



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

**September 5, 2025**

**RE: AUGUST 2025 WATER QUALITY COMPLIANCE SUBMISSION FOR THE CITY OF WINNIPEG WATER SUPPLY**

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 August 2025.

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 analyser readings were greater than 0.30 NTU for filter 2 on August 24, filter 5 on August 6, and filter 6 on August 17; the elevated turbidities 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. On August 3, the minimum free chlorine on Branch 1 fell below 0.50 mg/L; additional information on this event is provided separately in a corrective action report. Apart from this event, 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. 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](mailto:rgrosselle@winnipeg.ca).

Yours sincerely,

R. Grosselle  
Manager of Environmental Standards

Enclosures

cc: Dr. L. Richards, Winnipeg Regional Health Authority (email)  
Dr. J. Aquin, Winnipeg Regional Health Authority (email)  
Dr. T. Hilderman, Manitoba Health and Seniors Care (email)  
Dr. P. Benoit, Manitoba Health and Seniors Care (email)  
T. Shanks, M. Eng., P. Eng. (email)  
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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**

August 2025 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  |
| 1/08/2025  | 3.16 | 0.10      | 0.14 | 0.07      | 0.12 | 0.07      | 0.12 | 0.09      | 0.15 | 0.06      | 0.09 | 0.00      | 0.11 | 0.01      | 0.03 | 0.08      | 0.09 |
| 2/08/2025  | 3.68 | 0.11      | 0.16 | 0.07      | 0.11 | 0.07      | 0.10 | 0.09      | 0.13 | 0.05      | 0.15 | 0.00      | 0.01 | 0.01      | 0.04 | 0.09      | 0.12 |
| 3/08/2025  | 4.22 | 0.03      | 0.22 | 0.05      | 0.15 | 0.06      | 0.16 | 0.08      | 0.22 | 0.05      | 0.11 | 0.00      | 0.02 | 0.01      | 0.05 | 0.07      | 0.15 |
| 4/08/2025  | 4.28 | 0.03      | 0.07 | 0.06      | 0.08 | 0.06      | 0.10 | 0.08      | 0.15 | 0.05      | 0.09 | 0.00      | 0.00 | 0.01      | 0.03 | 0.10      | 0.16 |
| 5/08/2025  | 4.04 | 0.03      | 0.05 | 0.06      | 0.11 | 0.06      | 0.11 | 0.08      | 0.14 | 0.05      | 0.14 | 0.00      | 0.02 | 0.01      | 0.03 | 0.13      | 0.15 |
| 6/08/2025  | 3.28 | 0.03      | 0.06 | 0.06      | 0.10 | 0.05      | 0.11 | 0.06      | 0.12 | 0.05      | 0.37 | 0.00      | 0.00 | 0.01      | 0.09 | 0.09      | 0.18 |
| 7/08/2025  | 2.47 | 0.04      | 0.09 | 0.06      | 0.20 | 0.06      | 0.16 | 0.03      | 0.10 | 0.06      | 0.14 | 0.00      | 0.02 | 0.02      | 0.08 | 0.05      | 0.10 |
| 8/08/2025  | 2.02 | 0.04      | 0.12 | 0.06      | 0.08 | 0.06      | 0.10 | 0.03      | 0.08 | 0.06      | 0.10 | 0.00      | 0.00 | 0.01      | 0.02 | 0.05      | 0.08 |
| 9/08/2025  | 2.30 | 0.04      | 0.07 | 0.07      | 0.10 | 0.06      | 0.11 | 0.03      | 0.09 | 0.06      | 0.10 | 0.00      | 0.00 | 0.01      | 0.04 | 0.05      | 0.07 |
| 10/08/2025 | 2.88 | 0.06      | 0.10 | 0.07      | 0.11 | 0.06      | 0.11 | 0.05      | 0.08 | 0.07      | 0.10 | 0.00      | 0.00 | 0.01      | 0.04 | 0.05      | 0.09 |
| 11/08/2025 | 2.67 | 0.06      | 0.10 | 0.07      | 0.11 | 0.07      | 0.09 | 0.04      | 0.09 | 0.08      | 0.13 | 0.00      | 0.00 | 0.01      | 0.05 | 0.05      | 0.09 |
| 12/08/2025 | 2.77 | 0.05      | 0.10 | 0.06      | 0.09 | 0.06      | 0.11 | 0.04      | 0.09 | 0.09      | 0.12 | 0.00      | 0.00 | 0.02      | 0.04 | 0.06      | 0.10 |
| 13/08/2025 | 2.72 | 0.06      | 0.09 | 0.07      | 0.11 | 0.06      | 0.11 | 0.04      | 0.08 | 0.08      | 0.13 | 0.00      | 0.00 | 0.03      | 0.06 | 0.08      | 0.10 |
| 14/08/2025 | 2.73 | 0.06      | 0.13 | 0.06      | 0.11 | 0.05      | 0.11 | 0.05      | 0.08 | 0.08      | 0.12 | 0.00      | 0.00 | 0.02      | 0.06 | 0.07      | 0.11 |
| 15/08/2025 | 2.99 | 0.05      | 0.11 | 0.06      | 0.10 | 0.06      | 0.08 | 0.04      | 0.10 | 0.09      | 0.12 | 0.00      | 0.05 | 0.03      | 0.06 | 0.08      | 0.13 |
| 16/08/2025 | 2.98 | 0.06      | 0.09 | 0.06      | 0.08 | 0.05      | 0.09 | 0.03      | 0.07 | 0.10      | 0.21 | 0.00      | 0.00 | 0.04      | 0.05 | 0.08      | 0.12 |
| 17/08/2025 | 3.38 | 0.06      | 0.08 | 0.07      | 0.09 | 0.05      | 0.09 | 0.03      | 0.08 | 0.09      | 0.14 | 0.00      | 0.34 | 0.04      | 0.07 | 0.10      | 0.11 |
| 18/08/2025 | 2.57 | 0.08      | 0.11 | 0.06      | 0.10 | 0.04      | 0.10 | 0.04      | 0.08 | 0.09      | 0.13 | 0.02      | 0.06 | 0.05      | 0.08 | 0.09      | 0.13 |
| 19/08/2025 | 2.61 | 0.07      | 0.11 | 0.06      | 0.09 | 0.06      | 0.08 | 0.04      | 0.08 | 0.09      | 0.12 | 0.04      | 0.08 | 0.05      | 0.09 | 0.09      | 0.13 |
| 20/08/2025 | 2.58 | 0.07      | 0.12 | 0.06      | 0.08 | 0.06      | 0.09 | 0.04      | 0.09 | 0.10      | 0.15 | 0.03      | 0.06 | 0.06      | 0.08 | 0.09      | 0.13 |
| 21/08/2025 | 2.32 | 0.07      | 0.10 | 0.07      | 0.10 | 0.05      | 0.10 | 0.04      | 0.09 | 0.08      | 0.14 | 0.04      | 0.06 | 0.07      | 0.10 | 0.11      | 0.12 |
| 22/08/2025 | 2.24 | 0.09      | 0.18 | 0.06      | 0.10 | 0.05      | 0.09 | 0.05      | 0.07 | 0.10      | 0.14 | 0.04      | 0.06 | 0.07      | 0.11 | 0.10      | 0.14 |
| 23/08/2025 | 1.73 | 0.08      | 0.14 | 0.06      | 0.10 | 0.05      | 0.07 | 0.05      | 0.09 | 0.11      | 0.27 | 0.05      | 0.08 | 0.09      | 0.14 | 0.11      | 0.15 |
| 24/08/2025 | 1.82 | 0.09      | 0.14 | 0.06      | 0.56 | 0.05      | 0.09 | 0.05      | 0.08 | 0.11      | 0.16 | 0.04      | 0.09 | 0.12      | 0.13 | 0.12      | 0.17 |
| 25/08/2025 | 1.44 | 0.08      | 0.16 | 0.06      | 0.10 | 0.05      | 0.09 | 0.05      | 0.09 | 0.08      | 0.12 | 0.03      | 0.06 | 0.07      | 0.16 | 0.10      | 0.16 |
| 26/08/2025 | 0.09 | 0.05      | 0.09 | 0.03      | 0.07 | 0.04      | 0.08 | 0.05      | 0.08 | 0.07      | 0.11 | 0.02      | 0.04 | 0.02      | 0.05 | 0.05      | 0.09 |
| 27/08/2025 | 0.08 | 0.04      | 0.08 | 0.03      | 0.06 | 0.05      | 0.06 | 0.05      | 0.10 | 0.06      | 0.11 | 0.03      | 0.05 | 0.02      | 0.04 | 0.05      | 0.08 |
| 28/08/2025 | 0.09 | 0.03      | 0.10 | 0.03      | 0.05 | 0.04      | 0.08 | 0.05      | 0.09 | 0.08      | 0.11 | 0.03      | 0.06 | 0.02      | 0.03 | 0.06      | 0.09 |
| 29/08/2025 | 0.09 | 0.03      | 0.06 | 0.03      | 0.07 | 0.04      | 0.07 | 0.04      | 0.09 | 0.06      | 0.18 | 0.03      | 0.07 | 0.03      | 0.05 | 0.08      | 0.09 |
| 30/08/2025 | 0.12 | 0.04      | 0.08 | 0.04      | 0.07 | 0.04      | 0.09 | 0.05      | 0.07 | 0.06      | 0.09 | 0.03      | 0.06 | 0.03      | 0.06 | 0.08      | 0.12 |
| 31/08/2025 | 0.13 | 0.04      | 0.08 | 0.04      | 0.07 | 0.05      | 0.07 | 0.05      | 0.10 | 0.06      | 0.10 | 0.04      | 0.06 | 0.03      | 0.07 | 0.09      | 0.13 |

|                                                     |          |         |          |          |         |         |          |          |
|-----------------------------------------------------|----------|---------|----------|----------|---------|---------|----------|----------|
| Total Number of Measurements Taken, A:              | 15243    | 15143   | 14455    | 16378    | 16637   | 7216    | 15665    | 15526    |
| 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:         | 15243    | 15142   | 14455    | 16378    | 16636   | 7215    | 15665    | 15526    |
| Compliance with Turbidity Standard, C = B/A X 100%: | 100.000% | 99.993% | 100.000% | 100.000% | 99.994% | 99.986% | 100.000% | 100.000% |

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2025\08-August

Submitted By (Print): **D. Merredew**

Signature: **Original signed by D. Merredew**



Water Treatment Plant Turbidity Grab Monitoring Report  
August 2025

| Water System Code: 252.00                          | Turbidity (NTU) |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------------------------------------------------|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Licence No. PWS-09-412-02 AA                       |                 |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 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-Aug-2025                                        | 1.80            | 2.36     | 0.09     | 0.12     | 0.09     | 0.09     | 0.07     | 0.07     | 0.10     | 0.10     | 0.08     | 0.09     | 0.04     | <0.02    | 0.06     | <0.02    | 0.10     | 0.08     |
| 02-Aug-2025                                        | ns              | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       |
| 03-Aug-2025                                        | ns              | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       |
| 04-Aug-2025                                        | ns              | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       |
| 05-Aug-2025                                        | 2.27            | 2.29     | 0.10     | 0.04     | 0.08     | 0.08     | 0.07     | 0.06     | 0.07     | 0.09     | 0.07     | 0.08     | 0.06     | <0.02    | 0.07     | <0.02    | 0.05     | 0.14     |
| 06-Aug-2025                                        | 1.87            | 2.63     | 0.08     | 0.04     | 0.07     | 0.07     | 0.07     | 0.06     | 0.07     | 0.09     | 0.08     | 0.06     | 0.04     | <0.02    | 0.04     | <0.02    | 0.06     | 0.17     |
| 07-Aug-2025                                        | 2.22            | 2.64     | 0.08     | 0.07     | 0.09     | 0.07     | 0.08     | 0.07     | 0.07     | 0.05     | 0.06     | 0.10     | 0.06     | <0.02    | 0.04     | 0.02     | 0.04     | 0.07     |
| 08-Aug-2025                                        | 1.77            | 2.43     | 0.07     | 0.04     | 0.09     | 0.07     | 0.10     | 0.08     | 0.06     | 0.03     | 0.04     | 0.08     | 0.06     | <0.02    | 0.04     | <0.02    | 0.04     | 0.06     |
| 09-Aug-2025                                        | ns              | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       |
| 10-Aug-2025                                        | ns              | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       |
| 11-Aug-2025                                        | 1.80            | 2.36     | 0.11     | 0.08     | 0.08     | 0.07     | 0.09     | 0.07     | 0.10     | 0.07     | 0.04     | 0.09     | 0.06     | <0.02    | 0.05     | <0.02    | 0.05     | 0.07     |
| 12-Aug-2025                                        | 2.11            | 3.87     | 0.08     | 0.06     | 0.08     | 0.08     | 0.11     | 0.08     | 0.08     | 0.04     | 0.05     | 0.10     | 0.07     | <0.02    | 0.05     | <0.02    | 0.05     | 0.07     |
| 13-Aug-2025                                        | 1.93            | 2.68     | 0.08     | 0.08     | 0.08     | 0.08     | 0.08     | 0.06     | 0.07     | 0.04     | 0.08     | 0.13     | 0.05     | <0.02    | 0.09     | 0.03     | 0.06     | 0.08     |
| 14-Aug-2025                                        | 2.34            | 3.23     | 0.09     | 0.07     | 0.11     | 0.09     | 0.09     | 0.06     | 0.08     | 0.05     | 0.07     | 0.10     | 0.09     | <0.02    | 0.14     | <0.02    | 0.07     | 0.10     |
| 15-Aug-2025                                        | 1.82            | 2.88     | 0.11     | 0.08     | 0.09     | 0.07     | 0.10     | 0.07     | 0.10     | 0.06     | 0.05     | 0.11     | 0.08     | <0.02    | 0.05     | 0.02     | 0.05     | 0.09     |
| 16-Aug-2025                                        | ns              | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       |
| 17-Aug-2025                                        | ns              | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       |
| 18-Aug-2025                                        | 2.45            | 2.72     | 0.08     | 0.08     | 0.11     | 0.09     | 0.09     | 0.06     | 0.08     | 0.05     | 0.05     | 0.11     | 0.05     | <0.02    | 0.06     | 0.02     | 0.06     | 0.12     |
| 19-Aug-2025                                        | 1.52            | 2.89     | 0.08     | 0.09     | 0.07     | 0.07     | 0.08     | 0.06     | 0.09     | 0.06     | 0.06     | 0.11     | 0.06     | 0.04     | 0.05     | 0.04     | 0.05     | 0.10     |
| 20-Aug-2025                                        | 1.68            | 2.46     | 0.07     | 0.08     | 0.07     | 0.07     | 0.10     | 0.08     | 0.06     | 0.05     | 0.05     | 0.12     | 0.08     | 0.06     | 0.05     | 0.06     | 0.04     | 0.11     |
| 21-Aug-2025                                        | 1.95            | 2.61     | 0.09     | 0.08     | 0.08     | 0.08     | 0.08     | 0.06     | 0.07     | 0.05     | 0.06     | 0.12     | 0.04     | 0.04     | 0.07     | 0.08     | 0.05     | 0.11     |
| 22-Aug-2025                                        | 1.59            | 2.80     | 0.08     | 0.10     | 0.08     | 0.08     | 0.07     | 0.06     | 0.07     | 0.06     | 0.04     | 0.12     | 0.04     | 0.06     | 0.05     | 0.07     | 0.06     | 0.13     |
| 23-Aug-2025                                        | ns              | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       |
| 24-Aug-2025                                        | ns              | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       |
| 25-Aug-2025                                        | 1.38            | 2.40     | 0.08     | 0.12     | 0.08     | 0.08     | 0.10     | 0.07     | 0.07     | 0.06     | 0.07     | 0.12     | 0.04     | 0.03     | 0.05     | 0.14     | 0.04     | 0.15     |
| 26-Aug-2025                                        | 1.59            | 2.25     | 0.09     | 0.05     | 0.10     | 0.07     | 0.08     | 0.05     | 0.07     | 0.06     | 0.06     | 0.10     | 0.04     | 0.03     | 0.08     | 0.03     | 0.07     | 0.07     |
| 27-Aug-2025                                        | 5.98            | 2.44     | 0.10     | 0.07     | 0.07     | 0.04     | 0.07     | 0.06     | 0.08     | 0.07     | 0.04     | 0.08     | 0.04     | 0.04     | 0.04     | <0.02    | 0.04     | 0.06     |
| 28-Aug-2025                                        | 1.87            | 2.13     | 0.06     | 0.04     | 0.07     | 0.04     | 0.09     | 0.06     | 0.07     | 0.04     | 0.05     | 0.09     | 0.07     | 0.05     | 0.10     | 0.02     | 0.04     | 0.08     |
| 29-Aug-2025                                        | 1.45            | 2.28     | 0.05     | 0.04     | 0.06     | 0.04     | 0.07     | 0.04     | 0.04     | 0.04     | 0.06     | 0.10     | 0.04     | 0.04     | 0.04     | 0.03     | 0.04     | 0.09     |
| 30-Aug-2025                                        | ns              | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       | ns       |
| 31-Aug-2025                                        | 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       |          |
| 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:        |                 |          | 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%     |          |

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

Comments:

The raw water analyzer is cleaned daily during warm water months because it is susceptible to frequent fouling

Report Date: September 5, 2025

**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 September 2025

Report Period: August 2025

| Date       | BRANCH 1<br>[mg/L] |         | BRANCH 2<br>[mg/L] |         |
|------------|--------------------|---------|--------------------|---------|
|            | Average            | Minimum | Average            | Minimum |
| 01/08/2025 | 1.63               | 1.55    | 1.66               | 1.55    |
| 02/08/2025 | 1.64               | 1.55    | 1.63               | 1.50    |
| 03/08/2025 | 1.46               | 0.45    | 1.37               | 0.71    |
| 04/08/2025 | 1.52               | 1.39    | 1.49               | 1.28    |
| 05/08/2025 | 1.63               | 1.54    | 1.75               | 1.59    |
| 06/08/2025 | 1.53               | 1.36    | 1.61               | 1.37    |
| 07/08/2025 | 1.52               | 1.01    | 1.48               | 1.13    |
| 08/08/2025 | 1.43               | 1.16    | 1.38               | 1.20    |
| 09/08/2025 | 1.45               | 1.21    | 1.53               | 1.36    |
| 10/08/2025 | 1.51               | 1.44    | 1.65               | 1.47    |
| 11/08/2025 | 1.49               | 1.44    | 1.67               | 1.50    |
| 12/08/2025 | 1.40               | 1.35    | 1.51               | 1.39    |
| 13/08/2025 | 1.41               | 1.33    | 1.56               | 1.45    |
| 14/08/2025 | 1.53               | 1.41    | 1.66               | 1.46    |
| 15/08/2025 | 1.53               | 1.45    | 1.58               | 1.42    |
| 16/08/2025 | 1.48               | 1.44    | 1.53               | 1.44    |
| 17/08/2025 | 1.49               | 1.47    | 1.57               | 1.47    |
| 18/08/2025 | 1.41               | 1.33    | 1.52               | 1.35    |
| 19/08/2025 | 1.33               | 1.25    | 1.46               | 1.17    |
| 20/08/2025 | 1.38               | 1.30    | 1.48               | 1.38    |
| 21/08/2025 | 1.50               | 1.33    | 1.61               | 1.33    |
| 22/08/2025 | 1.61               | 1.52    | 1.77               | 1.58    |
| 23/08/2025 | 1.54               | 1.49    | 1.70               | 1.60    |
| 24/08/2025 | 1.56               | 1.52    | 1.68               | 1.56    |
| 25/08/2025 | 1.59               | 1.31    | 1.65               | 1.53    |
| 26/08/2025 | 1.71               | 1.56    | 1.72               | 1.44    |
| 27/08/2025 | 1.68               | 1.43    | 1.77               | 1.52    |
| 28/08/2025 | 1.69               | 1.59    | 1.74               | 1.61    |
| 29/08/2025 | 1.69               | 1.63    | 1.66               | 1.51    |
| 30/08/2025 | 1.62               | 1.55    | 1.59               | 1.47    |
| 31/08/2025 | 1.62               | 1.56    | 1.58               | 1.47    |

|                                             |       |        |
|---------------------------------------------|-------|--------|
| Total Number of Measurements, A:            | 21606 | 21604  |
| Minimum Free Chlorine Standard:             | 0.5   | 0.5    |
| Number of Measurements Meeting Standard, B: | 21605 | 21604  |
| COMPLIANCE, C = B/A X 100%:                 | 99.99 | 100.00 |

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2025\08-August

Submitted By (Print): D. MerredewSignature: Original signed by D. Merredew



## Water Treatment Plant Chlorine Grab Monitoring Report August 2025

| Water System Code: 252.00                                                                                                                                                                       | Deacon Booster Pumping Station Branch 1 |      |                       | Deacon Booster Pumping Station Branch 2 |      |                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------|-----------------------|-----------------------------------------|------|-----------------------|
| Licence No. PWS-09-412-02 AA                                                                                                                                                                    |                                         |      |                       |                                         |      |                       |
| Date                                                                                                                                                                                            | Free Chlorine (mg/L)                    |      | Total Chlorine (mg/L) | Free Chlorine (mg/L)                    |      | Total Chlorine (mg/L) |
|                                                                                                                                                                                                 | Analyser                                | Grab | Grab                  | Analyser                                | Grab | Grab                  |
| 01-Aug-2025                                                                                                                                                                                     | 1.65                                    | 1.64 | 1.84                  | 1.66                                    | 1.67 | 1.90                  |
| 02-Aug-2025                                                                                                                                                                                     | ns                                      | ns   | ns                    | ns                                      | ns   | ns                    |
| 03-Aug-2025                                                                                                                                                                                     | ns                                      | ns   | ns                    | ns                                      | ns   | ns                    |
| 04-Aug-2025                                                                                                                                                                                     | ns                                      | ns   | ns                    | ns                                      | ns   | ns                    |
| 05-Aug-2025                                                                                                                                                                                     | 1.61                                    | 1.63 | 1.82                  | 1.70                                    | 1.75 | 1.97                  |
| 06-Aug-2025                                                                                                                                                                                     | 1.58                                    | 1.59 | 1.78                  | 1.79                                    | 1.69 | 1.92                  |
| 07-Aug-2025                                                                                                                                                                                     | 1.63                                    | 1.66 | 1.82                  | 1.81                                    | 1.81 | 2.04                  |
| 08-Aug-2025                                                                                                                                                                                     | 1.35                                    | 1.42 | 1.65                  | 1.35                                    | 1.43 | 1.62                  |
| 09-Aug-2025                                                                                                                                                                                     | ns                                      | ns   | ns                    | ns                                      | ns   | ns                    |
| 10-Aug-2025                                                                                                                                                                                     | ns                                      | ns   | ns                    | ns                                      | ns   | ns                    |
| 11-Aug-2025                                                                                                                                                                                     | 1.52                                    | 1.56 | 1.75                  | 1.68                                    | 1.60 | 1.80                  |
| 12-Aug-2025                                                                                                                                                                                     | 1.42                                    | 1.43 | 1.60                  | 1.54                                    | 1.49 | 1.74                  |
| 13-Aug-2025                                                                                                                                                                                     | 1.38                                    | 1.34 | 1.60                  | 1.58                                    | 1.49 | 1.71                  |
| 14-Aug-2025                                                                                                                                                                                     | 1.44                                    | 1.42 | 1.63                  | 1.48                                    | 1.55 | 1.75                  |
| 15-Aug-2025                                                                                                                                                                                     | 1.61                                    | 1.60 | 1.78                  | 1.69                                    | 1.68 | 1.87                  |
| 16-Aug-2025                                                                                                                                                                                     | ns                                      | ns   | ns                    | ns                                      | ns   | ns                    |
| 17-Aug-2025                                                                                                                                                                                     | ns                                      | ns   | ns                    | ns                                      | ns   | ns                    |
| 18-Aug-2025                                                                                                                                                                                     | 1.46                                    | 1.41 | 1.62                  | 1.60                                    | 1.59 | 1.79                  |
| 19-Aug-2025                                                                                                                                                                                     | 1.36                                    | 1.34 | 1.52                  | 1.43                                    | 1.43 | 1.64                  |
| 20-Aug-2025                                                                                                                                                                                     | 1.33                                    | 1.30 | 1.50                  | 1.41                                    | 1.38 | 1.62                  |
| 21-Aug-2025                                                                                                                                                                                     | 1.33                                    | 1.28 | 1.46                  | 1.38                                    | 1.39 | 1.63                  |
| 22-Aug-2025                                                                                                                                                                                     | 1.62                                    | 1.69 | 1.86                  | 1.80                                    | 1.77 | 2.01                  |
| 23-Aug-2025                                                                                                                                                                                     | ns                                      | ns   | ns                    | ns                                      | ns   | ns                    |
| 24-Aug-2025                                                                                                                                                                                     | ns                                      | ns   | ns                    | ns                                      | ns   | ns                    |
| 25-Aug-2025                                                                                                                                                                                     | 1.50                                    | 1.57 | 1.78                  | 1.61                                    | 1.72 | 1.93                  |
| 26-Aug-2025                                                                                                                                                                                     | 1.82                                    | 1.75 | 1.99                  | 1.87                                    | 1.84 | 2.05                  |
| 27-Aug-2025                                                                                                                                                                                     | 1.66                                    | 1.61 | 1.92                  | 1.64                                    | 1.72 | 1.98                  |
| 28-Aug-2025                                                                                                                                                                                     | 1.68                                    | 1.66 | 1.88                  | 1.77                                    | 1.69 | 1.89                  |
| 29-Aug-2025                                                                                                                                                                                     | 1.69                                    | 1.76 | 1.92                  | 1.71                                    | 1.68 | 1.93                  |
| 30-Aug-2025                                                                                                                                                                                     | ns                                      | ns   | ns                    | ns                                      | ns   | ns                    |
| 31-Aug-2025                                                                                                                                                                                     | ns                                      | ns   | ns                    | ns                                      | ns   | ns                    |
| Total number of measurements taken, A:<br>Chlorine Standard for Monitoring Location (mg/L):<br>Number of measurements meeting standard, B:<br>Compliance with Chlorine Standard, C= B/A X 100%: |                                         | 20   |                       | 20                                      |      |                       |
|                                                                                                                                                                                                 |                                         | 0.50 |                       | 0.50                                    |      |                       |
|                                                                                                                                                                                                 |                                         | 20   |                       | 20                                      |      |                       |
|                                                                                                                                                                                                 |                                         | 100% |                       | 100%                                    |      |                       |

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

Comments:

Report Date: September 5, 2025



**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: **August 2025**

Report Created: **Monday, September 01, 2025**

| Date        | UVR-D100A    |         | UVR-D200A         |        | UVR-D300A    |        | UVR-D400A         |       | UVR-D500A    |        | UVR-D600A    |         | Total             |         | % Volume Treated To Dose |
|-------------|--------------|---------|-------------------|--------|--------------|--------|-------------------|-------|--------------|--------|--------------|---------|-------------------|---------|--------------------------|
|             | Water Volume |         | Water Volume [ML] |        | Water Volume |        | Water Volume [ML] |       | Water Volume |        | Water Volume |         | Water Volume [ML] |         |                          |
|             | To           | Total   | To                | Total  | To           | Total  | To                | Total | To           | Total  | To           | Total   | To                | Total   |                          |
| 01/08/2025  | 109.72       | 109.72  | 0.00              | 0.00   | 110.99       | 110.99 | 0.00              | 0.00  | 0.00         | 0.00   | 0.00         | 0.00    | 220.71            | 220.71  | 100.00                   |
| 02/08/2025  | 109.99       | 109.99  | 0.00              | 0.00   | 111.93       | 111.93 | 0.00              | 0.00  | 0.00         | 0.00   | 0.00         | 0.00    | 221.93            | 221.93  | 100.00                   |
| 03/08/2025  | 83.68        | 83.76   | 0.00              | 0.00   | 65.72        | 73.70  | 0.00              | 0.00  | 0.00         | 0.00   | 18.87        | 18.87   | 168.27            | 176.33  | 95.43                    |
| 04/08/2025  | 94.62        | 94.62   | 0.00              | 0.00   | 63.71        | 63.71  | 0.00              | 0.00  | 0.00         | 0.00   | 76.39        | 76.39   | 234.72            | 234.72  | 100.00                   |
| 05/08/2025  | 93.24        | 93.24   | 0.00              | 0.00   | 62.31        | 62.31  | 0.00              | 0.00  | 0.00         | 0.00   | 77.87        | 77.87   | 233.42            | 233.42  | 100.00                   |
| 06/08/2025  | 100.29       | 100.29  | 0.00              | 0.00   | 64.63        | 64.63  | 0.00              | 0.00  | 0.00         | 0.00   | 81.21        | 81.21   | 246.14            | 246.14  | 100.00                   |
| 07/08/2025  | 90.40        | 90.40   | 0.00              | 0.00   | 56.83        | 58.03  | 0.00              | 0.00  | 0.00         | 0.00   | 66.97        | 66.97   | 214.21            | 215.40  | 99.44                    |
| 08/08/2025  | 99.89        | 99.89   | 0.00              | 0.00   | 43.58        | 43.76  | 0.00              | 0.00  | 0.00         | 0.00   | 84.97        | 84.97   | 228.45            | 228.62  | 99.92                    |
| 09/08/2025  | 109.94       | 109.94  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 98.82        | 98.82   | 208.76            | 208.76  | 100.00                   |
| 10/08/2025  | 106.75       | 106.75  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 96.04        | 96.04   | 202.79            | 202.79  | 100.00                   |
| 11/08/2025  | 106.53       | 106.53  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 95.80        | 95.80   | 202.33            | 202.33  | 100.00                   |
| 12/08/2025  | 107.41       | 107.41  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 94.83        | 94.83   | 202.25            | 202.25  | 100.00                   |
| 13/08/2025  | 110.07       | 110.07  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 99.04        | 99.04   | 209.11            | 209.11  | 100.00                   |
| 14/08/2025  | 107.13       | 107.13  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 96.39        | 96.39   | 203.52            | 203.52  | 100.00                   |
| 15/08/2025  | 102.06       | 102.06  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 91.95        | 91.95   | 194.00            | 194.00  | 100.00                   |
| 16/08/2025  | 101.54       | 101.54  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 91.47        | 91.47   | 193.01            | 193.01  | 100.00                   |
| 17/08/2025  | 98.78        | 98.78   | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 89.00        | 89.00   | 187.78            | 187.78  | 100.00                   |
| 18/08/2025  | 98.21        | 98.21   | 0.00              | 0.00   | 0.43         | 0.47   | 0.00              | 0.00  | 0.00         | 0.00   | 88.31        | 88.31   | 186.96            | 187.00  | 99.98                    |
| 19/08/2025  | 99.92        | 99.92   | 0.00              | 0.00   | 0.13         | 0.16   | 0.00              | 0.00  | 0.00         | 0.00   | 92.98        | 92.98   | 193.03            | 193.06  | 99.98                    |
| 20/08/2025  | 102.42       | 102.42  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 99.99        | 99.99   | 202.41            | 202.41  | 100.00                   |
| 21/08/2025  | 105.27       | 105.27  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 102.76       | 102.76  | 208.02            | 208.02  | 100.00                   |
| 22/08/2025  | 105.09       | 105.23  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 102.78       | 102.78  | 207.87            | 208.01  | 99.93                    |
| 23/08/2025  | 105.49       | 106.31  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 104.00       | 104.00  | 209.49            | 210.31  | 99.61                    |
| 24/08/2025  | 104.61       | 105.71  | 0.00              | 0.00   | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 103.39       | 103.39  | 207.99            | 209.09  | 99.47                    |
| 25/08/2025  | 48.97        | 49.92   | 58.74             | 58.74  | 0.00         | 0.00   | 0.00              | 0.00  | 0.00         | 0.00   | 101.91       | 101.91  | 209.62            | 210.57  | 99.55                    |
| 26/08/2025  | 0.00         | 0.00    | 109.80            | 109.80 | 0.00         | 0.00   | 0.00              | 0.00  | 43.43        | 43.43  | 58.76        | 58.77   | 211.99            | 212.00  | 99.99                    |
| 27/08/2025  | 0.00         | 0.00    | 109.33            | 109.33 | 0.00         | 0.00   | 0.00              | 0.00  | 102.68       | 102.68 | 0.00         | 0.00    | 212.02            | 212.02  | 100.00                   |
| 28/08/2025  | 0.00         | 0.00    | 109.24            | 109.24 | 0.00         | 0.00   | 0.00              | 0.00  | 102.77       | 102.77 | 0.00         | 0.00    | 212.01            | 212.01  | 100.00                   |
| 29/08/2025  | 0.00         | 0.00    | 109.03            | 109.03 | 0.00         | 0.00   | 0.00              | 0.00  | 102.98       | 102.98 | 0.00         | 0.00    | 212.01            | 212.01  | 100.00                   |
| 30/08/2025  | 0.00         | 0.00    | 108.91            | 108.91 | 0.00         | 0.00   | 0.00              | 0.00  | 103.75       | 103.75 | 0.00         | 0.00    | 212.66            | 212.66  | 100.00                   |
| 31/08/2025  | 0.00         | 0.00    | 102.73            | 102.73 | 0.00         | 0.00   | 0.00              | 0.00  | 99.02        | 99.02  | 0.00         | 0.00    | 201.75            | 201.75  | 100.00                   |
| Total [ML]: | 2502.03      | 2505.12 | 707.78            | 707.78 | 580.28       | 589.70 | 0.00              | 0.00  | 554.64       | 554.64 | 2114.48      | 2114.50 | 6459.21           | 6471.73 |                          |

**Water Volume [%]:**

To Dose per reactor      99.88    %      100.00    %      98.40    %      OL    OL      100.00    %      100.00    %

To Dose Total      99.81    %

**Notes:**      1. Target Log value: 2.00

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-AA**

**WATER TREATMENT PLANT UV REPORT**

Report Period: **August 2025**

Report Created: **Monday, September 01, 2025**

| Date       | Transmittance (%) |      |          |      | UVR_D100A |      | UVR_D200A |      | UVR_D300A |      | UVR_D400A |      | UVR_D500A |      | UVR_D600A |      |
|------------|-------------------|------|----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|
|            | Branch 1          |      | Branch 2 |      | [Log]     |      | [Log]     |      | [Log]     |      | [Log]     |      | [Log]     |      | [Log]     |      |
|            | Avg.              | Min. | Avg.     | Min. | Avg.      | Min. | Avg.      | Min. | Avg.      | Min. | Avg.      | Min. | Avg.      | Min. | Avg.      | Min. |
| 01/08/2025 | 96.4              | 95.9 | 96.4     | 95.7 | 2.5       | 2.3  | OL        | OL   | 2.5       | 2.3  | OL        | OL   | OL        | OL   | OL        | OL   |
| 02/08/2025 | 96.4              | 96.0 | 96.4     | 95.6 | 2.5       | 2.3  | OL        | OL   | 2.5       | 2.3  | OL        | OL   | OL        | OL   | OL        | OL   |
| 03/08/2025 | 96.2              | 94.9 | 96.3     | 94.9 | 2.5       | 1.7  | OL        | OL   | 2.3       | 1.5  | OL        | OL   | OL        | OL   | 4.1       | 4.1  |
| 04/08/2025 | 96.7              | 96.0 | 96.7     | 96.2 | 2.5       | 2.2  | OL        | OL   | 2.5       | 2.1  | OL        | OL   | OL        | OL   | 4.1       | 3.8  |
| 05/08/2025 | 96.7              | 96.3 | 96.5     | 96.2 | 2.5       | 2.1  | OL        | OL   | 2.5       | 2.3  | OL        | OL   | OL        | OL   | 3.9       | 3.6  |
| 06/08/2025 | 96.6              | 95.0 | 96.4     | 94.7 | 2.5       | 2.1  | OL        | OL   | 2.5       | 2.3  | OL        | OL   | OL        | OL   | 3.7       | 3.2  |
| 07/08/2025 | 95.5              | 94.5 | 95.6     | 94.7 | 2.5       | 1.9  | OL        | OL   | 2.4       | 1.1  | OL        | OL   | OL        | OL   | 3.6       | 3.2  |
| 08/08/2025 | 96.7              | 96.2 | 96.8     | 96.3 | 2.5       | 2.0  | OL        | OL   | 2.4       | 1.9  | OL        | OL   | OL        | OL   | 3.7       | 3.3  |
| 09/08/2025 | 96.7              | 96.2 | 96.8     | 96.3 | 2.5       | 1.9  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 3.5       | 3.3  |
| 10/08/2025 | 96.7              | 96.4 | 96.7     | 96.4 | 2.5       | 2.2  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 3.4       | 3.2  |
| 11/08/2025 | 96.7              | 96.4 | 96.8     | 96.3 | 2.4       | 2.2  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 3.4       | 2.9  |
| 12/08/2025 | 96.7              | 96.3 | 96.8     | 96.4 | 2.4       | 2.1  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 3.4       | 2.9  |
| 13/08/2025 | 96.7              | 96.3 | 96.8     | 96.0 | 2.4       | 2.2  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 3.4       | 2.8  |
| 14/08/2025 | 96.7              | 96.2 | 96.8     | 96.4 | 2.5       | 2.1  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 3.3       | 2.8  |
| 15/08/2025 | 96.8              | 96.2 | 96.9     | 96.4 | 2.5       | 2.1  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 3.3       | 2.8  |
| 16/08/2025 | 97.0              | 96.5 | 97.1     | 96.6 | 2.5       | 2.3  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 3.3       | 2.9  |
| 17/08/2025 | 97.0              | 96.6 | 97.1     | 96.5 | 2.5       | 2.1  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 3.3       | 2.9  |
| 18/08/2025 | 97.0              | 96.6 | 97.2     | 96.8 | 2.5       | 2.1  | OL        | OL   | 1.2       | 0.0  | OL        | OL   | OL        | OL   | 3.3       | 2.9  |
| 19/08/2025 | 96.9              | 96.4 | 97.2     | 96.2 | 2.5       | 2.0  | OL        | OL   | 1.1       | 0.0  | OL        | OL   | OL        | OL   | 3.3       | 2.7  |
| 20/08/2025 | 96.9              | 96.4 | 97.1     | 96.8 | 2.4       | 2.2  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 3.2       | 2.9  |
| 21/08/2025 | 96.9              | 95.8 | 97.1     | 96.6 | 2.4       | 2.0  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 3.0       | 2.7  |
| 22/08/2025 | 96.9              | 95.9 | 97.1     | 96.7 | 2.3       | 1.9  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 2.7       | 2.5  |
| 23/08/2025 | 97.0              | 95.9 | 97.1     | 95.7 | 2.2       | 1.9  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 2.6       | 2.3  |
| 24/08/2025 | 97.1              | 96.2 | 97.1     | 96.5 | 2.2       | 1.8  | OL        | OL   | OL        | OL   | OL        | OL   | OL        | OL   | 2.5       | 2.3  |
| 25/08/2025 | 97.1              | 96.3 | 97.1     | 96.5 | 2.1       | 1.7  | 2.5       | 2.2  | OL        | OL   | OL        | OL   | OL        | OL   | 2.5       | 2.3  |
| 26/08/2025 | 97.1              | 96.3 | 97.2     | 96.4 | OL        | OL   | 2.5       | 2.3  | OL        | OL   | OL        | OL   | 2.8       | 2.3  | 2.5       | 0.0  |
| 27/08/2025 | 97.1              | 96.5 | 97.2     | 96.6 | OL        | OL   | 2.5       | 2.2  | OL        | OL   | OL        | OL   | 2.5       | 2.3  | OL        | OL   |
| 28/08/2025 | 96.8              | 96.0 | 97.2     | 96.3 | OL        | OL   | 2.5       | 2.3  | OL        | OL   | OL        | OL   | 2.5       | 2.3  | OL        | OL   |
| 29/08/2025 | 96.9              | 95.9 | 97.3     | 96.7 | OL        | OL   | 2.5       | 2.2  | OL        | OL   | OL        | OL   | 2.5       | 2.3  | OL        | OL   |
| 30/08/2025 | 96.8              | 95.6 | 97.2     | 96.0 | OL        | OL   | 2.5       | 2.2  | OL        | OL   | OL        | OL   | 2.5       | 2.3  | OL        | OL   |
| 31/08/2025 | 96.8              | 96.4 | 97.2     | 96.2 | OL        | OL   | 2.5       | 2.3  | OL        | OL   | OL        | OL   | 2.5       | 2.3  | OL        | OL   |

**Notes:**  
1. UV target value is 2.00 [Log]  
2. OL - Off Line

Submitted By (Print): D. Merredew

Signature: Original signed by D. Merredew