00	73.72	73.72	0.00	0.00	1.03	1.03	0.00	0.00	45.42	45.42	0.00	0.00	66.39	66.39	0.00	0.00	0.00	0.00	0.00	0.00	186.56	186.56	100.00	
07/10/2018	95.30	0.00	0.00	0.00	0.00	0.00	0.00	67.93	67.93	0.00	0.00	25.55	25.55	0.00	0.00	33.81	33.81	0.00	0.00	57.70	57.70	0.00	0.00	0.00	0.00	0.00	0.00	184.98	184.98	100.00	
08/10/2018	95.47	0.00	0.00	0.00	0.00	0.00	0.00	66.81	66.81	0.00	0.00	27.22	27.22	0.00	0.00	35.52	35.52	0.00	0.00	56.26	56.26	0.00	0.00	0.00	0.00	0.00	0.00	185.80	185.80	100.00	
09/10/2018	95.51	0.02	0.02	33.85	33.88	0.00	0.00	57.37	57.37	0.00	0.00	16.41	16.41	0.00	0.00	17.37	17.37	0.00	0.00	55.73	55.73	0.00	0.00	7.26	7.26	0.02	0.02	187.99	188.02	99.98	
10/10/2018	95.48	0.00	0.10	58.75	58.86	0.00	0.00	46.50	46.50	0.00	0.21	15.96	16.17	0.00	0.00	0.00	0.00	0.00	0.05	66.39	66.44	0.00	0.00	0.00	0.00	0.00	0.36	187.61	187.97	99.81	
11/10/2018	95.18	0.00	0.59	26.89	27.47	0.00	0.00	44.24	44.24	0.00	0.00	23.14	23.14	0.00	0.00	0.00	0.00	0.00	0.00	46.80	46.80	0.00	0.00	42.83	42.83	0.00	0.59	183.90	184.48	99.68	
12/10/2018	94.55	0.00	0.00	17.35	17.35	0.00	0.20	43.52	43.72	0.00	0.00	0.00	0.00	0.00	0.08	28.00	28.08	0.00	0.00	40.32	40.32	0.00	0.00	58.41	58.41	0.00	0.28	187.61	187.89	99.85	
13/10/2018	93.62	0.00	0.13	30.97	31.11	0.00	0.00	0.00	0.00	0.00	0.12	13.45	13.57	0.00	0.34	43.90	44.23	0.00	0.00	50.04	50.04	0.00	0.00	44.06	44.06	0.00	0.59	182.41	183.00	99.68	
14/10/2018	93.81	0.00	0.00	52.09	52.09	0.00	0.00	26.19	26.19	0.05	0.05	28.55	28.65	0.01	0.01	28.12	28.14	0.00	0.00	42.48	42.48	0.00	0.00	4.52	4.52	0.06	0.06	181.96	182.07	99.94	
15/10/2018	94.05	0.00	0.05	51.18	51.22	0.00	0.00	33.10	33.10	0.00	0.00	0.06	0.06	0.00	0.00	48.22	48.22	0.00	0.00	2.77	2.77	0.00	0.09	49.30	49.39	0.00	0.14	184.63	184.77	99.93	
16/10/2018	94.27	0.00	0.00	19.56	19.56	0.00	0.00	16.41	16.41	0.00	0.00	35.58	35.58	0.00	0.00	19.73	19.73	0.00	0.00	48.93	48.93	0.00	0.00	45.61	45.61	0.00	0.00	185.82	185.82	100.00	
17/10/2018	95.25	0.00	0.00	29.30	29.30	0.00	0.00	0.00	0.00	0.00	0.00	59.49	59.49	0.00	0.00	0.00	0.00	0.00	0.00	58.45	58.45	0.00	0.32	38.42	38.74	0.00	0.32	185.66	185.98	99.83	
18/10/2018	95.25	0.00	0.00	69.14	69.14	0.00	0.00	0.00	0.00	0.00	0.00	46.95	46.95	0.00	0.00	0.00	0.00	0.00	0.00	69.87	69.87	0.00	0.00	0.00	0.00	0.00	0.00	185.97	185.97	100.00	
19/10/2018	95.26	0.00	0.13	61.76	61.89	0.00	0.00	0.00	0.00	0.00	0.00	51.11	51.11	0.00	0.00	0.00	0.00	0.00	0.00	73.02	73.02	0.00	0.00	0.00	0.00	0.00	0.13	185.89	186.01	99.93	
20/10/2018	95.11	0.00	0.00	61.09	61.09	0.00	0.00	0.00	0.00	0.00	0.00	51.59	51.59	0.00	0.00	0.00	0.00	0.00	0.00	73.34	73.34	0.00	0.00	0.00	0.00	0.00	0.00	186.02	186.02	100.00	
21/10/2018	95.02	0.00	0.00	61.14	61.14	0.00	0.00	0.00	0.00	0.00	0.00	51.60	51.60	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	186.09	186.09	100.00	
22/10/2018	95.03	0.00	0.00	61.33	61.33	0.00	0.00	0.00	0.00	0.00	0.00	51.46	51.46	0.00	0.00	0.00	0.00	0.00	0.00	73.22	73.22	0.00	0.00	0.00	0.00	0.00	0.00	186.01	186.01	100.00	
23/10/2018	94.96	0.00	0.00	61.50	61.50	0.00	0.00	0.00	0.00	0.00	0.00	51.31	51.31	0.00	0.00	0.00	0.00	0.00	0.00	73.16	73.16	0.00	0.00	0.00	0.00	0.00	0.00	185.96	185.96	100.00	
24/10/2018	94.89	0.00	0.00	64.87	64.87	0.00	0.00	0.00	0.00	0.00	0.00	56.23	56.23	0.00	0.00	0.00	0.00	0.00	0.00	75.62	75.62	0.00	0.00	0.00	0.00	0.00	0.00	196.72	196.72	100.00	
25/10/2018	94.94	0.00	0.00	67.27	67.27	0.00	0.00	0.00	0.00	0.00	0.00	60.10	60.10	0.00	0.00	0.00	0.00	0.00	0.00	75.79	75.79	0.00	0.00	0.00	0.00	0.00	0.00	203.16	203.16	100.00	
26/10/2018	94.57	0.00	0.00	65.68	65.68	0.00	0.00	0.00	0.00	0.00	0.00	58.56	58.56	0.00	0.00	0.00	0.00	0.00	0.00	73.86	73.86	0.00	0.00	0.00	0.00	0.00	0.00	198.10	198.10	100.00	
27/10/2018	94.74	0.00	0.00	61.14	61.14	0.00	0.00	0.00	0.00	0.00	0.00	51.98	51.98	0.00	0.00	0.00	0.00	0.00	0.00	66.15	66.15	0.00	0.00	0.00	0.00	0.00	0.00	179.27	179.27	100.00	
28/10/2018	94.76	0.00	0.00	60.57	60.57	0.00	0.00	0.00	0.00	0.00	0.00	51.71	51.71	0.00	0.00	0.00	0.00	0.00	0.00	65.70	65.70	0.00	0.00	0.00	0.00	0.00	0.00	177.99	177.99	100.00	
29/10/2018	94.96	0.00	0.00	60.06	60.06	0.00	0.00	0.00	0.00	0.00	0.00	31.35	31.35	0.00	0.00	19.01	19.01	0.04	0.04	28.21	28.30	0.00	0.00	35.52	35.52	0.04	0.04	174.14	174.23	99.95	
30/10/2018	94.82	0.00	0.00	59.81	59.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.11	48.11	0.00	0.00	0.00	0.00	0.00	0.00	65.23	65.23	0.00	0.00	173.15	173.15	100.00	
31/10/2018	94.69	0.00	0.00	76.24	76.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.62	60.62	0.00	0.00	0.00	0.00	0.00	0.00	77.01	77.01	0.00	0.00	213.87	213.87	100.00	
Total [ML]:		0.02	1.65	1238.00	1239.67	0.13	0.49	614.15	614.77	0.05	0.38	926.73	927.16	0.01	14.90	661.00	675.91	0.04	0.10	1701.38	1701.52	0.00	0.54	643.07	643.62	0.26	18.06	5784.33	5802.65		

Water Volume [%]:
 Untreated: 0.00 %
 Below Dose 0.31 %
 To Dose 99.68 %

Submitted By (Print): D. Merredew

Signature: Original Signed by D. Merredew



Water and Waste Department • Service des eaux et des déchets

Wednesday, November 7, 2018

Our Incident/Report No: **08-2018**
LIMS Reference No: **145197 & 145222**
Incident Date: **October 1, 2018**

Mr. Derek Clarke
Drinking Water Officer
Manitoba Sustainable Development, Office of Drinking Water
Box 6000
Gimli, MB R0C 1B0

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM, CODE	Winnipeg Public Water System, 252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist NW06; SW07
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	E Coli (MPNU/100mL)	Total Coliform (MPNU/100mL)	HPC (cfu/mL)	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Turbidity-field (ntu)	Temperature (°C)	Time Sampled (hrs)
NW06	145197	1-Oct-18	<1	1	<1	0.59	0.88	0.14	15.8	9:30
SW07	145222	1-Oct-18	<1	1	<1	0.87	1.03	0.13	15.6	15:05
NW06 Resample	146175	2-Oct-18	<1	<1	<1	0.77	1.02	0.21	15.6	13:41
SW07 Resample	146176	2-Oct-18	<1	<1	<1	0.90	1.13	0.12	15.5	15:45
NW06 Resample 2	146188	4-Oct-18	<1	<1	<1	0.74	1.01	0.14	14.7	11:55
NW06 Resample 2 Duplicate	153932	4-Oct-18	<1	<1	<1	NA	NA	NA	NA	11:55
SW07 Resample 2	145189	4-Oct-18	<1	<1	<1	0.92	1.15	0.25	14.6	13:09
SW07 Resample 2 Duplicate	153933	4-Oct-18	<1	<1	<1	NA	NA	NA	NA	13:09

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.



Water and Waste Department • Service des eaux et des déchets

Wednesday, November 7, 2018

Our Incident/Report No: **09-2018**
LIMS Reference No: 145950
Incident Date: **October 2, 2018**

Mr. Derek Clarke
Drinking Water Officer
Manitoba Sustainable Development, Office of Drinking Water
Box 6000
Gimli, MB R0C 1B0

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM, CODE	Winnipeg Public Water System, 252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist NW02
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:

- 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	E Coli (MPNU/100mL)	Total Coliform (MPNU/100mL)	Online Analyzer Free Chlorine (mg/L)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Turbidity-field (ntu)	Temperature (°C)	Time Sampled (hrs)
NW02	145950	2-Oct-18	<1	1	NA	0.30	0.47	0.20	15.3	9:18
NW02 Resample	145192	3-Oct-18	<1	<1	0.18	0.21	0.38	0.18	14.5	14:20
NW02 Resample 2	146499	4-Oct-18	<1	<1	0.17	0.19	0.35	0.20	14.5	14:50
NW02 Resample 2 Duplicate	146499	4-Oct-18	<1	<1	NA	NA	NA	NA	NA	14:50

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.