



Water and Waste Department • Service des eaux et des déchets

February 7, 2013

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: JANUARY 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 reports for the Water Treatment Plant for January 2013. There are no corrective action reports to be submitted for January 2013.

The January 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 January 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 a summary report and reports for each reactor for January 2013 in accordance with Section 4.13, Table 2 of the Operating Licence. You will note that all 6 UV reactors are in compliance with the licence requirements.

Please let me know of any concerns or questions respecting this submission. I may be reached at the below address, 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: Dr. L. Richards, Winnipeg Regional Health Authority
D.P. Sacher, P.Eng (e-mail)
T. Josephson, P.Eng.
S. Fletcher (e-mail)

Dr. S. Roberecki, Manitoba Health
G. Patton, P.Eng.
A.J. Weremy, P.Eng

N:\Compliance Reporting\Submittal Letters\2013\ODW- Letters\Betsill Water January 2013.doc



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-Jan-2013	NS	NS	NS	NS
02-Jan-2013	0.90	1.15	0.99	1.24
03-Jan-2013	1.11	1.30	1.10	1.14
04-Jan-2013	0.97	1.09	0.96	1.05
05-Jan-2013	NS	NS	NS	NS
06-Jan-2013	NS	NS	NS	NS
07-Jan-2013	1.00	1.19	0.98	1.23
08-Jan-2013	0.97	1.17	1.00	1.21
09-Jan-2013	1.24	1.39	1.13	1.31
10-Jan-2013	1.18	1.40	1.21	1.34
11-Jan-2013	1.13	1.31	1.23	1.36
12-Jan-2013	NS	NS	NS	NS
13-Jan-2013	NS	NS	NS	NS
14-Jan-2013	1.22	1.39	1.12	1.40
15-Jan-2013	1.20	1.38	1.20	1.33
16-Jan-2013	1.14	1.35	1.21	1.34
17-Jan-2013	1.01	1.21	0.98	1.18
18-Jan-2013	0.98	1.20	0.95	1.14
19-Jan-2013	NS	NS	NS	NS
20-Jan-2013	NS	NS	NS	NS
21-Jan-2013	1.05	1.29	1.10	1.21
22-Jan-2013	1.09	1.29	1.08	1.27
23-Jan-2013	1.07	1.28	1.05	1.28
24-Jan-2013	1.07	1.29	1.20	1.41
25-Jan-2013	1.10	1.31	1.05	1.27
26-Jan-2013	NS	NS	NS	NS
27-Jan-2013	NS	NS	NS	NS
28-Jan-2013	1.04	1.33	1.05	1.30
29-Jan-2013	1.15	1.33	1.20	1.33
30-Jan-2013	1.11	1.30	1.23	1.39
31-Jan-2013	1.10	1.28	1.21	1.33
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%	

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

Comments:

Report Compiled By: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 6-Jan-13



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 February 2013

Report Period: January 2013

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
1/01/2013	0.94	0.89	0.98	0.95
2/01/2013	0.98	0.90	0.97	0.94
3/01/2013	1.15	1.07	0.97	0.92
4/01/2013	1.01	0.87	0.86	0.79
5/01/2013	0.99	0.91	0.85	0.80
6/01/2013	1.08	1.01	0.91	0.88
7/01/2013	0.98	0.91	0.97	0.88
8/01/2013	1.03	0.79	1.06	0.97
9/01/2013	1.13	1.00	1.13	1.04
10/01/2013	1.19	1.01	1.13	1.03
11/01/2013	1.04	0.73	1.16	0.86
12/01/2013	1.10	0.87	1.12	1.00
13/01/2013	1.09	1.02	1.11	0.99
14/01/2013	1.14	1.05	1.11	0.96
15/01/2013	1.15	1.03	1.13	1.02
16/01/2013	1.08	0.89	1.10	0.98
17/01/2013	1.01	0.90	0.98	0.90
18/01/2013	0.95	0.79	0.89	0.82
19/01/2013	0.95	0.76	0.95	0.80
20/01/2013	1.05	0.93	1.00	0.92
21/01/2013	1.06	0.96	0.96	0.89
22/01/2013	1.02	0.88	1.03	0.93
23/01/2013	1.06	0.93	1.04	0.97
24/01/2013	1.04	0.94	1.03	0.93
25/01/2013	0.98	0.90	1.04	0.96
26/01/2013	1.08	0.93	1.11	0.98
27/01/2013	1.08	0.94	1.15	1.03
28/01/2013	1.13	0.99	1.12	1.00
29/01/2013	1.12	0.99	1.11	1.03
30/01/2013	1.07	0.99	1.09	1.03
31/01/2013	1.07	0.99	1.12	1.04

Total Number of Measurements, A:	21600	21600
Minimum Free Chlorine Standard:	0.50	0.50
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\2013\01-January

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-09-412RR	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-Jan-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
02-Jan-2013	0.67	OL	OL	0.09	0.06	0.07	0.07	0.09	0.08
03-Jan-2013	0.60	0.11	0.17	0.12	OL	OL	0.16	0.15	0.18
04-Jan-2013	0.69	0.09	OL	0.08	0.08	0.07	0.09	OL	0.08
05-Jan-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
06-Jan-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
07-Jan-2013	0.51	0.07	0.07	OL	0.09	OL	0.08	0.07	0.07
08-Jan-2013	0.51	0.12	0.09	0.09	0.08	0.08	OL	0.08	OL
09-Jan-2013	0.49	0.07	0.09	OL	0.08	0.10	0.07	OL	0.07
10-Jan-2013	0.46	OL	0.07	0.07	0.07	0.07	OL	0.06	0.06
11-Jan-2013	0.48	0.18	0.14	0.20	0.08	0.09	0.12	OL	0.12
12-Jan-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
13-Jan-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
14-Jan-2013	0.46	0.08	0.06	0.07	OL	OL	0.07	0.07	0.07
15-Jan-2013	0.50	OL	OL	0.08	0.08	0.08	0.07	0.09	0.08
16-Jan-2013	0.47	0.07	0.07	OL	0.10	OL	0.07	0.07	0.07
17-Jan-2013	0.47	OL	0.09	0.07	0.06	0.06	OL	0.09	0.05
18-Jan-2013	0.50	0.09	0.08	OL	0.09	OL	0.06	0.09	0.06
19-Jan-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
20-Jan-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
21-Jan-2013	0.46	0.11	0.10	0.09	0.08	0.08	OL	0.08	OL
22-Jan-2013	0.48	0.08	0.07	OL	0.08	0.09	0.07	OL	0.07
23-Jan-2013	0.52	0.09	0.11	0.09	OL	0.10	0.10	0.07	OL
24-Jan-2013	0.43	0.09	OL	0.09	0.08	0.08	0.07	OL	0.07
25-Jan-2013	0.52	0.09	0.07	0.09	0.08	OL	0.07	0.05	OL
26-Jan-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
27-Jan-2013	NS	NS	NS	NS	NS	NS	NS	NS	NS
28-Jan-2013	0.46	0.08	0.08	0.07	OL	0.08	OL	0.07	0.07
29-Jan-2013	0.46	0.06	OL	0.14	0.07	0.07	0.06	OL	0.06
30-Jan-2013	0.52	0.06	0.06	0.08	0.07	0.06	OL	0.05	OL
31-Jan-2013	0.46	OL	OL	0.09	0.07	0.06	0.07	0.07	0.10
Total number of measurements taken, A:	17	16	17	18	16	16	16	16	17
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:	17	16	17	18	16	16	16	16	17
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: J. Jones

Approved in LIMS By: S. Fletcher

Date Approved: 6-Jan-13



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

January 2013 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
1/01/2013	0.57	0.05	0.07	0.01	0.02	0.02	0.03	0.03	0.10	0.03	0.09	0.05	0.10	0.04	0.05	0.01	0.07
2/01/2013	0.55	0.03	0.08	0.01	0.06	0.03	0.09	0.05	0.06	0.06	0.07	0.03	0.06	0.03	0.10	0.01	0.02
3/01/2013	0.54	0.05	0.06	0.01	0.02	0.02	0.03	0.03	0.10	0.02	0.11	0.05	0.10	0.03	0.05	0.01	0.05
4/01/2013	0.53	0.03	0.10	0.01	0.06	0.03	0.08	0.05	0.06	0.05	0.07	0.03	0.10	0.03	0.08	0.01	0.02
5/01/2013	0.52	0.05	0.06	0.01	0.02	0.01	0.07	0.03	0.09	0.03	0.09	0.04	0.07	0.03	0.04	0.01	0.05
6/01/2013	0.50	0.03	0.09	0.01	0.05	0.03	0.06	0.04	0.05	0.05	0.06	0.02	0.08	0.03	0.06	0.00	0.01
7/01/2013	0.49	0.06	0.07	0.02	0.03	0.03	0.09	0.04	0.10	0.04	0.10	0.05	0.07	0.02	0.05	0.02	0.04
8/01/2013	0.48	0.04	0.13	0.03	0.09	0.04	0.06	0.04	0.07	0.06	0.08	0.03	0.11	0.06	0.09	0.01	0.07
9/01/2013	0.47	0.05	0.06	0.01	0.03	0.02	0.10	0.05	0.11	0.04	0.09	0.05	0.07	0.02	0.10	0.02	0.04
10/01/2013	0.46	0.04	0.08	0.02	0.07	0.03	0.05	0.03	0.06	0.05	0.07	0.03	0.10	0.05	0.06	0.01	0.06
11/01/2013	0.45	0.04	0.11	0.02	0.07	0.03	0.10	0.05	0.13	0.05	0.11	0.04	0.08	0.03	0.10	0.02	0.05
12/01/2013	0.44	0.06	0.10	0.01	0.03	0.02	0.04	0.04	0.11	0.04	0.11	0.04	0.10	0.04	0.05	0.01	0.07
13/01/2013	0.43	0.03	0.11	0.01	0.06	0.03	0.09	0.05	0.06	0.06	0.07	0.03	0.05	0.03	0.08	0.01	0.02
14/01/2013	0.42	0.05	0.06	0.01	0.02	0.01	0.08	0.03	0.10	0.03	0.11	0.04	0.09	0.03	0.05	0.01	0.06
15/01/2013	0.41	0.03	0.10	0.01	0.05	0.03	0.06	0.04	0.06	0.05	0.06	0.02	0.07	0.04	0.08	0.01	0.02
16/01/2013	0.40	0.04	0.05	0.01	0.03	0.02	0.08	0.03	0.10	0.03	0.08	0.03	0.05	0.03	0.05	0.01	0.05
17/01/2013	0.41	0.03	0.09	0.01	0.05	0.03	0.04	0.04	0.05	0.05	0.06	0.02	0.07	0.05	0.09	0.00	0.02
18/01/2013	0.40	0.05	0.05	0.02	0.03	0.02	0.11	0.04	0.07	0.04	0.11	0.04	0.05	0.03	0.06	0.02	0.04
19/01/2013	0.44	0.03	0.10	0.02	0.07	0.04	0.05	0.04	0.06	0.06	0.07	0.02	0.09	0.06	0.10	0.01	0.02
20/01/2013	0.44	0.05	0.06	0.01	0.03	0.02	0.12	0.04	0.13	0.03	0.11	0.04	0.05	0.03	0.06	0.02	0.08
21/01/2013	0.45	0.04	0.12	0.02	0.07	0.03	0.05	0.03	0.06	0.05	0.06	0.02	0.07	0.06	0.11	0.01	0.06
22/01/2013	0.45	0.03	0.05	0.01	0.07	0.02	0.10	0.05	0.12	0.04	0.11	0.03	0.05	0.03	0.10	0.01	0.03
23/01/2013	0.46	0.04	0.11	0.01	0.11	0.02	0.03	0.03	0.10	0.03	0.06	0.03	0.07	0.05	0.19	0.01	0.05
24/01/2013	0.46	0.03	0.09	0.00	0.03	0.02	0.06	0.04	0.06	0.05	0.10	0.02	0.04	0.03	0.08	0.01	0.02
25/01/2013	0.46	0.05	0.06	0.00	0.00	0.02	0.07	0.03	0.08	0.03	0.07	0.04	0.08	0.03	0.05	0.01	0.05
26/01/2013	0.45	0.03	0.09	0.00	0.02	0.03	0.05	0.02	0.05	0.05	0.05	0.02	0.07	0.04	0.08	0.01	0.02
27/01/2013	0.45	0.05	0.06	0.00	0.00	0.02	0.08	0.04	0.08	0.03	0.08	0.04	0.05	0.03	0.08	0.01	0.04
28/01/2013	0.44	0.03	0.09	0.00	0.03	0.03	0.04	0.04	0.08	0.04	0.06	0.02	0.08	0.05	0.07	0.01	0.04
29/01/2013	0.43	0.03	0.05	0.00	0.03	0.02	0.07	0.03	0.05	0.04	0.09	0.04	0.05	0.03	0.08	0.02	0.03
30/01/2013	0.42	0.05	0.09	0.00	0.00	0.02	0.03	0.03	0.09	0.03	0.08	0.03	0.07	0.04	0.05	0.01	0.04
31/01/2013	0.41	0.03	0.08	0.00	0.02	0.02	0.07	0.03	0.08	0.04	0.06	0.03	0.05	0.04	0.08	0.01	0.02

Total Number of Measurements Taken, A:	14222	13203	14306	11467	14657	14702	14744	14329
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:	14222	13203	14306	11467	14657	14702	14744	14329
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\01-January

Submitted By (Print): A.Weremy

Signature: Original signed by A.Weremy



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 WATER SERVICES DIVISION

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

WATER TREATMENT PLANT UV REPORT

Report Period: **January 2013**

Report Created: **Friday, February 01, 2013**

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				
1/01/2013	93.35	0.00	0.00	0.00	0.00	0.00	0.00	78.19	78.19	0.00	0.00	49.53	49.53	0.00	0.00	0.00	0.00	0.00	0.00	65.26	65.26	0.00	0.00	0.00	0.00	0.00	0.00	192.99	192.99	100.00			
2/01/2013	93.44	0.00	0.00	20.09	20.09	0.00	0.00	46.34	46.34	0.00	0.00	57.06	57.06	0.00	0.00	0.00	0.00	0.00	0.00	69.47	69.47	0.00	0.00	0.00	0.00	0.00	0.00	192.96	192.96	100.00			
3/01/2013	93.54	0.00	0.00	35.10	35.10	0.00	0.00	33.92	33.92	0.00	0.00	55.34	55.34	0.00	0.00	0.00	0.00	0.00	0.00	27.33	27.33	0.00	0.00	41.32	41.32	0.00	0.00	193.01	193.01	100.00			
4/01/2013	93.69	0.00	0.00	48.36	48.36	0.00	0.00	22.81	22.81	0.00	0.00	34.04	34.04	0.00	0.00	20.62	20.62	0.00	0.00	0.00	0.00	0.00	0.10	66.94	67.03	0.00	0.10	192.77	192.87	99.95			
5/01/2013	93.83	0.00	0.10	69.43	69.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.13	55.13	0.00	0.00	0.00	0.00	0.00	0.00	64.88	64.88	0.00	0.10	189.44	189.54	99.95			
6/01/2013	93.75	0.00	0.00	50.63	50.63	0.00	0.00	56.40	56.40	0.00	0.00	0.00	0.00	0.00	0.00	14.56	14.56	0.00	0.00	0.00	0.00	0.00	0.05	72.80	72.85	0.00	0.05	194.40	194.44	99.98			
7/01/2013	93.49	0.00	0.06	47.78	47.84	0.00	0.00	69.56	69.56	0.00	0.03	15.61	15.64	0.00	0.00	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	69.53	69.53	0.00	0.09	202.81	202.90	99.96			
8/01/2013	92.98	0.05	0.32	46.07	46.43	0.02	0.02	48.19	48.22	0.00	0.00	46.91	46.91	0.00	0.00	0.00	0.00	0.00	0.02	8.34	8.36	0.00	0.00	57.08	57.08	0.07	0.36	206.58	207.00	99.80			
9/01/2013	93.22	0.00	0.00	2.47	2.47	0.00	0.00	81.88	81.88	0.00	0.00	61.16	61.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56.85	56.85	0.00	0.00	202.36	202.36	100.00			
10/01/2013	93.20	0.00	0.00	33.17	33.17	0.00	0.00	46.18	46.18	0.00	0.00	52.20	52.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.47	66.47	0.00	0.00	198.02	198.02	100.00			
11/01/2013	93.29	0.00	0.00	3.09	3.09	0.03	0.03	63.49	63.54	0.01	0.01	60.44	60.47	0.00	0.00	0.00	0.00	0.00	0.00	57.15	57.15	0.02	0.02	11.12	11.16	0.06	0.06	195.28	195.41	99.93			
12/01/2013	93.32	0.00	0.00	32.64	32.64	0.00	0.05	30.48	30.52	0.00	0.00	67.02	67.02	0.00	0.00	0.00	0.00	0.00	0.00	69.83	69.83	0.00	0.00	0.00	0.00	0.00	0.05	199.96	200.00	99.98			
13/01/2013	93.42	0.00	0.00	34.78	34.78	0.00	0.00	36.18	36.18	0.00	0.00	59.55	59.55	0.00	0.00	0.00	0.00	0.00	0.00	62.73	62.73	0.00	0.00	0.00	0.00	0.00	0.00	193.24	193.24	100.00			
14/01/2013	94.18	0.00	1.04	20.30	21.34	0.00	0.00	16.70	16.70	0.00	0.00	48.15	48.15	0.00	0.00	31.91	31.91	0.00	0.00	68.64	68.64	0.00	0.04	3.17	3.21	0.00	1.08	188.86	189.94	99.43			
15/01/2013	94.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.63	50.63	0.00	0.00	54.40	54.40	0.00	0.00	84.86	84.86	0.00	0.00	0.00	0.00	0.00	0.00	189.90	189.90	100.00			
16/01/2013	94.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.75	50.75	0.00	0.00	55.25	55.25	0.00	0.00	85.87	85.87	0.00	0.00	0.00	0.00	0.00	0.00	191.87	191.87	100.00			
17/01/2013	94.58	0.00	0.00	27.73	27.73	0.00	0.00	0.00	0.00	0.00	0.00	31.20	31.20	0.00	0.00	55.33	55.33	0.00	0.00	80.27	80.27	0.00	0.00	0.00	0.00	0.00	0.00	194.53	194.53	100.00			
18/01/2013	94.07	0.00	0.00	74.75	74.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.03	48.03	0.00	0.00	72.24	72.24	0.00	0.00	0.00	0.00	0.00	0.00	195.02	195.02	100.00				
19/01/2013	93.80	0.00	0.00	74.86	74.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	47.93	47.93	0.00	0.00	72.22	72.22	0.00	0.00	0.00	0.00	0.00	0.00	195.01	195.01	100.00				
20/01/2013	93.74	0.00	0.21	56.30	56.51	0.00	0.00	19.36	19.36	0.00	0.00	0.00	0.00	0.00	0.00	47.68	47.68	0.00	0.00	71.43	71.43	0.00	0.00	0.00	0.00	0.00	0.21	194.78	194.99	99.89			
21/01/2013	93.72	0.00	0.00	0.00	0.00	0.00	0.00	80.06	80.06	0.00	0.00	0.00	0.00	0.00	0.00	46.00	46.00	0.00	0.00	68.94	68.94	0.00	0.00	0.00	0.00	0.00	0.00	195.00	195.00	100.00			
22/01/2013	93.94	0.00	0.00	0.00	0.00	0.00	0.00	80.13	80.13	0.00	0.00	0.00	0.00	0.00	0.00	45.95	45.95	0.00	0.00	68.92	68.92	0.00	0.00	0.00	0.00	0.00	0.00	195.00	195.00	100.00			
23/01/2013	93.83	0.00	0.00	0.00	0.00	0.00	0.00	80.04	80.04	0.00	0.00	0.00	0.00	0.00	0.00	45.82	45.82	0.00	0.00	69.14	69.14	0.00	0.00	0.00	0.00	0.00	0.00	195.00	195.00	100.00			
24/01/2013	94.88	0.00	0.00	0.00	0.00	0.00	0.00	79.97	79.97	0.00	0.00	0.00	0.00	0.00	0.00	45.81	45.81	0.00	0.00	69.24	69.24	0.00	0.00	0.00	0.00	0.00	0.00	195.02	195.02	100.00			
25/01/2013	94.89	0.00	0.00	0.00	0.00	0.00	0.00	79.48	79.48	0.00	0.00	13.77	13.77	0.00	0.00	31.54	31.54	0.00	0.00	69.53	69.53	0.00	0.00	0.00	0.00	0.00	0.00	194.31	194.31	100.00			
26/01/2013	94.73	0.00	0.10	0.22	0.32	0.00	0.00	31.23	31.23	0.00	0.00	0.00	0.00	0.00	0.00	62.91	62.91	0.00	0.00	57.20	57.20	0.00	0.00	42.35	42.35	0.00	0.10	193.91	194.01	99.95			
27/01/2013	94.68	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	0.39	67.42	67.81	0.00	0.00	51.11	51.11	0.00	0.05	74.99	75.04	0.00	0.44	193.52	193.96	99.77			
28/01/2013	94.44	0.00	0.00	30.68	30.68	0.00	0.00	0.00	0.00	0.00	0.04	27.99	28.03	0.00	0.08	39.18	39.27	0.00	0.00	55.71	55.71	0.00	0.00	39.11	39.11	0.00	0.12	192.68	192.80	99.94			
29/01/2013	94.58	0.00	0.00	62.59	62.59	0.00	0.00	0.00	0.00	0.00	0.00	21.34	21.34	0.00	0.00	45.12	45.12	0.00	0.00	66.72	66.72	0.00	0.00	0.00	0.00	0.00	0.00	195.77	195.77	100.00			
30/01/2013	94.75	0.00	0.00	60.67	60.67	0.00	0.00	0.00	0.00	0.00	0.00	67.37	67.37	0.00	0.00	0.00	0.00	0.00	0.00	68.95	68.95	0.00	0.00	0.00	0.00	0.00	0.00	196.99	196.99	100.00			
31/01/2013	94.83	0.00	0.00	60.58	60.58	0.00	0.00	0.00	0.00	0.00	0.00	67.41	67.41	0.00	0.00	0.00	0.00	0.00	0.00	69.02	69.02	0.00	0.00	0.00	0.00	0.00	0.00	197.02	197.02	100.00			
		0.05	1.83	892.30	894.18	0.05	0.09	1080.57	1080.71	0.01	0.08	937.47	937.56	0.00	0.47	860.91	861.39	0.00	0.02	1610.13	1610.15	0.02	0.25	666.61	666.88	0.13	2.74	6048.00	6050.87				

Water Volume [%]:
 Untreated: 0.00 %
 Below Dose 0.05 %
 To Dose 99.95 %

Submitted By (Print): A.Weremy

Signature: Original signed by A.Weremy



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES DIVISION

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

WATER TREATMENT PLANT UV REPORT

Report Period: **January 2013**

Report Created: **Friday, February 01, 2013**

Reactor: **UVR-100A**

Date	UV Dose mJ/cm ²			Reactor Flow MLD			Average UV Lamp Intensity W/m ²									UV Lamp Status Hours									% Volume Treated to Validate Conditions	Daily Totals Water Volume [ML]				
	Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total	
																														OL
1/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	4882	1598	48	4867	2597	2595	1091	4756	2581	OL	0.00	0.00	0.00	0.00	
2/01/2013	17.9	104.7	24.5	0.0	77.0	59.9	235.0	118.1	117.7	173.1	103.3	114.2	211.4	96.0	125.9	4890	1607	56	4867	2597	2596	1099	4764	2590	100.00	0.00	0.00	20.09	20.09	
3/01/2013	0.0	29.3	24.1	0.0	62.6	59.9	190.8	97.2	96.9	OL	OL	OL	175.6	96.4	96.7	4904	1621	70	4867	2597	2596	1113	4778	2604	100.00	0.00	0.00	35.10	35.10	
4/01/2013	14.8	93.6	24.1	5.0	77.3	67.1	133.5	85.5	84.7	118.5	74.7	74.6	149.6	84.7	84.8	4921	1638	88	4877	2607	2605	1131	4796	2621	100.00	0.00	0.00	48.36	48.36	
5/01/2013	17.0	25.3	23.9	64.3	74.7	69.5	115.9	73.7	72.0	107.7	93.2	92.9	148.4	93.6	93.4	4932	1649	98	4901	2631	2629	1155	4820	2645	99.86	0.00	0.10	69.43	69.52	
6/01/2013	18.0	25.9	24.3	36.0	70.0	50.6	81.2	49.7	45.9	93.1	78.4	74.3	146.1	79.3	74.2	4940	1657	106	4925	2655	2653	1179	4844	2669	100.00	0.00	0.00	50.63	50.63	
7/01/2013	15.9	26.9	24.2	41.9	56.3	47.8	85.2	50.6	45.0	86.8	67.2	62.1	151.7	70.3	63.8	4955	1672	122	4949	2679	2677	1203	4868	2693	99.87	0.00	0.06	47.78	47.84	
8/01/2013	0.0	25.5	23.4	0.0	80.1	55.0	92.7	50.7	42.1	100.5	80.6	77.2	158.4	88.0	82.8	4968	1685	134	4969	2699	2697	1223	4888	2713	99.21	0.05	0.32	46.07	46.43	
9/01/2013	20.2	60.8	24.5	0.0	78.3	74.6	203.2	119.6	115.6	OL	OL	OL	202.0	113.0	134.5	4969	1686	135	4969	2699	2697	1224	4889	2714	100.00	0.00	0.00	2.47	2.47	
10/01/2013	0.0	31.1	24.0	0.0	78.5	76.3	211.2	121.9	121.8	OL	OL	OL	190.4	121.8	124.7	4979	1696	146	0	2699	2697	1234	4899	2725	100.00	0.00	0.00	33.17	33.17	
11/01/2013	0.0	63.7	24.2	0.0	86.2	74.3	129.9	118.9	118.0	OL	OL	OL	139.6	115.8	116.7	4980	1	147	0	2699	2697	1236	4900	2726	100.00	0.00	0.00	3.09	3.09	
12/01/2013	19.2	63.4	24.0	3.2	62.9	61.2	113.9	98.7	98.4	OL	OL	OL	123.9	98.2	98.3	4993	14	160	0	2699	2697	1248	4913	2739	100.00	0.00	0.00	32.64	32.64	
13/01/2013	18.3	26.4	24.4	26.2	63.3	34.7	96.9	70.0	56.9	OL	OL	OL	123.7	62.0	56.8	5017	38	184	0	2699	2697	1272	4937	2763	100.00	0.00	0.00	34.78	34.78	
14/01/2013	0.0	31.5	23.2	0.0	66.3	37.2	104.1	73.7	52.8	OL	OL	OL	131.4	68.8	61.2	5031	52	197	0	2699	2697	1286	4951	2776	95.13	0.00	1.04	20.30	21.34	
15/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5031	52	197	0	2699	2697	1286	4951	2776	OL	0.00	0.00	0.00	0.00	0.00
16/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5031	52	197	0	2699	2697	1286	4951	2776	OL	0.00	0.00	0.00	0.00	0.00
17/01/2013	17.9	105.5	24.5	3.5	80.0	70.6	233.1	121.3	124.6	198.2	115.3	116.4	200.5	76.7	134.9	5041	61	207	10	2708	2707	1286	4951	2777	100.00	0.00	0.00	27.73	27.73	
18/01/2013	18.9	33.8	24.0	68.7	77.2	74.7	151.6	112.8	112.4	139.0	112.7	112.9	172.7	75.5	75.6	5065	85	231	34	2732	2731	1291	4955	2781	100.00	0.00	0.00	74.75	74.75	
19/01/2013	18.5	25.6	24.1	68.2	77.1	74.8	103.6	76.4	76.2	109.3	76.2	76.2	179.5	76.2	76.2	5089	109	255	58	2756	2755	1315	4979	2805	100.00	0.00	0.00	74.86	74.86	
20/01/2013	0.0	31.3	22.8	0.0	77.3	74.4	94.0	75.7	70.2	105.2	76.1	75.8	173.7	76.0	76.0	5107	127	273	76	2775	2773	1333	4998	2823	99.63	0.00	0.21	56.30	56.51	
21/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5107	127	273	76	2775	2773	1333	4998	2823	OL	0.00	0.00	0.00	0.00	0.00
22/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5107	127	273	76	2775	2773	1333	4998	2823	OL	0.00	0.00	0.00	0.00	0.00
23/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5107	127	273	76	2775	2773	1333	4998	2823	OL	0.00	0.00	0.00	0.00	0.00
24/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5107	127	273	76	2775	2773	1333	4998	2823	OL	0.00	0.00	0.00	0.00	0.00
25/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5107	127	273	76	2775	2773	1333	4998	2823	OL	0.00	0.00	0.00	0.00	0.00
26/01/2013	0.0	46.2	20.7	0.0	76.2	62.6	73.0	69.5	44.3	80.1	68.0	56.4	137.2	65.1	65.4	5107	128	273	76	2775	2773	1333	4998	2823	67.53	0.00	0.10	0.22	0.32	
27/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	5107	128	273	76	2775	2773	1333	4998	2823	OL	0.00	0.00	0.00	0.00	0.00
28/01/2013	19.7	96.8	24.3	0.0	65.8	61.9	241.3	108.1	110.2	165.0	90.7	110.6	199.9	99.0	112.9	12	140	285	76	2775	2773	1345	12	2835	100.00	0.00	0.00	30.68	30.68	
29/01/2013	19.4	31.4	24.0	52.8	66.1	62.6	155.7	100.5	100.1	101.4	61.1	59.1	145.9	100.1	100.1	36	164	309	77	2775	2774	1369	36	2859	100.00	0.00	0.00	62.59	62.59	
30/01/2013	18.5	25.4	24.2	57.5	62.8	60.7	129.0	62.7	62.2	122.3	68.1	62.3	138.6	62.3	62.3	60	188	333	101	2799	2798	1393	60	2883	100.00	0.00	0.00	60.67	60.67	
31/01/2013	17.5	25.0	23.9	58.8	63.0	60.6	125.9	62.4	60.9	119.7	66.8	62.2	137.9	62.2	62.2	84	212	357	125	2823	2822	1417	84	2907	100.00	0.00	0.00	60.58	60.58	
Total [ML]:																										0.05	1.83	892.30	894.18	

Water Volume [%]:

Untreated: 0.01 %
 Below Dose: 0.20 %
 To Dose: 99.79 %

Notes: 1. UV Comparative Dose: 18.1 mJ/cm²
 2. OL - Off Line

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV2013\01-January



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 WATER SERVICES DIVISION

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

WATER TREATMENT PLANT UV REPORT

Report Period: **January 2013**

Report Created: **Friday, February 01, 2013**

Reactor: **UVR-200A**

Date	UV Dose mJ/cm ²			Reactor Flow MLD			Average UV Lamp Intensity W/m ²									UV Lamp Status Hours									% Volume Treated to Validate Conditions	Daily Totals Water Volume [ML]			
	Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
1/01/2013	18.8	25.1	23.8	67.9	89.6	78.2	93.5	79.7	78.3	79.7	79.8	79.6	172.6	79.7	79.6	2259	2258	2259	1765	1248	3863	2285	2285	2285	100.00	0.00	0.00	78.19	78.19
2/01/2013	0.0	30.4	22.6	0.0	72.3	69.5	89.3	71.1	63.8	71.1	71.2	70.9	176.5	70.9	70.9	2275	2274	2275	1781	1264	3879	2301	2301	2301	100.00	0.00	0.00	46.34	46.34
3/01/2013	17.7	112.8	24.2	0.0	83.8	81.5	199.7	132.6	149.7	194.4	204.9	159.4	227.6	127.9	130.3	2285	2285	2285	1781	1265	3879	2311	2312	2311	100.00	0.00	0.00	33.92	33.92
4/01/2013	0.0	29.2	24.0	0.0	84.0	81.5	153.3	130.6	131.3	OL	OL	OL	187.5	130.5	130.5	2292	2291	2292	1781	1265	3879	2318	2318	2318	100.00	0.00	0.00	22.81	22.81
5/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2292	2291	2292	1781	1265	3879	2318	2318	2318	OL	0.00	0.00	0.00	0.00
6/01/2013	21.0	93.2	24.3	3.2	77.4	75.3	99.8	76.7	76.7	80.2	77.2	76.7	151.8	76.8	76.6	2310	2309	2310	1799	1283	3897	2336	2336	2336	100.00	0.00	0.00	56.40	56.40
7/01/2013	18.9	25.0	23.5	59.3	80.6	69.6	81.0	71.1	69.4	71.1	71.1	67.9	149.9	71.1	71.0	2334	2333	2334	1823	1307	3921	2360	2360	2360	100.00	0.00	0.00	69.56	69.56
8/01/2013	0.0	117.7	23.2	0.0	88.8	65.9	115.7	82.1	100.2	80.1	79.6	79.6	153.8	64.1	65.4	2351	2351	2351	1841	1325	3939	2374	2375	2374	99.93	0.02	0.02	48.19	48.22
9/01/2013	0.0	34.7	23.7	0.0	88.1	84.6	140.3	106.2	111.7	105.4	105.3	107.6	197.0	85.8	85.7	2374	2374	2375	1864	1348	3962	2389	2389	2389	100.00	0.00	0.00	81.88	81.88
10/01/2013	17.8	111.2	24.1	2.7	84.5	81.4	198.1	130.6	132.5	96.7	87.4	91.4	212.6	128.9	130.1	2388	2388	2388	1865	1348	3963	2402	2403	2402	100.00	0.00	0.00	46.18	46.18
11/01/2013	0.0	86.5	24.3	0.0	87.9	66.7	128.6	74.1	74.5	66.7	66.6	66.6	157.5	73.2	73.6	2411	2411	2411	1885	1369	3983	2425	2426	2425	99.91	0.03	0.03	63.49	63.54
12/01/2013	0.0	31.0	22.9	0.0	66.9	65.1	111.6	66.5	62.1	66.8	66.9	66.6	130.4	66.6	66.6	2422	2422	2422	1897	1380	3995	2437	2437	2437	99.85	0.00	0.05	30.48	30.52
13/01/2013	17.2	39.5	24.3	2.9	49.2	45.4	66.7	51.9	30.1	73.5	73.6	73.2	119.0	73.6	73.5	2422	2422	2423	1916	1400	4014	2456	2456	2456	100.00	0.00	0.00	36.18	36.18
14/01/2013	0.0	111.2	24.5	0.0	71.7	44.9	150.1	119.4	113.3	73.8	73.6	73.0	127.0	72.8	73.2	2422	2422	2423	1925	1408	4023	2465	2465	2465	100.00	0.00	0.00	16.70	16.70
15/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2422	2422	2423	1925	1408	4023	2465	2465	2465	OL	0.00	0.00	0.00	0.00
16/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2422	2422	2423	1925	1408	4023	2465	2465	2465	OL	0.00	0.00	0.00	0.00
17/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2422	2422	2423	1925	1408	4023	2465	2465	2465	OL	0.00	0.00	0.00	0.00
18/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2422	2422	2423	1925	1408	4023	2465	2465	2465	OL	0.00	0.00	0.00	0.00
19/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2422	2422	2423	1925	1408	4023	2465	2465	2465	OL	0.00	0.00	0.00	0.00
20/01/2013	19.1	116.6	24.3	2.2	82.1	80.0	206.4	127.8	148.5	156.2	127.6	126.1	202.5	80.4	113.4	2428	2428	2429	1931	1414	4029	2465	2466	2465	100.00	0.00	0.00	19.36	19.36
21/01/2013	20.3	32.3	24.1	78.2	81.7	80.1	156.0	118.5	119.2	121.0	124.0	118.3	117.7	81.2	81.0	2452	2452	2453	1955	1438	4053	2471	2471	2471	100.00	0.00	0.00	80.06	80.06
22/01/2013	21.1	24.7	24.3	77.9	82.0	80.1	119.6	81.6	81.6	81.6	99.9	81.5	98.9	81.6	81.5	2476	2476	2477	1979	1462	4077	2495	2495	2495	100.00	0.00	0.00	80.13	80.13
23/01/2013	21.0	24.8	24.2	78.1	82.2	80.0	112.5	81.5	81.5	81.5	96.1	81.4	85.2	81.4	81.4	2500	2500	2501	2003	1486	4101	2519	2519	2519	100.00	0.00	0.00	80.04	80.04
24/01/2013	21.0	24.7	24.3	78.1	81.9	80.0	112.6	81.5	81.4	81.4	95.4	81.3	85.0	81.4	81.3	2524	2524	2525	2027	1510	4125	2543	2543	2543	100.00	0.00	0.00	79.97	79.97
25/01/2013	21.0	24.8	24.3	72.6	81.9	79.5	111.9	81.0	80.9	81.0	95.4	80.9	91.0	80.8	80.8	2548	2548	2549	2051	1534	4149	2567	2567	2567	100.00	0.00	0.00	79.48	79.48
26/01/2013	0.0	33.6	24.3	0.0	81.5	79.6	111.7	81.4	81.1	81.9	95.0	81.1	102.7	81.2	81.1	2558	2557	2558	2060	1544	4158	2576	2577	2576	100.00	0.00	0.00	31.23	31.23
27/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2558	2557	2558	2060	1544	4158	2576	2577	2576	OL	0.00	0.00	0.00	0.00
28/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2558	2557	2558	2060	1544	4158	2576	2577	2576	OL	0.00	0.00	0.00	0.00
29/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2558	2557	2558	2060	1544	4158	2576	2577	2576	OL	0.00	0.00	0.00	0.00
30/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2558	2557	2558	2060	1544	4158	2576	2577	2576	OL	0.00	0.00	0.00	0.00
31/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2558	2557	2558	2060	1544	4158	2576	2577	2576	OL	0.00	0.00	0.00	0.00
Total [ML]:																									0.05	0.09	1080.57	1080.71	

Water Volume [%]:
 Untreated: 0.00 %
 Below Dose: 0.01 %
 To Dose: 99.99 %

Notes: 1. UV Comparative Dose: 18.1 mJ/cm²
 2. OL - Off Line

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2013\01-January



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 WATER SERVICES DIVISION

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

WATER TREATMENT PLANT UV REPORT

Report Period: **January 2013**

Report Created: **Friday, February 01, 2013**

Reactor: **UVR-400A**

Date	UV Dose mJ/cm ²			Reactor Flow MLD			Average UV Lamp Intensity W/m ²									UV Lamp Status Hours									% Volume Treated to Validate Conditions	Daily Totals Water Volume [ML]			
	Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
1/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	283	282	42	735	735	736	714	4714	715	OL	0.00	0.00	0.00	0.00
2/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	283	282	42	735	735	736	714	4714	715	OL	0.00	0.00	0.00	0.00
3/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	283	282	42	735	735	736	714	4714	715	OL	0.00	0.00	0.00	0.00
4/01/2013	22.3	63.9	24.5	0.0	61.2	54.4	107.0	93.3	87.2	93.7	87.7	88.4	87.8	106.0	128.5	292	292	51	745	744	745	715	4714	715	100.00	0.00	0.00	20.62	20.62
5/01/2013	18.4	33.9	24.2	51.6	59.2	55.1	70.6	70.6	71.1	75.7	76.1	79.0	80.6	78.7	309	309	69	769	768	769	731	4731	732	100.00	0.00	0.00	55.13	55.13	
6/01/2013	0.0	30.8	22.6	0.0	59.6	56.9	OL	OL	OL	81.9	91.5	85.6	91.6	91.6	91.5	309	309	69	775	774	775	738	4737	738	100.00	0.00	0.00	14.56	14.56
7/01/2013	0.0	34.7	22.9	0.0	46.2	41.3	45.5	45.2	24.7	50.8	59.9	52.0	62.1	63.8	63.4	309	309	69	775	775	775	738	4738	738	100.00	0.00	0.00	0.33	0.33
8/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	309	309	69	775	775	775	738	4738	738	OL	0.00	0.00	0.00	0.00
9/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	309	309	69	775	775	775	738	4738	738	OL	0.00	0.00	0.00	0.00
10/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	309	309	69	775	775	775	738	4738	738	OL	0.00	0.00	0.00	0.00
11/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	310	309	69	775	775	775	738	4738	738	OL	0.00	0.00	0.00	0.00
12/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	310	309	69	775	775	775	738	4738	738	OL	0.00	0.00	0.00	0.00
13/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	310	309	69	775	775	775	738	4738	738	OL	0.00	0.00	0.00	0.00
14/01/2013	0.0	63.9	24.8	4.8	57.5	50.4	91.2	70.8	63.6	65.5	52.1	70.9	87.7	84.7	106.7	325	325	84	791	790	791	753	4753	754	100.00	0.00	0.00	31.91	31.91
15/01/2013	19.6	26.7	24.4	41.8	57.0	54.4	59.6	56.0	55.9	56.1	56.0	56.0	74.3	73.7	83.6	349	349	108	815	814	815	777	4777	778	100.00	0.00	0.00	54.40	54.40
16/01/2013	19.8	25.4	24.4	52.1	58.1	55.2	57.0	56.9	56.8	56.9	56.8	56.9	73.6	74.3	82.5	373	373	132	839	838	839	801	4801	802	100.00	0.00	0.00	55.25	55.25
17/01/2013	19.0	30.7	24.4	33.6	64.9	55.3	57.2	57.1	57.0	57.0	56.9	57.0	75.2	74.7	83.1	397	397	156	863	862	863	825	4825	826	100.00	0.00	0.00	55.33	55.33
18/01/2013	19.3	25.8	24.5	45.6	51.8	48.0	49.8	49.8	49.6	49.7	49.8	49.8	79.6	85.2	91.2	421	421	180	887	886	887	849	4849	850	100.00	0.00	0.00	48.03	48.03
19/01/2013	19.8	25.8	24.5	45.3	51.7	47.9	49.7	49.7	49.5	49.6	49.7	50.2	88.8	91.4	112.6	445	445	204	911	910	911	873	4873	874	100.00	0.00	0.00	47.93	47.93
20/01/2013	19.6	26.8	24.5	36.9	51.4	47.7	49.6	49.5	49.3	49.4	49.4	53.7	91.6	89.4	120.9	469	469	228	935	934	935	897	4897	898	100.00	0.00	0.00	47.68	47.68
21/01/2013	19.7	25.9	24.5	43.6	48.8	46.0	48.5	47.8	47.6	47.7	47.7	64.6	93.1	90.0	123.2	493	493	252	959	958	959	921	4921	922	100.00	0.00	0.00	46.00	46.00
22/01/2013	19.7	25.9	24.5	43.6	48.5	46.0	50.7	47.8	47.6	47.6	47.7	80.1	94.5	90.3	124.1	517	517	276	983	982	983	945	4945	946	100.00	0.00	0.00	45.95	45.95
23/01/2013	19.9	26.2	24.5	43.0	48.0	45.8	52.3	47.6	47.5	47.5	47.6	83.3	94.4	90.0	122.9	541	541	300	1007	1006	1007	969	4969	970	100.00	0.00	0.00	45.82	45.82
24/01/2013	19.6	25.8	24.5	43.4	48.2	45.8	53.9	47.6	47.4	47.4	47.5	84.5	96.8	91.0	124.6	565	565	324	1031	1030	1031	993	4993	994	100.00	0.00	0.00	45.81	45.81
25/01/2013	0.0	63.9	24.7	0.0	47.7	45.4	94.5	65.1	58.0	80.7	47.4	83.0	96.3	95.7	123.1	582	582	341	1047	1047	1047	1010	5000	1010	100.00	0.00	0.00	31.54	31.54
26/01/2013	18.9	27.6	24.3	42.5	77.2	63.0	86.0	71.9	65.4	84.3	64.8	69.3	83.5	88.0	98.3	606	606	365	1071	1071	1071	1034	34	1034	100.00	0.00	0.00	62.91	62.91
27/01/2013	16.9	25.2	21.7	56.8	77.3	67.8	74.0	69.4	60.2	74.5	69.3	69.4	69.3	84.6	88.1	630	630	389	1095	1095	1095	1058	58	1058	99.43	0.00	0.39	67.42	67.81
28/01/2013	0.0	63.9	22.9	0.0	67.4	62.4	97.6	69.4	63.8	87.6	63.9	70.2	66.2	85.5	98.3	645	645	404	1110	1110	1111	1073	73	1074	99.79	0.00	0.08	39.18	39.27
29/01/2013	0.0	34.4	23.9	0.0	68.6	65.9	73.2	67.4	66.5	71.9	67.7	67.7	67.9	69.8	70.1	661	661	421	1127	1126	1127	1090	89	1090	100.00	0.00	0.00	45.12	45.12
30/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	661	661	421	1127	1126	1127	1090	89	1090	OL	0.00	0.00	0.00	0.00
31/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	661	661	421	1127	1126	1127	1090	89	1090	OL	0.00	0.00	0.00	0.00
Total [ML]:																									0.00	0.47	860.91	861.39	

Water Volume [%]:

Untreated: 0.00 %
 Below Dose 0.05 %
 To Dose 99.95 %

Notes: 1. UV Comparative Dose: 18.1 mJ/cm²
 2. OL - Off Line

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2013\01-January



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 WATER SERVICES DIVISION

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

WATER TREATMENT PLANT UV REPORT

Report Period: **January 2013**

Report Created: **Friday, February 01, 2013**

Reactor: **UVR-500A**

Date	UV Dose mJ/cm ²			Reactor Flow MLD			Average UV Lamp Intensity W/m ²							UV Lamp Status Hours							% Volume Treated to Validate Conditions	Daily Totals Water Volume [ML]							
	Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2		2-3	3-1	3-2	3-3	Untreated	Below Dose	To Dose	Total
	1/01/2013	20.9	26.7	24.1	49.6	70.8	65.3	131.6	104.8	160.8	OL	OL	OL	161.6	105.1	125.6	2543	2199	4305	2355		3935	2788	902	901	901	100.00	0.00	0.00
2/01/2013	20.9	24.8	24.1	54.5	74.8	69.5	133.3	111.4	229.1	OL	OL	OL	163.0	111.7	128.5	2567	2223	4329	2355	3935	2788	926	925	925	100.00	0.00	0.00	69.47	69.47
3/01/2013	0.0	41.6	24.1	0.0	74.7	72.6	132.8	116.4	254.4	OL	OL	OL	164.1	117.2	128.0	2576	2232	4338	2355	3935	2788	935	934	934	100.00	0.00	0.00	27.33	27.33
4/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2576	2232	4338	2355	3935	2788	935	934	934	OL	0.00	0.00	0.00	0.00
5/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2576	2232	4338	2355	3935	2788	935	934	934	OL	0.00	0.00	0.00	0.00
6/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2576	2232	4338	2355	3935	2788	935	935	934	OL	0.00	0.00	0.00	0.00
7/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2576	2232	4338	2355	3935	2788	935	935	934	OL	0.00	0.00	0.00	0.00
8/01/2013	0.0	34.3	27.5	0.0	32.9	30.2	102.3	60.4	241.4	13.2	8.2	4.6	189.3	73.5	109.5	2583	2239	4344	2355	3935	2789	942	941	941	99.78	0.00	0.02	8.34	8.36
9/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2583	2239	4344	2355	3935	2789	942	941	941	OL	0.00	0.00	0.00	0.00
10/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	2583	2239	4344	2355	3935	2789	942	941	941	OL	0.00	0.00	0.00	0.00
11/01/2013	0.0	117.7	24.9	4.7	71.4	66.6	117.0	103.4	318.1	197.0	112.5	124.1	171.1	108.8	117.3	2583	2239	4345	2376	3956	2809	962	962	962	100.00	0.00	0.00	57.15	57.15
12/01/2013	20.9	33.5	24.0	62.1	73.3	69.8	99.3	75.6	375.4	124.3	111.4	111.4	144.1	111.4	111.3	2584	2240	4345	2400	3980	2833	986	986	986	100.00	0.00	0.00	69.83	69.83
13/01/2013	20.3	25.6	24.2	57.4	73.2	62.8	88.8	64.5	256.1	103.2	64.5	64.3	134.9	64.5	64.4	2608	2264	4369	2424	4004	2857	1010	1010	1010	100.00	0.00	0.00	62.73	62.73
14/01/2013	18.6	29.5	24.2	26.9	93.6	68.6	76.6	71.0	129.9	104.6	71.3	70.1	134.9	71.6	70.9	2632	2288	4393	2448	4028	2881	1034	1034	1034	100.00	0.00	0.00	68.64	68.64
15/01/2013	20.3	26.0	24.0	63.7	87.6	84.9	86.3	86.2	86.3	103.1	86.3	86.2	126.7	86.3	86.3	2656	2312	4417	2472	4052	2905	1058	1058	1058	100.00	0.00	0.00	84.86	84.86
16/01/2013	20.1	25.2	24.0	81.2	89.6	85.8	87.3	87.2	87.3	104.0	87.3	87.2	114.3	87.3	87.2	2680	2336	4441	2496	4076	2929	1082	1082	1082	100.00	0.00	0.00	85.87	85.87
17/01/2013	20.4	26.8	24.1	53.5	89.4	80.3	81.7	81.7	81.8	106.7	81.9	81.6	109.4	82.4	81.7	2704	2360	4465	2520	4100	2953	1106	1106	1106	100.00	0.00	0.00	80.27	80.27
18/01/2013	20.6	25.2	24.2	69.2	75.6	72.2	73.8	73.8	73.8	115.9	73.9	73.7	122.8	86.5	75.2	2728	2384	4489	2544	4124	2977	1130	1130	1130	100.00	0.00	0.00	72.24	72.24
19/01/2013	20.7	25.2	24.2	68.5	75.4	72.2	73.8	73.8	73.8	133.1	80.2	73.8	143.7	88.9	98.5	2752	2408	4513	2568	4148	3001	1154	1154	1154	100.00	0.00	0.00	72.22	72.22
20/01/2013	20.7	25.3	24.2	61.1	75.4	71.4	73.0	73.0	73.1	157.8	94.0	73.1	143.9	85.8	112.8	2776	2432	4537	2592	4172	3025	1178	1178	1178	100.00	0.00	0.00	71.43	71.43
21/01/2013	20.8	26.4	24.3	66.0	71.4	68.9	72.4	70.6	70.6	192.9	101.2	71.4	144.3	85.9	117.3	2800	2456	4561	2616	4196	3049	1202	1202	1202	100.00	0.00	0.00	68.94	68.94
22/01/2013	20.8	29.6	24.5	66.0	71.3	68.9	85.2	70.6	70.6	209.7	102.7	83.9	144.6	86.9	118.1	2824	2480	4585	2640	4220	3073	1226	1226	1226	100.00	0.00	0.00	68.92	68.92
23/01/2013	20.7	29.0	24.5	66.0	71.4	69.1	94.0	70.8	70.8	209.4	101.9	96.0	142.3	84.7	114.4	2848	2504	4609	2664	4244	3097	1250	1250	1250	100.00	0.00	0.00	69.14	69.14
24/01/2013	20.8	29.2	24.5	66.2	71.7	69.3	101.2	70.9	71.0	209.6	101.7	105.7	143.5	84.8	115.1	2872	2528	4633	2688	4268	3121	1274	1274	1274	100.00	0.00	0.00	69.24	69.24
25/01/2013	20.8	29.6	24.5	66.1	72.7	69.5	108.0	71.2	71.3	210.6	101.9	115.3	144.8	86.0	115.0	2896	2552	4657	2712	4292	3145	1298	1298	1298	100.00	0.00	0.00	69.53	69.53
26/01/2013	20.8	36.9	25.4	38.7	72.6	57.1	109.7	70.4	70.4	208.4	101.3	118.5	145.8	87.3	116.2	2906	2561	4667	2736	4316	3169	1322	1322	1322	100.00	0.00	0.00	57.20	57.20
27/01/2013	20.7	29.0	25.7	44.4	58.3	51.1	OL	OL	OL	211.2	102.8	125.8	151.1	90.0	122.3	2906	2561	4667	2760	4340	3193	1346	1346	1346	100.00	0.00	0.00	51.11	51.11
28/01/2013	20.9	40.8	25.8	16.4	70.4	55.8	OL	OL	OL	209.2	103.4	126.3	146.5	98.6	119.6	2906	2561	4667	2784	4364	3217	1370	1370	1370	100.00	0.00	0.00	55.71	55.71
29/01/2013	20.9	27.0	24.0	57.9	71.0	66.7	OL	OL	OL	207.1	107.2	125.6	143.1	107.3	116.3	2906	2561	4667	2808	4388	3241	1394	1394	1394	100.00	0.00	0.00	66.72	66.72
30/01/2013	21.0	26.8	24.0	65.6	71.6	69.0	OL	OL	OL	201.4	110.7	119.5	139.1	110.9	112.1	2906	2561	4667	2832	4412	3265	1418	1418	1418	100.00	0.00	0.00	68.95	68.95
31/01/2013	20.8	26.7	24.0	66.4	71.4	69.0	OL	OL	OL	196.7	110.7	113.7	135.8	111.0	110.7	2906	2561	4667	2856	4436	3289	1442	1442	1442	100.00	0.00	0.00	69.02	69.02
Total [ML]:																										0.00	0.02	1610.13	1610.15

Water Volume [%]:

Untreated: 0.00 %
 Below Dose 0.00 %
 To Dose 100.00 %

Notes: 1. UV Comparative Dose: 18.1 mJ/cm²
 2. OL - Off Line

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2013\01-January



CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 WATER SERVICES DIVISION

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

WATER TREATMENT PLANT UV REPORT

Report Period: **January 2013**

Report Created: **Friday, February 01, 2013**

Reactor: **UVR-600A**

Date	UV Dose mJ/cm ²			Reactor Flow MLD			Average UV Lamp Intensity W/m ²									UV Lamp Status Hours									% Volume Treated to Validate Conditions	Daily Totals Water Volume [ML]			
	Min.	Max.	Avg.	Min.	Max.	Avg.	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3		Untreated	Below Dose	To Dose	Total
1/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3724	1585	1585	1917	1917	1918	3222	1825	1824	OL	0.00	0.00	0.00	0.00
2/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3724	1585	1585	1917	1917	1918	3222	1825	1824	OL	0.00	0.00	0.00	0.00
3/01/2013	18.1	82.3	24.2	4.8	75.6	66.2	78.1	67.7	67.8	68.0	67.6	67.7	70.7	67.7	67.5	3739	1600	1600	1932	1932	1933	3237	1840	1839	100.00	0.00	0.00	41.32	41.32
4/01/2013	17.6	25.4	24.1	60.3	75.6	67.0	70.4	68.5	68.5	68.6	68.5	68.5	72.0	68.5	68.5	3763	1624	1624	1956	1956	1957	3261	1864	1863	99.86	0.00	0.10	66.94	67.03
5/01/2013	17.6	25.2	24.2	60.6	70.0	64.9	66.4	66.4	66.3	66.4	66.4	66.3	74.1	66.3	66.4	3787	1648	1648	1980	1980	1981	3285	1888	1887	100.00	0.00	0.00	64.88	64.88
6/01/2013	17.8	25.5	24.1	52.1	76.7	72.9	74.2	74.2	74.0	74.3	74.2	74.1	75.9	74.2	74.2	3811	1672	1672	2004	2004	2005	3309	1912	1911	99.94	0.00	0.05	72.80	72.85
7/01/2013	17.9	26.0	23.8	54.6	79.9	69.5	70.8	70.7	66.9	71.5	70.8	70.7	75.9	71.0	70.7	3835	1696	1696	2028	2028	2029	3333	1936	1935	100.00	0.00	0.00	69.53	69.53
8/01/2013	17.9	27.7	24.3	42.8	72.7	57.1	60.9	58.6	58.6	61.6	58.6	58.6	73.9	58.6	58.6	3859	1720	1720	2052	2052	2053	3357	1960	1959	100.00	0.00	0.00	57.08	57.08
9/01/2013	17.9	25.5	24.3	51.6	70.0	56.9	65.0	58.4	58.4	65.5	58.4	58.4	83.9	58.4	58.4	3883	1744	1744	2076	2076	2077	3381	1984	1983	100.00	0.00	0.00	56.85	56.85
10/01/2013	18.1	25.6	24.2	55.7	70.2	66.5	67.9	67.9	67.9	68.3	67.9	67.9	92.9	67.9	67.9	3907	1768	1768	2100	2100	2101	3405	2008	2007	100.00	0.00	0.00	66.47	66.47
11/01/2013	0.0	53.9	24.2	0.0	73.0	63.1	66.8	65.5	64.6	68.2	66.2	65.7	99.0	66.1	65.6	3912	1773	1772	2105	2104	2105	3409	2012	2012	99.61	0.02	0.02	11.12	11.16
12/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3912	1773	1772	2105	2104	2105	3409	2012	2012	OL	0.00	0.00	0.00	0.00
13/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3912	1773	1772	2105	2104	2105	3409	2012	2012	OL	0.00	0.00	0.00	0.00
14/01/2013	0.0	62.2	24.3	0.0	74.4	69.0	70.8	70.7	68.8	71.7	70.2	69.8	96.5	70.6	70.8	3913	1774	1774	2106	2105	2106	3410	2013	2013	98.79	0.00	0.04	3.17	3.21
15/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3913	1774	1774	2106	2105	2106	3410	2013	2013	OL	0.00	0.00	0.00	0.00
16/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3913	1774	1774	2106	2105	2106	3410	2013	2013	OL	0.00	0.00	0.00	0.00
17/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3913	1774	1774	2106	2105	2106	3410	2013	2013	OL	0.00	0.00	0.00	0.00
18/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3913	1774	1774	2106	2105	2106	3410	2013	2013	OL	0.00	0.00	0.00	0.00
19/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3913	1774	1774	2106	2105	2106	3410	2013	2013	OL	0.00	0.00	0.00	0.00
20/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3913	1774	1774	2106	2105	2106	3410	2013	2013	OL	0.00	0.00	0.00	0.00
21/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3913	1774	1774	2106	2105	2106	3410	2013	2013	OL	0.00	0.00	0.00	0.00
22/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3913	1774	1774	2106	2105	2106	3410	2013	2013	OL	0.00	0.00	0.00	0.00
23/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3913	1774	1774	2106	2105	2106	3410	2013	2013	OL	0.00	0.00	0.00	0.00
24/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3913	1774	1774	2106	2105	2106	3410	2013	2013	OL	0.00	0.00	0.00	0.00
25/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3913	1774	1774	2106	2105	2106	3410	2013	2013	OL	0.00	0.00	0.00	0.00
26/01/2013	15.6	48.3	24.1	4.5	81.4	70.0	71.7	71.4	71.0	71.9	71.4	71.4	97.2	71.5	71.4	3928	1788	1788	2120	2120	2121	3425	2028	2027	100.00	0.00	0.00	42.35	42.35
27/01/2013	17.9	25.3	24.1	67.2	89.0	75.1	81.0	76.6	76.6	81.0	76.6	77.7	115.9	76.6	76.6	3952	1812	1812	2144	2144	2145	3449	2052	2051	99.94	0.00	0.05	74.99	75.04
28/01/2013	0.0	42.1	24.2	0.0	88.4	77.6	86.6	78.7	78.5	84.4	81.7	97.2	116.3	78.8	78.7	3964	1824	1824	2156	2156	2157	3461	2064	2064	100.00	0.00	0.00	39.11	39.11
29/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3964	1824	1824	2156	2156	2157	3461	2064	2064	OL	0.00	0.00	0.00	0.00
30/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3964	1824	1824	2156	2156	2157	3461	2064	2064	OL	0.00	0.00	0.00	0.00
31/01/2013	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	3964	1824	1824	2156	2156	2157	3461	2064	2064	OL	0.00	0.00	0.00	0.00
Total [ML]:																									0.02	0.25	666.61	666.88	

Water Volume [%]:

Untreated: 0.00 %
 Below Dose 0.04 %
 To Dose 99.96 %

Notes: 1. UV Comparative Dose: 18.1 mJ/cm²
 2. OL - Off Line

N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\UV\2013\01-January