



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

November 7, 2024

RE: OCTOBER 2024 WATER QUALITY COMPLIANCE SUBMISSION FOR THE CITY OF WINNIPEG WATER SUPPLY SYSTEM

Please find attached on-line and grab turbidity summary reports, on-line and grab chlorine summary reports and the UV summary report for the Water Treatment Plant for October 2024.

The on-line and grab sampling turbidity reports include results obtained for the Water Treatment Plant raw water and the eight filters. Filter 2 was taken offline for maintenance on October 7th and was offline for the remainder of the month. The maximum turbidity was greater than 0.30 NTU for Filter 4 on October 28 and Filter 5 on October 7; the elevated turbidities occurred for less than 12 consecutive hours. On October 3 the turbidity on Filter 2 exceeded 1.00 NTU and on October 31 the turbidity on Filter 6 also exceeded 1.00 NTU, additional information for the exceedances is provided separately in a Corrective Action Report. With the exception of these events, the turbidity results for the filter effluent met the licence requirements.

The on-line and grab sampling chlorine reports include results obtained for the Deacon Booster Pumping Station at the Water Treatment Plant. The free chlorine results at the Water Treatment Plant met the licence requirements.

The UV summary reports include results obtained for the six UV reactors at the Water Treatment Plant. 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. (email)
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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

October 2024 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 |
| 1/10/2024 | 3.32 | 0.10 | 0.14 | 0.08 | 0.13 | 0.01 | 0.04 | 0.04 | 0.08 | 0.07 | 0.11 | 0.07 | 0.08 | 0.02 | 0.04 | 0.01 | 0.02 |
| 2/10/2024 | 3.39 | 0.10 | 0.14 | 0.11 | 0.12 | 0.01 | 0.05 | 0.04 | 0.07 | 0.08 | 0.11 | 0.06 | 0.13 | 0.02 | 0.05 | 0.01 | 0.03 |
| 3/10/2024 | 3.87 | 0.15 | 0.17 | 0.12 | 2.05 | 0.01 | 0.05 | 0.05 | 0.06 | 0.10 | 0.13 | 0.07 | 0.12 | 0.03 | 0.06 | 0.02 | 0.04 |
| 4/10/2024 | 3.85 | 0.10 | 0.19 | 0.12 | 0.20 | 0.01 | 0.05 | 0.02 | 0.07 | 0.10 | 0.14 | 0.06 | 0.11 | 0.03 | 0.12 | 0.05 | 0.15 |
| 5/10/2024 | 3.81 | 0.09 | 0.13 | 0.10 | 0.15 | 0.01 | 0.04 | 0.01 | 0.05 | 0.10 | 0.15 | 0.03 | 0.06 | 0.02 | 0.05 | 0.11 | 0.12 |
| 6/10/2024 | 3.86 | 0.11 | 0.13 | 0.10 | 0.14 | 0.00 | 0.03 | 0.01 | 0.05 | 0.13 | 0.15 | 0.03 | 0.07 | 0.02 | 0.04 | 0.10 | 0.15 |
| 7/10/2024 | 3.54 | 0.09 | 0.13 | 0.13 | 0.13 | 0.00 | 0.02 | 0.00 | 0.03 | 0.12 | 0.55 | 0.03 | 0.07 | 0.02 | 0.05 | 0.10 | 0.14 |
| 8/10/2024 | 3.69 | 0.09 | 0.14 | OL | OL | 0.02 | 0.07 | 0.01 | 0.05 | 0.11 | 0.18 | 0.04 | 0.06 | 0.03 | 0.05 | 0.09 | 0.14 |
| 9/10/2024 | 3.73 | 0.08 | 0.13 | OL | OL | 0.05 | 0.09 | 0.03 | 0.05 | 0.11 | 0.20 | 0.03 | 0.06 | 0.03 | 0.04 | 0.10 | 0.13 |
| 10/10/2024 | 3.41 | 0.09 | 0.13 | OL | OL | 0.05 | 0.08 | 0.03 | 0.06 | 0.11 | 0.15 | 0.04 | 0.05 | 0.03 | 0.05 | 0.10 | 0.13 |
| 11/10/2024 | 3.25 | 0.10 | 0.14 | OL | OL | 0.05 | 0.10 | 0.03 | 0.06 | 0.12 | 0.16 | 0.04 | 0.08 | 0.03 | 0.06 | 0.11 | 0.13 |
| 12/10/2024 | 3.11 | 0.11 | 0.15 | OL | OL | 0.04 | 0.09 | 0.03 | 0.06 | 0.14 | 0.17 | 0.04 | 0.08 | 0.04 | 0.06 | 0.11 | 0.13 |
| 13/10/2024 | 3.18 | 0.12 | 0.14 | OL | OL | 0.05 | 0.10 | 0.03 | 0.05 | 0.14 | 0.21 | 0.04 | 0.08 | 0.04 | 0.07 | 0.10 | 0.16 |
| 14/10/2024 | 3.10 | 0.12 | 0.15 | OL | OL | 0.04 | 0.07 | 0.02 | 0.05 | 0.14 | 0.18 | 0.05 | 0.08 | 0.05 | 0.07 | 0.11 | 0.15 |
| 15/10/2024 | 2.85 | 0.12 | 0.16 | OL | OL | 0.04 | 0.07 | 0.02 | 0.04 | 0.14 | 0.20 | 0.05 | 0.08 | 0.06 | 0.10 | 0.11 | 0.15 |
| 16/10/2024 | 2.98 | 0.12 | 0.17 | OL | OL | 0.05 | 0.07 | 0.03 | 0.05 | 0.13 | 0.18 | 0.06 | 0.08 | 0.06 | 0.11 | 0.11 | 0.14 |
| 17/10/2024 | 2.91 | 0.10 | 0.16 | OL | OL | 0.05 | 0.08 | 0.03 | 0.06 | 0.12 | 0.19 | 0.06 | 0.09 | 0.08 | 0.09 | 0.11 | 0.14 |
| 18/10/2024 | 3.03 | 0.13 | 0.28 | OL | OL | 0.06 | 0.09 | 0.03 | 0.06 | 0.13 | 0.18 | 0.07 | 0.10 | 0.08 | 0.11 | 0.10 | 0.14 |
| 19/10/2024 | 2.80 | 0.13 | 0.16 | OL | OL | 0.06 | 0.10 | 0.04 | 0.07 | 0.15 | 0.20 | 0.07 | 0.12 | 0.09 | 0.12 | 0.11 | 0.15 |
| 20/10/2024 | 2.69 | 0.13 | 0.17 | OL | OL | 0.07 | 0.13 | 0.05 | 0.09 | 0.16 | 0.20 | 0.07 | 0.11 | 0.10 | 0.13 | 0.11 | 0.14 |
| 21/10/2024 | 2.65 | 0.13 | 0.17 | OL | OL | 0.08 | 0.13 | 0.06 | 0.11 | 0.13 | 0.19 | 0.07 | 0.12 | 0.10 | 0.14 | 0.12 | 0.14 |
| 22/10/2024 | 2.74 | 0.14 | 0.18 | OL | OL | 0.09 | 0.14 | 0.08 | 0.12 | 0.15 | 0.21 | 0.08 | 0.18 | 0.12 | 0.16 | 0.11 | 0.14 |
| 23/10/2024 | 2.89 | 0.14 | 0.19 | OL | OL | 0.08 | 0.14 | 0.06 | 0.11 | 0.14 | 0.22 | 0.07 | 0.13 | 0.07 | 0.16 | 0.10 | 0.14 |
| 24/10/2024 | 2.88 | 0.13 | 0.17 | OL | OL | 0.05 | 0.10 | 0.04 | 0.10 | 0.14 | 0.17 | 0.06 | 0.09 | 0.02 | 0.04 | 0.09 | 0.12 |
| 25/10/2024 | 2.90 | 0.13 | 0.18 | OL | OL | 0.05 | 0.11 | 0.04 | 0.08 | 0.11 | 0.17 | 0.06 | 0.10 | 0.02 | 0.05 | 0.09 | 0.12 |
| 26/10/2024 | 2.96 | 0.14 | 0.19 | OL | OL | 0.06 | 0.10 | 0.05 | 0.09 | 0.14 | 0.19 | 0.07 | 0.09 | 0.03 | 0.05 | 0.07 | 0.13 |
| 27/10/2024 | 3.02 | 0.13 | 0.19 | OL | OL | 0.07 | 0.10 | 0.06 | 0.12 | 0.12 | 0.17 | 0.07 | 0.11 | 0.03 | 0.05 | 0.09 | 0.13 |
| 28/10/2024 | 2.92 | 0.14 | 0.18 | OL | OL | 0.06 | 0.11 | 0.07 | 0.45 | 0.12 | 0.19 | 0.07 | 0.11 | 0.04 | 0.05 | 0.09 | 0.12 |
| 29/10/2024 | 2.90 | 0.15 | 0.21 | OL | OL | 0.07 | 0.14 | 0.09 | 0.14 | 0.13 | 0.18 | 0.09 | 0.12 | 0.04 | 0.06 | 0.10 | 0.13 |
| 30/10/2024 | 2.97 | 0.13 | 0.20 | OL | OL | 0.07 | 0.14 | 0.06 | 0.13 | 0.09 | 0.21 | 0.07 | 0.13 | 0.08 | 0.14 | 0.07 | 0.13 |
| 31/10/2024 | 2.89 | 0.11 | 0.19 | OL | OL | 0.06 | 0.12 | 0.01 | 0.05 | 0.02 | 0.05 | 0.04 | 1.35 | 0.12 | 0.16 | 0.04 | 0.07 |

| | | | | | | | | |
|---|----------|---------|----------|---------|---------|---------|----------|----------|
| Total Number of Measurements Taken, A: | 16993 | 3278 | 16335 | 16630 | 17145 | 17229 | 16333 | 15613 |
| 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: | 16993 | 3277 | 16335 | 16629 | 17144 | 17226 | 16333 | 15613 |
| Compliance with Turbidity Standard, C = B/A X 100%: | 100.000% | 99.969% | 100.000% | 99.994% | 99.994% | 99.983% | 100.000% | 100.000% |

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Submitted By (Print): D. Merredew

Signature: original signed by D. Merredew



Water Treatment Plant Turbidity Grab Monitoring Report October 2024

| 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-Oct-2024 | 1.50 | 2.86 | 0.09 | 0.12 | 0.09 | 0.11 | 0.11 | <0.02 | 0.10 | 0.07 | 0.09 | 0.10 | 0.09 | 0.07 | 0.09 | <0.02 | 0.08 | <0.02 | |
| 02-Oct-2024 | 1.88 | 1.89 | 0.16 | 0.13 | 0.10 | 0.11 | 0.14 | <0.02 | 0.09 | 0.06 | 0.10 | 0.10 | 0.14 | 0.08 | 0.10 | 0.02 | 0.12 | 0.03 | |
| 03-Oct-2024 | 1.85 | 3.50 | 0.10 | 0.15 | 0.10 | 0.15 | 0.11 | 0.02 | 0.10 | 0.04 | 0.09 | 0.12 | 0.09 | 0.09 | 0.08 | 0.03 | 0.18 | 0.12 | |
| 04-Oct-2024 | 1.80 | 4.00 | 0.11 | 0.18 | 0.10 | 0.15 | 0.12 | 0.02 | 0.10 | 0.05 | 0.09 | 0.14 | 0.11 | 0.10 | 0.09 | 0.03 | 0.09 | 0.03 | |
| 05-Oct-2024 | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | |
| 06-Oct-2024 | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | |
| 07-Oct-2024 | 2.17 | 1.82 | 0.10 | 0.12 | o/l | o/l | 0.11 | <0.02 | 0.13 | <0.02 | 0.13 | 0.16 | 0.09 | 0.05 | 0.09 | 0.02 | 0.10 | 0.13 | |
| 08-Oct-2024 | 2.16 | 3.75 | 0.11 | 0.12 | o/l | o/l | 0.11 | <0.02 | 0.16 | <0.02 | 0.10 | 0.20 | 0.11 | 0.05 | 0.09 | 0.02 | 0.14 | 0.12 | |
| 09-Oct-2024 | 3.37 | 4.90 | 0.11 | 0.13 | o/l | o/l | 0.12 | 0.05 | 0.10 | 0.03 | 0.11 | 0.14 | 0.14 | 0.04 | 0.11 | 0.02 | 0.18 | 0.13 | |
| 10-Oct-2024 | 2.02 | 1.81 | 0.09 | 0.11 | o/l | o/l | 0.12 | 0.06 | 0.11 | 0.05 | 0.12 | 0.15 | 0.08 | 0.05 | 0.09 | 0.03 | 0.09 | 0.12 | |
| 11-Oct-2024 | 1.51 | 1.71 | 0.10 | 0.12 | o/l | o/l | 0.11 | 0.07 | ns | ns | 0.09 | 0.16 | 0.09 | 0.05 | 0.09 | 0.03 | 0.09 | 0.12 | |
| 12-Oct-2024 | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | |
| 13-Oct-2024 | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | |
| 14-Oct-2024 | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | |
| 15-Oct-2024 | 1.66 | 1.41 | 0.12 | 0.14 | o/l | o/l | 0.10 | 0.06 | 0.09 | 0.03 | 0.12 | 0.19 | 0.10 | 0.07 | 0.09 | 0.05 | 0.17 | 0.17 | |
| 16-Oct-2024 | 1.63 | 1.50 | 0.10 | 0.15 | o/l | o/l | 0.12 | 0.06 | 0.09 | 0.05 | 0.11 | 0.18 | 0.08 | 0.07 | 0.10 | 0.06 | 0.08 | 0.14 | |
| 17-Oct-2024 | 1.47 | 1.45 | 0.12 | 0.13 | o/l | o/l | 0.11 | 0.05 | 0.10 | 0.04 | 0.09 | 0.17 | 0.10 | 0.08 | 0.09 | 0.08 | 0.09 | 0.13 | |
| 18-Oct-2024 | 1.28 | 1.54 | 0.09 | 0.15 | o/l | o/l | 0.11 | 0.08 | 0.11 | 0.05 | 0.09 | 0.17 | 0.10 | 0.09 | 0.11 | 0.09 | 0.10 | 0.14 | |
| 19-Oct-2024 | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | |
| 20-Oct-2024 | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | |
| 21-Oct-2024 | 1.54 | 1.52 | 0.10 | 0.15 | o/l | o/l | 0.11 | 0.08 | 0.10 | 0.06 | 0.09 | 0.19 | 0.10 | 0.10 | 0.13 | 0.15 | 0.09 | 0.14 | |
| 22-Oct-2024 | 1.49 | 1.59 | 0.10 | 0.15 | o/l | o/l | 0.12 | 0.10 | 0.10 | 0.08 | 0.09 | 0.18 | 0.10 | 0.11 | 0.11 | 0.12 | 0.09 | 0.13 | |
| 23-Oct-2024 | 1.41 | 1.47 | 0.09 | 0.17 | o/l | o/l | 0.10 | 0.11 | 0.09 | 0.09 | 0.10 | 0.21 | 0.09 | 0.12 | 0.10 | 0.14 | 0.10 | 0.14 | |
| 24-Oct-2024 | 1.45 | 1.39 | 0.10 | 0.14 | o/l | o/l | 0.10 | 0.06 | 0.10 | 0.05 | 0.09 | 0.16 | 0.10 | 0.10 | 0.08 | <0.02 | 0.09 | 0.11 | |
| 25-Oct-2024 | 1.76 | 1.58 | 0.11 | 0.15 | o/l | o/l | 0.10 | 0.06 | 0.10 | 0.05 | 0.10 | 0.16 | 0.10 | 0.07 | 0.09 | 0.02 | 0.10 | 0.11 | |
| 26-Oct-2024 | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | |
| 27-Oct-2024 | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | ns | |
| 28-Oct-2024 | 1.51 | 1.51 | 0.10 | 0.16 | o/l | o/l | 0.12 | 0.08 | 0.11 | 0.10 | 0.09 | 0.17 | 0.15 | 0.10 | 0.11 | 0.04 | 0.10 | 0.12 | |
| 29-Oct-2024 | 1.50 | 1.44 | 0.11 | 0.17 | o/l | o/l | 0.12 | 0.08 | 0.10 | 0.10 | 0.10 | 0.17 | 0.09 | 0.11 | 0.09 | 0.03 | 0.10 | 0.11 | |
| 30-Oct-2024 | 1.78 | 1.62 | 0.09 | 0.19 | o/l | o/l | 0.13 | 0.12 | 0.09 | 0.10 | 0.09 | 0.17 | 0.09 | 0.11 | 0.09 | 0.04 | 0.14 | 0.12 | |
| 31-Oct-2024 | 1.62 | 1.48 | 0.10 | 0.13 | o/l | o/l | 0.09 | 0.07 | 0.09 | <0.02 | 0.09 | 0.03 | 0.09 | 0.06 | 0.09 | 0.13 | 0.10 | 0.08 | |
| Total number of measurements taken, A: | | | | | 4 | | | | 22 | | | | 22 | | | | 22 | | |
| Turbidity Standard for Monitoring Location (NTU): | | | | | 0.30 | | | | 0.30 | | | | 0.30 | | | | 0.30 | | |
| Number of measurements meeting standard, B: | | | | | 22 | | | | 22 | | | | 22 | | | | 22 | | |
| Compliance with Turbidity Standard, C= B/A X 100%: | | | | | 100% | | | | 100% | | | | 100% | | | | 100% | | |

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

Comments:

Report Date: November 7, 2024



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 November 2024

Report Period: October 2024

| Date | BRANCH 1 [mg/L] | | BRANCH 2 [mg/L] | |
|------------|--------------------|---------|--------------------|---------|
| | Average | Minimum | Average | Minimum |
| 01/10/2024 | 1.58 | 1.48 | 1.70 | 1.64 |
| 02/10/2024 | 1.56 | 1.50 | 1.64 | 1.56 |
| 03/10/2024 | 1.62 | 1.54 | 1.64 | 1.56 |
| 04/10/2024 | 1.64 | 1.48 | 1.65 | 1.50 |
| 05/10/2024 | 1.54 | 1.46 | 1.55 | 1.47 |
| 06/10/2024 | 1.53 | 1.16 | 1.51 | 1.17 |
| 07/10/2024 | 1.46 | 1.30 | 1.51 | 1.27 |
| 08/10/2024 | 1.48 | 1.26 | 1.48 | 1.35 |
| 09/10/2024 | 1.57 | 1.42 | 1.48 | 1.23 |
| 10/10/2024 | 1.53 | 1.45 | 1.59 | 1.53 |
| 11/10/2024 | 1.59 | 1.51 | 1.61 | 1.51 |
| 12/10/2024 | 1.66 | 1.59 | 1.49 | 1.39 |
| 13/10/2024 | 1.58 | 1.49 | 1.47 | 1.34 |
| 14/10/2024 | 1.66 | 1.56 | 1.62 | 1.51 |
| 15/10/2024 | 1.73 | 1.60 | 1.62 | 1.54 |
| 16/10/2024 | 1.64 | 1.51 | 1.54 | 1.46 |
| 17/10/2024 | 1.56 | 1.47 | 1.50 | 1.38 |
| 18/10/2024 | 1.50 | 1.35 | 1.47 | 1.33 |
| 19/10/2024 | 1.48 | 1.37 | 1.41 | 1.32 |
| 20/10/2024 | 1.41 | 1.34 | 1.34 | 1.26 |
| 21/10/2024 | 1.44 | 1.36 | 1.40 | 1.26 |
| 22/10/2024 | 1.46 | 1.39 | 1.54 | 1.40 |
| 23/10/2024 | 1.56 | 1.43 | 1.64 | 1.50 |
| 24/10/2024 | 1.66 | 1.11 | 1.70 | 1.31 |
| 25/10/2024 | 1.73 | 1.65 | 1.78 | 1.69 |
| 26/10/2024 | 1.63 | 1.53 | 1.65 | 1.53 |
| 27/10/2024 | 1.62 | 1.54 | 1.64 | 1.55 |
| 28/10/2024 | 1.58 | 1.44 | 1.66 | 0.79 |
| 29/10/2024 | 1.48 | 1.42 | 1.57 | 0.78 |
| 30/10/2024 | 1.52 | 1.21 | 1.81 | 1.53 |
| 31/10/2024 | 1.52 | 1.45 | 1.73 | 1.64 |

| | | |
|---|--------|--------|
| Total Number of Measurements, A: | 21600 | 21600 |
| Minimum Free Chlorine Standard: | 0.5 | 0.5 |
| Number of Measurements Meeting Standard, B: | 21600 | 21600 |
| COMPLIANCE, C = B/A X 100%: | 100.00 | 100.00 |

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2024\10-October

Submitted By (Print): D. Merredew

Signature: original signed by D. Merredew



Water Treatment Plant Chlorine Grab Monitoring Report October 2024

| Water System Code: 252.00 Licence No. PWS-09-412-02 AA | 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-Oct-2024 | 1.52 | 1.49 | 1.83 | 1.64 | 1.65 | 1.82 |
| 02-Oct-2024 | 1.55 | 1.60 | 1.82 | 1.60 | 1.62 | 1.86 |
| 03-Oct-2024 | 1.64 | 1.50 | 1.87 | 1.66 | 1.63 | 1.87 |
| 04-Oct-2024 | 1.77 | 1.72 | 1.95 | 1.73 | 1.80 | 1.93 |
| 05-Oct-2024 | ns | ns | ns | ns | ns | ns |
| 06-Oct-2024 | ns | ns | ns | ns | ns | ns |
| 07-Oct-2024 | 1.53 | 1.57 | 1.82 | 1.54 | 1.57 | 1.85 |
| 08-Oct-2024 | 1.38 | 1.46 | 1.68 | 1.53 | 1.60 | 1.84 |
| 09-Oct-2024 | 1.58 | 1.64 | 1.92 | 1.39 | 1.46 | 1.66 |
| 10-Oct-2024 | 1.54 | 1.58 | 1.80 | 1.54 | 1.62 | 1.84 |
| 11-Oct-2024 | 1.54 | 1.62 | 1.78 | 1.57 | 1.55 | 1.85 |
| 12-Oct-2024 | ns | ns | ns | ns | ns | ns |
| 13-Oct-2024 | ns | ns | ns | ns | ns | ns |
| 14-Oct-2024 | ns | ns | ns | ns | ns | ns |
| 15-Oct-2024 | 1.73 | 1.84 | 2.02 | 1.64 | 1.71 | 1.88 |
| 16-Oct-2024 | 1.65 | 1.72 | 1.90 | 1.58 | 1.60 | 1.90 |
| 17-Oct-2024 | 1.55 | 1.70 | 1.85 | 1.50 | 1.60 | 1.78 |
| 18-Oct-2024 | 1.46 | 1.60 | 1.77 | 1.40 | 1.50 | 1.68 |
| 19-Oct-2024 | ns | ns | ns | ns | ns | ns |
| 20-Oct-2024 | ns | ns | ns | ns | ns | ns |
| 21-Oct-2024 | 1.44 | 1.53 | 1.70 | 1.27 | 1.41 | 1.64 |
| 22-Oct-2024 | 1.43 | 1.58 | 1.78 | 1.55 | 1.66 | 1.91 |
| 23-Oct-2024 | 1.63 | 1.66 | 1.91 | 1.53 | 1.61 | 1.77 |
| 24-Oct-2024 | 1.44 | 1.49 | 1.62 | 1.54 | 1.49 | 1.63 |
| 25-Oct-2024 | 1.69 | 1.61 | 1.91 | 1.77 | 1.79 | 1.95 |
| 26-Oct-2024 | ns | ns | ns | ns | ns | ns |
| 27-Oct-2024 | ns | ns | ns | ns | ns | ns |
| 28-Oct-2024 | 1.63 | 1.64 | 1.85 | 1.69 | 1.72 | 1.88 |
| 29-Oct-2024 | 1.44 | 1.59 | 1.81 | 1.59 | 1.73 | 1.91 |
| 30-Oct-2024 | 1.61 | 1.57 | 1.79 | 1.64 | 1.71 | 1.92 |
| 31-Oct-2024 | 1.52 | 1.57 | 1.82 | 1.76 | 1.74 | 1.88 |
| Total number of measurements taken, A: | | | 22 | | | 22 |
| Chlorine Standard for Monitoring Location (mg/L): | | | 0.50 | | | 0.50 |
| Number of measurements meeting standard, B: | | | 22 | | | 22 |
| Compliance with Chlorine Standard, C= B/A X 100%: | | | 100% | | | 100% |

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

Comments:

Report Date: November 7, 2024



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 WATER SERVICES

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

WATER TREATMENT PLANT UV REPORT

Report Period: **October 2024**

Report Created: **Friday, November 01, 2024**

| 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 | |
| 01/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 87.94 | 87.94 | 34.60 | 34.61 | 70.67 | 70.67 | 193.21 | 193.22 | 99.99 |
| 02/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 86.13 | 86.13 | 101.69 | 101.69 | 0.00 | 0.00 | 187.82 | 187.82 | 100.00 |
| 03/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 88.63 | 88.63 | 102.67 | 102.67 | 0.00 | 0.00 | 191.31 | 191.31 | 100.00 |
| 04/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 89.56 | 89.56 | 103.46 | 103.46 | 0.00 | 0.00 | 193.02 | 193.02 | 100.00 |
| 05/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 89.59 | 89.59 | 103.41 | 103.41 | 0.00 | 0.00 | 193.00 | 193.00 | 100.00 |
| 06/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 1.32 | 1.36 | 88.09 | 88.09 | 100.46 | 100.46 | 1.35 | 1.35 | 191.22 | 191.26 | 99.98 |
| 07/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 49.59 | 49.59 | 48.31 | 48.31 | 44.63 | 44.63 | 50.22 | 50.22 | 192.76 | 192.76 | 100.00 |
| 08/10/2024 | 45.26 | 45.26 | 0.00 | 0.00 | 0.00 | 0.00 | 98.32 | 98.32 | 49.39 | 49.39 | 0.00 | 0.00 | 192.97 | 192.97 | 100.00 |
| 09/10/2024 | 56.45 | 56.45 | 0.00 | 0.00 | 41.46 | 41.46 | 51.23 | 51.55 | 43.09 | 43.09 | 0.19 | 0.20 | 192.41 | 192.75 | 99.83 |
| 10/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 99.09 | 99.09 | 0.00 | 0.00 | 93.92 | 93.92 | 0.00 | 0.00 | 193.02 | 193.02 | 100.00 |
| 11/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 99.29 | 99.29 | 0.00 | 0.00 | 93.75 | 93.75 | 0.00 | 0.00 | 193.04 | 193.04 | 100.00 |
| 12/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 100.78 | 100.78 | 0.00 | 0.00 | 95.88 | 95.88 | 0.00 | 0.00 | 196.66 | 196.66 | 100.00 |
| 13/10/2024 | 21.14 | 21.14 | 0.00 | 0.00 | 102.11 | 102.11 | 0.00 | 0.00 | 76.71 | 76.71 | 0.00 | 0.00 | 199.96 | 199.96 | 100.00 |
| 14/10/2024 | 95.35 | 95.35 | 0.00 | 0.00 | 96.58 | 96.58 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 191.93 | 191.93 | 100.00 |
| 15/10/2024 | 94.34 | 94.34 | 0.00 | 0.00 | 95.60 | 95.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 189.94 | 189.94 | 100.00 |
| 16/10/2024 | 93.47 | 93.47 | 0.00 | 0.00 | 96.49 | 96.49 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 189.96 | 189.96 | 100.00 |
| 17/10/2024 | 90.54 | 90.54 | 0.00 | 0.00 | 99.44 | 99.44 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 189.98 | 189.98 | 100.00 |
| 18/10/2024 | 80.81 | 80.81 | 0.00 | 0.00 | 69.05 | 69.05 | 40.18 | 40.18 | 0.00 | 0.00 | 0.00 | 0.00 | 190.04 | 190.04 | 100.00 |
| 19/10/2024 | 86.02 | 86.02 | 0.00 | 0.00 | 82.93 | 82.93 | 20.79 | 20.79 | 0.00 | 0.00 | 0.00 | 0.00 | 189.74 | 189.74 | 100.00 |
| 20/10/2024 | 92.17 | 92.17 | 0.00 | 0.00 | 99.02 | 99.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 191.19 | 191.19 | 100.00 |
| 21/10/2024 | 95.46 | 95.46 | 0.00 | 0.00 | 50.00 | 50.00 | 49.55 | 49.55 | 0.00 | 0.00 | 0.00 | 0.00 | 195.02 | 195.02 | 100.00 |
| 22/10/2024 | 95.36 | 95.36 | 0.00 | 0.00 | 0.14 | 0.17 | 99.49 | 99.49 | 0.00 | 0.00 | 0.00 | 0.00 | 194.99 | 195.02 | 99.99 |
| 23/10/2024 | 30.76 | 30.76 | 0.00 | 0.00 | 0.00 | 0.00 | 99.76 | 99.76 | 60.55 | 60.55 | 0.00 | 0.00 | 191.07 | 191.07 | 100.00 |
| 24/10/2024 | 0.00 | 0.00 | 7.74 | 7.74 | 0.00 | 0.00 | 98.53 | 98.53 | 34.91 | 34.92 | 46.91 | 46.91 | 188.09 | 188.10 | 99.99 |
| 25/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 98.05 | 98.05 | 0.00 | 0.00 | 88.85 | 88.85 | 186.90 | 186.90 | 100.00 |
| 26/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100.29 | 100.29 | 0.00 | 0.00 | 91.09 | 91.09 | 191.37 | 191.37 | 100.00 |
| 27/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 104.69 | 104.69 | 0.00 | 0.00 | 94.70 | 94.70 | 199.39 | 199.39 | 100.00 |
| 28/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 105.73 | 105.73 | 0.00 | 0.00 | 95.24 | 95.24 | 200.97 | 200.97 | 100.00 |
| 29/10/2024 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 104.60 | 104.60 | 0.00 | 0.00 | 94.08 | 94.08 | 198.68 | 198.72 | 99.98 |
| 30/10/2024 | 0.00 | 0.00 | 9.33 | 9.33 | 0.07 | 0.07 | 91.08 | 91.08 | 33.03 | 33.03 | 60.49 | 60.49 | 194.00 | 194.00 | 100.00 |
| 31/10/2024 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 98.30 | 98.30 | 89.26 | 89.26 | 0.00 | 0.00 | 187.55 | 187.55 | 100.00 |
| Total [ML]: | 977.14 | 977.18 | 17.07 | 17.07 | 1182.98 | 1183.05 | 1838.83 | 1839.14 | 1261.41 | 1261.44 | 693.78 | 693.79 | 5971.20 | 5971.67 | |

| | | | | | | | | | | | | | | | |
|--------------------------|--------|---|--------|---|-------|---|-------|---|--------|---|--------|---|--|--|--|
| Water Volume [%]: | | | | | | | | | | | | | | | |
| To Dose per reactor | 100.00 | % | 100.00 | % | 99.99 | % | 99.98 | % | 100.00 | % | 100.00 | % | | | |
| To Dose Total | 99.99 | % | | | | | | | | | | | | | |

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: October 2024

Report Created: Friday, November 01, 2024

| Date | Transmittance (%) | | | | UVR_D100A [Log] | | UVR_D200A [Log] | | UVR_D300A [Log] | | UVR_D400A [Log] | | UVR_D500A [Log] | | UVR_D600A [Log] | |
|------------|-------------------|------|----------|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|-----------------|------|
| | Branch 1 | | Branch 2 | | Avg. | Min. | Avg. | Min. | Avg. | Min. | Avg. | Min. | Avg. | Min. | Avg. | Min. |
| | Avg. | Min. | Avg. | Min. | | | | | | | | | | | | |
| 01/10/2024 | 95.5 | 94.8 | 94.5 | 93.7 | OL | OL | OL | OL | OL | OL | 2.5 | 2.3 | 3.3 | 0.0 | 2.5 | 2.3 |
| 02/10/2024 | 95.5 | 95.0 | 94.5 | 93.2 | OL | OL | OL | OL | OL | OL | 2.5 | 2.2 | 2.5 | 2.2 | OL | OL |
| 03/10/2024 | 95.4 | 94.9 | 94.5 | 93.5 | OL | OL | OL | OL | OL | OL | 2.5 | 2.2 | 2.5 | 2.2 | OL | OL |
| 04/10/2024 | 95.5 | 94.9 | 94.6 | 90.8 | OL | OL | OL | OL | OL | OL | 2.5 | 2.2 | 2.5 | 2.0 | OL | OL |
| 05/10/2024 | 95.5 | 94.9 | 94.7 | 90.5 | OL | OL | OL | OL | OL | OL | 2.5 | 2.1 | 2.5 | 2.0 | OL | OL |
| 06/10/2024 | 95.6 | 94.7 | 94.8 | 93.1 | OL | OL | OL | OL | 2.7 | 0.0 | 2.5 | 1.3 | 2.5 | 1.6 | 3.7 | 2.8 |
| 07/10/2024 | 95.7 | 94.9 | 94.8 | 88.1 | OL | OL | OL | OL | 2.5 | 2.2 | 2.4 | 1.5 | 3.2 | 2.2 | 2.7 | 2.1 |
| 08/10/2024 | 95.7 | 95.0 | 94.9 | 92.6 | 3.1 | 2.3 | OL | OL | OL | OL | 2.4 | 2.0 | 2.5 | 2.3 | OL | OL |
| 09/10/2024 | 95.5 | 95.0 | 94.9 | 82.5 | 2.5 | 0.0 | OL | OL | 2.5 | 2.0 | 2.4 | 0.0 | 3.0 | 2.1 | 3.8 | 0.0 |
| 10/10/2024 | 95.6 | 95.0 | 94.8 | 87.9 | OL | OL | OL | OL | 2.5 | 1.8 | OL | OL | 2.5 | 1.8 | OL | OL |
| 11/10/2024 | 95.6 | 95.0 | 95.0 | 90.6 | OL | OL | OL | OL | 2.5 | 2.1 | OL | OL | 2.5 | 2.0 | OL | OL |
| 12/10/2024 | 95.5 | 95.0 | 95.5 | 92.8 | OL | OL | OL | OL | 2.5 | 2.1 | OL | OL | 3.6 | 0.0 | OL | OL |
| 13/10/2024 | 95.5 | 94.8 | 95.6 | 93.9 | 3.5 | 2.3 | OL | OL | 2.5 | 1.8 | OL | OL | 3.7 | 3.4 | OL | OL |
| 14/10/2024 | 95.6 | 95.0 | 95.9 | 93.5 | 2.5 | 2.3 | OL | OL | 2.5 | 2.2 | OL | OL | OL | OL | OL | OL |
| 15/10/2024 | 95.5 | 94.7 | 95.5 | 0.0 | 2.5 | 2.1 | OL | OL | 2.4 | 1.9 | OL | OL | 1.9 | 1.8 | OL | OL |
| 16/10/2024 | 95.5 | 94.8 | 95.0 | 93.2 | 2.4 | 2.2 | OL | OL | 2.4 | 2.1 | OL | OL | OL | OL | OL | OL |
| 17/10/2024 | 95.6 | 95.0 | 95.0 | 92.9 | 2.5 | 2.2 | OL | OL | 2.5 | 2.2 | OL | OL | OL | OL | OL | OL |
| 18/10/2024 | 95.5 | 95.0 | 94.8 | 91.3 | 2.5 | 2.2 | OL | OL | 2.5 | 2.1 | 3.4 | 0.0 | OL | OL | OL | OL |
| 19/10/2024 | 95.5 | 94.9 | 94.8 | 85.0 | 2.4 | 2.2 | OL | OL | 2.4 | 1.6 | 2.8 | 2.5 | OL | OL | OL | OL |
| 20/10/2024 | 94.8 | 93.2 | 94.8 | 92.2 | 2.5 | 2.2 | OL | OL | 2.3 | 2.1 | OL | OL | OL | OL | OL | OL |
| 21/10/2024 | 92.0 | 89.5 | 94.7 | 91.5 | 2.4 | 2.0 | OL | OL | 2.4 | 2.1 | 3.0 | 2.2 | OL | OL | OL | OL |
| 22/10/2024 | 95.1 | 89.3 | 94.5 | 90.3 | 2.4 | 2.0 | OL | OL | 3.6 | 0.0 | 2.5 | 2.0 | OL | OL | OL | OL |
| 23/10/2024 | 95.4 | 94.8 | 94.6 | 91.6 | 2.5 | 2.2 | OL | OL | OL | OL | 2.5 | 2.3 | 2.5 | 2.2 | OL | OL |
| 24/10/2024 | 95.1 | 94.5 | 94.3 | 93.0 | 0.0 | 0.0 | 2.4 | 1.3 | OL | OL | 2.5 | 1.9 | 2.5 | 0.0 | 3.6 | 3.2 |
| 25/10/2024 | 95.4 | 94.8 | 94.5 | 91.4 | OL | OL | OL | OL | OL | OL | 2.5 | 2.2 | OL | OL | 2.9 | 2.3 |
| 26/10/2024 | 95.4 | 94.7 | 94.5 | 90.7 | OL | OL | OL | OL | OL | OL | 2.5 | 1.9 | OL | OL | 2.5 | 2.2 |
| 27/10/2024 | 95.4 | 94.6 | 94.5 | 91.4 | OL | OL | OL | OL | OL | OL | 2.5 | 2.2 | OL | OL | 2.5 | 2.3 |
| 28/10/2024 | 95.4 | 94.6 | 94.5 | 92.3 | OL | OL | OL | OL | OL | OL | 2.5 | 2.0 | OL | OL | 2.5 | 2.2 |
| 29/10/2024 | 95.4 | 94.6 | 94.4 | 89.2 | 0.0 | 0.0 | OL | OL | 4.2 | 0.0 | 2.5 | 2.1 | OL | OL | 2.5 | 2.0 |
| 30/10/2024 | 95.4 | 94.6 | 94.5 | 87.6 | OL | OL | 2.4 | 1.3 | 4.1 | 0.0 | 2.5 | 2.1 | 3.3 | 1.7 | 2.5 | 2.3 |
| 31/10/2024 | 95.4 | 94.6 | 94.5 | 90.4 | OL | OL | OL | OL | OL | OL | 2.5 | 2.3 | 2.5 | 2.0 | 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