



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

*Environmental Standards Division • Division des Normes Environnementales*

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December 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: NOVEMBER 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 November 2018. We are also submitting two corrective action reports for filtered water turbidity reading exceedances at the Water Treatment Plant.

The November 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 1 was greater than 0.3 NTU on November 29; the elevated turbidity occurred for a short period of time which did not exceed 12 consecutive hours. On November 7 and 15, the turbidity measured on Filters 7 and 1 respectively, exceeded 1.0 ntu. The exceedances were due to maintenance activities on the analyzers and did not reflect the actual effluent turbidity. Please see the attached corrective action reports for additional details. The turbidity results for the effluent from the filters met the licence requirements.

The November 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 November 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](mailto: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**

November 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
1/11/2018	0.94	0.06	0.09	0.10	0.12	0.04	0.11	0.03	0.08	0.07	0.12	0.07	0.12	0.06	0.11	0.03	0.05
2/11/2018	0.93	0.05	0.09	0.10	0.14	0.06	0.08	0.03	0.08	0.06	0.09	0.08	0.10	0.06	0.11	0.05	0.09
3/11/2018	0.93	0.03	0.06	0.07	0.14	0.05	0.11	0.03	0.09	0.08	0.12	0.07	0.12	0.06	0.08	0.04	0.10
4/11/2018	0.94	0.06	0.10	0.10	0.13	0.05	0.14	0.03	0.07	0.05	0.12	0.06	0.13	0.06	0.10	0.04	0.07
5/11/2018	0.95	0.04	0.10	0.08	0.15	0.08	0.11	0.02	0.07	0.05	0.10	0.07	0.09	0.04	0.11	0.07	0.11
6/11/2018	1.02	0.04	0.14	0.06	0.18	0.02	0.22	0.02	0.09	0.05	0.11	0.04	0.13	0.04	0.14	0.03	0.16
7/11/2018	0.99	0.06	0.11	0.11	0.15	0.04	0.12	0.04	0.08	0.07	0.12	0.07	0.12	0.08	5.00	0.09	0.31
8/11/2018	1.01	0.05	0.10	0.10	0.16	0.01	0.06	0.04	0.05	0.09	0.11	0.09	0.12	0.06	0.11	0.08	0.14
9/11/2018	0.98	0.06	0.08	0.11	0.13	0.00	0.05	0.04	0.09	0.08	0.13	0.07	0.12	0.08	0.10	0.08	0.11
10/11/2018	0.98	0.06	0.10	0.10	0.15	0.00	0.02	0.04	0.10	0.08	0.11	0.08	0.09	0.07	0.11	0.11	0.15
11/11/2018	0.97	0.06	0.08	0.10	0.16	0.01	0.06	0.05	0.07	0.11	0.14	0.08	0.14	0.08	0.09	0.10	0.18
12/11/2018	0.97	0.07	0.11	0.13	0.14	0.01	0.02	0.05	0.13	0.09	0.16	0.08	0.15	0.07	0.12	0.14	0.15
13/11/2018	1.01	0.06	0.12	0.11	0.17	0.02	0.08	0.06	0.08	0.10	0.16	0.10	0.12	0.07	0.13	0.08	0.20
14/11/2018	0.99	0.08	0.09	0.10	0.14	0.01	0.09	0.07	0.13	0.08	0.13	0.08	0.15	0.09	0.11	0.02	0.08
15/11/2018	1.04	0.09	5.00	0.12	0.18	0.04	0.11	0.06	0.14	0.07	0.15	0.06	0.12	0.05	0.15	0.03	0.07
16/11/2018	0.99	0.05	0.11	0.09	0.19	0.09	0.16	0.06	0.10	0.09	0.11	0.07	0.09	0.04	0.11	0.02	0.06
17/11/2018	0.97	0.05	0.13	0.08	0.20	0.08	0.15	0.10	0.19	0.10	0.22	0.08	0.17	0.07	0.12	0.03	0.09
18/11/2018	0.95	0.06	0.15	0.13	0.21	0.06	0.14	0.06	0.13	0.08	0.14	0.05	0.14	0.05	0.14	0.03	0.08
19/11/2018	0.96	0.04	0.10	0.09	0.17	0.08	0.14	0.06	0.14	0.07	0.17	0.05	0.09	0.05	0.10	0.04	0.07
20/11/2018	0.96	0.05	0.11	0.10	0.19	0.07	0.16	0.07	0.12	0.12	0.16	0.07	0.14	0.05	0.13	0.05	0.13
21/11/2018	0.94	0.05	0.08	0.09	0.14	0.06	0.16	0.08	0.15	0.09	0.18	0.05	0.14	0.07	0.10	0.05	0.15
22/11/2018	0.92	0.06	0.12	0.13	0.19	0.07	0.10	0.06	0.15	0.09	0.20	0.05	0.14	0.05	0.13	0.09	0.11
23/11/2018	0.91	0.05	0.12	0.10	0.19	0.10	0.17	0.06	0.16	0.09	0.16	0.08	0.10	0.05	0.13	0.05	0.17
24/11/2018	0.90	0.05	0.07	0.09	0.19	0.07	0.17	0.09	0.21	0.05	0.12	0.06	0.14	0.06	0.08	0.01	0.07
25/11/2018	0.88	0.07	0.13	0.13	0.16	0.06	0.11	0.07	0.15	0.04	0.11	0.06	0.14	0.05	0.13	0.01	0.02
26/11/2018	0.88	0.05	0.13	0.09	0.19	0.11	0.18	0.06	0.16	0.04	0.07	0.07	0.10	0.05	0.13	0.01	0.06
27/11/2018	0.81	0.05	0.14	0.09	0.20	0.09	0.19	0.11	0.14	0.05	0.12	0.07	0.15	0.05	0.08	0.01	0.07
28/11/2018	0.75	0.07	0.14	0.09	0.15	0.07	0.15	0.04	0.17	0.04	0.11	0.05	0.12	0.05	0.13	0.01	0.02
29/11/2018	0.76	0.03	0.37	0.06	0.25	0.08	0.20	0.03	0.15	0.03	0.09	0.04	0.10	0.02	0.08	0.01	0.05
30/11/2018	0.72	0.03	0.11	0.05	0.14	0.06	0.12	0.04	0.06	0.05	0.07	0.05	0.08	0.03	0.05	0.01	0.03

Total Number of Measurements Taken, A:	14199	11378	13492	12160	15131	13784	13131	14671
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:	14197	11378	13492	12160	15131	13784	13129	14670
Compliance with Turbidity Standard, C = B/A X 100%:	99.986%	100.000%	100.000%	100.000%	100.000%	100.000%	99.985%	99.993%

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2018\11-November

Submitted By (Print):           D. Minor          

Signature:           Original Signed by D. Minor



CITY OF WINNIPEG  
 WATER AND WASTE DEPARTMENT  
 ENVIRONMENTAL STANDARDS DIVISION

**WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT**

Water System Code: 252.00		Turbidity (NTU)																	
Licence No. PWS-09-412-01																			
Date	Raw Water		Filter 1		Filter 2		Filter 3		Filter 4		Filter 5		Filter 6		Filter 7		Filter 8		
	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	
01-Nov-2018	0.94	0.90	0.12	0.04	0.10	0.11	0.14	0.04	0.14	0.05	OL	OL	0.09	0.08	0.10	0.07	0.10	0.06	
02-Nov-2018	0.92	0.94	OL	OL	0.13	0.12	0.12	0.06	0.11	0.03	0.11	0.07	0.10	0.09	0.11	0.06	0.13	0.08	
03-Nov-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
04-Nov-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
05-Nov-2018	0.88	0.91	0.14	0.06	0.12	0.12	0.11	0.08	OL	OL	0.08	0.07	0.08	0.08	OL	OL	0.08	0.09	
06-Nov-2018	0.88	1.05	0.11	0.04	0.10	0.11	OL	OL	0.12	0.05	0.09	0.07	0.10	0.09	0.09	0.06	OL	OL	
07-Nov-2018	0.95	0.99	0.14	0.06	0.14	0.12	0.13	<0.02	OL	OL	0.12	0.08	0.13	0.09	0.14	0.09	0.11	0.11	
08-Nov-2018	0.94	0.93	0.10	0.04	OL	OL	0.14	<0.02	0.12	0.04	0.11	0.08	0.11	0.09	0.12	0.06	0.13	0.15	
09-Nov-2018	0.87	0.98	0.12	0.05	0.12	0.12	0.12	<0.02	0.09	0.05	OL	OL	0.14	0.09	0.10	0.07	0.08	0.11	
10-Nov-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
11-Nov-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
12-Nov-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
13-Nov-2018	0.89	0.95	0.13	0.06	OL	OL	0.16	<0.02	0.14	0.07	0.13	0.11	0.14	0.11	0.14	0.07	0.16	0.19	
14-Nov-2018	0.91	0.99	0.14	0.07	0.13	0.13	0.14	<0.02	0.16	0.08	0.15	0.09	OL	OL	0.14	0.08	0.14	0.05	
15-Nov-2018	0.85	0.95	0.19	0.07	0.15	0.15	0.15	0.09	OL	OL	0.14	0.08	0.14	0.11	OL	OL	0.15	0.07	
16-Nov-2018	0.89	1.19	OL	OL	0.17	0.16	0.16	0.09	0.14	0.09	0.13	0.10	0.13	0.08	0.12	0.05	0.15	0.06	
17-Nov-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
18-Nov-2018	0.82	0.91	0.15	0.06	0.16	0.14	0.13	0.08	OL	OL	OL	OL	0.13	0.07	0.16	0.08	0.11	0.08	
19-Nov-2018	0.84	0.92	OL	OL	0.13	0.14	0.12	0.07	0.11	0.07	0.11	0.09	0.11	0.07	OL	OL	0.11	0.06	
20-Nov-2018	0.81	0.94	0.16	0.06	0.15	0.14	0.16	0.09	0.17	0.10	0.16	0.12	0.17	0.11	0.14	0.06	0.15	0.10	
21-Nov-2018	0.81	0.91	0.18	0.05	0.14	0.13	OL	OL	0.17	0.11	0.17	0.14	OL	OL	0.14	0.06	0.12	0.09	
22-Nov-2018	0.80	0.93	0.15	0.06	0.13	0.14	0.14	0.09	OL	OL	OL	OL	0.12	0.07	0.15	0.08	0.13	0.11	
23-Nov-2018	0.81	0.85	OL	OL	OL	OL	0.16	0.11	0.14	0.09	0.13	0.14	0.16	0.08	OL	OL	0.19	0.15	
24-Nov-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
25-Nov-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
26-Nov-2018	0.82	0.87	OL	OL	0.18	0.17	0.17	0.11	0.16	0.10	0.15	0.04	0.13	0.08	OL	OL	0.14	0.04	
27-Nov-2018	0.78	0.76	0.15	0.07	OL	OL	0.25	0.19	0.17	0.12	0.15	0.06	0.15	0.11	0.13	0.05	OL	OL	
28-Nov-2018	0.69	0.73	0.14	0.04	0.14	0.08	0.15	0.08	0.18	0.07	OL	OL	OL	OL	0.14	0.05	0.14	0.02	
29-Nov-2018	0.63	0.74	OL	OL	0.13	0.09	0.12	0.07	0.12	0.03	0.10	0.03	0.11	0.05	OL	OL	0.11	<0.02	
30-Nov-2018	0.69	0.69	0.12	0.03	OL	OL	0.19	0.11	0.14	0.05	0.12	0.05	0.14	0.07	0.12	0.03	OL	OL	
<b>Total number of measurements taken, A:</b>			16		17		20		17		17		19		16		19		
<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>			16		17		20		17		17		19		16		19		
<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

Authorized in Sample Manager By: C.Diduck

Date Authorized: 7-Dec-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 December 2018

Report Period: November 2018

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/11/2018	1.18	1.12	1.18	1.12
02/11/2018	1.13	1.06	1.11	1.05
03/11/2018	1.06	0.96	1.06	0.97
04/11/2018	1.03	0.96	1.08	1.03
05/11/2018	1.16	1.08	1.19	1.10
06/11/2018	1.07	1.01	1.12	1.03
07/11/2018	1.18	1.03	1.17	1.10
08/11/2018	1.14	1.03	1.10	1.02
09/11/2018	1.10	1.00	1.04	1.00
10/11/2018	1.16	1.05	1.06	1.03
11/11/2018	1.13	1.02	1.04	1.03
12/11/2018	1.16	1.00	1.08	1.05
13/11/2018	1.21	1.09	1.14	1.06
14/11/2018	1.21	1.11	1.19	1.10
15/11/2018	1.13	1.02	1.08	1.01
16/11/2018	1.09	0.98	1.00	0.95
17/11/2018	1.13	0.97	1.07	0.90
18/11/2018	1.22	1.11	1.12	1.04
19/11/2018	1.19	1.09	1.20	1.08
20/11/2018	1.17	1.09	1.19	1.11
21/11/2018	1.06	0.94	1.05	0.88
22/11/2018	1.11	0.96	1.06	0.92
23/11/2018	1.17	1.07	1.11	1.01
24/11/2018	1.11	1.05	1.04	0.99
25/11/2018	1.08	1.02	1.00	0.96
26/11/2018	1.09	1.02	0.97	0.89
27/11/2018	1.02	0.96	0.93	0.85
28/11/2018	1.04	0.98	1.11	0.98
29/11/2018	0.94	0.87	1.05	0.97
30/11/2018	1.03	0.94	1.14	1.04

Total Number of Measurements, A:	20910	20910
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	20910	20910
COMPLIANCE, C = B/A X 100%:	100.00	100.00

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2018\11-November

Submitted By (Print): D. Minor

Original Signed by D. Minor



CITY OF WINNIPEG  
 WATER AND WASTE DEPARTMENT  
 ENVIRONMENTAL STANDARDS DIVISION

**WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT**

Water System Code: 252.00 Licence No. PWS-09-412-01	Deacon Booster Pumping Station Branch 1			Deacon Booster Pumping Station Branch 2		
	Free Chlorine (mg/L)		Total Chlorine (mg/L)	Free Chlorine (mg/L)		Total Chlorine (mg/L)
Date	Analyser	Grab	Grab	Analyser	Grab	Grab
01-Nov-2018	1.19	1.28	1.49	1.21	1.28	1.46
02-Nov-2018	1.13	1.33	1.50	1.13	1.29	1.40
03-Nov-2018	NA	NA	NA	NA	NA	NA
04-Nov-2018	NA	NA	NA	NA	NA	NA
05-Nov-2018	1.16	1.22	1.41	1.21	1.23	1.37
06-Nov-2018	1.11	1.22	1.38	1.17	1.24	1.41
07-Nov-2018	1.29	1.18	1.34	1.22	1.17	1.31
08-Nov-2018	1.04	1.14	1.34	1.10	1.15	1.32
09-Nov-2018	1.13	1.22	1.36	1.04	1.09	1.29
10-Nov-2018	NA	NA	NA	NA	NA	NA
11-Nov-2018	NA	NA	NA	NA	NA	NA
12-Nov-2018	NA	NA	NA	NA	NA	NA
13-Nov-2018	1.15	1.23	1.40	1.08	1.07	1.30
14-Nov-2018	1.19	1.23	1.44	1.16	1.23	1.36
15-Nov-2018	1.16	1.18	1.42	1.11	1.14	1.30
16-Nov-2018	1.06	1.20	1.39	0.97	1.10	1.28
17-Nov-2018	NA	NA	NA	NA	NA	NA
18-Nov-2018	1.27	1.36	1.54	1.15	1.32	1.44
19-Nov-2018	1.21	1.35	1.60	1.22	1.37	1.51
20-Nov-2018	1.17	1.22	1.38	1.23	1.16	1.32
21-Nov-2018	1.06	1.15	1.31	1.08	1.17	1.31
22-Nov-2018	1.04	1.16	1.37	1.00	1.12	1.28
23-Nov-2018	1.20	1.31	1.47	1.12	1.25	1.37
24-Nov-2018	NA	NA	NA	NA	NA	NA
25-Nov-2018	NA	NA	NA	NA	NA	NA
26-Nov-2018	1.11	1.14	1.32	1.01	1.04	1.22
27-Nov-2018	1.01	1.00	1.19	0.89	0.98	1.10
28-Nov-2018	1.02	1.10	1.22	1.15	1.18	1.35
29-Nov-2018	0.92	1.05	1.24	1.01	1.14	1.28
30-Nov-2018	1.00	1.06	1.24	1.11	1.21	1.36
<b>Total number of measurements taken, A:</b>		22			22	
<b>Chlorine Standard for Monitoring Location (mg/L):</b>		0.50			0.50	
<b>Number of measurements meeting standard, B:</b>		22			22	
<b>Compliance with Chlorine Standard, C= B/A X 100%:</b>		100%			100%	

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

Comments:

Report Compiled By: H.Demchenko

Authorized By: C.Diduck

Date Authorized: 7-Dec-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: **November 2018**

Report Created: **Saturday, December 01, 2018**

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	
01/11/2018	94.77	0.00	0.00	76.62	76.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	61.32	61.32	0.00	0.00	0.00	0.00	0.00	0.00	73.76	73.76	0.00	0.00	211.70	211.70	100.00
02/11/2018	94.80	0.00	0.00	65.59	65.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.86	53.86	0.00	0.00	0.00	0.00	0.00	0.00	63.55	63.55	0.00	0.00	183.00	183.00	100.00
03/11/2018	94.97	0.00	0.00	65.62	65.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.86	53.86	0.00	0.00	0.00	0.00	0.00	0.00	63.51	63.51	0.00	0.00	182.99	182.99	100.00
04/11/2018	94.89	0.00	0.14	66.13	66.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	54.32	54.32	0.00	0.00	0.00	0.00	0.00	0.00	64.97	64.97	0.00	0.14	185.41	185.55	99.92
05/11/2018	94.30	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	0.00	55.24	55.24	0.00	0.00	0.00	0.00	0.00	0.00	68.59	68.59	0.00	0.00	191.94	191.94	100.00
06/11/2018	93.56	0.01	0.02	24.66	24.69	0.00	0.00	14.72	14.72	0.00	0.00	0.00	0.00	0.00	0.00	34.54	34.54	0.00	0.00	0.00	0.00	0.00	0.00	40.38	40.38	0.01	0.02	114.31	114.33	99.98
07/11/2018	94.64	0.00	0.00	0.00	0.00	0.00	0.00	61.63	61.63	0.00	0.00	0.00	0.00	0.00	0.00	55.20	55.20	0.00	0.00	0.00	0.00	0.00	0.00	81.14	81.14	0.00	0.00	197.98	197.98	100.00
08/11/2018	94.78	0.00	0.00	37.15	37.15	0.00	0.00	28.30	28.30	0.00	0.00	0.00	0.00	0.00	0.00	50.33	50.33	0.00	0.00	0.00	0.00	0.00	0.00	74.02	74.02	0.00	0.00	189.81	189.81	100.00
09/11/2018	94.95	0.00	0.28	24.41	24.70	0.00	0.00	23.31	23.31	0.00	0.00	0.00	0.00	0.00	0.00	52.90	52.90	0.16	0.16	13.68	14.00	0.00	0.00	70.13	70.13	0.16	0.44	184.43	185.03	99.67
10/11/2018	94.82	0.00	0.00	0.00	0.00	0.00	0.00	72.00	72.00	0.00	0.00	0.00	0.00	0.00	0.00	43.35	43.35	0.00	0.00	0.00	0.00	0.00	0.00	64.73	64.73	0.00	0.00	180.08	180.08	100.00
11/11/2018	94.65	0.00	0.00	0.00	0.00	0.00	0.00	71.66	71.66	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	62.38	62.38	0.00	0.00	178.02	178.02	100.00
12/11/2018	94.52	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	45.65	45.65	0.00	0.00	0.00	0.00	0.00	0.00	65.93	65.93	0.00	0.00	185.44	185.44	100.00
13/11/2018	94.36	0.00	0.00	27.13	27.13	0.00	0.00	48.42	48.42	0.00	0.00	0.00	0.00	0.00	0.00	47.24	47.24	0.00	0.00	0.00	0.00	0.00	0.00	71.26	71.26	0.00	0.00	194.04	194.04	100.00
14/11/2018	94.30	0.00	0.00	73.12	73.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.83	47.83	0.00	0.00	0.00	0.00	0.00	0.00	73.03	73.03	0.00	0.00	193.99	193.99	100.00
15/11/2018	94.14	0.00	0.00	67.14	67.14	0.00	0.00	17.81	17.81	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	72.00	72.00	0.00	0.00	204.27	204.27	100.00
16/11/2018	94.23	0.00	0.00	69.69	69.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.18	45.18	0.00	0.00	0.00	0.00	0.00	0.00	65.92	65.92	0.00	0.00	180.79	180.79	100.00
17/11/2018	93.52	0.01	0.01	69.03	69.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	42.37	42.39	0.00	0.00	0.00	0.00	0.01	0.01	61.68	61.70	0.03	0.03	173.08	173.13	99.97
18/11/2018	93.70	0.00	0.00	70.87	70.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	44.75	44.75	0.00	0.00	0.00	0.00	0.00	0.00	69.66	69.66	0.00	0.00	185.28	185.28	100.00
19/11/2018	93.35	0.00	0.00	76.49	76.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.62	48.62	0.00	0.00	0.00	0.00	0.00	0.00	76.64	76.64	0.00	0.00	201.74	201.74	100.00
20/11/2018	94.09	0.00	0.00	74.91	74.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.64	47.64	0.00	0.00	0.07	0.07	0.00	0.00	74.77	74.77	0.00	0.00	197.39	197.39	100.00
21/11/2018	94.42	0.00	0.00	73.31	73.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.51	46.51	0.00	0.00	0.00	0.00	0.00	0.00	73.20	73.20	0.00	0.00	193.02	193.02	100.00
22/11/2018	94.41	0.00	0.00	73.03	73.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.27	46.27	0.00	0.00	0.00	0.00	0.00	0.00	73.02	73.02	0.00	0.00	192.32	192.32	100.00
23/11/2018	94.34	0.00	0.00	69.29	69.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.88	43.88	0.00	0.00	0.00	0.00	0.00	0.00	67.50	67.50	0.00	0.00	180.67	180.67	100.00
24/11/2018	94.43	0.00	0.00	68.02	68.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.97	42.97	0.00	0.00	0.00	0.00	0.00	0.00	65.22	65.22	0.00	0.00	176.21	176.21	100.00
25/11/2018	94.51	0.00	0.00	68.03	68.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.94	42.94	0.00	0.00	0.00	0.00	0.00	0.00	65.01	65.01	0.00	0.00	175.99	175.99	100.00
26/11/2018	94.46	0.00	0.05	71.05	71.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.75	27.75	0.00	0.00	12.47	12.47	0.00	0.09	64.52	64.61	0.00	0.14	175.80	175.94	99.92
27/11/2018	94.27	0.00	0.00	70.97	70.97	0.00	0.00	0.00	0.00	0.00	0.00	17.72	17.72	0.00	0.00	0.00	0.00	0.00	0.00	21.84	21.84	0.00	0.31	65.18	65.50	0.00	0.31	175.71	176.02	99.82
28/11/2018	94.29	0.00	0.00	62.20	62.20	0.00	0.00	0.00	0.00	0.00	0.00	46.40	46.40	0.00	0.00	0.00	0.00	0.00	0.00	48.60	48.60	0.00	0.00	19.94	19.94	0.00	0.00	177.13	177.13	100.00
29/11/2018	93.64	0.00	0.00	62.59	62.59	0.00	0.00	0.00	0.00	0.00	0.00	46.84	46.84	0.00	0.00	0.00	0.00	0.00	0.00	69.57	69.57	0.00	0.00	0.00	0.00	0.00	0.00	179.00	179.00	100.00
30/11/2018	93.67	0.00	0.00	63.88	63.88	0.00	0.00	0.00	0.00	0.00	0.00	47.87	47.87	0.00	0.00	0.00	0.00	0.00	0.00	72.04	72.04	0.00	0.00	0.00	0.00	0.00	0.00	183.79	183.79	100.00
<b>Total [ML]:</b>		<b>0.02</b>	<b>0.50</b>	<b>1639.04</b>	<b>1639.56</b>	<b>0.00</b>	<b>0.00</b>	<b>411.71</b>	<b>411.71</b>	<b>0.00</b>	<b>0.00</b>	<b>158.82</b>	<b>158.82</b>	<b>0.01</b>	<b>0.01</b>	<b>1225.83</b>	<b>1225.85</b>	<b>0.16</b>	<b>0.16</b>	<b>238.27</b>	<b>238.59</b>	<b>0.01</b>	<b>0.42</b>	<b>1851.64</b>	<b>1852.07</b>	<b>0.20</b>	<b>1.09</b>	<b>5525.31</b>	<b>5526.60</b>	

**Water Volume [%]:**  
 Untreated: 0.00 %  
 Below Dose: 0.02 %  
 To Dose: 99.98 %

**Submitted By (Print):** D. Minor

**Signature:** Original signed by D. Minor

**CORRECTIVE ACTION REPORT**



WATER SYSTEM City of Winnipeg WATER SYSTEM CODE: 252.00

LOCATION OF NON-COMPLIANCE INCIDENT (ex. Water Plant): Deacon Water Treatment Plant

OPERATOR: JOHANNE MALLOP Signature: Johanne Mallop

- 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): NA DATE

Filter #7. Operators flushed Turbidity analyzer causing high reading of 5.00 NTU from ~ 14:20 to 14:31 November 27/18

TEST RESULTS AFTER CORRECTIVE ACTIONS: NA DATE: Nov-27/18

(attach laboratory results if applicable)

Approved By Operator-in-Charge: Don McCreedy Original signed by: [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  
RETAIN A COPY FOR YOUR RECORDS

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

CORRECTIVE ACTION REPORT



WATER SYSTEM City of Winnipeg

WATER SYSTEM CODE: 252.00

LOCATION OF NON-COMPLIANCE INCIDENT (ex. Water Plant): \_\_\_\_\_

OPERATOR: Johana Mellore

Signature: Johana Mellore

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):

0.22 NTU DATE Nov 15/2014

Instrumentation was cleaning the filter Analyzer #1. They took a grab sample before and after. Filter #1 spiked at 5.0 NTU, between 08:25 and 08:38.

TEST RESULTS AFTER CORRECTIVE ACTIONS:

0.23 DATE: Nov 15/2014

(attach laboratory results if applicable)

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

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