



Water and Waste Eaux et déchets

Kale Black, Sr. Drinking Water Officer
Office of Drinking Water, Manitoba Conservation and Climate
309 – 25 Tupper Street North
Portage La Prairie, MB R1N 3K1

April 6, 2024

RE: MARCH 2024 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 2024.

The on-line and grab sampling turbidity reports include results obtained for the Water Treatment Plant raw water and the eight filters. The maximum turbidity was greater than 0.30 NTU for Filter 3 on March 11; the elevated turbidity occurred for less than 12 consecutive hours. The turbidity results for the filter effluent met the licence requirements.

The 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 UV summary reports include results obtained for the six UV reactors at the Water Treatment Plant. Please note that there are two UV summary reports because we transitioned from reporting fixed UV dose to calculated UV dose, as required by our revised Operating Licence PWS-09-412-02 AA, which came into effect on March 19, 2024. 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,

N. Crawford
Acting Manager of Environmental Standards

Enclosures

cc: Dr. L. Richards, Winnipeg Regional Health Authority (email)
Dr. H. Chang, Winnipeg Regional Health Authority (email)
Dr. T. Hilderman, Manitoba Health and Seniors Care (email)
T. Shanks, M. Eng., P. Eng. (email)
M. Szmon, P. Eng. (email)
H. Buhler, P. Eng. (email)
L. McCusker, P. Eng. (email)
C. Diduck (email)



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

Water System Code: 252.00
Licence Number: PWS-09-412-02-AA

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

March 2024 Turbidity (NTU)

Date	Raw		Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
1/03/2024	0.58	0.10	0.13	0.07	0.14	0.04	0.08	0.06	0.12	0.04	0.08	0.01	0.03	0.00	0.01	0.00	0.01	
2/03/2024	0.56	0.10	0.14	0.07	0.13	0.04	0.07	0.07	0.10	0.05	0.07	0.02	0.04	0.01	0.01	0.00	0.09	
3/03/2024	0.60	0.08	0.14	0.07	0.10	0.03	0.07	0.05	0.11	0.04	0.07	0.01	0.04	0.01	0.01	0.00	0.01	
4/03/2024	0.73	0.08	0.12	0.07	0.13	0.04	0.09	0.06	0.11	0.05	0.08	0.02	0.04	0.01	0.01	0.00	0.02	
5/03/2024	0.75	0.11	0.15	0.08	0.13	0.04	0.09	0.07	0.09	0.05	0.08	0.02	0.05	0.01	0.04	0.01	0.03	
6/03/2024	0.86	0.09	0.13	0.07	0.10	0.04	0.10	0.07	0.11	0.05	0.08	0.02	0.04	0.01	0.01	0.00	0.02	
7/03/2024	0.86	0.09	0.14	0.08	0.13	0.04	0.09	0.07	0.12	0.04	0.08	0.02	0.04	0.01	0.02	0.01	0.01	
8/03/2024	0.80	0.09	0.11	0.06	0.12	0.04	0.08	0.06	0.12	0.04	0.08	0.02	0.03	0.01	0.02	0.00	0.02	
9/03/2024	0.76	0.11	0.14	0.06	0.11	0.04	0.08	0.07	0.09	0.04	0.07	0.02	0.04	0.01	0.01	0.00	0.02	
10/03/2024	0.78	0.09	0.15	0.06	0.08	0.04	0.09	0.06	0.10	0.05	0.07	0.02	0.04	0.01	0.01	0.00	0.02	
11/03/2024	0.83	0.09	0.14	0.07	0.11	0.04	0.51	0.06	0.11	0.04	0.07	0.02	0.04	0.01	0.01	0.01	0.01	
12/03/2024	0.86	0.09	0.15	0.06	0.11	0.05	0.15	0.06	0.11	0.04	0.08	0.02	0.03	0.01	0.02	0.00	0.02	
13/03/2024	0.88	0.11	0.13	0.06	0.12	0.05	0.09	0.07	0.09	0.05	0.06	0.02	0.04	0.01	0.02	0.01	0.02	
14/03/2024	0.88	0.09	0.15	0.07	0.09	0.05	0.11	0.07	0.12	0.05	0.08	0.02	0.05	0.01	0.02	0.00	0.01	
15/03/2024	0.89	0.09	0.14	0.06	0.12	0.05	0.08	0.07	0.12	0.04	0.08	0.01	0.04	0.01	0.02	0.01	0.02	
16/03/2024	0.89	0.11	0.13	0.07	0.12	0.05	0.11	0.07	0.09	0.04	0.08	0.02	0.04	0.01	0.02	0.00	0.03	
17/03/2024	0.95	0.10	0.16	0.06	0.13	0.06	0.13	0.08	0.13	0.05	0.07	0.01	0.04	0.01	0.01	0.00	0.01	
18/03/2024	0.99	0.10	0.15	0.07	0.10	0.06	0.11	0.07	0.12	0.04	0.08	0.01	0.04	0.01	0.02	0.00	0.01	
19/03/2024	1.45	0.05	0.15	0.02	0.12	0.04	0.14	0.04	0.13	0.02	0.09	0.01	0.09	0.00	0.04	0.00	0.03	
20/03/2024	0.94	0.11	0.16	0.08	0.10	0.07	0.15	0.07	0.13	0.04	0.07	0.02	0.04	0.01	0.01	0.01	0.02	
21/03/2024	0.98	0.12	0.18	0.08	0.14	0.09	0.13	0.08	0.14	0.04	0.08	0.02	0.04	0.01	0.02	0.01	0.01	
22/03/2024	0.98	0.12	0.15	0.07	0.14	0.11	0.18	0.08	0.14	0.04	0.07	0.02	0.03	0.01	0.02	0.00	0.02	
23/03/2024	1.00	0.12	0.15	0.06	0.11	0.10	0.16	0.08	0.10	0.04	0.05	0.02	0.04	0.01	0.02	0.00	0.02	
24/03/2024	0.99	0.12	0.18	0.07	0.10	0.12	0.20	0.08	0.13	0.05	0.07	0.02	0.04	0.01	0.01	0.01	0.02	
25/03/2024	0.96	0.12	0.18	0.09	0.14	0.13	0.19	0.08	0.13	0.04	0.07	0.01	0.04	0.01	0.02	0.01	0.01	
26/03/2024	0.95	0.12	0.16	0.07	0.15	0.17	0.24	0.08	0.15	0.04	0.09	0.02	0.05	0.01	0.03	0.01	0.03	
27/03/2024	0.99	0.14	0.17	0.06	0.12	0.07	0.23	0.08	0.10	0.03	0.08	0.02	0.04	0.01	0.02	0.01	0.07	
28/03/2024	1.00	0.10	0.21	0.02	0.13	0.04	0.13	0.10	0.26	0.03	0.07	0.02	0.05	0.04	0.10	0.00	0.03	
29/03/2024	1.02	0.08	0.13	0.07	0.12	0.05	0.15	0.09	0.14	0.01	0.04	0.01	0.04	0.08	0.11	0.00	0.01	
30/03/2024	0.99	0.08	0.13	0.06	0.13	0.05	0.13	0.09	0.15	0.01	0.04	0.01	0.03	0.08	0.12	0.01	0.03	
31/03/2024	0.94	0.08	0.10	0.06	0.11	0.04	0.10	0.09	0.12	0.01	0.03	0.02	0.04	0.07	0.11	0.00	0.02	

Total Number of Measurements Taken, A: 13557 13658 15661 15087 15734 16081 14261 16075
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: 13557 13658 15660 15087 15734 16081 14261 16075
Compliance with Turbidity Standard, C = B/A X 100%: 100.000% 100.000% 99.994% 100.000% 100.000% 100.000% 100.000% 100.000%

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2024\03-March

Submitted By (Print): H. Buhler

Signature: original signed by H. Buhler



Water and Waste
Eaux et déchets

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-09-412-02 AA	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-2024	0.49	0.54	0.09	0.11	0.13	0.11	0.12	0.05	0.09	0.07	0.11	0.06	0.08	0.02	0.08	<0.02	0.09	<0.02
02-Mar-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
03-Mar-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
04-Mar-2024	0.48	0.69	0.09	0.10	0.11	0.10	0.11	0.04	0.09	0.06	0.13	0.05	0.10	0.02	0.09	<0.02	0.10	<0.02
05-Mar-2024	0.49	0.72	0.10	0.12	0.09	0.09	0.16	0.08	0.10	0.08	0.11	0.07	0.09	0.03	0.08	<0.02	0.08	<0.02
06-Mar-2024	0.68	0.71	0.14	0.14	0.09	0.09	0.11	0.04	0.11	0.09	0.12	0.06	0.08	0.02	0.08	<0.02	0.08	<0.02
07-Mar-2024	0.51	0.86	0.09	0.10	0.10	0.09	0.11	0.04	0.09	0.07	0.13	0.08	0.08	0.02	0.09	<0.02	0.08	<0.02
08-Mar-2024	0.48	0.76	0.09	0.11	0.12	0.09	0.12	0.05	0.10	0.07	0.10	0.05	0.08	0.02	0.10	<0.02	0.09	<0.02
09-Mar-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
10-Mar-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
11-Mar-2024	0.43	0.72	0.10	0.10	0.11	0.07	0.12	0.04	0.09	0.07	0.14	0.07	0.08	0.03	0.09	<0.02	0.08	<0.02
12-Mar-2024	0.49	0.81	0.10	0.11	0.14	0.11	0.12	0.05	0.10	0.07	0.12	0.05	0.08	0.03	0.07	<0.02	0.09	<0.02
13-Mar-2024	0.51	0.83	0.11	0.12	0.10	0.08	ns	ns	0.10	0.08	0.12	0.06	0.10	0.02	0.08	<0.02	0.10	<0.02
14-Mar-2024	0.47	0.84	0.12	0.13	0.11	0.08	0.11	0.06	0.14	0.12	0.12	0.06	0.08	0.02	0.09	<0.02	0.08	<0.02
15-Mar-2024	0.46	0.84	0.09	0.11	0.11	0.08	0.12	0.06	0.09	0.07	0.10	0.05	0.08	0.02	0.10	<0.02	0.09	<0.02
16-Mar-2024	ns	ns	ns	ns	ns	ns	0.14	0.07	ns									
17-Mar-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
18-Mar-2024	0.49	0.95	0.10	0.11	0.10	0.08	0.11	0.06	0.11	0.08	0.13	0.06	0.10	0.03	0.09	<0.02	0.09	<0.02
19-Mar-2024	0.46	0.99	0.11	0.12	0.15	0.11	0.14	0.08	0.11	0.09	0.12	0.05	0.09	0.02	0.08	<0.02	0.10	<0.02
20-Mar-2024	0.48	0.90	0.10	0.12	0.11	0.09	0.12	0.08	0.14	0.11	0.13	0.06	0.08	0.02	0.09	<0.02	0.08	<0.02
21-Mar-2024	0.59	0.95	0.11	0.12	0.12	0.10	0.13	0.10	0.09	0.08	0.14	0.06	0.08	0.02	0.09	<0.02	0.08	<0.02
22-Mar-2024	0.49	0.94	0.12	0.14	0.13	0.10	0.15	0.13	0.11	0.09	0.11	0.05	0.09	0.02	0.08	<0.02	0.10	<0.02
23-Mar-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
24-Mar-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
25-Mar-2024	0.52	0.93	0.10	0.13	0.11	0.09	0.12	0.15	0.09	0.08	0.13	0.06	0.07	0.02	0.08	<0.02	0.08	<0.02
26-Mar-2024	0.59	0.92	0.11	0.14	0.15	0.12	0.14	0.18	0.10	0.10	0.11	0.04	0.08	0.03	0.09	<0.02	0.09	<0.02
27-Mar-2024	0.52	0.95	0.10	0.15	0.08	0.07	0.15	0.20	0.09	0.09	0.11	0.05	0.08	0.03	0.07	<0.02	0.07	<0.02
28-Mar-2024	0.55	0.99	0.13	0.18	0.13	0.11	0.13	0.05	0.12	0.12	0.12	0.06	0.08	0.03	0.08	<0.02	0.08	<0.02
29-Mar-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
30-Mar-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
31-Mar-2024	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
Total number of measurements taken, A:	20		20		20		20		20		20		20		20		20	
Turbidity Standard for Monitoring Location (NTU):	0.30		0.30		0.30		0.30		0.30		0.30		0.30		0.30		0.30	
Number of measurements meeting standard, B:	20		20		20		20		20		20		20		20		20	
Compliance with Turbidity Standard, C= B/A X 100%:	100%		100%		100%		100%		100%		100%		100%		100%		100%	

na: not analyzed nr: no result ns: no sample o/: offline im: instrument maintenance

Comments:

Report Date: April 6, 2024



City Of Winnipeg

Water and Waste Department

Water Services

WATER TREATMENT PLANT FREE CHLORINE ON-LINE MONITORING REPORT
Deacon Booster Pumping Station

Water System Code: **252.00**

Licence Number: **PWS-09-412-02-AA**

Report Created: **01 April 2024**

Report Period: March 2024

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/03/2024	1.23	1.14	1.31	1.24
02/03/2024	1.23	1.19	1.27	1.23
03/03/2024	1.21	0.96	1.19	0.84
04/03/2024	1.29	1.09	1.29	1.15
05/03/2024	1.20	1.02	1.12	0.90
06/03/2024	1.29	1.18	1.17	1.07
07/03/2024	1.30	1.25	1.31	1.26
08/03/2024	1.27	1.18	1.29	1.25
09/03/2024	1.29	1.26	1.31	1.30
10/03/2024	1.26	1.20	1.29	1.24
11/03/2024	1.23	1.19	1.25	1.23
12/03/2024	1.30	1.23	1.26	1.22
13/03/2024	1.26	1.15	1.23	1.21
14/03/2024	1.25	1.23	1.26	1.24
15/03/2024	1.26	1.20	1.25	1.18
16/03/2024	1.21	1.13	1.21	1.18
17/03/2024	1.14	1.06	1.19	1.11
18/03/2024	1.23	1.10	1.24	1.15
19/03/2024	1.27	1.07	1.25	0.95
20/03/2024	1.28	0.88	1.28	0.68
21/03/2024	1.28	1.22	1.34	1.29
22/03/2024	1.33	1.26	1.37	1.31
23/03/2024	1.33	1.25	1.36	1.28
24/03/2024	1.25	1.21	1.27	1.23
25/03/2024	1.23	1.17	1.25	1.18
26/03/2024	1.28	1.24	1.27	1.21
27/03/2024	1.49	1.31	1.44	1.12
28/03/2024	1.39	1.23	1.35	1.00
29/03/2024	1.47	1.41	1.44	1.38
30/03/2024	1.40	1.36	1.37	1.32
31/03/2024	1.37	1.32	1.33	1.27

Total Number of Measurements, A: **21536** 21569

Minimum Free Chlorine Standard: **0.5** 0.5

Number of Measurements Meeting Standard, B: **21536** 21569

COMPLIANCE, C = B/A X 100%: **100.00** 100.00

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2024\03-March

Submitted By (Print): H. Buhler

Signature: original signed by H. Buhler



WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT

Water System Code: 252.00	Deacon Booster Pumping Station Branch 1			Deacon Booster Pumping Station Branch 2		
	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-2024	1.22	1.26	1.53	1.28	1.25	1.51
02-Mar-2024	ns	ns	ns	ns	ns	ns
03-Mar-2024	ns	ns	ns	ns	ns	ns
04-Mar-2024	1.33	1.30	1.53	1.28	1.24	1.50
05-Mar-2024	1.16	1.06	1.40	1.07	1.07	1.37
06-Mar-2024	1.28	1.24	1.53	1.13	1.14	1.42
07-Mar-2024	1.33	1.27	1.58	1.33	1.31	1.60
08-Mar-2024	1.18	1.26	1.49	1.25	1.24	1.54
09-Mar-2024	ns	ns	ns	ns	ns	ns
10-Mar-2024	ns	ns	ns	ns	ns	ns
11-Mar-2024	1.24	1.25	1.51	1.26	1.28	1.55
12-Mar-2024	1.24	1.28	1.57	1.27	1.36	1.57
13-Mar-2024	1.23	1.24	1.50	1.24	1.24	1.54
14-Mar-2024	1.25	1.27	1.57	1.26	1.24	1.52
15-Mar-2024	1.25	1.35	1.58	1.28	1.32	1.55
16-Mar-2024	ns	ns	ns	ns	ns	ns
17-Mar-2024	ns	ns	ns	ns	ns	ns
18-Mar-2024	1.12	1.21	1.49	1.18	1.23	1.45
19-Mar-2024	1.37	1.33	1.70	1.33	1.35	1.66
20-Mar-2024	1.75	2.02	2.30	1.67	2.03	2.40
21-Mar-2024	1.31	1.29	1.58	1.33	1.31	1.61
22-Mar-2024	1.33	1.35	1.60	1.35	1.34	1.61
23-Mar-2024	ns	ns	ns	ns	ns	ns
24-Mar-2024	ns	ns	ns	ns	ns	ns
25-Mar-2024	1.21	1.18	1.47	1.22	1.15	1.50
26-Mar-2024	1.26	1.24	1.56	1.30	1.30	1.57
27-Mar-2024	1.54	1.50	1.85	1.54	1.56	1.87
28-Mar-2024	1.41	1.35	1.70	1.38	1.41	1.69
29-Mar-2024	ns	ns	ns	ns	ns	ns
30-Mar-2024	ns	ns	ns	ns	ns	ns
31-Mar-2024	ns	ns	ns	ns	ns	ns
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%		

na: not analyzed nr: no result ns: no sample o/l: offline im: instrument maintenance

Comments:

Report Date:

April 6, 2024



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

Water System Code: 252.00
Licence Number: PWS-09-412-02-AA

WATER TREATMENT PLANT UV REPORT

Report Period: March 2024

Report Created: Monday, April 01, 2024

Date	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		
01/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	79.84	79.84	0.00	0.00	42.22	42.22	0.00	0.00	65.50	65.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	187.57	187.57	100.00			
02/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	79.65	79.65	0.00	0.00	42.70	42.70	0.00	0.00	65.62	65.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	187.97	187.97	100.00			
03/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	68.44	68.44	0.00	0.00	38.10	38.10	0.00	0.00	57.17	57.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	163.71	163.71	100.00			
04/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	81.32	81.32	0.00	0.00	44.21	44.21	0.00	0.00	63.74	63.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	189.26	189.26	100.00			
05/03/2024	0.00	0.00	2.29	2.29	0.00	0.06	74.91	74.96	0.00	0.00	42.47	42.47	0.00	0.00	63.78	63.78	0.00	0.13	3.98	4.11	0.00	0.07	2.79	2.87	0.00	0.26	190.23	190.49	99.86	
06/03/2024	0.00	0.00	0.00	0.00	0.00	0.23	82.07	82.30	0.00	0.00	45.15	45.15	0.00	0.00	67.94	67.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	195.15	195.39	99.88	
07/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	80.25	80.25	0.00	0.00	44.33	44.33	0.00	0.00	66.41	66.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	190.99	190.99	100.00	
08/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	80.28	80.28	0.00	0.00	44.25	44.25	0.00	0.00	66.47	66.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	191.00	191.00	100.00	
09/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	80.26	80.26	0.00	0.00	44.25	44.25	0.00	0.00	66.48	66.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	190.98	190.98	100.00	
10/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	80.36	80.36	0.00	0.00	44.25	44.25	0.00	0.00	66.51	66.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	191.12	191.12	100.00	
11/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	79.74	79.74	0.00	0.00	43.67	43.67	0.00	0.00	65.95	65.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	189.37	189.37	100.00	
12/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	77.71	77.71	0.00	0.00	41.51	41.51	0.00	0.00	63.82	63.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	183.04	183.04	100.00	
13/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	77.80	77.80	0.00	0.00	41.33	41.33	0.00	0.00	63.79	63.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	182.92	182.92	100.00	
14/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	77.55	77.55	0.00	0.00	41.61	41.61	0.00	0.00	63.84	63.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	183.01	183.01	100.00	
15/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	78.11	78.11	0.00	0.00	43.00	43.00	0.00	0.00	65.08	65.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	186.20	186.20	100.00	
16/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	78.71	78.71	0.00	0.00	43.12	43.12	0.00	0.00	65.19	65.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	187.02	187.02	100.00	
17/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	80.70	80.70	0.00	0.00	43.94	43.94	0.00	0.00	66.85	66.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	191.49	191.49	100.00	
18/03/2024	0.00	0.00	0.00	0.00	0.00	0.00	83.34	83.34	0.00	0.00	45.30	45.30	0.00	0.00	69.48	69.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	198.12	198.12	100.00	
19/03/2024	0.00	0.00	0.00	0.00	0.05	29.65	29.70	0.00	0.00	24.21	24.21	0.00	0.00	15.01	15.01	0.00	0.00	0.00	0.00	0.00	0.09	11.26	11.35	0.00	0.13	80.13	80.26	99.83		
20/03/2024	0.00	0.00	0.60	0.60	N/A	N/A	N/A	N/A	0.00	0.00	30.64	30.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	31.25	31.25	100.00	
21/03/2024	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	N/A		
22/03/2024	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	N/A		
23/03/2024	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	N/A		
24/03/2024	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	N/A		
25/03/2024	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	N/A		
26/03/2024	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00	N/A		
27/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
28/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
29/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
30/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
31/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

Notes: 1. UV Comparative Dose: 18.1 mJ/cm²

2. N/A - not applicable

Submitted By (Print): H. Buhler _____

Signature: original signed by H. Buhler _____

Page 1 of 2



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

Water System Code: 252.00
Licence Number: PWS-09-412-02-AA

Report Period: March 2024

Report Created: Monday, April 01, 2024

WATER TREATMENT PLANT UV REPORT

Date	Transmittance (%)				UVR_D100A			UVR_D200A			UVR_D300A			UVR_D400A			UVR_D500A			UVR_D600A		
	Branch 1		Branch 2		UV Dose [mJ/cm] ²																	
	Avg.	Min.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	
01/03/2024	93.6	92.7	92.6	91.9	OL	OL	OL	20.0	23.1	21.8	28.2	36.0	32.4	20.8	22.9	22.0	OL	OL	OL	OL	OL	OL
02/03/2024	93.7	93.2	92.6	92.4	OL	OL	OL	19.8	23.1	21.8	27.8	36.2	31.5	20.8	23.2	22.0	OL	OL	OL	OL	OL	OL
03/03/2024	93.7	92.1	92.7	92.0	OL	OL	OL	0.0	105.7	22.9	0.0	106.0	37.3	0.0	102.5	24.6	OL	OL	OL	OL	OL	OL
04/03/2024	93.7	93.2	92.7	92.4	OL	OL	OL	16.0	50.6	24.3	28.0	65.4	32.1	20.9	30.7	22.2	OL	OL	OL	OL	OL	OL
05/03/2024	93.6	92.9	92.7	92.4	0.0	105.8	71.2	0.0	76.2	22.6	0.0	104.7	37.5	0.0	67.1	36.8	0.0	84.6	22.5	0.0	97.7	22.3
06/03/2024	93.6	93.0	92.9	92.6	OL	OL	OL	12.2	47.0	22.3	27.9	34.9	31.2	20.9	71.3	38.2	OL	OL	OL	OL	OL	OL
07/03/2024	93.7	93.1	92.8	92.5	OL	OL	OL	21.1	23.8	22.6	26.9	33.9	29.5	20.8	22.9	22.0	OL	OL	OL	OL	OL	OL
08/03/2024	93.6	93.0	92.8	92.5	OL	OL	OL	20.3	42.0	22.0	25.7	31.2	28.1	20.5	22.8	22.0	0.0	0.0	0.0	0.0	0.0	0.0
09/03/2024	93.7	93.1	92.8	92.5	0.0	0.0	0.0	20.8	23.2	22.0	24.3	34.2	26.9	19.9	22.7	21.9	0.0	0.0	0.0	0.0	0.0	0.0
10/03/2024	93.7	93.1	93.3	92.7	0.0	0.0	0.0	20.7	23.2	22.0	23.9	29.7	26.5	20.7	23.4	21.9	0.0	0.0	0.0	0.0	0.0	0.0
11/03/2024	93.9	93.3	93.7	93.5	0.0	0.0	0.0	20.7	23.0	22.0	23.9	29.7	26.7	20.6	22.8	22.0	0.0	0.0	0.0	0.0	0.0	0.0
12/03/2024	93.7	93.1	93.8	93.6	0.0	0.0	0.0	20.8	23.2	22.0	24.1	34.3	26.6	20.7	22.9	22.0	0.0	0.0	0.0	0.0	0.0	0.0
13/03/2024	93.6	93.1	93.8	92.8	0.0	0.0	0.0	20.7	23.3	22.0	22.8	32.9	25.2	20.2	22.9	22.0	0.0	0.0	0.0	0.0	0.0	0.0
14/03/2024	93.6	93.0	93.8	93.5	OL	OL	OL	20.7	23.3	22.0	20.8	30.9	23.5	20.5	22.7	22.0	OL	OL	OL	OL	OL	OL
15/03/2024	93.6	92.7	93.8	93.5	OL	OL	OL	20.7	23.3	22.0	20.1	24.7	22.3	19.7	40.3	22.0	OL	OL	OL	OL	OL	OL
16/03/2024	93.5	93.0	93.7	93.5	OL	OL	OL	20.6	23.3	22.0	20.1	29.6	22.0	20.3	22.9	21.9	0.0	0.0	0.0	OL	OL	OL
17/03/2024	93.6	92.9	93.7	93.4	OL	OL	OL	20.6	23.2	22.0	19.6	32.2	22.0	19.3	38.0	21.9	0.0	0.0	0.0	OL	OL	OL
18/03/2024	93.6	93.0	94.0	93.5	OL	OL	OL	20.6	23.3	22.0	19.6	29.4	22.0	19.4	39.7	21.9	0.0	0.0	0.0	OL	OL	OL
19/03/2024	93.6	79.4	93.2	78.6	0.0	0.0	0.0	0.0	71.5	22.0	0.0	105.3	30.2	0.0	64.0	22.1	0.0	0.0	0.0	0.0	74.4	22.0
20/03/2024	92.1	0.0	92.4	0.0	0.0	104.8	64.5	N/A	N/A	N/A	0.0	104.7	25.7	OL	OL	OL	OL	OL	OL	N/A	N/A	N/A
21/03/2024	92.0	91.3	92.3	92.0	OL	OL	OL	N/A	N/A	N/A	OL	N/A	N/A	N/A								
22/03/2024	91.9	91.3	92.2	92.0	OL	OL	OL	N/A	N/A	N/A	OL	N/A	N/A	N/A								
23/03/2024	92.5	91.7	92.8	92.4	OL	OL	OL	N/A	N/A	N/A	OL	N/A	N/A	N/A								
24/03/2024	92.2	91.6	92.5	92.3	OL	OL	OL	N/A	N/A	N/A	OL	N/A	N/A	N/A								
25/03/2024	92.2	91.6	92.5	92.2	OL	OL	OL	N/A	N/A	N/A	OL	N/A	N/A	N/A								
26/03/2024	92.2	91.6	92.5	92.3	OL	OL	OL	N/A	N/A	N/A	OL	N/A	N/A	N/A								
27/03/2024	92.4	0.0	92.4	0.0	N/A	N/A																
28/03/2024	92.3	91.4	92.7	92.4	N/A	N/A																
29/03/2024	92.4	91.5	92.8	92.5	N/A	N/A																
30/03/2024	92.4	91.6	92.9	92.7	N/A	N/A																
31/03/2024	92.6	91.6	93.1	92.4	N/A	N/A																

Notes: 1. UV Comparative Dose: 18.1 mJ/cm²

2. OL - Off Line

3. N/A - not applicable

Submitted By (Print): H. Buhler

Signature: original signed by H. Buhler

Page 2 of 2



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

Water System Code: **252.00**
Licence Number: **PWS-09-412-02-AA**

WATER TREATMENT PLANT UV REPORT

Report Period: **March 2024**

Report Created: **Tuesday, April 02, 2024**

Date	UVR-D100A		UVR-D200A		UVR-D300A		UVR-D400A		UVR-D500A		UVR-D600A		Total water volume [ML]		% Volume Treated To Dose
	To	Total	To	Total	To	Total	To	Total	To	Total	To	Total	To	Total	
01/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
02/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
03/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
04/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
05/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
06/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
07/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
08/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
09/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
16/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19/03/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
20/03/2024	N/A	N/A	87.87	88.23	N/A	N/A	N/A	N/A	N/A	N/A	78.77	78.83	166.64	167.06	99.75
21/03/2024	N/A	N/A	107.72	108.02	N/A	N/A	N/A	N/A	N/A	N/A	94.28	94.28	201.99	202.30	99.85
22/03/2024	N/A	N/A	106.90	106.9	N/A	N/A	N/A	N/A	N/A	N/A	93.81	93.81	200.71	200.71	100.00
23/03/2024	N/A	N/A	103.58	104.16	N/A	N/A	N/A	N/A	N/A	N/A	92.64	92.64	196.22	196.80	99.71
24/03/2024	N/A	N/A	103.76	103.9	N/A	N/A	N/A	N/A	N/A	N/A	93.13	93.13	196.88	197.03	99.93
25/03/2024	N/A	N/A	106.15	106.15	N/A	N/A	N/A	N/A	N/A	N/A	94.63	94.63	200.78	200.78	100.00
26/03/2024	N/A	N/A	105.56	105.56	N/A	N/A	N/A	N/A	N/A	N/A	93.46	93.46	199.02	199.02	100.00
27/03/2024	54.38	54.38	43.17	43.17	40.83	40.83	3.97	4.2	4.45	5.15	41.89	41.89	188.70	189.62	99.51
28/03/2024	95.07	95.07	0.00	0	79.16	79.16	0.00	0	0.00	0	0.00	0.00	174.24	174.23	100.00
29/03/2024	94.68	94.68	0.00	0	79.26	79.26	0.00	0	0.00	0	0.00	0.00	173.94	173.94	100.00
30/03/2024	92.79	92.79	0.00	0	79.22	79.22	0.00	0	0.00	0	0.00	0.00	172.02	172.01	100.00
31/03/2024	93.03	93.03	0.00	0	79.37	79.37	0.00	0	0.00	0	0.00	0.00	172.40	172.40	100.00

Total [ML]: 429.96 429.96 764.71 766.10 357.84 357.84 3.97 4.20 4.45 5.15 682.61 682.67 2243.54 2245.90

Water Volume [%]:

To Dose per reactor	100.00 %	99.82 %	100.00 %	94.43 %	86.36 %	99.99 %
To Dose Total	99.93 %					

Notes:

1. Target Log value: 2.00
2. N/A - not applicable

Submitted By (Print): H. Buhler

Signature: original signed by H. Buhler



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

Water System Code: 252.00
Licence Number: PWS-09-412-02-AA

Report Period: March 2024

Report Created: Tuesday, April 02, 2024

WATER TREATMENT PLANT UV REPORT

Date	Transmittance (%)				UVR_D100A		UVR_D200A		UVR_D300A		UVR_D400A		UVR_D500A		UVR_D600A	
	Branch 1		Branch 2		Avg.	Min.										
01/03/2024	93.6	92.7	92.6	91.9	N/A	N/A										
02/03/2024	93.7	93.2	92.6	92.4	N/A	N/A										
03/03/2024	93.7	92.1	92.7	92.0	N/A	N/A										
04/03/2024	93.7	93.2	92.7	92.4	N/A	N/A										
05/03/2024	93.6	92.9	92.7	92.4	N/A	N/A										
06/03/2024	93.6	93.0	92.9	92.6	N/A	N/A										
07/03/2024	93.7	93.1	92.8	92.5	N/A	N/A										
08/03/2024	93.6	93.0	92.8	92.5	N/A	N/A										
09/03/2024	93.7	93.1	92.8	92.5	N/A	N/A										
10/03/2024	93.7	93.1	93.3	92.7	N/A	N/A										
11/03/2024	93.9	93.3	93.7	93.5	N/A	N/A										
12/03/2024	93.7	93.1	93.8	93.6	N/A	N/A										
13/03/2024	93.6	93.1	93.8	92.8	N/A	N/A										
14/03/2024	93.6	93.0	93.8	93.5	N/A	N/A										
15/03/2024	93.6	92.7	93.8	93.5	N/A	N/A										
16/03/2024	93.5	93.0	93.7	93.5	N/A	N/A										
17/03/2024	93.6	92.9	93.7	93.4	N/A	N/A										
18/03/2024	93.6	93.0	94.0	93.5	N/A	N/A										
19/03/2024	93.6	79.4	93.2	78.6	N/A	N/A										
20/03/2024	92.1	0.0	92.4	0.0	N/A	N/A	2.3	1.7	N/A	N/A	N/A	N/A	N/A	N/A	2.4	0.0
21/03/2024	92.0	91.3	92.3	92.0	N/A	N/A	2.1	1.8	N/A	N/A	N/A	N/A	N/A	N/A	2.1	2.0
22/03/2024	91.9	91.3	92.2	92.0	N/A	N/A	2.1	1.9	N/A	N/A	N/A	N/A	N/A	N/A	2.1	2.0
23/03/2024	92.5	91.7	92.8	92.4	N/A	N/A	2.1	1.9	N/A	N/A	N/A	N/A	N/A	N/A	2.2	2.0
24/03/2024	92.2	91.6	92.5	92.3	N/A	N/A	2.1	1.9	N/A	N/A	N/A	N/A	N/A	N/A	2.2	2.0
25/03/2024	92.2	91.6	92.5	92.2	N/A	N/A	2.2	2.0	N/A	N/A	N/A	N/A	N/A	N/A	2.1	2.0
26/03/2024	92.2	91.6	92.5	92.3	N/A	N/A	2.1	1.9	N/A	N/A	N/A	N/A	N/A	N/A	2.1	1.9
27/03/2024	92.4	0.0	92.4	0.0	2.5	1.9	2.2	0.0	2.7	0.0	2.6	0.0	2.6	0.0	2.4	0.0
28/03/2024	92.3	91.4	92.7	92.4	2.3	2.1	OL	OL	2.5	0.0	OL	OL	OL	OL	OL	OL
29/03/2024	92.4	91.5	92.8	92.5	2.2	2.0	OL	OL	2.4	2.2	OL	OL	OL	OL	OL	OL
30/03/2024	92.4	91.6	92.9	92.7	2.2	2.0	OL	OL	2.4	2.2	OL	OL	OL	OL	OL	OL
31/03/2024	92.6	91.6	93.1	92.4	2.2	2.0	OL	OL	2.3	2.0	OL	OL	OL	OL	OL	OL

Notes: 1. UV target value is 2.00 [Log]

2. OL - Off Line

3. N/A - not applicable

Submitted By (Print): H. Buhler

Signature: original signed by H. Buhler

Page 2 of 2