



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

March 7, 2023

RE: FEBRUARY 2023 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 February 2023.

The February 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 February 27; the elevated turbidity occurred for less than 12 consecutive hours. The turbidity results for the filter effluent met the licence requirements.

The February on-line and grab sampling chlorine reports include results obtained for the Deacon Booster Pumping Station at the Water Treatment Plant. As previously approved, the Branch 1 chlorine analyzer readings and grab samples have been taken at the nearest location to the entry point to Branch 1 beginning February 22, 2023, while Deacon Booster Pumping Station and UV System are offline to accommodate planned upgrades at the Water Treatment Plant. The free chlorine results at the Water Treatment Plant met the licence requirements.

The February UV summary report includes results obtained for the six UV reactors at the Water Treatment Plant. Please note that the UV system has been offline since February 22, 2023 at approximately 8:15am to accommodate planned upgrades 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,

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. T. Hilderman, Manitoba Health and Seniors Care (email)
T. Shanks, M. Eng., P. Eng. (e-mail)
M.Szmon, P. Eng. (e-mail)
C. Diduck (email)



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

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

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

February 2023 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
1/02/2023	0.72	0.13	0.17	0.05	0.07	0.04	0.06	0.06	0.11	0.05	0.07	0.02	0.06	0.01	0.06	0.01	0.03
2/02/2023	0.32	0.14	0.18	0.06	0.11	0.06	0.16	0.06	0.16	0.06	0.08	0.01	0.04	0.01	0.04	0.01	0.04
3/02/2023	0.32	0.11	0.16	0.05	0.10	0.05	0.10	0.06	0.10	0.05	0.08	0.01	0.04	0.04	0.01	0.01	0.03
4/02/2023	0.32	0.08	0.13	0.05	0.10	0.04	0.07	0.06	0.12	0.05	0.08	0.01	0.03	0.01	0.04	0.01	0.04
5/02/2023	0.31	0.07	0.14	0.05	0.08	0.05	0.10	0.05	0.09	0.04	0.07	0.01	0.04	0.01	0.04	0.00	0.03
6/02/2023	0.32	0.07	0.13	0.05	0.10	0.04	0.09	0.05	0.07	0.05	0.07	0.01	0.05	0.01	0.05	0.01	0.02
7/02/2023	0.33	0.08	0.11	0.06	0.10	0.04	0.10	0.06	0.11	0.04	0.08	0.01	0.05	0.01	0.02	0.01	0.04
8/02/2023	0.33	0.12	0.14	0.07	0.16	0.07	0.09	0.08	0.14	0.06	0.12	0.03	0.05	0.03	0.05	0.02	0.09
9/02/2023	0.33	0.11	0.20	0.10	0.12	0.10	0.16	0.09	0.16	0.06	0.12	0.04	0.09	0.05	0.10	0.03	0.05
10/02/2023	0.31	0.10	0.17	0.08	0.16	0.08	0.15	0.09	0.12	0.08	0.12	0.04	0.12	0.04	0.11	0.05	0.10
11/02/2023	0.29	0.12	0.14	0.08	0.15	0.07	0.15	0.09	0.14	0.07	0.11	0.03	0.09	0.03	0.05	0.03	0.08
12/02/2023	0.28	0.10	0.19	0.07	0.15	0.08	0.11	0.09	0.16	0.06	0.12	0.04	0.06	0.04	0.09	0.03	0.09
13/02/2023	0.28	0.09	0.17	0.08	0.14	0.07	0.15	0.07	0.11	0.05	0.10	0.03	0.09	0.03	0.09	0.03	0.05
14/02/2023	0.35	0.10	0.20	0.08	0.22	0.07	0.23	0.09	0.16	0.07	0.11	0.04	0.10	0.03	0.11	0.04	0.09
15/02/2023	0.28	0.08	0.17	0.06	0.13	0.06	0.08	0.08	0.13	0.07	0.11	0.04	0.07	0.05	0.10	0.03	0.10
16/02/2023	0.28	0.09	0.16	0.07	0.10	0.08	0.13	0.07	0.15	0.06	0.12	0.05	0.10	0.04	0.11	0.03	0.05
17/02/2023	0.28	0.09	0.16	0.06	0.13	0.07	0.14	0.08	0.10	0.07	0.11	0.03	0.05	0.03	0.10	0.04	0.09
18/02/2023	0.29	0.11	0.16	0.06	0.14	0.06	0.08	0.07	0.14	0.06	0.12	0.05	0.10	0.04	0.07	0.03	0.09
19/02/2023	0.29	0.10	0.17	0.07	0.10	0.09	0.15	0.07	0.15	0.06	0.08	0.04	0.10	0.04	0.10	0.03	0.05
20/02/2023	0.29	0.09	0.17	0.07	0.13	0.07	0.15	0.08	0.11	0.08	0.13	0.04	0.11	0.04	0.11	0.04	0.10
21/02/2023	0.29	0.11	0.16	0.07	0.14	0.07	0.16	0.08	0.18	0.08	0.14	0.06	0.11	0.04	0.07	0.04	0.10
22/02/2023	0.32	0.07	0.18	0.07	0.11	0.08	0.13	0.06	0.14	0.06	0.16	0.04	0.08	0.05	0.12	0.03	0.06
23/02/2023	0.34	0.09	0.17	0.10	0.18	0.09	0.17	0.07	0.10	0.11	0.14	0.03	0.11	0.07	0.16	0.06	0.13
24/02/2023	0.35	0.09	0.20	0.11	0.20	0.11	0.23	0.08	0.15	0.10	0.17	0.04	0.09	0.07	0.15	0.05	0.13
25/02/2023	0.38	0.11	0.23	0.10	0.16	0.09	0.19	0.07	0.18	0.09	0.14	0.04	0.12	0.07	0.10	0.05	0.13
26/02/2023	0.56	0.02	0.22	0.04	0.13	0.04	0.15	0.02	0.17	0.03	0.13	0.01	0.19	0.02	0.15	0.02	0.11
27/02/2023	0.38	0.12	0.28	0.12	0.24	0.11	0.45	0.09	0.16	0.09	0.14	0.03	0.07	0.06	0.07	0.05	0.11
28/02/2023	0.38	0.10	0.19	0.12	0.15	0.12	0.16	0.09	0.16	0.09	0.11	0.03	0.08	0.08	0.13	0.05	0.08

Total Number of Measurements Taken, A:	11002	10923	11003	11515	12601	12721	12383	13962
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:	11002	10923	10998	11515	12601	12721	12383	13962
Compliance with Turbidity Standard, C = B/A X 100%:	100.000%	100.000%	99.955%	100.000%	100.000%	100.000%	100.000%	100.000%

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2023\02-February

Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew



WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00		Turbidity (NTU)																	
Licence No. PWS-09-412-02																			
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-Feb-2023	0.44	0.32	0.12	0.13	0.14	0.07	0.15	0.07	0.12	0.06	0.11	0.08	0.16	0.07	0.12	0.02	0.12	0.02	
02-Feb-2023	0.39	0.29	0.12	0.13	0.17	0.09	0.17	0.08	0.12	0.07	0.10	0.08	0.08	0.02	0.09	<0.02	0.10	<0.02	
03-Feb-2023	0.40	0.31	0.13	0.09	0.12	0.06	0.13	0.04	0.13	0.08	0.10	0.07	0.08	0.02	0.09	<0.02	0.11	0.02	
04-Feb-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	0.09	0.02	ns	ns	ns	ns	
05-Feb-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
06-Feb-2023	0.41	0.32	0.11	0.09	0.14	0.07	0.14	0.06	0.11	0.06	0.09	0.06	0.08	<0.02	0.09	<0.02	0.09	<0.02	
07-Feb-2023	0.42	0.32	0.13	0.09	0.12	0.05	0.13	0.05	0.13	0.08	0.10	0.06	0.09	0.02	0.10	<0.02	0.12	0.02	
08-Feb-2023	0.43	0.32	0.15	0.11	0.13	0.05	0.14	0.05	0.20	0.14	0.09	0.05	0.10	0.02	0.11	<0.02	0.12	0.02	
09-Feb-2023	0.42	0.32	0.19	0.12	0.21	0.11	0.21	0.11	0.17	0.10	0.13	0.07	0.17	0.07	0.20	0.07	0.16	0.03	
10-Feb-2023	0.42	0.33	0.22	0.12	0.22	0.12	0.21	0.11	0.17	0.10	0.15	0.09	0.13	0.04	0.13	0.03	0.14	0.04	
11-Feb-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
12-Feb-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
13-Feb-2023	0.37	0.27	0.15	0.11	0.18	0.09	0.20	0.10	0.14	0.09	0.12	0.07	0.17	0.07	0.15	0.05	0.13	0.03	
14-Feb-2023	0.43	0.33	0.16	0.11	0.18	0.09	0.15	0.07	0.16	0.09	0.13	0.08	0.13	0.04	0.13	0.03	0.15	0.05	
15-Feb-2023	0.40	0.32	0.17	0.12	0.13	0.07	0.14	0.07	0.16	0.10	0.10	0.07	0.13	0.05	0.14	0.04	0.12	0.02	
16-Feb-2023	0.40	0.30	0.13	0.09	0.15	0.08	0.17	0.09	0.13	0.08	0.12	0.08	0.17	0.07	0.17	0.07	0.13	0.03	
17-Feb-2023	0.40	0.30	0.14	0.10	0.21	0.11	0.22	0.13	0.14	0.09	0.13	0.09	0.12	0.04	0.13	0.03	0.14	0.04	
18-Feb-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
19-Feb-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
20-Feb-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
21-Feb-2023	0.43	0.28	0.17	0.11	0.15	0.07	0.16	0.08	0.17	0.10	0.19	0.14	nr	0.06	0.14	0.04	0.12	0.03	
22-Feb-2023	0.40	0.28	0.17	0.13	0.11	0.05	0.13	0.06	0.10	0.05	0.08	0.07	0.18	0.08	0.11	<0.02	0.09	<0.02	
23-Feb-2023	0.42	0.33	0.18	0.09	0.26	0.17	0.27	0.17	0.17	0.08	0.15	0.13	0.14	0.05	0.14	0.07	0.17	0.07	
24-Feb-2023	0.43	0.33	0.17	0.10	0.19	0.12	0.18	0.10	0.18	0.10	0.15	0.14	0.14	0.05	0.15	0.07	0.18	0.08	
25-Feb-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
26-Feb-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	
27-Feb-2023	0.50	0.38	0.19	0.11	0.24	0.16	0.21	0.14	0.20	0.12	0.13	0.11	0.14	0.04	0.14	0.06	0.13	0.04	
28-Feb-2023	0.47	0.36	0.24	0.14	0.20	0.13	0.21	0.13	0.18	0.10	0.10	0.08	0.18	0.08	0.17	0.07	0.13	0.04	
Total number of measurements taken, A:			19		19		19		19		19		19		19		19		
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		19		19		19		19		19		19		19		
Compliance with Turbidity Standard, C= B/A X 100%:			100%		100%		100%		100%		100%		100%		100%		100%		

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

Comments:

February 21, Filter 6 no result due to lab error.

Report Date: 7-Mar-2023



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

Water System Code: **252.00**
Licence Number: **PWS-09-412-02**
Report Created: **01 March 2023**

Report Period: February 2023

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/02/2023	1.40	1.31	1.47	1.26
02/02/2023	1.41	1.26	1.39	1.23
03/02/2023	1.46	1.35	1.51	1.40
04/02/2023	1.56	1.37	1.63	1.40
05/02/2023	1.44	1.30	1.47	1.35
06/02/2023	1.40	1.28	1.39	1.29
07/02/2023	1.41	1.29	1.37	1.24
08/02/2023	1.48	1.31	1.44	1.28
09/02/2023	1.41	1.30	1.35	1.26
10/02/2023	1.40	1.24	1.39	1.27
11/02/2023	1.36	1.25	1.34	1.24
12/02/2023	1.31	1.23	1.30	1.22
13/02/2023	1.32	1.23	1.33	1.25
14/02/2023	1.35	1.27	1.38	1.19
15/02/2023	1.31	1.16	1.27	1.17
16/02/2023	1.33	1.25	1.24	1.17
17/02/2023	1.35	1.27	1.22	1.16
18/02/2023	1.37	1.29	1.19	1.14
19/02/2023	1.35	1.23	1.24	1.15
20/02/2023	1.33	1.26	1.26	1.19
21/02/2023	1.28	1.21	1.19	1.14
22/02/2023	1.72 *	1.27 *	1.84	1.13
23/02/2023	1.60 *	1.50 *	1.61	1.36
24/02/2023	1.47 *	1.33 *	1.48	1.23
25/02/2023	1.37 *	1.31 *	1.42	1.24
26/02/2023	1.38 *	1.32 *	1.35	1.27
27/02/2023	1.51 *	1.39 *	1.46	1.30
28/02/2023	1.42 *	1.33 *	1.42	1.22

Total Number of Measurements, A:	19081	19078
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	19081	19078
COMPLIANCE, C = B/A X 100%:	100.00	100.00

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2023\02-February

* Branch 1 samples are taken at the nearest location to the entry point to Branch 1 while Deacon Booster Pumping Station and UV System were offline for the gravity flow

Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew



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-09-412-02						
Date	Free Chlorine (mg/L)		Total Chlorine (mg/L)	Free Chlorine (mg/L)		Total Chlorine (mg/L)
	Analyser	Grab	Grab	Analyser	Grab	Grab
01-Feb-2023	2.10	2.00	2.20	1.76	1.76	1.99
02-Feb-2023	1.37	1.43	1.67	1.25	1.53	1.87
03-Feb-2023	1.42	1.48	1.78	1.55	1.54	2.08
04-Feb-2023	ns	ns	ns	ns	ns	ns
05-Feb-2023	ns	ns	ns	ns	ns	ns
06-Feb-2023	1.41	1.48	1.81	1.32	1.39	1.65
07-Feb-2023	1.46	1.55	1.77	1.45	1.52	1.79
08-Feb-2023	1.43	1.44	1.73	1.46	1.51	1.78
09-Feb-2023	1.50	1.54	1.84	1.45	1.49	1.82
10-Feb-2023	1.44	1.55	1.76	1.43	1.51	1.69
11-Feb-2023	ns	ns	ns	ns	ns	ns
12-Feb-2023	ns	ns	ns	ns	ns	ns
13-Feb-2023	1.36	1.27	1.59	1.35	1.43	1.65
14-Feb-2023	1.34	1.44	1.72	1.40	1.38	1.59
15-Feb-2023	1.26	1.32	1.54	1.29	1.31	1.49
16-Feb-2023	1.39	1.49	1.80	1.32	1.39	1.69
17-Feb-2023	1.39	1.47	1.71	1.25	1.34	1.64
18-Feb-2023	ns	ns	ns	ns	ns	ns
19-Feb-2023	ns	ns	ns	ns	ns	ns
20-Feb-2023	ns	ns	ns	ns	ns	ns
21-Feb-2023	1.27	1.34	1.62	1.20	1.30	1.49
22-Feb-2023	1.96	2.05	2.40	1.95	2.05	2.30
23-Feb-2023	1.58	1.57	1.84	1.59	1.63	1.92
24-Feb-2023	1.50	1.50	1.79	1.48	1.50	1.80
25-Feb-2023	ns	ns	ns	ns	ns	ns
26-Feb-2023	ns	ns	ns	ns	ns	ns
27-Feb-2023	1.53	1.55	1.73	1.41	1.60	1.94
28-Feb-2023	1.45	1.46	1.81	1.22	1.51	1.80
Total number of measurements taken, A:			19			19
Chlorine Standard for Monitoring Location (mg/L):			0.50			0.50
Number of measurements meeting standard, B:			19			19
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:

* Effective February 22, 2023, Branch 1 chlorine analyzer readings and grab samples have been taken at the nearest location to the entry point to Branch 1, while Deacon Booster Pumping Station and the UV System are offline to accomodate planned upgrades at the Water Treatment Plant.

Report Date: 1-Mar-2023



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 WATER SERVICES

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

WATER TREATMENT PLANT UV REPORT

Report Period: February 2023

Report Created: Thursday, March 02, 2023

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		Untreated	Below
01/02/2023	0.00	0.00	37.25	37.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	38.06	38.06	0.00	0.00	36.65	36.65	0.00	0.00	0.00	0.00	0.00	0.00	111.95	111.95	100.00		
02/02/2023	0.00	0.00	75.26	75.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.73	77.73	0.00	0.00	74.07	74.07	0.00	0.00	0.00	0.00	0.00	0.00	227.07	227.07	100.00		
03/02/2023	0.00	0.00	74.83	74.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.70	75.70	0.00	0.00	74.22	74.22	0.00	0.00	0.00	0.00	0.00	0.00	224.75	224.75	100.00		
04/02/2023	0.00	0.00	68.14	68.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.10	71.10	0.00	0.00	69.69	69.69	0.00	0.00	0.00	0.00	0.00	0.00	208.93	208.93	100.00		
05/02/2023	0.00	0.00	61.70	61.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.74	66.74	0.00	0.00	63.96	63.96	0.00	0.00	0.00	0.00	0.00	0.00	192.40	192.40	100.00		
06/02/2023	0.00	0.00	59.46	59.46	0.00	0.00	0.00	0.00	0.00	0.09	33.57	33.67	0.00	0.00	32.33	32.33	0.00	0.00	64.54	64.54	0.00	0.00	0.00	0.00	0.00	0.09	189.90	189.99	99.95		
07/02/2023	0.00	0.00	57.68	57.68	0.00	0.04	5.26	5.31	0.00	0.19	53.79	53.97	0.00	0.05	6.82	6.87	0.00	0.00	65.87	65.87	0.00	0.00	0.00	0.00	0.00	0.28	189.42	189.69	99.85		
08/02/2023	0.00	0.00	57.34	57.34	0.00	0.00	0.00	0.00	0.00	0.09	64.92	65.02	0.00	0.00	0.00	0.00	0.00	0.00	64.65	64.65	0.00	0.00	0.00	0.00	0.00	0.09	186.91	187.00	99.95		
09/02/2023	0.00	0.00	55.74	55.74	0.00	0.00	0.00	0.00	0.00	0.09	63.11	63.20	0.00	0.00	0.00	0.00	0.00	0.00	62.83	62.83	0.00	0.00	0.00	0.00	0.00	0.09	181.68	181.77	99.95		
10/02/2023	0.00	0.00	53.16	53.16	0.00	0.00	0.00	0.00	0.00	0.17	61.15	61.32	0.00	0.00	0.00	0.00	0.00	0.00	60.53	60.53	0.00	0.00	0.00	0.00	0.00	0.17	174.85	175.02	99.90		
11/02/2023	0.00	0.00	52.76	52.76	0.00	0.00	0.00	0.00	0.00	0.04	60.27	60.31	0.00	0.00	0.00	0.00	0.00	0.00	60.04	60.04	0.00	0.00	0.00	0.00	0.00	0.04	173.07	173.11	99.98		
12/02/2023	0.00	0.00	54.05	54.05	0.00	0.00	0.00	0.00	0.00	0.09	60.12	60.20	0.00	0.00	0.00	0.00	0.00	0.00	61.07	61.07	0.00	0.00	0.00	0.00	0.00	0.09	175.24	175.32	99.95		
13/02/2023	0.00	0.00	53.02	53.02	0.00	0.00	0.00	0.00	0.00	0.16	58.79	58.95	0.00	0.00	0.00	0.00	0.00	0.00	60.04	60.04	0.00	0.00	0.00	0.00	0.00	0.16	171.85	172.01	99.90		
14/02/2023	0.00	0.00	53.36	53.36	0.00	0.00	0.00	0.00	0.00	0.20	58.27	58.47	0.00	0.00	0.00	0.00	0.00	0.00	60.15	60.15	0.00	0.00	0.00	0.00	0.00	0.21	171.78	171.99	99.88		
15/02/2023	0.00	0.00	23.08	23.08	0.00	0.00	42.40	42.40	0.00	0.11	48.72	48.83	0.00	0.00	0.00	0.00	0.00	0.00	55.56	55.56	0.00	0.00	0.00	0.00	0.00	0.11	169.76	169.87	99.93		
16/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	78.59	78.59	0.00	0.08	40.27	40.35	0.00	0.00	0.00	0.00	0.00	0.00	51.57	51.57	0.00	0.00	0.00	0.00	0.00	0.08	170.43	170.51	99.95		
17/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	82.62	82.62	0.00	0.06	40.44	40.50	0.00	0.00	0.00	0.00	0.00	0.00	52.24	52.24	0.00	0.00	0.00	0.00	0.00	0.06	175.31	175.37	99.97		
18/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	82.75	82.75	0.00	0.11	40.11	40.22	0.00	0.00	0.00	0.00	0.00	0.00	52.21	52.21	0.00	0.00	0.00	0.00	0.00	0.11	175.07	175.18	99.94		
19/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	79.78	79.78	0.00	0.03	40.45	40.48	0.00	0.00	0.00	0.00	0.00	0.04	51.73	51.76	0.00	0.00	0.00	0.00	0.00	0.06	171.96	172.02	99.96		
20/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	80.92	80.92	0.00	0.11	39.80	39.91	0.00	0.00	0.00	0.00	0.00	0.00	51.18	51.18	0.00	0.00	0.00	0.00	0.00	0.11	171.89	172.00	99.94		
21/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	81.87	81.87	0.00	0.14	40.16	40.30	0.00	0.00	0.00	0.00	0.00	0.04	51.55	51.58	0.00	0.00	0.00	0.00	0.00	0.18	173.57	173.75	99.90		
22/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	28.51	28.51	0.00	0.06	13.51	13.56	0.00	0.00	0.00	0.00	0.00	0.00	17.42	17.42	0.00	0.00	0.00	0.00	0.00	0.06	59.43	59.49	99.90		
23/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL		
24/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL		
25/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL		
26/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL		
27/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL		
28/02/2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	OL		
Total [ML]:	0.00	0.00	836.83	836.83	0.00	0.04	562.70	562.74	0.00	1.83	817.44	819.27	0.00	0.05	368.48	368.53	0.00	0.07	1261.77	1261.84	0.00	0.00	0.00	0.00	0.00	1.99	3847.22	3849.21			

Water Volume [%]:

Untreated: 0.00 %
 Below Dose: 0.05 %
 To Dose: 99.95 %

- Notes:**
- UV Comparative Dose: 18.1 mJ/cm²
 - OL - Offline

Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

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

WATER TREATMENT PLANT UV REPORT

Report Period: **February 2023**

Report Created: **Thursday, March 02, 2023**

Date	Transmittance (%)				UVR_D100A			UVR_D200A			UVR_D300A			UVR_D400A			UVR_D500A			UVR_D600A		
	Branch 1		Branch 2		UV Dose [mJ/cm]²			UV Dose [mJ/cm]²			UV Dose [mJ/cm]²			UV Dose [mJ/cm]²			UV Dose [mJ/cm]²			UV Dose [mJ/cm]²		
	Avg.	Min.	Avg.	Min.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.	Min.	Max.	Avg.
01/02/2023	90.8	90.6	93.8	93.7	20.7	21.9	21.2	OL	OL	OL	OL	OL	OL	18.5	21.6	21.1	18.2	23.1	21.1	OL	OL	OL
02/02/2023	90.5	89.8	93.7	93.2	20.7	26.7	21.2	OL	OL	OL	OL	OL	OL	14.9	21.7	21.1	18.3	21.8	21.1	OL	OL	OL
03/02/2023	91.2	86.5	93.7	93.2	20.6	27.2	21.2	OL	OL	OL	OL	OL	OL	18.6	21.6	21.2	18.3	21.7	21.1	OL	OL	OL
04/02/2023	92.3	91.8	94.0	93.4	20.7	27.4	21.3	OL	OL	OL	OL	OL	OL	18.6	21.7	21.2	18.3	21.8	21.1	OL	OL	OL
05/02/2023	91.5	90.9	94.4	93.9	20.8	30.2	21.5	OL	OL	OL	OL	OL	OL	18.6	21.7	21.2	18.3	23.1	21.2	OL	OL	OL
06/02/2023	90.3	88.8	95.0	94.6	17.6	32.7	21.4	OL	OL	OL	17.4	105.9	21.3	0.0	36.2	21.2	18.3	29.7	21.2	OL	OL	OL
07/02/2023	90.9	59.7	95.1	94.6	20.7	26.6	21.5	0.0	69.7	21.7	0.0	93.3	21.3	0.0	86.1	21.9	18.2	23.3	21.2	OL	OL	OL
08/02/2023	92.3	91.9	95.8	95.2	20.6	22.1	21.3	OL	OL	OL	17.5	23.2	21.2	OL	OL	OL	18.3	22.8	21.2	OL	OL	OL
09/02/2023	92.6	92.0	95.8	95.3	20.7	22.1	21.3	OL	OL	OL	17.5	24.1	21.2	OL	OL	OL	18.3	22.8	21.2	OL	OL	OL
10/02/2023	93.0	92.6	96.3	95.8	20.7	22.1	21.3	OL	OL	OL	17.6	23.5	21.3	OL	OL	OL	18.3	22.8	21.2	OL	OL	OL
11/02/2023	93.2	92.9	97.1	96.6	20.7	22.2	21.3	OL	OL	OL	17.5	23.7	21.3	OL	OL	OL	18.4	22.3	21.2	OL	OL	OL
12/02/2023	93.2	92.7	97.3	96.9	20.7	22.1	21.3	OL	OL	OL	17.5	24.4	21.3	OL	OL	OL	18.1	21.8	21.2	OL	OL	OL
13/02/2023	93.1	92.4	97.1	96.6	20.7	22.1	21.3	OL	OL	OL	17.6	22.8	21.2	OL	OL	OL	18.3	22.9	21.2	OL	OL	OL
14/02/2023	93.3	92.3	97.4	96.1	20.7	22.2	21.3	0.0	0.0	0.0	17.6	22.8	21.2	OL	OL	OL	17.8	23.2	21.2	OL	OL	OL
15/02/2023	93.6	93.3	96.7	94.3	0.0	29.8	21.3	15.9	79.4	21.2	16.1	30.1	21.5	OL	OL	OL	16.2	30.1	21.3	OL	OL	OL
16/02/2023	93.6	93.3	96.7	96.1	OL	OL	OL	18.6	22.6	21.2	17.4	27.0	21.4	OL	OL	OL	18.4	22.6	21.3	OL	OL	OL
17/02/2023	93.6	93.3	96.9	96.6	OL	OL	OL	18.7	23.2	21.1	17.4	26.5	21.4	OL	OL	OL	18.2	21.8	21.2	OL	OL	OL
18/02/2023	93.5	93.2	97.1	96.6	OL	OL	OL	18.8	23.5	21.1	17.4	25.5	21.4	OL	OL	OL	18.3	30.2	21.3	OL	OL	OL
19/02/2023	93.5	93.2	96.8	96.2	OL	OL	OL	18.4	29.7	21.3	17.7	25.1	21.4	OL	OL	OL	17.9	23.9	21.7	OL	OL	OL
20/02/2023	93.5	93.1	96.9	96.5	OL	OL	OL	18.3	22.1	21.4	17.6	23.9	21.4	OL	OL	OL	17.7	23.1	21.6	OL	OL	OL
21/02/2023	93.4	92.9	96.8	96.2	OL	OL	OL	18.3	22.1	21.4	16.7	23.1	21.4	OL	OL	OL	17.5	22.5	21.6	OL	OL	OL
22/02/2023	92.9	89.3	95.8	93.4	OL	OL	OL	0.0	27.0	21.4	0.0	24.7	21.3	OL	OL	OL	0.0	29.1	21.5	OL	OL	OL
23/02/2023	93.1	92.8	95.6	95.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
24/02/2023	92.9	92.6	95.6	95.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
25/02/2023	93.1	92.7	95.9	95.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
26/02/2023	92.4	88.8	95.1	91.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
27/02/2023	92.6	91.1	95.9	94.1	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
28/02/2023	92.8	92.4	96.2	94.6	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL

Notes: 1. UV Comparative Dose: 18.1 mJ/cm²
 2. OL - Off Line

Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew