



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

October 7, 2020

RE: SEPTEMBER 2020 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 2020.

The September on-line and grab sampling turbidity reports include results obtained for the Water Treatment Plant raw water and the eight filters. The daily maximum turbidities were greater than 0.30 NTU on several occasions; the elevated turbidities occurred for less than 12 consecutive hours. On September 25, Filter 4 exceeded 1.00 NTU, and on September 30, Filter 5 exceeded 1.00 NTU; additional information for these events is provided separately in Corrective Action Reports. With the exception of these two events, 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. On September 21, the free chlorine fell below 0.5 mg/L on Branches 1 and 2; additional information for this event is provided separately in a Corrective Action Report. With the exception of this event, 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
(Signed original available upon request)*

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)
B. Bradford (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 2020 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
1/09/2020	2.76	0.05	0.10	0.04	0.11	0.07	0.15	0.12	0.21	0.10	0.17	0.08	0.17	0.08	0.10	0.06	0.13
2/09/2020	2.59	0.03	0.11	0.03	0.10	0.08	0.14	0.08	0.15	0.12	0.15	0.08	0.17	0.07	0.13	0.08	0.12
3/09/2020	2.80	0.02	0.08	0.01	0.06	0.05	0.11	0.06	0.10	0.11	0.20	0.08	0.14	0.07	0.13	0.07	0.14
4/09/2020	2.77	0.02	0.07	0.04	0.10	0.06	0.09	0.05	0.08	0.12	0.19	0.08	0.10	0.06	0.13	0.06	0.13
5/09/2020	3.64	0.02	0.08	0.04	0.08	0.05	0.12	0.06	0.09	0.13	0.18	0.08	0.15	0.08	0.11	0.06	0.10
6/09/2020	3.98	0.02	0.09	0.04	0.10	0.05	0.11	0.05	0.13	0.15	0.17	0.06	0.14	0.06	0.11	0.06	0.12
7/09/2020	2.38	0.03	0.07	0.04	0.07	0.05	0.08	0.04	0.11	0.14	0.24	0.06	0.12	0.06	0.12	0.05	0.12
8/09/2020	2.26	0.02	0.09	0.04	0.12	0.05	0.11	0.04	0.07	0.16	0.20	0.07	0.09	0.05	0.11	0.05	0.11
9/09/2020	2.17	0.02	0.07	0.04	0.08	0.04	0.09	0.04	0.10	0.16	0.22	0.06	0.12	0.06	0.08	0.05	0.07
10/09/2020	2.20	0.02	0.04	0.03	0.08	0.04	0.11	0.04	0.10	0.17	0.21	0.06	0.11	0.05	0.10	0.05	0.14
11/09/2020	2.31	0.03	0.08	0.04	0.05	0.04	0.05	0.04	0.13	0.13	0.24	0.06	0.13	0.05	0.10	0.05	0.11
12/09/2020	2.09	0.02	0.07	0.03	0.08	0.05	0.09	0.04	0.07	0.08	0.14	0.07	0.09	0.05	0.11	0.05	0.09
13/09/2020	2.16	0.02	0.07	0.03	0.09	0.04	0.10	0.04	0.09	0.09	0.13	0.07	0.13	0.06	0.08	0.05	0.06
14/09/2020	2.14	0.03	0.05	0.03	0.08	0.04	0.10	0.04	0.12	0.09	0.12	0.06	0.12	0.06	0.10	0.06	0.09
15/09/2020	2.19	0.06	0.73	0.05	0.58	0.05	0.59	0.06	0.55	0.14	0.82	0.08	0.24	0.07	0.34	0.07	0.29
16/09/2020	2.26	0.08	0.13	0.04	0.10	0.06	0.09	0.06	0.12	0.15	0.21	0.07	0.13	0.07	0.12	0.06	0.14
17/09/2020	2.38	0.07	0.12	0.03	0.11	0.05	0.10	0.07	0.09	0.15	0.22	0.09	0.15	0.06	0.09	0.07	0.12
18/09/2020	2.43	0.07	0.13	0.03	0.06	0.05	0.10	0.06	0.12	0.09	0.18	0.07	0.16	0.07	0.14	0.07	0.09
19/09/2020	2.66	0.08	0.10	0.03	0.08	0.04	0.10	0.06	0.12	0.05	0.07	0.06	0.13	0.06	0.11	0.07	0.13
20/09/2020	3.09	0.07	0.11	0.02	0.04	0.04	0.06	0.03	0.46	0.05	0.10	0.05	0.11	0.05	0.10	0.06	0.13
21/09/2020	2.64	0.07	0.15	0.04	0.09	0.05	0.08	0.00	0.00	0.06	0.10	0.07	0.13	0.07	0.13	0.08	0.14
22/09/2020	1.69	0.07	0.15	0.04	0.09	0.05	0.10	0.02	0.15	0.06	0.12	0.06	0.09	0.06	0.15	0.08	0.14
23/09/2020	1.68	0.06	0.19	0.05	0.13	0.05	0.19	0.08	0.17	0.04	0.18	0.09	0.38	0.07	0.34	0.07	0.36
24/09/2020	1.63	0.08	0.14	0.05	0.16	0.06	0.16	0.07	0.20	0.07	0.15	0.07	0.21	0.08	0.20	0.09	0.15
25/09/2020	1.55	0.09	0.17	0.04	0.13	0.05	0.15	0.07	1.21	0.05	0.09	0.06	0.15	0.05	0.15	0.08	0.17
26/09/2020	1.54	0.06	0.19	0.04	0.07	0.06	0.11	0.06	0.15	0.06	0.13	0.06	0.16	0.06	0.15	0.06	0.17
27/09/2020	1.60	0.08	0.18	0.06	0.13	0.06	0.15	0.06	0.10	0.04	0.16	0.07	0.10	0.05	0.16	0.06	0.16
28/09/2020	1.55	0.07	0.26	0.04	0.16	0.05	0.16	0.07	0.20	0.05	0.14	0.07	0.15	0.06	0.10	0.06	0.10
29/09/2020	1.46	0.10	0.18	0.05	0.12	0.06	0.11	0.01	0.07	0.07	0.13	0.06	0.16	0.07	0.14	0.09	0.15
30/09/2020	1.47	0.10	0.13	0.05	0.10	0.06	0.10	O/L	O/L	0.07	1.17	0.06	0.15	0.06	0.19	0.08	0.13

Total Number of Measurements Taken, A:	12714	13444	13449	12130	15028	15110	14784	15834
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:	12704	13436	13441	12119	15006	15094	14758	15820
Compliance with Turbidity Standard, C = B/A X 100%:	99.921%	99.940%	99.941%	99.909%	99.854%	99.894%	99.824%	99.912%

O/L = Offline

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2020\09-September

Submitted By (Print): D.Minor

Signature: Original signed D.Minor

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

Water System Code: 252.00		Turbidity (NTU)																	
Licence No. PWS-09-412-01		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-Sep-2020	2.00	2.77	0.16	0.08	0.17	0.10	0.15	0.10	0.13	0.14	0.10	0.12	0.12	0.10	0.10	0.07	0.10	0.06	
02-Sep-2020	2.07	NR*	0.12	0.04	0.11	0.03	0.16	0.11	0.15	0.10	0.11	0.13	0.17	0.14	0.11	0.08	0.11	0.07	
03-Sep-2020	2.09	2.08	0.10	0.03	0.10	<0.02	0.09	0.06	0.13	0.06	0.13	0.16	0.11	0.09	OL	OL	0.15	0.10	
04-Sep-2020	1.74	2.73	0.16	0.04	0.11	0.05	0.10	0.06	0.11	0.06	OL	OL	0.10	0.09	0.12	0.06	0.09	0.05	
05-Sep-2020	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
06-Sep-2020	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
07-Sep-2020	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
08-Sep-2020	2.03	2.28	0.11	0.04	0.11	0.06	0.10	0.06	0.15	0.05	0.10	0.19	0.10	0.08	0.09	0.05	0.09	0.04	
09-Sep-2020	1.70	2.10	0.10	0.02	0.09	0.05	0.10	0.06	0.12	0.05	0.10	0.20	0.11	0.08	0.09	0.05	0.08	0.04	
10-Sep-2020	1.94	2.12	0.09	0.03	0.10	0.04	0.09	0.04	0.11	0.06	0.07	0.20	0.08	0.07	0.10	0.06	0.09	0.09	
11-Sep-2020	1.81	2.16	0.12	0.04	0.10	0.04	0.09	0.05	0.09	0.04	0.08	0.11	0.09	0.07	0.08	0.05	OL	OL	
12-Sep-2020	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
13-Sep-2020	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
14-Sep-2020	1.62	2.30	0.09	0.03	0.08	0.04	0.09	0.05	0.10	0.06	0.08	0.11	0.09	0.07	0.09	0.06	0.09	0.05	
15-Sep-2020	1.65	2.31	0.11	0.05	0.10	0.05	0.09	0.06	0.09	0.05	0.09	0.12	0.09	0.08	0.10	0.07	0.11	0.07	
16-Sep-2020	1.72	2.16	0.14	0.13	0.10	0.06	0.10	0.06	0.09	0.07	0.10	0.18	0.10	0.09	0.11	0.07	0.12	0.08	
17-Sep-2020	1.40	2.31	0.09	0.09	0.11	0.07	0.11	0.07	0.10	0.07	0.08	0.17	0.11	0.10	0.10	0.07	0.09	0.06	
18-Sep-2020	1.55	2.34	0.11	0.08	0.11	0.04	OL	OL	0.11	0.08	0.09	0.18	0.13	0.12	0.10	0.07	0.10	0.07	
19-Sep-2020	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
20-Sep-2020	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
21-Sep-2020	1.38	3.95	0.11	0.10	0.10	0.05	0.10	0.07	OL	OL	0.11	0.07	0.12	0.08	0.11	0.06	0.11	0.08	
22-Sep-2020	1.31	1.67	0.12	0.11	0.10	0.05	0.10	0.06	0.15	0.11	0.13	0.09	0.12	0.07	0.11	0.06	0.10	0.07	
23-Sep-2020	1.28	1.57	0.11	0.10	0.12	0.07	0.19	0.16	0.11	0.08	0.14	0.11	0.14	0.10	0.14	0.07	0.12	0.08	
24-Sep-2020	1.20	1.74	0.11	0.12	OL	OL	0.10	0.08	0.14	0.12	0.13	0.10	OL	OL	0.14	0.10	0.13	0.10	
25-Sep-2020	1.36	1.49	0.11	0.10	0.14	0.04	0.10	0.07	OL	OL	0.11	0.07	OL	OL	0.18	0.11	0.14	0.09	
26-Sep-2020	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
27-Sep-2020	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
28-Sep-2020	1.54	1.50	0.11	0.11	0.11	0.06	0.12	0.09	0.14	0.10	0.12	0.07	0.13	0.09	0.11	0.07	0.11	0.08	
29-Sep-2020	1.22	1.44	0.11	0.11	0.11	0.07	0.11	0.07	OL	OL	0.13	0.08	0.18	0.11	0.14	0.07	0.15	0.08	
30-Sep-2020	1.51	1.43	0.10	0.11	0.09	0.06	0.09	0.07	OL	OL	0.09	0.09	0.11	0.08	0.11	0.07	0.10	0.08	
Total number of measurements taken, A:			21		20		20		17		20		19		20		20		
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:			21		20		20		17		20		19		20		20		
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 NR: No Result IM: Instrument Maintenance

Comments:

NR* - not representative. The raw water analyser is cleaned daily during warm water months because it is susceptible to frequent fouling.

Report Compiled By: H. Demchenko
Authorized By: B. Bradford
Date Authorized: 7-Oct-20



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 2020

Report Period: September 2020

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/09/2020	1.49	1.30	1.58	1.47
02/09/2020	1.45	1.24	1.55	1.44
03/09/2020	1.47	1.25	1.53	1.38
04/09/2020	1.49	1.21	1.60	1.47
05/09/2020	1.49	1.19	1.57	1.49
06/09/2020	1.45	1.23	1.47	1.32
07/09/2020	1.30	1.03	1.32	1.21
08/09/2020	1.49	1.21	1.40	1.28
09/09/2020	1.60	1.21	1.53	1.42
10/09/2020	1.71	1.58	1.73	1.64
11/09/2020	1.66	1.55	1.73	1.60
12/09/2020	1.59	1.47	1.62	1.50
13/09/2020	1.47	1.36	1.51	1.42
14/09/2020	1.46	1.34	1.50	1.39
15/09/2020	1.50	1.17	1.67	1.16
16/09/2020	1.66	1.39	1.80	1.55
17/09/2020	1.74	1.64	1.83	1.73
18/09/2020	1.68	1.54	1.77	1.58
19/09/2020	1.79	1.70	1.91	1.80
20/09/2020	1.80	1.67	1.93	1.73
21/09/2020	1.09	0.38	1.20	0.49
22/09/2020	O/L	O/L	1.43	0.66
23/09/2020	O/L	O/L	1.21	0.55
24/09/2020	O/L	O/L	1.38	1.27
25/09/2020	O/L	O/L	1.28	1.15
26/09/2020	O/L	O/L	1.24	1.18
27/09/2020	O/L	O/L	1.20	1.13
28/09/2020	O/L	O/L	1.30	1.13
29/09/2020	O/L	O/L	1.40	1.32
30/09/2020	1.34	1.31	1.46	1.39

O/L = Offline

Total Number of Measurements, A:	14940	20859
Minimum Free Chlorine Standard:	0.5	0.5
Number of Measurements Meeting Standard, B:	14787	20835
COMPLIANCE, C = B/A X 100%:	98.98	99.88

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2020\09-September

Submitted By (Print): D.Minor

Signature: Original signed by D.Minor



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)
	Analysed	Grab	Grab	Analysed	Grab	Grab
01-Sep-2020	1.37	1.35	1.60	1.55	1.50	1.70
02-Sep-2020	1.35	1.40	1.57	1.53	1.50	1.72
03-Sep-2020	1.43	1.45	1.62	1.47	1.40	1.69
04-Sep-2020	1.63	1.60	1.81	1.76	1.67	1.84
05-Sep-2020	ns	ns	ns	ns	ns	ns
06-Sep-2020	ns	ns	ns	ns	ns	ns
07-Sep-2020	ns	ns	ns	ns	ns	ns
08-Sep-2020	1.41	1.40	1.57	1.33	1.42	1.59
09-Sep-2020	1.72	1.54	1.72	1.52	1.62	1.80
10-Sep-2020	1.72	1.73	1.97	1.79	1.83	2.00
11-Sep-2020	1.70	1.64	1.93	1.81	1.74	1.98
12-Sep-2020	ns	ns	ns	ns	ns	ns
13-Sep-2020	ns	ns	ns	ns	ns	ns
14-Sep-2020	1.48	1.53	1.76	1.47	1.53	1.76
15-Sep-2020	1.44	1.48	1.72	1.45	1.53	1.75
16-Sep-2020	1.73	1.70	1.92	1.89	1.85	2.12
17-Sep-2020	1.78	1.77	1.97	1.89	1.88	2.16
18-Sep-2020	1.59	1.63	1.84	1.64	1.73	2.00
19-Sep-2020	ns	ns	ns	ns	ns	ns
20-Sep-2020	ns	ns	ns	ns	ns	ns
21-Sep-2020	1.50	1.50	1.70	1.58	1.55	1.73
22-Sep-2020	ns	ns	ns	1.58	1.63	1.88
23-Sep-2020	ns	ns	ns	1.34	1.37	1.55
24-Sep-2020	ns	ns	ns	1.35	1.33	1.61
25-Sep-2020	ns	ns	ns	1.22	1.31	1.48
26-Sep-2020	ns	ns	ns	ns	ns	ns
27-Sep-2020	ns	ns	ns	ns	ns	ns
28-Sep-2020	ns	ns	ns	1.37	1.32	1.55
29-Sep-2020	ns	ns	ns	1.42	1.39	1.58
30-Sep-2020	1.33	1.33	1.59	1.47	1.46	1.68
Total number of measurements taken, A:		15			21	
Chlorine Standard for Monitoring Location (mg/L):		0.50			0.50	
Number of measurements meeting standard, B:		15			21	
Compliance with Chlorine Standard, C= B/A X 100%:		100%			100%	

NS: No Sample NA: Not Analyzed OL: Off-Line NR: No Result IM: Instrument Maintenance

Comments:

Branch I was offline for maintenance from September 22 to 30, 2020.

Report Compiled By: H. Demchenko

Authorized By: B. Bradford

Date Authorized: 7-Oct-20



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: **September 2020**

Report Created: **Thursday, October 01, 2020**

Date	Transmittance %	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	
01/09/2020	96.66	0.00	0.29	60.80	61.09	0.00	0.00	0.00	0.00	0.00	0.24	68.57	68.80	0.00	0.00	0.00	0.00	0.00	0.00	67.43	67.43	0.00	0.00	0.00	0.00	0.00	0.53	196.79	197.32	99.73
02/09/2020	96.78	0.00	0.29	60.00	60.29	0.00	0.00	0.00	0.00	0.00	0.09	67.88	67.97	0.00	0.00	0.00	0.00	0.00	0.00	40.52	40.52	0.00	0.05	26.21	26.26	0.00	0.44	194.61	195.05	99.78
03/09/2020	97.11	0.00	0.25	59.49	59.74	0.00	0.00	0.00	0.00	0.00	0.37	66.09	66.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.83	64.83	0.00	0.61	190.41	191.03	99.68
04/09/2020	97.42	0.00	0.37	59.22	59.59	0.00	0.00	0.00	0.00	0.00	0.51	65.64	66.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.28	64.28	0.00	0.88	189.14	190.02	99.54
05/09/2020	97.35	0.00	0.33	57.98	58.31	0.00	0.00	0.00	0.00	0.00	0.28	64.16	64.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.99	62.99	0.00	0.60	185.14	185.74	99.68
06/09/2020	97.49	0.00	0.40	57.77	58.16	0.00	0.00	0.00	0.00	0.00	0.36	64.25	64.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.08	63.08	0.00	0.75	185.10	185.85	99.59
07/09/2020	97.53	0.00	0.45	58.72	59.17	0.00	0.00	0.00	0.00	0.00	0.41	65.39	65.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.03	64.03	0.00	0.87	188.14	189.01	99.54
08/09/2020	96.19	0.00	0.29	59.00	59.29	0.00	0.00	0.00	0.00	0.00	0.74	64.98	65.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64.01	64.01	0.00	1.03	187.98	189.01	99.46
09/09/2020	95.00	0.00	0.33	58.85	59.18	0.00	0.00	0.00	0.00	0.00	0.37	65.20	65.56	0.00	0.00	0.00	0.00	0.00	0.00	25.51	25.51	0.00	0.00	38.73	38.73	0.00	0.70	188.29	188.98	99.63
10/09/2020	95.26	0.00	0.45	58.52	58.97	0.00	0.00	0.00	0.00	0.00	0.27	34.85	35.12	0.00	0.00	29.16	29.16	0.00	0.00	62.10	62.10	0.00	0.00	0.00	0.00	0.00	0.72	184.63	185.35	99.61
11/09/2020	95.17	0.00	0.29	59.02	59.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.72	62.72	0.00	0.00	59.98	59.98	0.00	0.00	0.00	0.00	0.00	0.29	181.72	182.01	99.84
12/09/2020	95.23	0.00	0.37	59.26	59.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.04	62.04	0.00	0.00	60.35	60.35	0.00	0.00	0.00	0.00	0.00	0.37	181.66	182.03	99.80
13/09/2020	95.29	0.00	0.39	62.55	62.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.35	66.35	0.00	0.00	62.74	62.74	0.00	0.00	0.00	0.00	0.00	0.39	191.64	192.04	99.80
14/09/2020	95.12	0.00	0.90	63.84	64.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68.35	68.35	0.00	0.00	63.87	63.87	0.00	0.00	0.00	0.00	0.00	0.90	196.06	196.96	99.54
15/09/2020	94.83	0.00	1.50	67.59	69.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	60.21	60.24	0.00	0.00	63.08	63.08	0.00	0.00	0.00	0.00	0.00	1.53	190.87	192.41	99.20
16/09/2020	94.81	0.00	1.23	79.26	80.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.50	56.50	0.00	0.05	65.03	65.07	0.00	0.00	0.00	0.00	0.00	1.28	200.79	202.07	99.37
17/09/2020	94.96	0.00	1.40	79.00	80.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.11	56.11	0.00	0.05	64.44	64.48	0.00	0.00	0.00	0.00	0.00	1.45	199.54	200.99	99.28
18/09/2020	94.94	0.00	2.02	80.91	82.93	0.00	0.00	0.00	0.00	0.00	0.00	22.96	22.96	0.00	0.00	35.06	35.06	0.00	0.00	68.60	68.60	0.00	0.00	0.00	0.00	0.00	2.02	207.52	209.54	99.04
19/09/2020	94.87	0.00	1.82	82.69	84.51	0.00	0.00	0.00	0.00	0.00	0.00	59.21	59.21	0.00	0.00	0.00	0.00	0.00	0.00	71.80	71.80	0.00	0.00	0.00	0.00	0.00	1.82	213.70	215.52	99.15
20/09/2020	95.06	0.00	1.76	82.53	84.29	0.00	0.00	0.00	0.00	0.00	0.00	59.71	59.71	0.00	0.00	0.00	0.00	0.00	0.00	72.73	72.73	0.00	0.00	0.00	0.00	0.00	1.76	214.96	216.72	99.19
21/09/2020	94.76	0.00	0.79	28.11	28.90	0.00	0.00	0.00	0.00	0.00	0.00	52.20	52.20	0.00	0.03	38.12	38.14	0.00	0.00	84.17	84.17	0.00	0.49	0.13	0.61	0.00	1.31	202.72	204.03	99.36
22/09/2020	94.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.40	46.40	0.00	0.00	73.52	73.52	0.00	0.06	84.97	85.03	0.00	0.00	0.00	0.00	0.00	0.06	204.89	204.95	99.97
23/09/2020	93.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.13	39.08	39.23	0.02	0.02	59.01	59.06	0.03	0.12	35.40	35.56	0.00	0.23	33.06	33.30	0.08	0.51	166.55	167.14	99.65
24/09/2020	92.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	47.81	48.19	0.00	0.00	77.25	77.25	0.00	0.00	0.06	0.06	0.00	0.82	83.94	84.77	0.00	1.19	209.07	210.27	99.43
25/09/2020	94.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.36	48.36	0.00	0.00	77.64	77.64	0.00	0.00	0.00	0.00	0.00	0.77	84.24	85.01	0.00	0.77	210.24	211.01	99.63
26/09/2020	94.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.88	47.88	0.00	0.00	76.27	76.27	0.00	0.00	0.00	0.00	0.00	0.88	83.55	84.43	0.00	0.88	207.71	208.59	99.58
27/09/2020	94.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.95	40.95	0.00	0.00	63.23	63.23	0.00	0.00	0.00	0.00	0.00	0.74	74.74	75.48	0.00	0.74	178.92	179.66	99.59
28/09/2020	94.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.25	43.25	0.00	0.00	68.17	68.17	0.00	0.00	0.00	0.00	0.00	0.93	80.90	81.82	0.00	0.93	192.31	193.24	99.52
29/09/2020	93.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	42.53	42.59	0.00	0.00	66.95	66.95	0.00	0.00	0.00	0.00	0.00	1.00	79.36	80.36	0.00	1.06	188.84	189.90	99.44
30/09/2020	93.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	47.50	47.71	0.00	0.00	67.07	67.07	0.00	0.00	0.00	0.00	0.00	1.33	73.78	75.11	0.00	1.53	188.35	189.89	99.19
Total [ML]:		0.00	15.94	1335.09	1351.03	0.00	0.00	0.00	0.00	0.02	4.39	1224.83	1229.25	0.02	0.08	1163.73	1163.83	0.03	0.27	1052.79	1053.09	0.00	7.24	1041.86	1049.10	0.08	27.93	5818.31	5846.31	

Water Volume [%]:
 Untreated: 0.00 %
 Below Dose: 0.48 %
 To Dose: 99.52 %
Notes: 1. UV Comparative Dose: 18.1 mJ/cm²

Submitted By (Print): D.Minor

Signature: Original signed by D.Minor