



Water and Waste Department • Service des eaux et des déchets

January 7, 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: DECEMBER 2013 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 December 2013. We have also included one corrective action report for a positive total coliform in the distribution system.

The December 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 December 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 December 2013 in accordance with Section 4.13, Table 2 of the Operating Licence. The UV licence requirement has been met for December.

On December 23, a positive total coliform result was reported for a routine sample [REDACTED]. On December 27, the location was resampled and all results were reported to be negative. The resampling also indicated that the chlorine levels at the location were normal and provided adequate disinfection.

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](mailto: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  
D.P. Sacher, P.Eng. G. Patton, P.Eng.  
A. J. Weremy, P.Eng. S. Fletcher

Dr. S. Roberecki, Manitoba Health  
T. Josephson, P.Eng.

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**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-Dec-2013	NA	NA	NA	NA
02-Dec-2013	1.02	1.30	0.98	1.12
03-Dec-2013	1.10	1.22	1.04	1.19
04-Dec-2013	1.18	1.24	1.17	1.25
05-Dec-2013	1.08	1.25	1.11	1.22
06-Dec-2013	1.03	1.23	1.00	1.16
07-Dec-2013	NA	NA	NA	NA
08-Dec-2013	NA	NA	NA	NA
09-Dec-2013	1.13	1.24	1.15	1.30
10-Dec-2013	1.10	1.31	1.11	1.31
11-Dec-2013	1.13	1.33	1.09	1.29
12-Dec-2013	1.11	1.25	1.50	1.65
13-Dec-2013	1.09	1.26	1.08	1.15
14-Dec-2013	NA	NA	NA	NA
15-Dec-2013	NA	NA	NA	NA
16-Dec-2013	1.07	1.26	1.03	1.20
17-Dec-2013	1.06	1.30	1.07	1.22
18-Dec-2013	1.04	1.17	0.92	1.13
19-Dec-2013	1.03	1.15	1.05	1.10
20-Dec-2013	1.06	1.14	1.05	1.17
21-Dec-2013	NA	NA	NA	NA
22-Dec-2013	NA	NA	NA	NA
23-Dec-2013	1.06	1.15	1.15	1.32
24-Dec-2013	1.00	1.17	1.02	1.24
25-Dec-2013	0.98	1.11	1.05	1.14
26-Dec-2013	NA	NA	NA	NA
27-Dec-2013	1.07	1.17	1.03	1.17
28-Dec-2013	NA	NA	NA	NA
29-Dec-2013	NA	NA	NA	NA
30-Dec-2013	1.10	1.22	1.09	1.21
31-Dec-2013	0.95	1.06	0.98	1.15
<b>Total number of measurements taken, A:</b>	21		21	
<b>Chlorine Standard for Monitoring Location (mg/L):</b>	0.50		0.50	
<b>Number of measurements meeting standard, B:</b>	21		21	
<b>Compliance with Chlorine Standard, C= B/A X 100%:</b>	100%		100%	

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

Comments:

Report Compiled By: K. Wazny

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



**City of Winnipeg**

Water and Waste Department  
Water Services Division

**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 January 2014

Report Period: December 2013

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/12/2013	0.96	0.91	1.02	0.96
02/12/2013	1.00	0.93	1.02	0.97
03/12/2013	1.04	0.99	1.04	0.97
04/12/2013	1.00	0.90	1.06	0.96
05/12/2013	0.97	0.91	1.07	0.95
06/12/2013	0.96	0.92	0.95	0.89
07/12/2013	0.95	0.84	0.99	0.90
08/12/2013	0.97	0.94	1.05	1.00
09/12/2013	0.99	0.88	1.10	0.99
10/12/2013	1.04	0.99	1.12	1.07
11/12/2013	1.04	0.96	1.08	1.02
12/12/2013	1.04	1.00	1.11	0.73
13/12/2013	1.03	0.98	0.97	0.77
14/12/2013	1.00	0.93	1.09	1.01
15/12/2013	0.99	0.91	1.07	0.95
16/12/2013	1.04	0.99	1.07	0.95
17/12/2013	1.06	0.98	1.09	0.98
18/12/2013	1.01	0.94	0.99	0.84
19/12/2013	1.01	0.96	1.01	0.91
20/12/2013	0.96	0.91	0.99	0.88
21/12/2013	0.94	0.90	0.99	0.89
22/12/2013	1.01	0.95	1.07	0.97
23/12/2013	1.05	0.97	1.04	0.96
24/12/2013	1.01	0.95	0.96	0.86
25/12/2013	1.02	0.97	0.98	0.85
26/12/2013	1.01	0.92	1.00	0.87
27/12/2013	1.01	0.95	0.98	0.90
28/12/2013	1.05	0.98	1.03	0.97
29/12/2013	1.10	1.05	1.04	0.96
30/12/2013	1.06	1.02	0.99	0.92
31/12/2013	0.99	0.87	0.93	0.82

Total Number of Measurements, A:	21598	31434
Minimum Free Chlorine Standard:	0.50	0.50
Number of Measurements Meeting Standard, B:	21598	31434
COMPLIANCE, C = B/A X 100%:	100	100

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Submitted By (Print): A.Weremy

Signature: Original signed by A.Weremy



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	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Dec-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
02-Dec-2013	0.79	0.09	0.08	0.12	0.10	0.09	0.14	0.14	0.11
03-Dec-2013	0.75	0.09	0.09	0.17	0.09	0.16	0.08	0.10	0.11
04-Dec-2013	0.69	0.10	0.11	0.09	0.09	0.09	0.15	0.08	OL
05-Dec-2013	0.69	0.10	0.15	0.13	0.15	0.13	0.14	0.13	0.12
06-Dec-2013	0.71	0.10	0.11	0.13	0.11	0.08	0.17	0.13	0.21
07-Dec-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
08-Dec-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
09-Dec-2013	0.66	0.07	0.10	0.13	0.11	0.07	0.08	0.06	0.11
10-Dec-2013	0.74	0.11	0.11	0.10	0.09	0.09	0.09	0.12	0.16
11-Dec-2013	0.59	0.07	0.08	0.09	0.08	0.09	0.07	0.12	0.14
12-Dec-2013	0.52	0.10	0.09	0.07	0.15	0.12	0.07	0.07	0.15
13-Dec-2013	0.57	0.17	0.07	0.08	0.09	0.11	0.09	0.11	0.12
14-Dec-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
15-Dec-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
16-Dec-2013	0.60	0.07	0.08	0.11	0.07	0.09	0.11	0.08	0.09
17-Dec-2013	0.59	0.08	0.08	0.16	0.10	0.07	0.06	0.10	0.13
18-Dec-2013	0.64	0.11	OL	0.09	0.08	0.08	0.10	0.10	0.09
19-Dec-2013	0.50	0.09	0.14	0.10	0.10	0.14	0.13	0.06	0.17
20-Dec-2013	0.49	0.07	0.09	0.09	0.09	0.06	0.07	0.06	0.07
21-Dec-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
22-Dec-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
23-Dec-2013	0.42	0.08	0.10	0.10	0.11	0.11	0.12	0.10	0.10
24-Dec-2013	0.42	0.09	0.11	0.16	0.11	0.07	0.08	0.11	0.08
25-Dec-2013	0.51	OL	OL	0.08	0.09	0.08	0.10	0.11	0.10
26-Dec-2013	0.46	0.09	0.11	0.11	0.12	0.10	0.13	0.09	0.15
27-Dec-2013	0.49	0.14	0.18	0.11	0.10	0.09	0.11	0.11	0.11
28-Dec-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
29-Dec-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
30-Dec-2013	0.54	0.17	0.11	0.16	0.12	0.11	0.15	0.12	0.12
31-Dec-2013	0.43	0.10	0.11	0.17	0.13	0.17	0.11	0.09	0.15
<b>Total number of measurements taken, A:</b>	21	20	22	22	22	22	22	22	21
<b>Turbidity Standard for Monitoring Location (NTU):</b>	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
<b>Number of measurements meeting standard, B:</b>	21	20	22	22	22	22	22	22	21
<b>Compliance with Turbidity Standard, C= B/A X 100%:</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%

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

Comments:

Report Compiled By: K. Wazny

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

Date Approved: 7-Jan-14



**CITY OF WINNIPEG**  
 WATER AND WASTE DEPARTMENT  
 WATER SERVICES DIVISION

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

**WATER TREATMENT PLANT TURBIDITY ON-LINE MONITORING REPORT**

December 2013 Turbidity (NTU)

Report Created: January 2, 2014

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
1/12/2013	0.83	0.10	0.15	0.06	0.13	0.06	0.11	0.06	0.15	0.05	0.13	0.09	0.12	0.05	0.07	0.06	0.17
2/12/2013	0.82	0.06	0.15	0.04	0.10	0.09	0.15	0.07	0.11	0.08	0.11	0.05	0.14	0.03	0.10	0.07	0.10
3/12/2013	0.79	0.08	0.10	0.05	0.06	0.05	0.15	0.09	0.16	0.06	0.12	0.05	0.08	0.03	0.10	0.07	0.12
4/12/2013	0.79	0.10	0.15	0.05	0.15	0.07	0.10	0.07	0.18	0.04	0.22	0.08	0.13	0.04	0.06	0.03	0.30
5/12/2013	0.77	0.07	0.15	0.03	0.11	0.11	0.16	0.07	0.10	0.08	0.11	0.06	0.14	0.04	0.10	0.09	0.11
6/12/2013	0.74	0.09	0.11	0.06	0.08	0.10	0.19	0.10	0.26	0.05	0.13	0.06	0.09	0.03	0.11	0.12	0.20
7/12/2013	0.72	0.11	0.17	0.04	0.11	0.07	0.12	0.07	0.16	0.06	0.09	0.08	0.14	0.05	0.07	0.07	0.21
8/12/2013	0.71	0.06	0.14	0.03	0.09	0.12	0.20	0.07	0.13	0.07	0.14	0.05	0.17	0.03	0.12	0.12	0.22
9/12/2013	0.69	0.08	0.10	0.05	0.08	0.08	0.18	0.09	0.14	0.04	0.11	0.05	0.14	0.03	0.10	0.08	0.22
10/12/2013	0.67	0.10	0.14	0.04	0.11	0.08	0.13	0.06	0.15	0.05	0.07	0.07	0.11	0.04	0.05	0.08	0.18
11/12/2013	0.65	0.05	0.15	0.04	0.05	0.14	0.20	0.08	0.10	0.06	0.10	0.04	0.12	0.02	0.09	0.12	0.23
12/12/2013	0.63	0.09	0.19	0.06	0.11	0.06	0.14	0.07	0.16	0.03	0.09	0.05	0.08	0.03	0.05	0.03	0.14
13/12/2013	0.61	0.06	0.14	0.03	0.10	0.03	0.05	0.03	0.05	0.05	0.08	0.02	0.07	0.03	0.07	0.03	0.22
14/12/2013	0.59	0.08	0.09	0.06	0.07	0.02	0.09	0.06	0.11	0.03	0.09	0.01	0.03	0.01	0.06	0.02	0.14
15/12/2013	0.58	0.10	0.14	0.04	0.10	0.02	0.04	0.04	0.11	0.04	0.05	0.03	0.07	0.02	0.04	0.01	0.08
16/12/2013	0.58	0.06	0.14	0.05	0.08	0.04	0.09	0.05	0.06	0.06	0.10	0.02	0.07	0.02	0.06	0.01	0.03
17/12/2013	0.56	0.10	0.13	0.08	0.13	0.03	0.11	0.06	0.12	0.03	0.10	0.02	0.04	0.01	0.03	0.01	0.08
18/12/2013	0.56	0.07	0.17	0.05	0.20	0.03	0.04	0.03	0.14	0.05	0.07	0.03	0.08	0.02	0.14	0.00	0.02
19/12/2013	0.56	0.07	0.10	0.09	0.10	0.05	0.11	0.05	0.12	0.04	0.12	0.01	0.04	0.02	0.08	0.02	0.11
20/12/2013	0.57	0.09	0.15	0.06	0.16	0.03	0.04	0.02	0.13	0.06	0.07	0.04	0.10	0.03	0.05	0.00	0.01
21/12/2013	0.54	0.06	0.10	0.10	0.11	0.05	0.12	0.04	0.06	0.04	0.13	0.02	0.11	0.02	0.08	0.01	0.03
22/12/2013	0.53	0.11	0.17	0.13	0.18	0.02	0.05	0.03	0.12	0.05	0.07	0.04	0.06	0.03	0.04	0.01	0.08
23/12/2013	0.52	0.06	0.18	0.08	0.12	0.05	0.12	0.04	0.05	0.07	0.13	0.02	0.10	0.02	0.10	0.01	0.02
24/12/2013	0.51	0.11	0.14	0.14	0.20	0.03	0.13	0.06	0.15	0.04	0.07	0.04	0.05	0.03	0.04	0.01	0.10
25/12/2013	0.51	0.06	0.16	0.08	0.20	0.04	0.06	0.03	0.05	0.07	0.14	0.02	0.10	0.03	0.09	0.01	0.01
26/12/2013	0.49	0.09	0.11	0.10	0.15	0.03	0.10	0.05	0.12	0.04	0.15	0.03	0.05	0.01	0.04	0.02	0.07
27/12/2013	0.48	0.06	0.18	0.05	0.15	0.05	0.07	0.04	0.15	0.09	0.10	0.07	0.14	0.05	0.11	0.01	0.02
28/12/2013	0.48	0.06	0.10	0.07	0.09	0.07	0.16	0.06	0.08	0.05	0.16	0.03	0.14	0.03	0.12	0.03	0.14
29/12/2013	0.50	0.10	0.18	0.09	0.15	0.04	0.17	0.05	0.17	0.05	0.09	0.05	0.08	0.04	0.06	0.02	0.14
30/12/2013	0.51	0.07	0.21	0.05	0.17	0.07	0.10	0.05	0.08	0.09	0.16	0.04	0.14	0.06	0.13	0.02	0.03
31/12/2013	0.50	0.09	0.11	0.08	0.12	0.04	0.17	0.07	0.22	0.04	0.15	0.03	0.06	0.02	0.12	0.03	0.15

Total Number of Measurements Taken, A:	14332	14338	14175	10888	14686	14820	12953	13938
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:	14332	14338	14175	10888	14686	14820	12953	13938
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%

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2013\12-December

Submitted By (Print): A.Weremy

Signature: Original signed by A.Weremy





Water and Waste Department • Service des eaux et des déchets

Friday, January 3, 2014

**Our Incident/Report No: 12-2013**  
LIMS Reference No: **37962**

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

**RE: CORRECTIVE ACTION REPORT**

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<b>WATER SYSTEM</b>	Winnipeg Public Water System
<b>WATER SYSTEM CODE</b>	252.00
<b>LOCATION OF NON-COMPLIANT INCIDENT</b>	<b>Winnipeg 3-Dist NW01</b>
<b>OPERATOR IN CHARGE</b>	NA
<b>INCIDENT REPORTED BY</b>	Steve Fletcher, Supervisor of Analytical Services Branch
<b>TYPE OF NON-COMPLIANT INCIDENT</b>	Low positive Total Coliform (<10 per100mL), 3 MR 41/2007
<b>INCIDENT DATE</b>	December 23, 2013
<b>DESCRIPTION OF CORRECTIVE ACTIONS</b>	AS SOON AS POSSIBLE: Re-sampled original location, also tested for turbidity, free/total chlorine, temperature and contacted the ODW.
<b>TEST RESULTS</b>	See Attached

NOTES/COMMENTS:

1. All microbiological tests performed by contract laboratory.
2. 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
3. INITIAL chlorine, turbidity and temperature only tested at the required 39 sample locations.
4. NR-No Result due to laboratory/analyst error.
5. NA-Not Analyzed.

**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 THE DRINKING WATER OFFICER WITH THE MONTHLY COMPLIANCE SUBMISSIONS.

**Contact the Drinking Water Officer for any comments, questions or concerns**

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REFERENCE: ODW-RF-016

*Embrace the spirit • Vivez l'esprit*

Environmental Standards Division • Division des normes environnementales  
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fax/téléc. (204) 339-2147 • www.winnipeg.ca

Sample Name	Sample Number	Date Sampled	Time Spled (hrs)	E. Coli-QT (MPNU/100 mL)	Total Coliform-QT (MPNU/100 mL)	HPC (cfu/mL)	Chlorine, Free (mg/L)	Chlorine, Total (mg/L)	Temperature (°C)	Turbidity (ntu)
NW01_ [REDACTED]	382511	23-Dec-13	8:45	<1	2	10	0.96	1.08	6.0	0.32
NW01_ [REDACTED]	382999	27-Dec-13	9:00	<1	<1	<10	0.79	0.98	6.9	0.14