



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

October 7, 2019

RE: SEPTEMBER 2019 WATER QUALITY COMPLIANCE SUBMISSION FOR THE CITY OF WINNIPEG WATER SUPPLY SYSTEM

Please find attached on-line and grab turbidity summary reports, on-line and grab chlorine summary reports and the UV summary report for the Water Treatment Plant for September 2019.

The September 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 September 6, the maximum turbidity for Filter 6 was greater than 0.30 ntu, but the elevated turbidity did not exceed 12 consecutive hours; the turbidity results for the filter effluent met the licence requirements.

The September on-line and grab sampling chlorine reports include results obtained for the Deacon Booster Pumping Station at the Water Treatment Plant. The free chlorine results at the Water Treatment Plant met the licence requirements.

The September 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
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

September 2019 Turbidity (NTU)

Date	Raw	Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
	Avg	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
1/09/2019	1.82	0.04	0.06	0.04	0.06	0.06	0.10	0.09	0.17	0.06	0.12	0.08	0.11	0.06	0.14	0.07	0.15
2/09/2019	1.71	0.05	0.10	0.04	0.09	0.09	0.15	0.12	0.14	0.06	0.13	0.07	0.14	0.06	0.08	0.08	0.23
3/09/2019	1.72	0.03	0.10	0.04	0.06	0.07	0.16	0.11	0.18	0.08	0.10	0.08	0.09	0.07	0.12	0.07	0.16
4/09/2019	1.68	0.06	0.14	0.06	0.15	0.10	0.18	0.12	0.21	0.06	0.18	0.06	0.15	0.06	0.11	0.07	0.14
5/09/2019	2.04	0.07	0.12	0.07	0.11	0.11	0.23	0.15	0.24	0.09	0.12	0.07	0.13	0.07	0.08	0.09	0.11
6/09/2019	1.56	0.04	0.11	0.06	0.08	0.09	0.15	0.12	0.19	0.10	0.14	0.09	0.31	0.09	0.23	0.07	0.15
7/09/2019	1.90	0.06	0.14	0.07	0.17	0.09	0.16	0.11	0.18	0.07	0.13	0.07	0.13	0.08	0.15	0.07	0.14
8/09/2019	1.42	0.05	0.12	0.06	0.12	0.09	0.17	0.12	0.19	0.07	0.10	0.08	0.17	0.11	0.13	0.09	0.11
9/09/2019	1.07	0.04	0.11	0.06	0.07	0.08	0.17	0.11	0.19	0.11	0.15	0.11	0.13	0.11	0.18	0.10	0.17
10/09/2019	1.47	0.06	0.08	0.07	0.11	0.10	0.13	0.09	0.13	0.07	0.18	0.08	0.17	0.09	0.20	0.08	0.19
11/09/2019	1.55	0.04	0.12	0.05	0.15	0.10	0.22	0.11	0.21	0.06	0.11	0.05	0.15	0.07	0.11	0.07	0.10
12/09/2019	1.56	0.04	0.12	0.05	0.14	0.09	0.23	0.08	0.18	0.06	0.10	0.05	0.13	0.09	0.15	0.06	0.15
13/09/2019	1.57	0.03	0.10	0.06	0.10	0.09	0.23	0.06	0.18	0.06	0.11	0.07	0.13	0.06	0.14	0.04	0.14
14/09/2019	1.43	0.05	0.08	0.07	0.12	0.12	0.16	0.06	0.16	0.05	0.11	0.05	0.13	0.06	0.14	0.05	0.13
15/09/2019	1.57	0.04	0.11	0.06	0.13	0.14	0.23	0.09	0.14	0.05	0.11	0.05	0.13	0.06	0.15	0.06	0.08
16/09/2019	1.46	0.04	0.09	0.07	0.13	0.02	0.15	0.07	0.17	0.06	0.09	0.07	0.12	0.10	0.12	0.07	0.15
17/09/2019	1.14	0.03	0.09	0.07	0.12	OL	OL	0.08	0.15	0.07	0.10	0.07	0.10	0.08	0.13	0.06	0.12
18/09/2019	1.24	0.03	0.08	0.08	0.11	OL	OL	0.09	0.14	0.06	0.11	0.07	0.12	0.08	0.14	0.07	0.12
19/09/2019	1.32	0.04	0.06	0.10	0.14	OL	OL	0.09	0.16	0.08	0.12	0.09	0.13	0.10	0.16	0.08	0.15
20/09/2019	1.50	0.05	0.09	0.10	0.14	OL	OL	0.09	0.16	0.08	0.14	0.09	0.27	0.10	0.15	0.08	0.15
21/09/2019	1.54	0.04	0.09	0.10	0.16	OL	OL	0.11	0.15	0.07	0.13	0.08	0.14	0.09	0.15	0.08	0.11
22/09/2019	1.01	0.03	0.08	0.11	0.16	OL	OL	0.09	0.16	0.07	0.11	0.07	0.13	0.09	0.11	0.08	0.13
23/09/2019	1.28	0.04	0.09	0.11	0.18	OL	OL	0.08	0.16	0.07	0.09	0.07	0.17	0.09	0.14	0.08	0.13
24/09/2019	1.04	0.05	0.14	0.10	0.15	OL	OL	0.08	0.13	0.06	0.12	0.08	0.14	0.07	0.14	0.07	0.11
25/09/2019	1.01	0.07	0.11	0.09	0.13	OL	OL	0.07	0.14	0.06	0.10	0.07	0.12	0.06	0.11	0.06	0.12
26/09/2019	0.99	0.08	0.14	0.07	0.13	OL	OL	0.06	0.10	0.05	0.10	0.06	0.13	0.06	0.11	0.05	0.11
27/09/2019	1.01	0.07	0.12	0.07	0.11	OL	OL	0.07	0.12	0.05	0.10	0.06	0.18	0.05	0.10	0.05	0.08
28/09/2019	0.97	0.07	0.19	0.06	0.11	OL	OL	0.06	0.12	0.04	0.09	0.06	0.11	0.06	0.08	0.06	0.11
29/09/2019	0.98	0.07	0.12	0.06	0.11	OL	OL	0.05	0.12	0.05	0.07	0.06	0.11	0.06	0.10	0.05	0.10
30/09/2019	0.94	0.06	0.12	0.06	0.08	OL	OL	0.05	0.10	0.04	0.09	0.07	0.09	0.05	0.10	0.05	0.10

Total Number of Measurements Taken, A:	11955	12836	6478	13187	14240	14537	14383	15632
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:	11955	12836	6478	13187	14240	14536	14383	15632
Compliance with Turbidity Standard, C = B/A X 100%:	100.000%	100.000%	100.000%	100.000%	100.000%	99.993%	100.000%	100.000%

Off Line - OL

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2019\09-September

Submitted By (Print): D. Merredew

Signature: Original signed by D. Merredew



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT																		
Water System Code: 252.00		Turbidity (NTU)																
Licence No. PWS-09-412-01																		
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-Sep-2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
02-Sep-2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
03-Sep-2019	1.78	1.62	0.17	0.05	0.21	0.05	0.15	0.11	OL	OL	0.12	0.08	0.15	0.08	0.15	0.07	0.19	0.10
04-Sep-2019	1.89	1.66	0.20	0.08	0.18	0.06	0.17	0.12	0.16	0.13	OL	OL	0.19	0.11	0.14	0.06	0.17	0.08
05-Sep-2019	1.86	1.55	OL	OL	0.19	0.07	0.24	0.17	0.22	0.17	0.13	0.11	0.17	0.09	0.14	0.07	0.15	0.09
06-Sep-2019	1.60	1.51	0.16	0.05	0.16	0.06	0.17	0.10	0.24	0.16	0.17	0.11	0.15	0.09	0.15	0.10	0.18	0.11
07-Sep-2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
08-Sep-2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
09-Sep-2019	1.56	1.39	0.16	0.05	0.16	0.06	0.17	0.11	OL	OL	0.17	0.12	0.21	0.11	0.20	0.13	0.21	0.13
10-Sep-2019	1.46	1.42	0.16	0.06	0.17	0.08	0.17	0.13	0.16	0.11	OL	OL	OL	OL	0.18	0.10	0.16	0.09
11-Sep-2019	1.49	1.47	0.21	0.09	OL	OL	0.22	0.16	0.20	0.13	0.20	0.07	OL	OL	0.12	0.08	0.12	0.06
12-Sep-2019	1.58	1.52	OL	OL	0.15	0.06	OL	OL	0.19	0.13	0.12	0.07	0.11	0.07	0.12	0.08	0.12	0.07
13-Sep-2019	1.41	1.51	0.14	0.05	0.13	0.07	0.14	0.15	OL	OL	0.10	0.06	0.12	0.08	0.14	0.09	OL	OL
14-Sep-2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
15-Sep-2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
16-Sep-2019	1.08	1.14	0.17	0.09	OL	OL	OL	OL	0.16	0.11	0.13	0.08	0.14	0.08	0.12	0.09	0.13	0.07
17-Sep-2019	1.11	1.13	0.14	0.03	0.14	0.08	OL	OL	OL	OL	0.14	0.08	0.13	0.08	0.13	0.09	0.15	0.08
18-Sep-2019	1.21	1.27	0.12	0.04	0.13	0.10	OL	OL	0.13	0.09	0.16	0.08	0.15	0.09	OL	OL	0.13	0.07
19-Sep-2019	1.21	1.29	0.15	0.05	0.15	0.12	OL	OL	0.16	0.11	0.20	0.12	0.19	0.12	OL	OL	0.15	0.09
20-Sep-2019	1.29	1.38	0.16	0.05	0.17	0.13	OL	OL	0.18	0.11	OL	OL	0.26	0.12	0.22	0.09	0.17	0.09
21-Sep-2019	NA	NA	NA	NA	NA	NA	OL	OL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
22-Sep-2019	NA	NA	NA	NA	NA	NA	OL	OL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
23-Sep-2019	1.05	0.96	0.23	0.13	0.17	0.13	OL	OL	0.23	0.12	0.13	0.08	0.13	0.09	0.16	0.09	0.14	0.08
24-Sep-2019	1.10	0.99	0.20	0.03	0.13	0.14	OL	OL	0.13	0.09	0.18	0.08	0.15	0.09	0.19	0.10	OL	OL
25-Sep-2019	1.06	0.97	0.15	0.09	0.17	0.10	OL	OL	0.14	0.07	0.17	0.07	0.15	0.09	OL	OL	0.14	0.05
26-Sep-2019	1.12	0.94	0.14	0.08	0.13	0.09	OL	OL	0.18	0.08	OL	OL	0.19	0.10	0.15	0.05	0.13	0.05
27-Sep-2019	1.06	1.01	0.16	0.09	OL	OL	OL	OL	0.15	0.07	0.13	0.06	0.13	0.07	0.13	0.05	0.13	0.06
28-Sep-2019	NA	NA	NA	NA	NA	NA	OL	OL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
29-Sep-2019	NA	NA	NA	NA	NA	NA	OL	OL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
30-Sep-2019	1.25	0.94	0.16	0.07	0.16	0.07	OL	OL	OL	OL	0.17	0.05	0.13	0.07	0.15	0.06	0.15	0.07
Total number of measurements taken, A:			18		17		8		15		16		18		17		18	
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:			18		17		8		15		16		18		17		18	
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:
 September 17, 2019: filter 3 taken offline for media replacement

Report Compiled By: N. Crawford

Authorized By: C.Diduck

Date Authorized: 7-Oct-19



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 October 2019**

Report Period: September 2019

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/09/2019	1.41	1.34	1.32	1.23
02/09/2019	1.42	1.35	1.30	1.23
03/09/2019	1.49	1.41	1.35	1.19
04/09/2019	1.60	1.35	1.54	1.34
05/09/2019	1.44	1.35	1.46	1.35
06/09/2019	1.49	1.35	1.42	1.31
07/09/2019	1.54	1.37	1.47	1.30
08/09/2019	1.34	1.19	1.28	1.10
09/09/2019	1.24	1.18	1.25	1.10
10/09/2019	1.20	1.16	1.24	1.13
11/09/2019	1.17	1.13	1.17	1.11
12/09/2019	1.21	1.10	1.22	1.11
13/09/2019	1.39	1.27	1.35	1.23
14/09/2019	1.54	1.45	1.49	1.41
15/09/2019	1.60	1.55	1.47	1.36
16/09/2019	1.59	1.53	1.42	1.36
17/09/2019	1.52	1.23	1.37	1.12
18/09/2019	1.46	1.35	1.49	1.30
19/09/2019	1.43	1.10	1.51	1.22
20/09/2019	1.50	1.36	1.44	1.32
21/09/2019	1.44	1.23	1.39	1.14
22/09/2019	1.43	1.36	1.36	1.29
23/09/2019	1.48	1.37	1.43	1.34
24/09/2019	1.47	1.39	1.43	1.35
25/09/2019	1.43	1.32	1.42	1.35
26/09/2019	1.47	1.32	1.45	1.34
27/09/2019	1.50	1.41	1.54	1.48
28/09/2019	1.47	1.39	1.49	1.44
29/09/2019	1.44	1.34	1.44	1.32
30/09/2019	1.54	1.47	1.52	1.45

Total Number of Measurements, A:	20882	20882
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	20882	20882
COMPLIANCE, C = B/A X 100%:	100.00	100.00

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2019\09-September

Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT

Water System Code: 252.00 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	Analysers	Grab	Grab	Analysers	Grab
01-Sep-2019	NA	NA	NA	NA	NA	NA
02-Sep-2019	NA	NA	NA	NA	NA	NA
03-Sep-2019	1.50	1.39	1.57	1.29	1.42	1.51
04-Sep-2019	1.59	1.47	1.63	1.46	1.46	1.60
05-Sep-2019	1.46	1.47	1.64	1.48	1.49	1.65
06-Sep-2019	1.43	1.48	1.61	1.41	1.45	1.62
07-Sep-2019	NA	NA	NA	NA	NA	NA
08-Sep-2019	NA	NA	NA	NA	NA	NA
09-Sep-2019	1.30	1.31	1.49	1.20	1.26	1.41
10-Sep-2019	1.17	1.25	1.41	1.26	1.18	1.36
11-Sep-2019	1.18	1.21	1.39	1.19	1.19	1.33
12-Sep-2019	1.14	1.21	1.38	1.15	1.15	1.34
13-Sep-2019	1.34	1.45	1.53	1.30	1.35	1.49
14-Sep-2019	NA	NA	NA	NA	NA	NA
15-Sep-2019	NA	NA	NA	NA	NA	NA
16-Sep-2019	1.56	1.56	1.78	1.41	1.44	1.60
17-Sep-2019	1.68	1.58	1.81	1.47	1.47	1.59
18-Sep-2019	1.53	1.45	1.61	1.49	1.50	1.66
19-Sep-2019	1.51	1.59	1.79	1.58	1.57	1.73
20-Sep-2019	1.51	1.46	1.62	1.44	1.46	1.66
21-Sep-2019	NA	NA	NA	NA	NA	NA
22-Sep-2019	NA	NA	NA	NA	NA	NA
23-Sep-2019	1.49	1.49	1.62	1.48	1.40	1.53
24-Sep-2019	1.47	1.49	1.70	1.41	1.45	1.62
25-Sep-2019	1.44	1.49	1.66	1.38	1.48	1.61
26-Sep-2019	1.49	1.50	1.65	1.41	1.48	1.58
27-Sep-2019	1.51	1.53	1.71	1.58	1.50	1.72
28-Sep-2019	NA	NA	NA	NA	NA	NA
29-Sep-2019	NA	NA	NA	NA	NA	NA
30-Sep-2019	1.55	1.45	1.63	1.49	1.55	1.68
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: N. Crawford

Authorized By: C. Diduck

Date Authorized: 7-Oct-19

