



Water and Waste Department • Service des eaux et des déchets

July 4, 2014

Our File: 040-18-18-55-00

Melanie Betsill
Office of Drinking Water
Manitoba Conservation and Water Stewardship
1007 Century Street
Winnipeg, Manitoba
R3H 0W4

Dear Ms. Betsill:

**RE: JUNE 2014 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 June 2014. We have also included one corrective action report for low pressure in the distribution system.

The June on-line and grab sampling turbidity reports include results obtained for the Water Treatment Plant raw water and the eight filters. The turbidity results for the effluent from the filters are in compliance with the licence requirements.

The June 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 have met the licence requirements.

The UV submission includes the summary report for June 2014 in accordance with Section 4.13, Table 2 of the Operating Licence. The UV licence requirement has been met for June.

On June 9, the power supply for all three in-town pump stations was interrupted due to a Manitoba Hydro pole fire. The power was off for approximately one minute. During the outage, system pressures dropped significantly across the city. The pressure point monitors indicated that pressures ranged from 20 to 40 psi for approximately 10 minutes. Staff of the Office of Drinking Water was notified and as requested a corrective action reported is being submitted. Routine water quality sampling confirmed that water quality was not detrimentally affected.

Please let me know of any concerns or questions respecting this submission. I may be reached by telephone at 204-986-4807 or by e-mail at kkjartanson@winnipeg.ca.

Thanks for your ongoing cooperation and understanding in this matter.

Yours sincerely,

Original signed by:

K.J.T. Kjartanson, P.Eng.
Manager of Environmental Standards

KJTK:rg
Attachments

c:(e-mail)

Dr. L. Richards, Winnipeg Regional Health Authority
Dr. H. Chang, Winnipeg Regional Health Authority
Dr. S. Roberecki, Manitoba Health
D.P. Sacher, P.Eng
G. Patton, P.Eng.
T. Shanks, P.Eng.
A. J. Weremy, P.Eng.
S. Fletcher

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CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 WATER SERVICES

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

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

June 2014 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 |
| 1/06/2014 | 1.08 | 0.04 | 0.08 | 0.03 | 0.07 | 0.01 | 0.01 | 0.01 | 0.02 | 0.04 | 0.07 | 0.04 | 0.09 | 0.01 | 0.04 | 0.01 | 0.01 |
| 2/06/2014 | 1.05 | 0.05 | 0.11 | 0.04 | 0.05 | 0.01 | 0.02 | 0.02 | 0.05 | 0.04 | 0.10 | 0.05 | 0.06 | 0.01 | 0.05 | 0.01 | 0.02 |
| 3/06/2014 | 1.04 | 0.08 | 0.21 | 0.06 | 0.11 | 0.03 | 0.17 | 0.03 | 0.11 | 0.07 | 0.09 | 0.09 | 0.15 | 0.05 | 0.12 | 0.01 | 0.06 |
| 4/06/2014 | 1.04 | 0.07 | 0.14 | 0.06 | 0.11 | 0.07 | 0.12 | 0.04 | 0.10 | 0.06 | 0.17 | 0.08 | 0.18 | 0.04 | 0.10 | 0.01 | 0.08 |
| 5/06/2014 | 1.15 | 0.07 | 0.14 | 0.05 | 0.14 | 0.06 | 0.09 | 0.04 | 0.09 | 0.07 | 0.15 | 0.08 | 0.15 | 0.03 | 0.15 | 0.01 | 0.08 |
| 6/06/2014 | 1.24 | 0.08 | 0.15 | 0.06 | 0.13 | 0.07 | 0.17 | 0.05 | 0.13 | 0.08 | 0.16 | 0.09 | 0.17 | 0.05 | 0.12 | 0.03 | 0.11 |
| 7/06/2014 | 1.19 | 0.09 | 0.16 | 0.05 | 0.13 | 0.07 | 0.17 | 0.05 | 0.13 | 0.08 | 0.16 | 0.08 | 0.17 | 0.05 | 0.12 | 0.03 | 0.09 |
| 8/06/2014 | 1.24 | 0.08 | 0.16 | 0.05 | 0.09 | 0.06 | 0.13 | 0.05 | 0.09 | 0.06 | 0.12 | 0.07 | 0.14 | 0.04 | 0.13 | 0.02 | 0.06 |
| 9/06/2014 | 1.23 | 0.08 | 0.11 | 0.05 | 0.09 | 0.05 | 0.11 | 0.04 | 0.08 | 0.06 | 0.10 | 0.08 | 0.16 | 0.03 | 0.09 | 0.02 | 0.25 |
| 10/06/2014 | 1.37 | 0.09 | 0.14 | 0.04 | 0.09 | 0.04 | 0.07 | 0.03 | 0.08 | 0.06 | 0.08 | 0.06 | 0.16 | 0.02 | 0.06 | 0.01 | 0.05 |
| 11/06/2014 | 1.50 | 0.08 | 0.14 | 0.04 | 0.10 | 0.05 | 0.09 | 0.04 | 0.08 | 0.05 | 0.10 | 0.06 | 0.11 | 0.02 | 0.07 | 0.01 | 0.02 |
| 12/06/2014 | 1.81 | 0.08 | 0.14 | 0.04 | 0.05 | 0.04 | 0.10 | 0.03 | 0.08 | 0.05 | 0.10 | 0.05 | 0.14 | 0.02 | 0.04 | 0.01 | 0.06 |
| 13/06/2014 | 2.22 | 0.07 | 0.10 | 0.04 | 0.08 | 0.03 | 0.07 | 0.03 | 0.07 | 0.04 | 0.09 | 0.06 | 0.09 | 0.01 | 0.06 | 0.01 | 0.06 |
| 14/06/2014 | 1.72 | 0.08 | 0.12 | 0.03 | 0.06 | 0.02 | 0.03 | 0.02 | 0.06 | 0.04 | 0.06 | 0.04 | 0.11 | 0.01 | 0.04 | 0.01 | 0.04 |
| 15/06/2014 | 1.17 | 0.07 | 0.12 | 0.02 | 0.06 | 0.02 | 0.04 | 0.02 | 0.05 | 0.03 | 0.07 | 0.04 | 0.09 | 0.01 | 0.01 | 0.01 | 0.01 |
| 16/06/2014 | 1.19 | 0.08 | 0.09 | 0.03 | 0.05 | 0.02 | 0.06 | 0.02 | 0.07 | 0.03 | 0.06 | 0.04 | 0.06 | 0.01 | 0.03 | 0.01 | 0.19 |
| 17/06/2014 | 1.18 | 0.07 | 0.13 | 0.02 | 0.06 | 0.03 | 0.04 | 0.02 | 0.03 | 0.04 | 0.06 | 0.04 | 0.10 | 0.01 | 0.03 | 0.01 | 0.03 |
| 18/06/2014 | 1.19 | 0.07 | 0.12 | 0.02 | 0.04 | 0.00 | 0.03 | 0.02 | 0.06 | 0.04 | 0.06 | 0.04 | 0.09 | 0.01 | 0.01 | 0.01 | 0.02 |
| 19/06/2014 | 1.13 | 0.07 | 0.10 | 0.03 | 0.09 | 0.02 | 0.15 | 0.02 | 0.10 | 0.03 | 0.11 | 0.05 | 0.07 | 0.01 | 0.04 | 0.01 | 0.03 |
| 20/06/2014 | 0.98 | 0.11 | 0.16 | 0.04 | 0.13 | 0.04 | 0.07 | 0.05 | 0.07 | 0.08 | 0.14 | 0.08 | 0.19 | 0.03 | 0.14 | 0.02 | 0.14 |
| 21/06/2014 | 1.00 | 0.09 | 0.20 | 0.04 | 0.07 | 0.07 | 0.16 | 0.05 | 0.13 | 0.06 | 0.16 | 0.06 | 0.20 | 0.05 | 0.08 | 0.04 | 0.10 |
| 22/06/2014 | 0.95 | 0.07 | 0.15 | 0.05 | 0.11 | 0.03 | 0.12 | 0.03 | 0.11 | 0.04 | 0.12 | 0.06 | 0.11 | 0.01 | 0.08 | 0.01 | 0.09 |
| 23/06/2014 | 0.76 | 0.04 | 0.11 | 0.03 | 0.10 | 0.03 | 0.15 | 0.03 | 0.05 | 0.04 | 0.11 | 0.03 | 0.14 | 0.01 | 0.04 | 0.00 | 0.05 |
| 24/06/2014 | 0.69 | 0.03 | 0.11 | 0.03 | 0.09 | 0.04 | 0.05 | 0.03 | 0.10 | 0.03 | 0.11 | 0.03 | 0.13 | 0.00 | 0.01 | 0.01 | 0.01 |
| 25/06/2014 | 0.83 | 0.03 | 0.10 | 0.04 | 0.05 | 0.04 | 0.13 | 0.03 | 0.10 | 0.03 | 0.10 | 0.03 | 0.11 | 0.01 | 0.05 | 0.00 | 0.07 |
| 26/06/2014 | 0.86 | 0.06 | 0.13 | 0.07 | 0.14 | 0.07 | 0.22 | 0.05 | 0.22 | 0.05 | 0.22 | 0.09 | 0.18 | 0.06 | 0.17 | 0.04 | 0.18 |
| 27/06/2014 | 0.92 | 0.09 | 0.21 | 0.06 | 0.20 | 0.05 | 0.18 | 0.07 | 0.14 | 0.11 | 0.20 | 0.08 | 0.25 | 0.05 | 0.18 | 0.03 | 0.12 |
| 28/06/2014 | 0.92 | 0.03 | 0.12 | 0.03 | 0.12 | 0.01 | 0.05 | 0.04 | 0.15 | 0.04 | 0.15 | 0.05 | 0.14 | 0.01 | 0.04 | 0.02 | 0.12 |
| 29/06/2014 | 1.09 | 0.03 | 0.15 | 0.05 | 0.08 | 0.03 | 0.07 | 0.05 | 0.13 | 0.05 | 0.15 | 0.05 | 0.07 | 0.03 | 0.07 | 0.02 | 0.06 |
| 30/06/2014 | 1.10 | 0.06 | 0.12 | 0.04 | 0.14 | 0.03 | 0.16 | 0.05 | 0.10 | 0.05 | 0.11 | 0.07 | 0.18 | 0.01 | 0.15 | 0.01 | 0.03 |

| | | | | | | | | |
|---|---------|---------|---------|---------|---------|---------|---------|---------|
| Total Number of Measurements Taken, A: | 14976 | 14904 | 14266 | 12055 | 15292 | 15579 | 14076 | 15106 |
| 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: | 14976 | 14904 | 14266 | 12055 | 15292 | 15579 | 14076 | 15106 |
| Compliance with Turbidity Standard, C = B/A X 100%: | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |

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Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

WATER TREATMENT PLANT TURBIDITY GRAB MONITORING REPORT

| Water System Code: 252.00 | Turbidity (NTU) | | | | | | | | |
|---|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Licence No. PWS-09-412 A | Turbidity (NTU) | | | | | | | | |
| Date | Raw Water | Filter 1 | Filter 2 | Filter 3 | Filter 4 | Filter 5 | Filter 6 | Filter 7 | Filter 8 |
| 01-Jun-2014 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 02-Jun-2014 | 0.79 | 0.06 | 0.06 | 0.10 | 0.07 | 0.07 | 0.07 | 0.10 | 0.07 |
| 03-Jun-2014 | 0.88 | 0.11 | 0.11 | 0.14 | 0.10 | 0.10 | 0.16 | 0.11 | 0.15 |
| 04-Jun-2014 | 0.86 | 0.13 | 0.12 | 0.12 | 0.17 | 0.15 | 0.18 | 0.13 | 0.11 |
| 05-Jun-2014 | 0.96 | 0.12 | 0.08 | 0.10 | 0.10 | 0.15 | 0.19 | 0.09 | 0.08 |
| 06-Jun-2014 | 1.04 | 0.24 | 0.19 | 0.22 | 0.20 | 0.25 | 0.15 | 0.18 | 0.21 |
| 07-Jun-2014 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 08-Jun-2014 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 09-Jun-2014 | 0.88 | 0.10 | 0.09 | 0.09 | 0.08 | 0.09 | 0.12 | 0.12 | 0.11 |
| 10-Jun-2014 | 1.07 | 0.09 | 0.10 | 0.08 | 0.07 | 0.09 | 0.11 | 0.07 | 0.18 |
| 11-Jun-2014 | 1.09 | 0.12 | 0.08 | 0.10 | 0.08 | 0.09 | 0.12 | 0.08 | 0.08 |
| 12-Jun-2014 | 0.94 | 0.20 | 0.10 | 0.17 | 0.14 | 0.20 | 0.13 | 0.12 | 0.18 |
| 13-Jun-2014 | 0.90 | 0.07 | 0.08 | 0.07 | 0.09 | 0.08 | 0.08 | 0.09 | 0.12 |
| 14-Jun-2014 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 15-Jun-2014 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 16-Jun-2014 | 0.81 | 0.05 | 0.05 | 0.08 | 0.05 | <0.05 | 0.08 | 0.07 | 0.07 |
| 17-Jun-2014 | 0.81 | 0.07 | 0.08 | 0.07 | 0.06 | 0.06 | 0.10 | 0.06 | 0.07 |
| 18-Jun-2014 | 0.98 | 0.05 | 0.07 | O/L | 0.07 | 0.05 | 0.05 | 0.07 | 0.07 |
| 19-Jun-2014 | 0.95 | 0.06 | 0.07 | O/L | 0.05 | 0.06 | 0.12 | 0.08 | 0.09 |
| 20-Jun-2014 | 0.76 | 0.15 | 0.17 | 0.12 | 0.12 | 0.15 | 0.23 | 0.08 | 0.14 |
| 21-Jun-2014 | NS | NS | NS | 0.13 | NS | NS | NS | NS | NS |
| 22-Jun-2014 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 23-Jun-2014 | 0.69 | 0.11 | 0.08 | 0.07 | 0.07 | 0.06 | 0.09 | 0.05 | 0.07 |
| 24-Jun-2014 | 0.61 | 0.08 | 0.06 | 0.07 | 0.08 | 0.06 | 0.07 | 0.06 | 0.06 |
| 25-Jun-2014 | 0.69 | 0.06 | 0.06 | 0.08 | 0.08 | 0.06 | 0.06 | 0.06 | 0.06 |
| 26-Jun-2014 | 0.74 | 0.12 | 0.10 | 0.20 | 0.07 | 0.06 | 0.06 | 0.08 | 0.09 |
| 27-Jun-2014 | 0.78 | 0.20 | 0.17 | 0.17 | 0.17 | 0.17 | 0.27 | 0.27 | 0.16 |
| 28-Jun-2014 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 29-Jun-2014 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| 30-Jun-2014 | 0.87 | 0.14 | 0.17 | 0.08 | 0.11 | 0.12 | 0.18 | 0.11 | 0.10 |
| Total number of measurements taken, A: | 21 | 21 | 20 | 21 | 20 | 21 | 21 | 21 | 21 |
| Turbidity Standard for Monitoring Location (NTU): | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 |
| Number of measurements meeting standard, B: | 21 | 21 | 20 | 21 | 20 | 21 | 21 | 21 | 21 |
| Compliance with Turbidity Standard, C= B/A X 100%: | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

NS: No Sample NA: Not Analyzed OL: Off-Line

Comments:

Report Compiled By: H.Demchenko

Approved in LIMS By: S.Fletcher/ A.Vanderstel

Date Approved: 3-Jul-14



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

Water System Code: **252.00**
Licence Number: **PWS-09-412 A**
Report Created: 01 July 2014

Report Period: June 2014

| Date | BRANCH 1 [mg/L] | | BRANCH 2 [mg/L] | |
|------------|--------------------|---------|--------------------|---------|
| | Average | Minimum | Average | Minimum |
| 1/06/2014 | 1.04 | 0.89 | 0.97 | 0.84 |
| 2/06/2014 | 1.19 | 1.01 | 1.04 | 0.97 |
| 3/06/2014 | 1.15 | 1.01 | 1.06 | 0.93 |
| 4/06/2014 | 1.01 | 0.90 | 1.01 | 0.92 |
| 5/06/2014 | 0.92 | 0.84 | 0.93 | 0.84 |
| 6/06/2014 | 1.16 | 1.00 | 1.08 | 0.91 |
| 7/06/2014 | 1.09 | 0.99 | 0.96 | 0.87 |
| 8/06/2014 | 1.06 | 0.96 | 0.98 | 0.91 |
| 9/06/2014 | 1.05 | 0.91 | 1.17 | 0.79 |
| 10/06/2014 | 0.94 | 0.88 | 1.47 | 0.92 |
| 11/06/2014 | 1.01 | 0.81 | 0.99 | 0.89 |
| 12/06/2014 | 1.20 | 1.08 | 1.08 | 0.99 |
| 13/06/2014 | 1.19 | 1.07 | 1.01 | 0.93 |
| 14/06/2014 | 1.19 | 1.07 | 1.11 | 0.99 |
| 15/06/2014 | 1.14 | 1.07 | 1.08 | 0.93 |
| 16/06/2014 | 1.19 | 1.00 | 1.12 | 0.97 |
| 17/06/2014 | 1.32 | 1.10 | 1.19 | 1.09 |
| 18/06/2014 | 1.11 | 0.97 | 1.05 | 0.96 |
| 19/06/2014 | 1.15 | 0.99 | 1.02 | 0.89 |
| 20/06/2014 | 1.20 | 0.99 | 1.26 | 0.91 |
| 21/06/2014 | 1.12 | 0.98 | 1.24 | 1.12 |
| 22/06/2014 | 1.08 | 0.94 | 1.14 | 1.06 |
| 23/06/2014 | 1.08 | 0.89 | 1.05 | 0.92 |
| 24/06/2014 | 1.16 | 1.01 | 1.06 | 0.98 |
| 25/06/2014 | 1.13 | 0.99 | 1.14 | 0.99 |
| 26/06/2014 | 1.17 | 1.07 | 1.17 | 1.08 |
| 27/06/2014 | 1.14 | 1.04 | 1.14 | 1.04 |
| 28/06/2014 | 1.14 | 0.93 | 1.16 | 0.99 |
| 29/06/2014 | 1.12 | 0.98 | 1.14 | 0.94 |
| 30/06/2014 | 1.14 | 0.99 | 1.15 | 1.04 |

| | | |
|---|-------|-------|
| Total Number of Measurements, A: | 20813 | 20772 |
| Minimum Free Chlorine Standard: | 0.50 | 0.50 |
| Number of Measurements Meeting Standard, B: | 20813 | 20772 |
| COMPLIANCE, C = B/A X 100%: | 100 | 100 |

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Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENVIRONMENTAL STANDARDS DIVISION

| WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT | | | | |
|--|--|------------------------------|--|------------------------------|
| Water System Code: 252.00 | Deacon Booster Pumping Station Branch 1 | | Deacon Booster Pumping Station Branch 2 | |
| Licence No. PWS-09-412 A | Free Chlorine (mg/L) | Total Chlorine (mg/L) | Free Chlorine (mg/L) | Total Chlorine (mg/L) |
| Date | | | | |
| 01-Jun-2014 | NS | NS | NS | NS |
| 02-Jun-2014 | 1.25 | 1.46 | 1.14 | 1.28 |
| 03-Jun-2014 | 1.07 | 1.26 | 1.04 | 1.18 |
| 04-Jun-2014 | 0.98 | 1.16 | 1.01 | 1.17 |
| 05-Jun-2014 | 0.93 | 1.03 | 1.01 | 1.09 |
| 06-Jun-2014 | 1.20 | 1.36 | 1.16 | 1.35 |
| 07-Jun-2014 | NS | NS | NS | NS |
| 08-Jun-2014 | NS | NS | NS | NS |
| 09-Jun-2014 | 1.08 | 1.24 | 0.97 | 1.10 |
| 10-Jun-2014 | 0.97 | 1.17 | 0.95 | 1.14 |
| 11-Jun-2014 | 0.98 | 1.13 | 0.95 | 1.15 |
| 12-Jun-2014 | 1.20 | 1.39 | 1.13 | 1.29 |
| 13-Jun-2014 | 1.19 | 1.40 | 1.06 | 1.24 |
| 14-Jun-2014 | NS | NS | NS | NS |
| 15-Jun-2014 | NS | NS | NS | NS |
| 16-Jun-2014 | 1.12 | 1.35 | 1.04 | 1.23 |
| 17-Jun-2014 | 1.41 | 1.56 | 1.24 | 1.46 |
| 18-Jun-2014 | 1.15 | 1.33 | 1.13 | 1.29 |
| 19-Jun-2014 | 1.13 | 1.34 | 1.13 | 1.28 |
| 20-Jun-2014 | 1.17 | 1.35 | 1.01 | 1.23 |
| 21-Jun-2014 | NS | NS | NS | NS |
| 22-Jun-2014 | NS | NS | NS | NS |
| 23-Jun-2014 | 1.12 | 1.24 | 1.11 | 1.25 |
| 24-Jun-2014 | 1.10 | 1.34 | 1.08 | 1.29 |
| 25-Jun-2014 | 1.05 | 1.23 | 1.09 | 1.27 |
| 26-Jun-2014 | 1.16 | 1.32 | 1.18 | 1.40 |
| 27-Jun-2014 | 1.12 | 1.30 | 1.20 | 1.36 |
| 28-Jun-2014 | NS | NS | NS | NS |
| 29-Jun-2014 | NS | NS | NS | NS |
| 30-Jun-2014 | 1.19 | 1.37 | 1.16 | 1.33 |
| Total number of measurements taken, A: | 21 | | 21 | |
| Chlorine Standard for Monitoring Location (mg/L): | 0.50 | | 0.50 | |
| Number of measurements meeting standard, B: | 21 | | 21 | |
| Compliance with Chlorine Standard, C= B/A X 100%: | 100% | | 100% | |

NS: No Sample NA: Not Analyzed OL: Off-Line

Comments:

Report Compiled By: H.Demchenko

Approved in LIMS By: S.Fletcher/ A.Vanderstel



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

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

WATER TREATMENT PLANT UV REPORT

Report Period: **June 2014**

Report Created: **Tuesday, July 01, 2014**

| Date | Transmittance % | UVR-D100A Water Volume [ML] | | | | UVR-D200A Water Volume [ML] | | | | UVR-D300A Water Volume [ML] | | | | UVR-D400A Water Volume [ML] | | | | UVR-D500A Water Volume [ML] | | | | UVR-D600A Water Volume [ML] | | | | Total Water Volume [ML] | | | | % Volume Treated To Dose |
|------------|-----------------|--------------------------------|-------|---------|---------|--------------------------------|-------|--------|--------|--------------------------------|-------|-------|-------|--------------------------------|-------|---------|---------|--------------------------------|-------|---------|---------|--------------------------------|-------|---------|---------|----------------------------|--------|---------|---------|--------------------------|
| | | 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 | |
| 1/06/2014 | 95.32 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 81.74 | 81.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 76.53 | 76.53 | 0.00 | 0.00 | 40.97 | 40.97 | 0.00 | 0.00 | 49.22 | 49.22 | 0.00 | 0.00 | 248.47 | 248.47 | 100.00 |
| 2/06/2014 | 95.27 | 0.00 | 0.00 | 45.69 | 45.69 | 0.00 | 0.00 | 53.03 | 53.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 49.68 | 49.68 | 0.00 | 0.00 | 42.80 | 42.80 | 0.00 | 0.00 | 55.09 | 55.09 | 0.00 | 0.00 | 246.29 | 246.29 | 100.00 |
| 3/06/2014 | 95.26 | 0.00 | 0.00 | 42.61 | 42.61 | 0.00 | 0.00 | 65.97 | 65.97 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 39.35 | 39.35 | 0.00 | 0.00 | 43.77 | 43.77 | 0.00 | 0.00 | 54.70 | 54.70 | 0.00 | 0.00 | 246.41 | 246.41 | 100.00 |
| 4/06/2014 | 95.69 | 0.00 | 0.00 | 29.79 | 29.79 | 0.00 | 0.00 | 79.76 | 79.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 36.26 | 36.26 | 0.00 | 0.00 | 42.17 | 42.17 | 0.00 | 0.00 | 54.51 | 54.51 | 0.00 | 0.00 | 242.49 | 242.49 | 100.00 |
| 5/06/2014 | 95.93 | 0.00 | 0.00 | 59.88 | 59.88 | 0.00 | 0.06 | 80.69 | 80.75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 45.79 | 45.79 | 0.00 | 0.00 | 61.29 | 61.29 | 0.00 | 0.06 | 247.65 | 247.71 | 99.98 |
| 6/06/2014 | 95.88 | 0.00 | 0.21 | 56.18 | 56.40 | 0.00 | 0.28 | 41.63 | 41.91 | 0.00 | 0.00 | 0.00 | 0.00 | 0.34 | 0.34 | 47.53 | 48.20 | 0.00 | 0.00 | 43.99 | 43.99 | 0.00 | 0.00 | 57.67 | 57.67 | 0.34 | 0.83 | 247.00 | 248.17 | 99.53 |
| 7/06/2014 | 95.98 | 0.00 | 0.05 | 77.65 | 77.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 77.72 | 77.72 | 0.00 | 0.00 | 36.02 | 36.02 | 0.00 | 0.00 | 56.50 | 56.50 | 0.00 | 0.05 | 247.89 | 247.95 | 99.98 |
| 8/06/2014 | 96.43 | 0.00 | 0.00 | 74.65 | 74.65 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 74.90 | 74.90 | 0.00 | 0.00 | 37.85 | 37.85 | 0.00 | 0.00 | 54.03 | 54.03 | 0.00 | 0.00 | 241.43 | 241.43 | 100.00 |
| 9/06/2014 | 96.13 | 0.00 | 0.00 | 60.22 | 60.22 | 0.00 | 0.00 | 14.63 | 14.63 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 73.92 | 73.92 | 0.00 | 0.00 | 21.75 | 21.75 | 0.00 | 0.00 | 61.45 | 61.45 | 0.00 | 0.00 | 231.98 | 231.98 | 100.00 |
| 10/06/2014 | 96.49 | 0.00 | 0.00 | 73.76 | 73.76 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 77.14 | 77.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 74.90 | 74.90 | 0.00 | 0.00 | 225.80 | 225.80 | 100.00 |
| 11/06/2014 | 96.49 | 0.00 | 0.00 | 73.40 | 73.40 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 76.57 | 76.57 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 74.66 | 74.66 | 0.00 | 0.00 | 224.63 | 224.63 | 100.00 |
| 12/06/2014 | 96.55 | 0.00 | 0.00 | 88.11 | 88.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 41.65 | 41.65 | 0.00 | 0.00 | 20.24 | 20.24 | 0.00 | 0.00 | 78.43 | 78.43 | 0.00 | 0.00 | 228.44 | 228.44 | 100.00 |
| 13/06/2014 | 96.66 | 0.00 | 0.00 | 96.83 | 96.83 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 49.36 | 49.36 | 0.00 | 0.06 | 81.00 | 81.06 | 0.00 | 0.06 | 227.19 | 227.25 | 99.97 | |
| 14/06/2014 | 96.71 | 0.00 | 0.00 | 84.99 | 84.99 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 59.98 | 59.98 | 0.00 | 0.00 | 85.01 | 85.01 | 0.00 | 0.00 | 229.98 | 229.98 | 100.00 | |
| 15/06/2014 | 96.84 | 0.00 | 0.00 | 85.01 | 85.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 48.89 | 48.89 | 0.00 | 0.00 | 81.02 | 81.02 | 0.00 | 0.00 | 214.92 | 214.92 | 100.00 | |
| 16/06/2014 | 96.95 | 0.00 | 0.00 | 85.00 | 85.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 42.41 | 42.41 | 0.00 | 0.00 | 77.60 | 77.60 | 0.00 | 0.00 | 205.01 | 205.01 | 100.00 | |
| 17/06/2014 | 96.91 | 0.00 | 0.06 | 84.96 | 85.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 42.26 | 42.26 | 0.00 | 0.00 | 77.75 | 77.75 | 0.00 | 0.06 | 204.97 | 205.02 | 99.97 | |
| 18/06/2014 | 96.86 | 0.00 | 0.00 | 84.84 | 84.84 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 41.51 | 41.51 | 0.00 | 0.00 | 75.70 | 75.70 | 0.00 | 0.00 | 202.05 | 202.05 | 100.00 | |
| 19/06/2014 | 96.78 | 0.00 | 0.00 | 3.05 | 3.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 82.09 | 82.09 | 0.00 | 0.00 | 41.66 | 41.66 | 0.00 | 0.00 | 79.15 | 79.15 | 0.00 | 0.00 | 205.95 | 205.95 | 100.00 |
| 20/06/2014 | 96.32 | 0.00 | 0.00 | 48.79 | 48.79 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 36.35 | 36.35 | 0.00 | 0.00 | 42.76 | 42.76 | 0.00 | 0.00 | 82.09 | 82.09 | 0.00 | 0.00 | 209.99 | 209.99 | 100.00 |
| 21/06/2014 | 96.46 | 0.00 | 0.26 | 41.40 | 41.65 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 39.80 | 39.80 | 0.00 | 0.00 | 47.63 | 47.63 | 0.00 | 0.00 | 84.37 | 84.37 | 0.00 | 0.26 | 213.20 | 213.45 | 99.88 |
| 22/06/2014 | 96.63 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 85.01 | 85.01 | 0.00 | 0.00 | 46.05 | 46.05 | 0.00 | 0.00 | 84.37 | 84.37 | 0.00 | 0.00 | 215.42 | 215.42 | 100.00 |
| 23/06/2014 | 96.61 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 84.99 | 84.99 | 0.00 | 0.00 | 50.61 | 50.61 | 0.00 | 0.00 | 84.87 | 84.87 | 0.00 | 0.00 | 220.47 | 220.47 | 100.00 |
| 24/06/2014 | 96.49 | 0.00 | 0.00 | 26.56 | 26.56 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 52.80 | 52.80 | 0.00 | 0.00 | 63.12 | 63.12 | 0.00 | 0.00 | 84.85 | 84.85 | 0.00 | 0.00 | 227.34 | 227.34 | 100.00 |
| 25/06/2014 | 96.46 | 0.00 | 0.00 | 24.21 | 24.21 | 0.00 | 0.00 | 55.99 | 55.99 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 63.35 | 63.35 | 0.00 | 0.00 | 84.80 | 84.80 | 0.00 | 0.00 | 228.35 | 228.35 | 100.00 | |
| 26/06/2014 | 96.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 84.99 | 84.99 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 58.02 | 58.02 | 0.00 | 0.00 | 85.02 | 85.02 | 0.00 | 0.00 | 228.03 | 228.03 | 100.00 | |
| 27/06/2014 | 96.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 85.02 | 85.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 57.97 | 57.97 | 0.00 | 0.00 | 84.96 | 84.96 | 0.00 | 0.00 | 227.95 | 227.95 | 100.00 | |
| 28/06/2014 | 96.48 | 0.00 | 0.00 | 1.01 | 1.01 | 0.00 | 0.00 | 84.55 | 84.55 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 60.04 | 60.04 | 0.00 | 0.00 | 84.22 | 84.22 | 0.00 | 0.00 | 229.82 | 229.82 | 100.00 | |
| 29/06/2014 | 96.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 85.00 | 85.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 64.40 | 64.40 | 0.00 | 0.00 | 84.98 | 84.98 | 0.00 | 0.00 | 234.38 | 234.38 | 100.00 | |
| 30/06/2014 | 96.57 | 0.00 | 0.00 | 62.50 | 62.50 | 0.00 | 0.00 | 22.54 | 22.55 | 0.00 | 0.05 | 31.05 | 31.11 | 0.00 | 0.00 | 14.55 | 14.55 | 0.00 | 0.00 | 19.34 | 19.34 | 0.00 | 0.00 | 84.99 | 84.99 | 0.00 | 0.05 | 234.97 | 235.03 | 99.98 |
| | | 0.00 | 0.58 | 1411.08 | 1411.67 | 0.00 | 0.34 | 835.56 | 835.90 | 0.00 | 0.05 | 31.05 | 31.11 | 0.34 | 0.34 | 1066.85 | 1067.53 | 0.00 | 0.00 | 1274.72 | 1274.72 | 0.00 | 0.06 | 2219.19 | 2219.25 | 0.34 | 1.37 | 6838.46 | 6840.17 | |

Water Volume [%]:
 Untreated: 0.00 %
 Below Dose: 0.02 %
 To Dose: 99.98 %

Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew

CORRECTIVE ACTION REPORT



WATER SYSTEM City of Winnipeg

WATER SYSTEM CODE: 252.00

LOCATION OF NON-COMPLIANCE INCIDENT (ex. Water Plant) 3 Regional Stations (Hurst, McPhillips, and Maclean)

OPERATOR: Mike Logan

Signature: 

TYPE OF NON-COMPLIANCE INCIDENT:

INITIAL TEST RESULTS:

- Low disinfectant residual entering the distribution system, 21(1) MR 40/2007
- Low disinfectant residual in the distribution system, 22 MR 40/2007
- Filtered water turbidity exceeding the turbidity standard, 6(1) MR 41/2007
- Low positive total coliform (<10 CFU/100mL), 3 MR 41/2007
- Other

DESCRIPTION OF CORRECTIVE ACTIONS TAKEN (attach additional sheets if required):

DATE

At 08:30 on June 9, 2014 the three regional pumping stations lost hydro power. The result of this failure caused 5 electrical pumps to shut off. One gas engine remained online for the entire system but could not maintain pressure. After the event the control room operator started other gas engines in the system to bring back pressure. Hydro power was also restored after this to all 3 stations. This event was the result of Manitoba Hydro having a pole fire. Pressures in the system did drop because of this but no water quality impacts have occurred. Testing in the system will be done to confirm this.

TEST RESULTS AFTER CORRECTIVE ACTIONS:

DATE: June 9, 2014

(attach laboratory results if applicable)

Approved By Operator-In-Charge:  Original signed by: 

EMERGENCY REPORTING IS REQUIRED WHERE A POTENTIAL HEALTH RISK IS INVOLVED. FOLLOW THE INSTRUCTIONS OF YOUR DRINKING WATER OFFICER ON SITUATIONS REQUIRING IMMEDIATE REPORTING.

DISTRIBUTION:

FORWARD THE ORIGINAL TO YOUR DRINKING WATER OFFICER WITH YOUR MONTHLY DISINFECTION OR TURBIDITY MONITORING REPORT

Contact your Drinking Water Officer with any comments, questions or concerns.

RETAIN A COPY FOR YOUR RECORDS