



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 5, 2023

RE: MARCH 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 March 2023.

The March on-line and grab sampling turbidity reports include results obtained for the Water Treatment Plant raw water and the eight filters. The turbidity results for the filter effluent 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. As previously approved, the Branch 1 chlorine analyzer readings and grab samples were taken at the nearest location to the entry point to Branch 1 from February 22 to March 15, while the Deacon Booster Pumping Station and UV System were offline to accommodate planned upgrades at the Water Treatment Plant. On March 15, 2023, the Water Treatment Plant was offline for scheduled maintenance from 8:22 am to 2:20 pm. During this time, the Branch 1 and Branch 2 free chlorine online analyzer readings fell below 0.5mg/L; additional information is provided in CAR-03-2023. With the exception of this incident, the free chlorine results at the Water Treatment Plant met the licence requirements.

The March UV summary report includes results obtained for the six UV reactors at the Water Treatment Plant. Please note that the UV system was offline from February 22 until March 15 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)



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 April 2023

Report Period: March 2023

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/03/2023	1.41 *	1.33 *	1.32	0.89
02/03/2023	1.41 *	1.11 *	1.41	1.20
03/03/2023	1.42 *	1.28 *	1.41	1.26
04/03/2023	1.42 *	1.31 *	1.47	1.37
05/03/2023	1.47 *	1.19 *	1.56	1.12
06/03/2023	1.41 *	1.30 *	1.43	1.26
07/03/2023	1.36 *	1.31 *	1.43	1.27
08/03/2023	1.30 *	1.20 *	1.35	1.28
09/03/2023	1.35 *	1.29 *	1.34	1.27
10/03/2023	1.46 *	1.38 *	1.43	1.33
11/03/2023	1.35 *	1.25 *	1.36	1.26
12/03/2023	1.35 *	1.28 *	1.41	1.28
13/03/2023	1.39 *	1.33 *	1.43	1.36
14/03/2023	1.36 *	1.30 *	1.39	1.33
15/03/2023	1.16	0.26	1.21	0.27
16/03/2023	1.30	1.21	1.28	1.21
17/03/2023	1.34	1.27	1.32	1.24
18/03/2023	1.34	1.22	1.34	1.27
19/03/2023	1.39	1.31	1.42	1.31
20/03/2023	1.36	1.19	1.36	1.21
21/03/2023	1.28	1.05	1.31	1.10
22/03/2023	1.18	1.08	1.19	1.10
23/03/2023	1.13	1.06	1.18	1.10
24/03/2023	1.12	0.97	1.22	1.08
25/03/2023	1.11	1.04	1.19	1.11
26/03/2023	1.19	1.08	1.24	1.13
27/03/2023	1.16	1.07	1.21	1.12
28/03/2023	1.19	1.11	1.25	1.17
29/03/2023	1.26	1.11	1.34	1.19
30/03/2023	1.33	1.23	1.44	1.35
31/03/2023	1.26	1.10	1.41	1.33

Total Number of Measurements, A:	21571	21573
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	21529	21553
COMPLIANCE, C = B/A X 100%:	99.81	99.91

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2023\03-March

* 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 Licence No. PWS-09-412-02	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-2023	1.45	1.44	1.76	1.39	1.44	1.65
02-Mar-2023	1.48	1.53	1.94	1.69	1.62	1.90
03-Mar-2023	1.36	1.39	1.70	1.35	1.41	1.71
04-Mar-2023	ns	ns	ns	ns	ns	ns
05-Mar-2023	ns	ns	ns	ns	ns	ns
06-Mar-2023	1.52	1.58	1.88	1.45	1.55	1.85
07-Mar-2023	1.38	1.45	1.78	1.42	1.41	1.73
08-Mar-2023	1.34	1.39	1.72	1.33	1.38	1.69
09-Mar-2023	1.33	1.40	1.71	1.31	1.41	1.69
10-Mar-2023	1.49	1.59	1.83	1.40	1.50	1.77
11-Mar-2023	ns	ns	ns	ns	ns	ns
12-Mar-2023	ns	ns	ns	ns	ns	ns
13-Mar-2023	1.41	1.47	1.75	1.40	1.49	1.75
14-Mar-2023	1.32	1.36	1.67	1.38	1.37	1.71
15-Mar-2023	1.37	1.43	1.75	1.45	1.54	1.85
16-Mar-2023	1.34	1.41	1.65	1.29	1.37	1.65
17-Mar-2023	1.29	1.38	1.68	1.25	1.34	1.65
18-Mar-2023	ns	ns	ns	ns	ns	ns
19-Mar-2023	ns	ns	ns	ns	ns	ns
20-Mar-2023	1.45	1.40	1.72	1.37	1.45	1.70
21-Mar-2023	1.35	1.42	1.71	1.36	1.45	1.75
22-Mar-2023	1.19	1.20	1.49	1.18	1.28	1.56
23-Mar-2023	1.10	1.16	1.41	1.18	1.23	1.47
24-Mar-2023	1.00	1.24	1.51	1.11	1.29	1.54
25-Mar-2023	ns	ns	ns	ns	ns	ns
26-Mar-2023	ns	ns	ns	ns	ns	ns
27-Mar-2023	1.12	1.25	1.59	1.17	1.32	1.59
28-Mar-2023	1.16	1.20	1.47	1.21	1.25	1.54
29-Mar-2023	1.26	1.30	1.54	1.37	1.43	1.74
30-Mar-2023	1.39	1.38	1.69	1.45	1.48	1.86
31-Mar-2023	1.27	1.33	1.62	1.42	1.49	1.75
Total number of measurements taken, A:			23			23
Chlorine Standard for Monitoring Location (mg/L):			0.50			0.50
Number of measurements meeting standard, B:			23			23
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:

* February 22 - March 15, 2023, Branch 1 chlorine analyzer readings and grab samples were taken at the nearest location to the entry point to Branch 1, while Deacon Booster Pumping Station and the UV System were offline to accomodate planned upgrades at the WTP

Report Date: 3-Apr-2023



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

March 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
1/03/2023	0.39	0.10	0.17	0.12	0.17	0.10	0.19	0.07	0.16	0.08	0.11	0.03	0.09	0.08	0.12	0.05	0.07
2/03/2023	0.40	0.08	0.17	0.11	0.19	0.11	0.19	0.10	0.13	0.10	0.14	0.03	0.08	0.05	0.08	0.05	0.13
3/03/2023	0.40	0.07	0.09	0.10	0.21	0.10	0.20	0.11	0.19	0.08	0.13	0.04	0.07	0.03	0.10	0.05	0.12
4/03/2023	0.40	0.09	0.17	0.10	0.21	0.11	0.14	0.11	0.20	0.09	0.15	0.04	0.09	0.04	0.08	0.05	0.12
5/03/2023	0.40	0.09	0.17	0.11	0.15	0.13	0.21	0.11	0.22	0.08	0.14	0.03	0.10	0.04	0.11	0.04	0.06
6/03/2023	0.40	0.08	0.17	0.11	0.21	0.12	0.21	0.11	0.15	0.09	0.13	0.03	0.09	0.03	0.07	0.04	0.11
7/03/2023	0.40	0.05	0.09	0.09	0.17	0.10	0.17	0.11	0.20	0.08	0.15	0.03	0.06	0.02	0.09	0.04	0.10
8/03/2023	0.40	0.07	0.13	0.08	0.18	0.09	0.11	0.09	0.17	0.08	0.17	0.03	0.08	0.03	0.05	0.04	0.10
9/03/2023	0.40	0.06	0.14	0.09	0.13	0.11	0.19	0.09	0.18	0.07	0.14	0.03	0.09	0.03	0.10	0.04	0.05
10/03/2023	0.40	0.07	0.16	0.09	0.18	0.10	0.20	0.11	0.15	0.07	0.11	0.02	0.08	0.03	0.07	0.04	0.11
11/03/2023	0.40	0.06	0.09	0.09	0.18	0.11	0.20	0.10	0.19	0.09	0.15	0.03	0.05	0.03	0.11	0.04	0.11
12/03/2023	0.39	0.08	0.16	0.09	0.19	0.10	0.14	0.10	0.20	0.08	0.15	0.03	0.09	0.03	0.06	0.04	0.11
13/03/2023	0.39	0.07	0.16	0.10	0.14	0.12	0.21	0.10	0.20	0.08	0.15	0.03	0.15	0.03	0.10	0.04	0.12
14/03/2023	0.39	0.07	0.14	0.09	0.18	0.12	0.22	0.12	0.16	0.07	0.12	0.03	0.08	0.03	0.11	0.05	0.12
15/03/2023	0.42	0.03	0.11	0.04	0.10	0.05	0.15	0.06	0.20	0.05	0.13	0.01	0.08	0.01	0.03	0.02	0.07
16/03/2023	0.39	0.02	0.08	0.05	0.06	0.07	0.11	0.06	0.12	0.05	0.08	0.00	0.04	0.01	0.04	0.01	0.05
17/03/2023	0.38	0.02	0.07	0.05	0.10	0.06	0.13	0.06	0.09	0.05	0.10	0.00	0.04	0.01	0.03	0.01	0.03
18/03/2023	0.38	0.02	0.06	0.05	0.10	0.06	0.12	0.06	0.12	0.06	0.09	0.00	0.01	0.01	0.03	0.01	0.05
19/03/2023	0.38	0.02	0.05	0.04	0.09	0.06	0.18	0.05	0.10	0.05	0.09	0.00	0.03	0.01	0.01	0.01	0.05
20/03/2023	0.37	0.02	0.12	0.05	0.06	0.06	0.11	0.05	0.09	0.05	0.08	0.00	0.03	0.01	0.03	0.01	0.02
21/03/2023	0.37	0.02	0.08	0.05	0.12	0.07	0.16	0.07	0.09	0.05	0.08	0.00	0.03	0.01	0.03	0.02	0.05
22/03/2023	0.37	0.02	0.04	0.05	0.12	0.07	0.14	0.07	0.12	0.07	0.09	0.00	0.02	0.01	0.04	0.01	0.05
23/03/2023	0.37	0.03	0.08	0.05	0.13	0.06	0.09	0.06	0.12	0.06	0.11	0.01	0.03	0.01	0.02	0.02	0.05
24/03/2023	0.37	0.02	0.06	0.05	0.07	0.07	0.11	0.05	0.12	0.06	0.10	0.00	0.03	0.01	0.03	0.01	0.02
25/03/2023	0.36	0.02	0.09	0.06	0.12	0.07	0.14	0.08	0.10	0.06	0.08	0.00	0.03	0.01	0.04	0.02	0.05
26/03/2023	0.36	0.03	0.06	0.05	0.13	0.07	0.15	0.07	0.13	0.06	0.10	0.01	0.02	0.01	0.01	0.02	0.05
27/03/2023	0.35	0.04	0.09	0.06	0.08	0.09	0.11	0.07	0.15	0.05	0.11	0.01	0.03	0.01	0.04	0.01	0.06
28/03/2023	0.35	0.03	0.10	0.06	0.14	0.07	0.15	0.07	0.10	0.05	0.08	0.01	0.03	0.01	0.04	0.02	0.04
29/03/2023	0.35	0.01	0.07	0.04	0.09	0.06	0.11	0.06	0.11	0.06	0.08	0.00	0.01	0.01	0.04	0.02	0.05
30/03/2023	0.34	0.02	0.07	0.04	0.10	0.06	0.12	0.06	0.11	0.05	0.08	0.01	0.03	0.01	0.01	0.02	0.05
31/03/2023	0.34	0.03	0.06	0.06	0.07	0.08	0.12	0.05	0.12	0.06	0.10	0.01	0.03	0.01	0.04	0.01	0.03

Total Number of Measurements Taken, A:	13031	13518	13280	13931	15191	13858	14616	16827
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:	13031	13518	13280	13931	15191	13858	14616	16827
Compliance with Turbidity Standard, C = B/A X 100%:	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%	100.000%

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2023\03-March

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-Mar-2023	0.50	0.37	0.16	0.10	0.18	0.12	0.21	0.12	0.14	0.07	0.11	0.09	0.11	0.03	0.21	0.12	0.14	0.05
02-Mar-2023	0.46	0.37	0.18	0.11	0.29	0.20	0.26	0.16	0.18	0.09	0.14	0.12	0.13	0.04	0.14	0.06	0.17	0.07
03-Mar-2023	0.51	0.41	0.19	0.09	0.19	0.12	0.19	0.11	0.19	0.12	0.16	0.12	0.13	0.04	0.11	0.02	0.14	0.04
04-Mar-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
05-Mar-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
06-Mar-2023	0.48	0.38	0.18	0.08	0.25	0.15	0.26	0.18	0.19	0.12	0.13	0.11	0.12	0.04	0.12	0.02	0.15	0.05
07-Mar-2023	0.50	0.40	0.16	0.06	0.15	0.08	0.17	0.09	0.16	0.09	0.13	0.11	0.12	0.03	0.11	<0.02	0.15	0.05
08-Mar-2023	0.48	0.39	0.19	0.09	0.17	0.09	0.18	0.11	0.15	0.09	0.10	0.08	0.14	0.09	0.12	0.02	0.12	0.03
09-Mar-2023	0.49	0.39	0.19	0.09	0.19	0.10	0.20	0.12	0.15	0.10	0.12	0.08	0.12	0.03	0.14	0.04	0.13	0.03
10-Mar-2023	0.48	0.39	0.16	0.06	0.23	0.13	0.22	0.14	0.18	0.12	0.12	0.09	0.12	0.03	0.11	<0.02	0.14	0.04
11-Mar-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
12-Mar-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
13-Mar-2023	0.47	0.38	0.20	0.10	0.21	0.11	0.23	0.14	0.17	0.12	0.11	0.08	0.11	0.03	0.15	0.05	0.13	0.03
14-Mar-2023	0.47	0.39	0.18	0.08	0.24	0.14	0.24	0.15	0.21	0.14	0.14	0.10	0.12	0.04	0.11	<0.02	0.14	0.04
15-Mar-2023	0.47	0.37	0.18	0.08	0.17	0.09	0.18	0.11	0.21	0.15	0.13	0.10	0.12	0.03	0.11	<0.02	0.10	0.03
16-Mar-2023	0.47	0.37	0.14	0.05	0.12	0.05	0.12	0.07	0.09	0.06	0.08	0.05	0.12	0.02	0.09	<0.02	0.08	<0.02
17-Mar-2023	0.47	0.38	0.11	0.02	0.13	0.07	0.16	0.09	0.10	0.06	0.08	0.06	0.10	<0.02	0.10	<0.02	0.10	<0.02
18-Mar-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
19-Mar-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
20-Mar-2023	0.49	0.35	0.12	0.03	0.11	0.05	0.13	0.07	0.10	0.06	0.08	0.06	0.08	<0.02	0.10	<0.02	0.09	<0.02
21-Mar-2023	0.51	0.35	0.12	0.03	0.16	0.08	0.16	0.09	0.13	0.07	0.08	0.06	0.09	<0.02	0.09	<0.02	0.10	<0.02
22-Mar-2023	0.48	0.36	0.12	0.03	0.12	0.06	0.13	0.07	0.12	0.09	0.09	0.06	0.09	<0.02	0.09	<0.02	0.11	0.02
23-Mar-2023	0.46	0.36	0.14	0.04	0.13	0.06	0.14	0.08	0.12	0.07	0.09	0.08	0.10	0.02	0.09	<0.02	0.09	<0.02
24-Mar-2023	0.45	0.35	0.16	0.07	0.12	0.06	0.13	0.07	0.11	0.07	0.08	0.06	0.08	<0.02	0.10	<0.02	0.09	<0.02
25-Mar-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
26-Mar-2023	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
27-Mar-2023	0.45	0.33	0.16	0.06	0.14	0.07	0.15	0.09	0.12	0.07	0.09	0.07	0.10	0.02	0.10	<0.02	0.10	<0.02
28-Mar-2023	0.45	0.34	0.13	0.03	0.16	0.08	0.20	0.13	0.12	0.07	0.08	0.07	0.08	<0.02	0.12	0.02	0.09	<0.02
29-Mar-2023	0.44	0.34	0.10	<0.02	0.15	0.08	0.11	0.06	0.11	0.07	0.09	0.07	0.09	<0.02	0.09	<0.02	0.12	0.03
30-Mar-2023	0.43	0.33	0.11	0.02	0.11	0.05	0.12	0.07	0.10	0.05	0.11	0.08	0.09	0.02	0.09	<0.02	0.08	<0.02
31-Mar-2023	0.42	0.33	0.15	0.08	0.12	0.06	0.14	0.08	0.11	0.07	0.08	0.08	0.08	<0.02	0.10	<0.02	0.10	<0.02
Total number of measurements taken, A:			23		23		23		23		23		23		23		23	
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:			23		23		23		23		23		23		23		23	
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:

Report Date: 3-Apr-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: **March 2023**

Report Created: **Saturday, April 01, 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.
01/03/2023	93.0	92.5	96.1	95.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
02/03/2023	90.0	0.0	95.6	95.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
03/03/2023	93.2	92.5	94.8	75.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
04/03/2023	93.0	92.5	93.6	93.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
05/03/2023	93.3	92.5	94.0	93.4	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
06/03/2023	93.1	92.2	93.4	92.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
07/03/2023	93.8	92.9	93.8	93.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
08/03/2023	93.7	92.7	93.6	69.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
09/03/2023	93.1	92.6	93.5	93.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
10/03/2023	93.4	92.4	94.2	93.5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
11/03/2023	93.6	93.0	94.5	94.2	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
12/03/2023	93.5	93.0	94.3	93.8	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
13/03/2023	93.5	93.0	93.9	93.3	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
14/03/2023	93.6	92.9	94.3	93.9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
15/03/2023	93.4	86.8	94.2	91.6	0.0	63.0	21.4	OL	OL	OL	11.5	56.0	21.6	0.0	90.1	40.9	0.0	48.7	22.5	17.1	84.6	21.6
16/03/2023	92.9	92.4	93.8	93.2	20.8	24.5	21.3	OL	OL	OL	16.7	21.9	21.1	OL	OL	OL	OL	OL	OL	16.7	21.8	21.1
17/03/2023	92.8	92.2	93.2	92.8	20.9	23.6	21.3	OL	OL	OL	17.3	21.9	21.2	OL	OL	OL	OL	OL	OL	16.5	21.8	21.1
18/03/2023	92.7	92.1	93.4	92.8	20.9	22.8	21.3	OL	OL	OL	17.0	23.3	21.2	OL	OL	OL	OL	OL	OL	16.4	21.8	21.1
19/03/2023	92.5	92.0	93.7	93.3	20.8	21.7	21.3	OL	OL	OL	17.1	22.0	21.2	OL	OL	OL	OL	OL	OL	16.5	21.8	21.1
20/03/2023	92.5	92.0	93.5	92.9	0.0	29.9	21.3	17.3	68.7	21.4	16.2	28.3	21.2	15.8	104.5	21.2	0.0	49.8	20.8	0.0	43.6	21.1
21/03/2023	92.5	91.7	94.0	93.3	16.4	41.4	21.7	18.1	26.7	21.5	15.8	48.7	21.2	0.0	36.2	21.1	OL	OL	OL	0.0	0.0	0.0
22/03/2023	92.4	91.8	95.2	94.4	15.6	22.6	21.4	18.3	22.1	21.5	15.8	28.6	21.2	OL	OL	OL	OL	OL	OL	OL	OL	OL
23/03/2023	92.3	91.6	95.1	94.3	16.1	23.5	21.6	18.4	22.0	21.4	17.4	21.8	21.1	OL	OL	OL	OL	OL	OL	OL	OL	OL
24/03/2023	92.7	91.8	96.3	95.5	16.3	26.4	21.7	18.1	22.0	21.4	17.1	22.3	21.1	OL	OL	OL	OL	OL	OL	OL	OL	OL
25/03/2023	92.3	91.5	96.1	95.2	16.2	26.0	21.8	18.2	21.9	21.4	17.1	22.7	21.1	OL	OL	OL	OL	OL	OL	OL	OL	OL
26/03/2023	92.2	91.5	95.7	94.9	16.1	24.9	21.7	18.3	21.9	21.4	17.1	21.7	21.1	OL	OL	OL	OL	OL	OL	OL	OL	OL
27/03/2023	92.1	91.4	94.6	93.5	16.1	23.6	21.7	18.2	21.9	21.4	17.0	23.0	21.1	OL	OL	OL	OL	OL	OL	OL	OL	OL
28/03/2023	92.3	91.4	94.4	93.8	16.2	23.1	21.7	18.2	21.9	21.4	17.4	23.0	21.1	OL	OL	OL	OL	OL	OL	OL	OL	OL
29/03/2023	92.7	92.0	95.4	94.5	0.0	33.3	21.7	18.0	22.3	21.5	17.2	22.7	21.2	OL	OL	OL	OL	OL	OL	17.0	84.6	21.4
30/03/2023	92.6	92.0	96.3	95.5	OL	OL	OL	18.1	22.1	21.5	17.3	22.0	21.2	OL	OL	OL	OL	OL	OL	17.0	24.3	21.2
31/03/2023	92.4	91.7	96.7	96.2	OL	OL	OL	18.1	22.0	21.5	16.6	22.4	21.2	OL	OL	OL	OL	OL	OL	16.7	22.9	21.2

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

Submitted By (Print): D.Morredew

Signature: Original signed by D.Morredew