



Water and Waste Department • Service des eaux et des déchets

June 7, 2016

Melanie Betsill
Office of Drinking Water
Manitoba Sustainable Development
1007 Century Street
Winnipeg, Manitoba R3H 0W4

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

Dear Ms. Betsill:

**RE: MAY 2016 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 May 2016. We have also included one corrective action report for a positive total coliform in the distribution system.

The May 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 met the licence requirements.

The May 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 May UV summary report includes results obtained for the six UV reactors at the Water Treatment Plant. The UV disinfection results met the licence requirements.

Please let me know of any concerns or questions respecting this submission. I may be reached by telephone at 204-986-8359 or by e-mail at rgrosselle@winnipeg.ca.

Yours sincerely,

Original signed by:

R. Grosselle
Manager of Environmental Standards
Attachments

c:(e-mail)

Dr. L. Richards, Winnipeg Regional Health Authority
Dr. H. Chang, Winnipeg Regional Health Authority
Dr. S. Roberecki, Manitoba Health, Healthy Living and Seniors
M. L. Geer, CPA, CA
G. Patton, P.Eng.
T. Shanks, P.Eng.
M. Szmon, P.Eng.
C. Diduck

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CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

Water System Code: **252.00**
 Licence Number: **PWS-09-412 01**

WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT

May 2016 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
1/05/2016	0.84	0.01	0.04	0.01	0.05	0.02	0.10	0.01	0.06	0.01	0.02	0.03	0.10	0.01	0.02	0.01	0.05
2/05/2016	0.86	0.01	0.05	0.01	0.03	OL	OL	0.02	0.05	0.01	0.05	0.03	0.08	0.01	0.05	0.01	0.03
3/05/2016	0.87	0.01	0.04	0.01	0.03	OL	OL	0.01	0.04	0.01	0.04	0.04	0.06	0.01	0.05	0.01	0.01
4/05/2016	0.89	0.01	0.01	0.01	0.04	OL	OL	0.02	0.02	0.01	0.03	0.04	0.07	0.01	0.03	0.01	0.03
5/05/2016	0.95	0.01	0.06	0.01	0.05	OL	OL	0.02	0.05	0.01	0.05	0.04	0.09	0.01	0.01	0.01	0.02
6/05/2016	0.90	0.01	0.05	0.01	0.05	OL	OL	0.02	0.07	0.01	0.03	0.04	0.11	0.01	0.03	0.01	0.04
7/05/2016	0.95	0.01	0.04	0.01	0.03	0.00	0.04	0.01	0.08	0.01	0.05	0.04	0.06	0.01	0.05	0.01	0.08
8/05/2016	0.93	0.01	0.09	0.02	0.06	0.00	0.04	0.02	0.03	0.01	0.05	0.04	0.17	0.01	0.03	0.01	0.02
9/05/2016	0.96	0.02	0.05	0.02	0.07	0.01	0.05	OL	OL	0.01	0.05	0.04	0.08	0.01	0.03	0.01	0.03
10/05/2016	0.94	0.02	0.08	0.02	0.06	0.04	0.12	OL	OL	0.02	0.05	0.05	0.08	0.01	0.03	0.01	0.03
11/05/2016	0.94	0.02	0.09	0.01	0.05	0.05	0.11	OL	OL	0.02	0.05	0.05	0.09	0.01	0.02	0.01	0.02
12/05/2016	1.00	0.07	0.12	0.03	0.08	0.04	0.10	OL	OL	0.04	0.08	0.06	0.11	0.04	0.08	0.01	0.03
13/05/2016	1.06	0.10	0.17	0.04	0.11	0.03	0.05	0.01	0.12	0.06	0.12	0.07	0.13	0.08	0.13	0.01	0.03
14/05/2016	1.29	0.08	0.21	0.03	0.08	0.01	0.09	0.01	0.04	0.04	0.09	0.07	0.11	0.06	0.11	0.01	0.01
15/05/2016	1.15	0.08	0.10	0.02	0.04	0.00	0.03	0.01	0.02	0.04	0.07	0.05	0.09	0.05	0.11	0.01	0.02
16/05/2016	1.08	0.07	0.14	0.02	0.04	0.00	0.03	0.02	0.02	0.04	0.05	0.05	0.11	0.07	0.08	0.01	0.02
17/05/2016	1.14	0.07	0.11	0.02	0.03	0.00	0.01	0.01	0.02	0.04	0.15	0.05	0.07	0.06	0.10	0.01	0.01
18/05/2016	1.10	0.07	0.14	0.02	0.06	0.00	0.03	0.01	0.02	0.03	0.07	0.06	0.14	0.05	0.12	0.01	0.05
19/05/2016	1.13	0.07	0.11	0.01	0.04	0.00	0.02	0.01	0.02	0.04	0.06	0.06	0.10	0.06	0.08	0.01	0.01
20/05/2016	1.13	0.08	0.13	0.02	0.04	0.01	0.01	0.01	0.02	0.05	0.07	0.07	0.13	0.07	0.12	0.01	0.02
21/05/2016	1.13	0.08	0.13	0.02	0.06	0.01	0.05	0.01	0.02	0.05	0.10	0.09	0.11	0.06	0.12	0.01	0.01
22/05/2016	1.16	0.07	0.11	0.04	0.07	0.02	0.07	0.02	0.10	0.06	0.14	0.07	0.14	0.06	0.08	0.03	0.08
23/05/2016	1.22	0.01	0.06	0.05	0.10	0.02	0.08	0.07	0.13	0.05	0.08	0.05	0.11	0.03	0.05	0.06	0.12
24/05/2016	1.19	0.01	0.05	0.05	0.07	0.02	0.04	0.04	0.10	0.05	0.10	0.04	0.07	0.03	0.09	0.04	0.11
25/05/2016	1.15	0.01	0.03	0.05	0.10	0.04	0.08	0.04	0.09	0.05	0.09	0.07	0.11	0.03	0.08	0.06	0.08
26/05/2016	1.15	0.02	0.05	0.04	0.10	0.04	0.10	0.05	0.08	0.05	0.07	0.05	0.12	0.03	0.04	0.05	0.11
27/05/2016	1.05	0.02	0.07	0.07	0.08	0.04	0.05	0.05	0.10	0.06	0.11	0.05	0.07	0.04	0.08	0.05	0.12
28/05/2016	0.89	0.03	0.05	0.08	0.15	0.07	0.14	0.05	0.07	0.06	0.17	0.07	0.13	0.03	0.09	0.06	0.08
29/05/2016	0.83	0.05	0.11	0.07	0.10	0.06	0.16	0.07	0.13	0.07	0.11	0.06	0.13	0.04	0.06	0.05	0.12
30/05/2016	0.70	0.04	0.13	0.09	0.15	0.08	0.11	0.07	0.14	0.06	0.12	0.06	0.08	0.04	0.09	0.05	0.12
31/05/2016	0.76	0.03	0.08	0.08	0.15	0.07	0.16	0.07	0.26	0.05	0.09	0.07	0.14	0.03	0.08	0.06	0.08

Total Number of Measurements Taken, A:	15581	12692	11468	10317	16645	16458	15004	16069
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:	15581	12692	11468	10317	16645	16458	15004	16069
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%

OL = Offline

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2016\05-May

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 Licence No. PWS-09-412-01	Turbidity (NTU)																	
	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-May-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
02-May-2016	0.81	0.88	0.09	<0.02	0.07	<0.02	OL	OL	0.06	<0.02	0.09	<0.02	0.09	0.03	0.11	<0.02	0.08	<0.02
03-May-2016	0.66	0.81	0.06	<0.02	0.07	0.02	OL	OL	0.10	<0.02	0.08	<0.02	0.09	0.03	0.07	<0.02	0.07	<0.02
04-May-2016	0.73	0.90	0.06	<0.02	0.08	0.02	OL	OL	0.11	<0.02	0.08	<0.02	0.15	0.05	0.09	<0.02	0.07	<0.02
05-May-2016	0.83	0.92	0.08	<0.02	0.07	<0.02	OL	OL	0.11	<0.02	0.09	<0.02	0.12	0.03	0.07	<0.02	0.08	<0.02
06-May-2016	0.84	0.91	0.10	<0.02	0.07	<0.02	OL	OL	0.09	<0.02	0.09	<0.02	0.08	0.03	0.09	<0.02	0.07	<0.02
07-May-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
08-May-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
09-May-2016	0.75	0.97	0.13	<0.02	0.11	<0.02	0.10	<0.02	OL	OL	0.10	<0.02	0.09	0.05	0.09	<0.02	0.10	0.02
10-May-2016	0.78	0.91	0.16	0.02	0.10	0.02	0.11	0.05	OL	OL	0.17	<0.02	0.10	0.06	0.18	<0.02	0.12	0.02
11-May-2016	0.74	0.93	0.10	0.02	0.07	<0.02	0.14	0.05	OL	OL	0.08	<0.02	0.10	0.03	0.08	<0.02	0.11	0.02
12-May-2016	0.70	0.96	0.10	0.02	0.08	<0.02	0.09	0.05	OL	OL	0.07	<0.02	0.07	0.04	0.08	<0.02	0.08	<0.02
13-May-2016	0.95	1.02	0.14	0.11	0.10	0.04	0.10	0.03	0.10	0.02	0.11	0.05	0.15	0.06	0.08	0.08	0.07	<0.02
14-May-2016	NS	NS	NS	NS	NS	NS	NS	NS	0.08	<0.02	NS	NS	NS	NS	NS	NS	NS	NS
15-May-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
16-May-2016	0.96	1.10	0.18	0.08	0.07	<0.02	0.07	<0.02	0.07	<0.02	0.12	0.04	0.11	0.05	0.20	0.06	0.08	<0.02
17-May-2016	1.08	1.06	0.14	0.07	0.09	0.02	0.08	<0.02	0.06	<0.02	0.07	0.04	0.16	0.05	0.11	0.08	0.05	<0.02
18-May-2016	1.28	1.33	0.06	0.09	0.09	0.04	0.09	0.03	0.09	<0.02	0.11	0.04	0.10	0.07	0.08	0.06	0.09	<0.02
19-May-2016	1.16	1.16	0.13	0.09	0.08	0.02	0.05	<0.02	0.10	<0.02	0.07	0.04	0.11	0.05	0.08	0.06	0.06	<0.02
20-May-2016	1.02	1.06	0.08	0.08	0.07	0.02	0.06	<0.02	0.10	<0.02	0.08	0.06	0.11	0.07	0.10	0.08	0.06	<0.02
21-May-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
22-May-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
23-May-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
24-May-2016	1.27	1.21	0.11	0.03	0.08	0.06	0.07	0.03	0.10	0.06	0.09	0.06	0.08	0.04	0.09	0.03	0.08	0.03
25-May-2016	1.23	1.25	0.11	<0.02	0.09	0.07	0.12	0.05	0.10	0.03	0.11	0.05	0.14	0.06	0.13	0.02	0.14	0.07
26-May-2016	1.09	1.09	0.09	<0.02	0.08	0.06	0.07	0.04	0.10	0.04	0.11	0.05	0.09	0.05	0.09	0.02	0.13	0.10
27-May-2016	1.01	1.11	0.10	<0.02	0.08	0.07	0.10	0.04	0.11	0.05	0.11	0.06	0.10	0.05	0.12	0.05	0.09	0.06
28-May-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
29-May-2016	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
30-May-2016	0.70	0.68	0.11	0.03	0.13	0.10	0.13	0.09	0.14	0.07	0.11	0.08	0.10	0.06	0.08	0.02	0.10	0.06
31-May-2016	0.68	0.69	0.13	0.03	0.14	0.11	0.17	0.11	0.11	0.04	0.09	0.06	0.12	0.07	0.09	0.03	0.09	0.07
Total number of measurements taken, A:			21		21		16		18		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	
Number of measurements meeting standard, B:			21		21		16		18		21		21		21		21	
Compliance with Turbidity Standard, C= B/A X 100%:			100%		100%		100%		100%		100%		100%		100%		100%	

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

Comments:

Filter 3 was offline for maintenance from May 2nd until May 6th. Filter 4 was offline for maintenance from May 9th until May 12th.

Report Compiled By: H.Demchenko

Approved in LIMS By: C.Diduck

Date Approved: 6-Jun-16



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

Water System Code: **252.00**
Licence Number: **PWS-09-412 01**
Report Created: 01 June 2016

Report Period: May 2016

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
1/05/2016	1.00	0.89	1.04	0.96
2/05/2016	1.01	0.91	1.06	0.95
3/05/2016	1.02	0.94	1.02	0.83
4/05/2016	1.01	0.75	0.96	0.75
5/05/2016	0.96	0.86	0.91	0.80
6/05/2016	0.95	0.88	0.92	0.89
7/05/2016	0.98	0.91	0.90	0.87
8/05/2016	0.96	0.90	0.88	0.83
9/05/2016	1.01	0.90	0.92	0.87
10/05/2016	1.03	0.95	1.10	0.90
11/05/2016	1.09	0.96	1.17	0.88
12/05/2016	1.01	0.88	0.93	0.87
13/05/2016	0.98	0.85	1.04	0.88
14/05/2016	1.06	0.84	1.18	1.00
15/05/2016	1.07	0.67	1.13	0.90
16/05/2016	1.07	1.00	1.12	0.94
17/05/2016	1.10	1.03	1.19	1.11
18/05/2016	1.62	1.08	1.72	1.17
19/05/2016	1.05	0.96	1.01	0.94
20/05/2016	1.06	0.96	1.02	0.86
21/05/2016	1.12	0.99	1.06	0.96
22/05/2016	1.03	0.96	0.95	0.88
23/05/2016	1.08	0.93	1.00	0.83
24/05/2016	1.11	0.85	1.11	0.77
25/05/2016	1.04	0.89	1.03	0.86
26/05/2016	1.13	0.96	1.19	1.08
27/05/2016	1.13	1.01	1.05	0.93
28/05/2016	1.07	1.01	0.97	0.91
29/05/2016	1.06	0.98	1.01	0.97
30/05/2016	1.03	0.96	0.96	0.89
31/05/2016	1.03	0.95	0.93	0.83

Total Number of Measurements, A:	21601	21592
Minimum Free Chlorine Standard:	0.50	0.50
Number of Measurements Meeting Standard, B:	21601	21592
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 Licence No. PWS-09-412-01	Deacon Booster Pumping Station Branch 1			Deacon Booster Pumping Station Branch 2		
	Free Chlorine (mg/L)		Total Chlorine (mg/L)	Free Chlorine (mg/L)		Total Chlorine (mg/L)
Date	Analyser	Grab	Grab	Analyser	Grab	Grab
01-May-2016	NS	NS	NS	NS	NS	NS
02-May-2016	1.02	1.04	1.18	1.06	1.06	1.22
03-May-2016	1.04	1.01	1.19	1.03	1.06	1.23
04-May-2016	1.01	0.95	1.15	1.01	1.01	1.16
05-May-2016	0.97	0.96	1.11	0.96	0.99	1.13
06-May-2016	0.95	1.00	1.15	0.91	0.98	1.12
07-May-2016	NS	NS	NS	NS	NS	NS
08-May-2016	NS	NS	NS	NS	NS	NS
09-May-2016	1.04	1.06	1.19	0.94	0.94	1.07
10-May-2016	1.02	1.03	1.21	0.97	0.98	1.11
11-May-2016	1.04	1.05	1.18	1.28	1.18	1.35
12-May-2016	1.05	1.00	1.17	0.98	0.96	1.12
13-May-2016	0.91	0.97	1.11	0.91	0.94	1.08
14-May-2016	NS	NS	NS	NS	NS	NS
15-May-2016	NS	NS	NS	NS	NS	NS
16-May-2016	1.09	1.09	1.23	1.13	1.17	1.30
17-May-2016	1.13	1.21	1.38	1.22	1.22	1.39
18-May-2016	1.77	1.90	2.09	2.02	2.18	2.50
19-May-2016	1.14	1.15	1.35	0.98	1.02	1.23
20-May-2016	1.00	1.15	1.25	0.89	1.07	1.18
21-May-2016	NS	NS	NS	NS	NS	NS
22-May-2016	NS	NS	NS	NS	NS	NS
23-May-2016	NS	NS	NS	NS	NS	NS
24-May-2016	1.10	1.17	1.31	1.10	1.18	1.29
25-May-2016	0.94	1.07	1.20	0.87	0.97	1.11
26-May-2016	1.13	1.17	1.30	1.17	1.20	1.33
27-May-2016	1.12	1.16	1.34	1.14	1.19	1.32
28-May-2016	NS	NS	NS	NS	NS	NS
29-May-2016	NS	NS	NS	NS	NS	NS
30-May-2016	1.01	1.06	1.23	0.97	1.03	1.17
31-May-2016	1.04	1.03	1.20	0.93	0.91	1.12
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: C.Diduck

Date Approved: 6-Jun-16



Water and Waste Department • Service des eaux et des déchets

Monday, June 6, 2016

Our Incident/Report No: 01-2016

LIMS Reference No: **46235**

Incident Date: **May 25, 2016**

Ms. Melanie Betsill
Drinking Water Officer
Manitoba Sustainable Development, Office of Drinking Water
1007 Century Street
Winnipeg MB R3H 0W4

RE: CORRECTIVE ACTION REPORT

WATER SYSTEM, CODE	Winnipeg Public Water System, 252.00
LOCATION OF NON-COMPLIANT INCIDENT	Winnipeg 3-Dist SE05
INCIDENT REPORTED BY	Courtney Diduck, Analytical Services Branch Head
TYPE OF NON-COMPLIANT INCIDENT	Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
DESCRIPTION OF CORRECTIVE ACTIONS	<u>Environmental Standards:</u> AS SOON AS POSSIBLE: Re-sampled original location until two consecutive negative results were reported. Also tested for turbidity, free/total chlorine, temperature and contacted the ODW.
TEST RESULTS	See Attached

NOTES/COMMENTS:

1. UP/DOWN STREAM testing performed when EC is >0 /100mL, TC is >10 /100mL or when resample/consecutive sample is positive for EC or TC or as directed by the Manager of Environmental Standards Division and/or the Office of Drinking Water

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

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Sample Name	Sample Number	Date Sampled	bacColiEsch-QT (MPNU/100mL)	bacColiTotal-QT (MPNU/100mL)	bacHPC (cfu/mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity-field (ntu)	Time Sampled (hrs)
SE05	472539	42515	<1	1	<1	0.85	1.01	9.9	0.14	13:47
SE05_Resample 1	473233	42516	<1	<1	<1	0.88	1.10	10.0	0.41	15:20
SE05_Resample 1 Duplicate	473990	42516	<1	<1	<1	NA	NA	NA	NA	15:20
SE05_Resample 2	473234	42517	<1	<1	<1	0.81	1.03	9.5	0.22	15:38
SE05_Resample 2 Duplicate	473991	42517	<1	<1	<1	NA	NA	NA	NA	15:38

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. N/R-No Result due to laboratory/analyst error.
3. N/A-Not Analyzed.