



**Water and Waste Department • Service des eaux et des déchets**

*Environmental Standards Division • Division des Normes Environnementales*

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April 6, 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: MARCH 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 March 2018. We have also included one corrective action report for a positive total coliform in the distribution system.

The March on-line and grab sampling turbidity reports include results obtained for the Water Treatment Plant raw water and the eight filters. Please note that the maximum turbidity for Filter 3 was greater than 0.3 NTU on March 8; the elevated turbidity occurred for a short period of time which did not exceed 12 consecutive hours. The turbidity results for the effluent from the filters met the licence requirements.

The March 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 March 13, a positive total coliform result was reported for a routine sample at the WC04 location. On March 14 and 16, the location was resampled and results were reported 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 March 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 M. Marsland for:*

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)  
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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**

March 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
1/03/2018	0.63	0.03	0.08	0.05	0.08	0.03	0.12	0.03	0.11	0.03	0.05	0.04	0.10	0.05	0.09	0.01	0.01
2/03/2018	0.63	0.02	0.07	0.07	0.14	0.04	0.06	0.02	0.05	0.02	0.07	0.04	0.12	0.04	0.10	0.01	0.06
3/03/2018	0.62	0.03	0.05	0.05	0.12	0.03	0.10	0.03	0.11	0.02	0.07	0.03	0.05	0.03	0.10	0.01	0.06
4/03/2018	0.63	0.03	0.06	0.05	0.13	0.04	0.15	0.03	0.10	0.01	0.03	0.04	0.13	0.04	0.07	0.01	0.06
5/03/2018	0.61	0.03	0.13	0.05	0.08	0.05	0.23	0.03	0.10	0.02	0.05	0.03	0.10	0.03	0.08	0.01	0.03
6/03/2018	0.60	0.02	0.06	0.05	0.11	0.04	0.20	0.03	0.05	0.01	0.06	0.02	0.10	0.02	0.07	0.01	0.05
7/03/2018	0.58	0.03	0.07	0.05	0.12	0.04	0.18	0.03	0.09	0.02	0.07	0.05	0.08	0.03	0.06	0.01	0.07
8/03/2018	0.56	0.03	0.16	0.05	0.14	0.06	0.32	0.03	0.11	0.03	0.06	0.05	0.13	0.05	0.09	0.01	0.03
9/03/2018	0.55	0.02	0.06	0.05	0.09	0.03	0.09	0.02	0.08	0.02	0.05	0.03	0.10	0.03	0.09	0.01	0.08
10/03/2018	0.53	0.04	0.11	0.08	0.14	0.08	0.11	0.04	0.07	0.03	0.10	0.05	0.15	0.05	0.13	0.03	0.10
11/03/2018	0.52	0.04	0.07	0.05	0.14	0.05	0.13	0.04	0.12	0.02	0.07	0.05	0.07	0.03	0.05	0.02	0.09
12/03/2018	0.50	0.03	0.08	0.05	0.08	0.04	0.12	0.03	0.10	0.03	0.05	0.04	0.13	0.05	0.10	0.02	0.03
13/03/2018	0.49	0.02	0.04	0.06	0.14	0.05	0.07	0.03	0.05	0.02	0.07	0.03	0.12	0.03	0.10	0.03	0.09
14/03/2018	0.46	0.04	0.07	0.05	0.14	0.05	0.12	0.03	0.11	0.01	0.04	0.05	0.07	0.03	0.05	0.02	0.10
15/03/2018	0.46	0.03	0.09	0.05	0.08	0.04	0.13	0.03	0.11	0.03	0.06	0.04	0.10	0.04	0.09	0.03	0.05
16/03/2018	0.46	0.03	0.05	0.07	0.14	0.07	0.10	0.03	0.06	0.02	0.06	0.03	0.11	0.03	0.09	0.03	0.09
17/03/2018	0.46	0.05	0.09	0.05	0.14	0.05	0.13	0.04	0.11	0.02	0.07	0.05	0.11	0.03	0.05	0.03	0.10
18/03/2018	0.46	0.04	0.10	0.05	0.08	0.05	0.14	0.03	0.13	0.03	0.06	0.04	0.11	0.04	0.10	0.04	0.06
19/03/2018	0.47	0.03	0.06	0.08	0.15	0.06	0.10	0.03	0.06	0.02	0.07	0.03	0.11	0.03	0.10	0.05	0.11
20/03/2018	0.46	0.06	0.10	0.05	0.14	0.05	0.13	0.04	0.11	0.02	0.07	0.05	0.07	0.03	0.05	0.04	0.11
21/03/2018	0.47	0.04	0.10	0.06	0.08	0.04	0.14	0.03	0.12	0.03	0.06	0.04	0.12	0.04	0.10	0.05	0.07
22/03/2018	0.47	0.04	0.06	0.07	0.14	0.07	0.10	0.04	0.07	0.02	0.07	0.03	0.11	0.03	0.09	0.05	0.11
23/03/2018	0.52	0.05	0.11	0.05	0.14	0.04	0.14	0.03	0.11	0.02	0.07	0.06	0.08	0.03	0.05	0.05	0.12
24/03/2018	0.53	0.04	0.09	0.05	0.13	0.04	0.12	0.03	0.08	0.03	0.06	0.05	0.13	0.05	0.10	0.06	0.09
25/03/2018	0.53	0.04	0.10	0.07	0.10	0.05	0.07	0.03	0.10	0.02	0.08	0.05	0.14	0.04	0.11	0.07	0.13
26/03/2018	0.53	0.05	0.07	0.05	0.13	0.06	0.14	0.04	0.09	0.02	0.07	0.05	0.13	0.04	0.11	0.06	0.14
27/03/2018	0.55	0.05	0.10	0.05	0.11	0.05	0.12	0.03	0.09	0.01	0.03	0.07	0.13	0.05	0.07	0.05	0.13
28/03/2018	0.57	0.05	0.11	0.07	0.09	0.05	0.08	0.03	0.12	0.03	0.08	0.06	0.15	0.05	0.12	0.10	0.13
29/03/2018	0.60	0.06	0.08	0.06	0.15	0.07	0.15	0.05	0.07	0.03	0.11	0.05	0.16	0.04	0.12	0.07	0.16
30/03/2018	0.61	0.07	0.13	0.05	0.15	0.05	0.15	0.04	0.11	0.03	0.04	0.09	0.14	0.06	0.08	0.06	0.16
31/03/2018	0.62	0.04	0.13	0.07	0.08	0.05	0.07	0.02	0.11	0.03	0.09	0.05	0.16	0.04	0.11	0.10	0.16

Total Number of Measurements Taken, A:	14036	11213	14305	11545	14771	13168	13120	14556
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:	14036	11213	14302	11545	14771	13168	13120	14556
Compliance with Turbidity Standard, C = B/A X 100%:	100.000%	100.000%	99.979%	100.000%	100.000%	100.000%	100.000%	100.000%

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2018\03-March

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-Mar-2018	0.43	0.62	0.12	0.05	0.08	0.07	OL	OL	OL	OL	0.09	0.02	0.12	0.08	0.12	0.05	0.10	<0.02
02-Mar-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
03-Mar-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
04-Mar-2018	0.48	0.61	0.12	0.03	OL	OL	OL	OL	0.14	0.05	0.10	<0.02	0.11	0.05	0.10	0.03	0.09	<0.02
05-Mar-2018	0.53	0.61	OL	OL	0.09	0.06	0.16	0.10	OL	OL	0.12	0.02	0.13	0.07	0.10	0.03	0.10	<0.02
06-Mar-2018	0.47	0.59	0.07	0.02	0.09	0.07	0.09	0.04	0.08	0.03	OL	OL	0.08	0.05	OL	OL	0.09	0.03
07-Mar-2018	0.47	0.55	0.08	<0.02	0.13	0.11	0.10	0.05	0.10	0.04	0.08	<0.02	0.09	0.06	0.08	0.03	OL	OL
08-Mar-2018	0.45	0.53	0.10	0.04	OL	OL	OL	OL	0.15	0.09	0.09	0.02	0.12	0.07	0.11	0.04	0.09	0.03
09-Mar-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10-Mar-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
11-Mar-2018	0.45	0.50	0.08	0.02	0.13	0.11	0.13	0.07	0.11	0.05	OL	OL	0.10	0.06	0.10	0.03	OL	OL
12-Mar-2018	0.40	0.50	0.10	0.05	0.07	0.07	OL	OL	OL	OL	0.08	0.02	0.10	0.06	0.09	0.04	0.08	0.04
13-Mar-2018	0.41	0.48	0.07	0.02	0.08	0.07	0.08	0.05	0.08	0.03	0.11	0.04	OL	OL	OL	OL	0.10	0.06
14-Mar-2018	0.42	0.45	0.09	0.03	OL	OL	0.12	0.08	0.12	0.06	0.07	<0.02	0.09	0.05	0.08	0.03	OL	OL
15-Mar-2018	0.38	0.44	OL	OL	0.08	0.07	0.08	0.05	OL	OL	0.09	0.03	0.12	0.07	0.10	0.04	0.09	0.05
16-Mar-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
17-Mar-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
18-Mar-2018	0.44	0.47	0.13	0.07	0.11	0.08	OL	OL	OL	OL	0.11	0.03	0.11	0.07	0.09	0.04	0.08	0.07
19-Mar-2018	0.45	0.46	0.10	0.03	0.13	0.08	0.09	0.06	0.08	0.04	0.10	0.02	OL	OL	OL	OL	0.09	0.07
20-Mar-2018	0.39	0.44	0.10	0.04	0.17	0.13	0.12	0.07	0.11	0.06	0.08	<0.02	0.10	0.05	0.09	0.03	OL	OL
21-Mar-2018	0.40	0.49	0.14	0.08	0.09	0.07	OL	OL	OL	OL	0.10	0.02	0.11	0.07	0.10	0.04	0.10	0.08
22-Mar-2018	0.43	0.45	0.08	0.04	0.09	0.08	0.10	0.06	0.09	0.04	0.12	0.03	OL	OL	OL	OL	0.11	0.09
23-Mar-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
24-Mar-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
25-Mar-2018	0.47	0.50	OL	OL	0.09	0.07	0.09	0.06	0.09	0.04	0.10	0.03	OL	OL	0.13	0.07	0.11	0.11
26-Mar-2018	0.44	0.54	0.09	0.04	0.09	0.08	0.10	0.06	0.10	0.04	OL	OL	0.10	0.06	OL	OL	0.11	0.13
27-Mar-2018	0.44	0.51	0.08	0.04	OL	OL	0.12	0.09	0.10	0.05	0.09	<0.02	0.10	0.07	0.09	0.03	OL	OL
28-Mar-2018	0.45	0.55	OL	OL	0.08	0.08	0.09	0.07	OL	OL	0.10	0.03	0.15	0.12	0.11	0.06	0.09	0.11
29-Mar-2018	0.45	0.57	0.10	0.05	0.10	0.09	0.11	0.07	0.10	0.05	OL	OL	0.10	0.08	OL	OL	0.12	0.13
30-Mar-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
31-Mar-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Total number of measurements taken, A:</b>			17		17		15		14		17		17		15		16	
<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>			17		17		15		14		17		17		15		16	
<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:

Report Compiled By: H.Demchenko

Approved in LIMS By: C.Diduck

Date Approved: 6-Apr-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 April 2018

Report Period: March 2018

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/03/2018	OL	OL	1.09	1.06
02/03/2018	OL	OL	1.09	1.06
03/03/2018	OL	OL	1.06	0.96
04/03/2018	OL	OL	1.07	1.05
05/03/2018	OL	OL	1.12	1.07
06/03/2018	OL	OL	1.08	0.85
07/03/2018	OL	OL	1.22	1.10
08/03/2018	OL	OL	1.15	1.09
09/03/2018	1.00	0.92	1.09	0.97
10/03/2018	1.02	0.95	0.97	0.94
11/03/2018	1.03	0.99	0.99	0.93
12/03/2018	1.04	0.99	1.08	1.06
13/03/2018	1.04	0.98	1.13	1.07
14/03/2018	1.02	0.98	1.13	1.11
15/03/2018	1.16	0.98	1.19	1.13
16/03/2018	1.24	1.18	1.22	1.17
17/03/2018	1.24	1.14	1.20	1.17
18/03/2018	1.16	1.11	1.14	1.10
19/03/2018	1.14	0.88	1.11	1.02
20/03/2018	0.99	0.81	1.08	1.03
21/03/2018	1.04	0.92	1.09	1.05
22/03/2018	1.02	0.91	1.10	1.06
23/03/2018	0.93	0.83	1.06	0.91
24/03/2018	0.89	0.81	0.99	0.89
25/03/2018	0.92	0.85	1.03	0.93
26/03/2018	1.02	0.89	1.15	1.01
27/03/2018	1.01	0.87	1.10	0.97
28/03/2018	1.01	0.92	0.99	0.93
29/03/2018	1.00	0.92	1.01	0.91
30/03/2018	0.93	0.84	1.02	0.92
31/03/2018	0.99	0.92	1.06	0.99

Total Number of Measurements, A:	15591	21565
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	15591	21565

COMPLIANCE, C = B/A X 100%:	100.00	100.00
Off-line OL		

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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							
Date	Free Chlorine (mg/L)		Total Chlorine (mg/L)	Free Chlorine (mg/L)		Total Chlorine (mg/L)	
	Analyser	Grab	Grab	Analyser	Grab	Grab	
01-Mar-2018	OL	OL	OL	1.11	1.17	1.32	
02-Mar-2018	NA	NA	NA	NA	NA	NA	
03-Mar-2018	NA	NA	NA	NA	NA	NA	
04-Mar-2018	OL	OL	OL	1.07	1.09	1.27	
05-Mar-2018	OL	OL	OL	1.13	1.15	1.33	
06-Mar-2018	OL	OL	OL	1.05	1.17	1.30	
07-Mar-2018	OL	OL	OL	1.29	1.15	1.35	
08-Mar-2018	OL	OL	OL	1.21	1.23	1.42	
09-Mar-2018	0.97	1.14	1.28	NA	NA	NA	
10-Mar-2018	0.96	0.97	1.25	NA	NA	NA	
11-Mar-2018	1.02	1.05	1.24	0.95	1.05	1.24	
12-Mar-2018	1.04	1.10	1.27	1.08	1.10	1.30	
13-Mar-2018	1.04	1.08	1.27	1.09	1.15	1.39	
14-Mar-2018	1.03	1.07	1.23	1.14	1.17	1.31	
15-Mar-2018	1.16	1.20	1.39	1.16	1.16	1.31	
16-Mar-2018	NA	NA	NA	NA	NA	NA	
17-Mar-2018	NA	NA	NA	NA	NA	NA	
18-Mar-2018	1.15	1.18	1.40	1.12	1.16	1.32	
19-Mar-2018	1.22	1.22	1.41	1.11	1.14	1.27	
20-Mar-2018	1.05	1.01	1.21	1.13	1.05	1.23	
21-Mar-2018	1.05	1.04	1.23	1.10	1.05	1.21	
22-Mar-2018	1.04	1.06	1.18	1.09	1.14	1.29	
23-Mar-2018	NA	NA	NA	NA	NA	NA	
24-Mar-2018	NA	NA	NA	NA	NA	NA	
25-Mar-2018	0.92	0.99	1.11	1.02	1.03	1.25	
26-Mar-2018	1.04	1.10	1.27	1.18	1.17	1.34	
27-Mar-2018	1.01	1.11	1.30	1.07	1.18	1.32	
28-Mar-2018	1.06	1.03	1.22	0.99	1.11	1.28	
29-Mar-2018	0.98	1.00	1.17	1.04	1.07	1.26	
30-Mar-2018	NA	NA	NA	NA	NA	NA	
31-Mar-2018	NA	NA	NA	NA	NA	NA	
<b>Total number of measurements taken, A:</b>		17			21		
<b>Chlorine Standard for Monitoring Location (mg/L):</b>		0.50			0.50		
<b>Number of measurements meeting standard, B:</b>		17			21		
<b>Compliance with Chlorine Standard, C= B/A X 100%:</b>		100%			100%		

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

**Comments:**

Branch I offline March 1 to 9 to facilitate maintenance work.

Report Compiled By: H.Demchenko

Approved in LIMS By: C.Diduck

Date Approved: 6-Apr-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: **March 2018**

Report Created: **Sunday, April 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	Below	To
01/03/2018	95.16	0.00	0.00	0.00	0.00	0.00	0.00	70.50	70.50	0.00	0.00	0.00	0.00	0.00	0.00	52.83	52.83	0.00	0.00	0.00	0.00	0.00	0.00	76.68	76.68	0.00	0.00	200.01	200.01	100.00			
02/03/2018	95.23	0.00	0.00	0.00	0.00	0.00	0.00	70.61	70.61	0.00	0.00	0.00	0.00	0.00	0.00	52.58	52.58	0.00	0.00	0.00	0.00	0.00	0.00	76.80	76.80	0.00	0.00	199.99	199.99	100.00			
03/03/2018	95.28	0.00	0.00	0.00	0.00	0.00	0.00	70.67	70.67	0.00	0.00	0.00	0.00	0.00	0.00	52.55	52.55	0.00	0.00	0.00	0.00	0.00	0.00	76.77	76.77	0.00	0.00	199.99	199.99	100.00			
04/03/2018	95.11	0.00	0.00	0.00	0.00	0.00	0.00	70.66	70.66	0.00	0.00	0.00	0.00	0.00	0.00	52.57	52.57	0.00	0.00	0.00	0.00	0.00	0.00	76.78	76.78	0.00	0.00	200.01	200.01	100.00			
05/03/2018	95.25	0.00	0.00	0.00	0.00	0.00	0.00	70.65	70.65	0.00	0.00	0.00	0.00	0.00	0.00	52.56	52.56	0.00	0.00	0.00	0.00	0.00	0.00	76.79	76.79	0.00	0.00	200.00	200.00	100.00			
06/03/2018	95.34	0.00	0.00	0.00	0.00	0.00	0.00	64.34	64.34	0.00	0.00	0.00	0.00	0.00	0.00	51.67	51.67	0.00	0.00	0.00	0.00	0.00	0.00	68.26	68.26	0.00	0.00	184.28	184.28	100.00			
07/03/2018	95.01	0.00	0.00	0.00	0.00	0.00	0.00	70.66	70.66	0.00	0.00	0.00	0.00	0.00	0.00	52.42	52.42	0.00	0.00	0.00	0.00	0.00	0.00	76.89	76.89	0.00	0.00	199.96	199.96	100.00			
08/03/2018	94.76	0.00	0.00	0.00	0.00	0.00	0.00	72.01	72.01	0.00	0.00	0.00	0.00	0.00	0.00	52.87	52.87	0.00	0.00	0.00	0.00	0.00	0.00	74.86	74.86	0.00	0.00	199.73	199.73	100.00			
09/03/2018	94.78	0.00	0.00	0.00	0.00	0.00	0.00	73.89	73.89	0.00	0.00	0.00	0.00	0.00	0.12	28.40	28.64	0.00	0.00	20.16	20.16	0.00	0.00	75.67	75.67	0.12	0.12	198.11	198.35	99.88			
10/03/2018	93.93	0.00	0.00	0.00	0.00	0.00	0.00	75.01	75.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.99	39.99	0.00	0.00	72.38	72.38	0.00	0.00	187.38	187.38	100.00			
11/03/2018	94.52	0.00	0.00	0.00	0.00	0.00	0.00	72.89	72.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.67	35.67	0.00	0.00	64.42	64.42	0.00	0.00	172.98	172.98	100.00				
12/03/2018	94.57	0.00	0.00	0.00	0.00	0.00	0.00	65.01	65.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	37.74	38.49	0.00	0.00	69.53	69.53	0.00	0.75	172.28	173.03	99.56				
13/03/2018	94.63	0.00	0.00	0.00	0.00	0.00	0.00	56.15	56.15	0.00	0.00	0.00	0.00	0.00	0.00	35.25	35.25	0.00	3.61	11.41	15.02	0.00	0.00	66.53	66.53	0.00	3.61	169.34	172.95	97.91			
14/03/2018	94.46	0.00	0.00	0.00	0.00	0.00	0.00	53.70	53.70	0.00	0.00	0.00	0.00	0.00	0.00	56.25	56.25	0.00	0.00	0.00	0.00	0.00	0.00	63.03	63.03	0.00	0.00	172.98	172.98	100.00			
15/03/2018	94.19	0.00	0.00	0.00	0.00	0.00	0.00	16.60	16.60	0.00	0.00	30.10	30.10	0.00	0.00	52.58	52.58	0.00	0.00	0.00	0.00	0.00	0.00	73.68	73.68	0.00	0.00	172.97	172.97	100.00			
16/03/2018	93.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.23	45.23	0.00	0.00	50.10	50.10	0.00	0.00	0.00	0.00	0.00	0.00	78.63	78.63	0.00	0.00	173.96	173.96	100.00			
17/03/2018	93.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.81	46.81	0.00	0.00	51.11	51.11	0.00	0.00	0.00	0.00	0.00	0.00	80.09	80.09	0.00	0.00	178.01	178.01	100.00			
18/03/2018	93.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.10	47.10	0.00	0.00	51.00	51.00	0.00	0.00	0.00	0.00	0.00	0.00	79.92	79.92	0.00	0.00	178.02	178.02	100.00			
19/03/2018	93.66	0.00	0.19	3.50	3.69	0.00	0.04	15.06	15.10	0.36	0.36	55.47	56.18	0.00	0.00	17.16	17.16	0.00	0.46	14.04	14.50	0.00	0.00	71.28	71.28	0.36	1.05	176.51	177.91	99.21			
20/03/2018	93.57	0.04	0.04	22.62	22.69	0.00	0.00	56.54	56.54	0.00	0.00	21.88	21.88	0.00	0.00	0.00	0.00	0.00	0.00	20.62	20.62	0.00	0.00	59.37	59.37	0.04	0.04	181.03	181.10	99.96			
21/03/2018	93.98	0.00	0.00	23.20	23.20	0.00	0.00	76.58	76.58	0.00	0.00	0.00	0.00	0.00	0.24	0.24	0.00	0.48	0.00	0.00	20.63	20.63	0.00	0.00	69.27	69.27	0.24	0.24	189.68	190.16	99.75		
22/03/2018	94.92	0.00	0.00	52.07	52.07	0.00	0.00	65.98	65.98	0.00	0.00	0.00	0.00	0.00	0.03	0.24	0.59	0.85	0.00	0.00	0.00	0.00	0.00	71.12	71.12	0.03	0.24	189.76	190.02	99.86			
23/03/2018	95.04	0.00	0.00	19.37	19.37	0.00	0.00	74.92	74.92	0.00	0.00	0.00	0.00	0.00	0.00	0.09	33.21	33.30	0.00	0.00	0.00	0.00	0.00	62.45	62.45	0.00	0.09	189.95	190.03	99.95			
24/03/2018	95.10	0.00	0.00	0.07	0.07	0.00	0.00	80.57	80.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	51.19	51.19	0.00	0.00	0.00	0.00	0.00	58.17	58.17	0.00	0.00	190.00	190.00	100.00			
25/03/2018	95.00	0.00	0.00	0.00	0.00	0.00	0.00	80.57	80.57	0.00	0.00	0.00	0.00	0.00	0.00	51.17	51.17	0.00	0.00	0.00	0.00	0.00	0.00	58.28	58.28	0.00	0.00	190.02	190.02	100.00			
26/03/2018	95.02	0.00	0.00	0.00	0.00	0.00	0.00	80.28	80.28	0.00	0.00	0.00	0.00	0.00	0.00	50.84	50.84	0.00	0.00	0.00	0.00	0.00	0.00	58.00	58.00	0.00	0.00	189.12	189.12	100.00			
27/03/2018	95.12	0.00	0.00	0.00	0.00	0.00	0.00	80.16	80.16	0.00	0.00	0.00	0.00	0.00	0.00	50.68	50.68	0.00	0.00	0.00	0.00	0.00	0.00	57.66	57.66	0.00	0.00	188.50	188.50	100.00			
28/03/2018	94.75	0.00	0.00	0.00	0.00	0.00	0.00	79.96	79.96	0.00	0.00	0.00	0.00	0.00	0.00	50.58	50.58	0.00	0.00	0.00	0.00	0.00	0.00	57.44	57.44	0.00	0.00	187.98	187.98	100.00			
29/03/2018	94.77	0.00	0.00	0.00	0.00	0.00	0.00	80.07	80.07	0.00	0.00	0.00	0.00	0.00	0.00	50.55	50.55	0.00	0.00	0.00	0.00	0.00	0.00	57.35	57.35	0.00	0.00	187.96	187.96	100.00			
30/03/2018	94.79	0.00	0.00	0.00	0.00	0.00	0.00	75.18	75.18	0.00	0.00	0.00	0.00	0.00	0.00	48.15	48.15	0.00	0.00	0.00	0.00	0.00	0.00	53.05	53.05	0.00	0.00	176.39	176.39	100.00			
31/03/2018	95.05	0.00	0.00	0.00	0.00	0.00	0.00	73.39	73.39	0.00	0.00	0.00	0.00	0.00	0.00	47.37	47.37	0.00	0.00	0.00	0.00	0.00	0.00	51.92	51.92	0.00	0.00	172.68	172.68	100.00			
<b>Total [ML]:</b>		0.04	0.23	120.83	121.10	0.00	0.04	1892.60	1892.64	0.36	0.36	246.59	247.30	0.39	0.68	1196.24	1197.32	0.00	4.83	200.25	205.08	0.00	0.00	2113.05	2113.05	0.78	6.13	5769.57	5776.49				

Water Volume [%]:  
 Untreated: 0.01 %  
 Below Dose: 0.11 %  
 To Dose: 99.88 %

Submitted By: D.Merredew

Signature: Original Signed by D.Merredew



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Wednesday, April 4, 2018

**Our Incident/Report No: 01-2018**  
LIMS Reference No: **52231**  
Incident Date: **March 13, 2018**

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

## **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 WC04</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)	Turbidity-field (ntu)	Temperature (°C)	Time Sampled (hrs)
WC04	542102	13-Mar-18	<1	1	<1	0.70	1.00	0.12	5.4	10:49
WC04_Resample	542718	14-Mar-18	<1	<1	<1	0.85	1.04	0.14	5.7	15:03
WC04_Resample Duplicate	542719	14-Mar-18	<1	<1	NA	NA	NA	NA	NA	NA
WC04_Resample 2	542900	16-Mar-18	<1	<1	1	0.81	0.96	0.12	5.7	10:36
WC04_Resample Duplicate 2	542901	16-Mar-18	<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.