



Water and Waste Department • Service des eaux et des déchets

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October 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: SEPTEMBER 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 September 2014. There are no corrective action reports to be submitted for September 2014.

The September on-line and grab sampling turbidity reports include results obtained for the Water Treatment Plant raw water and the eight filters. Please note that the on-line turbidity report shows that there were three turbidity exceedences above 0.3 NTU in September. The cause for the high values was due to the air saturator not starting immediately upon plant startup after the plant shutdowns. These results were for a short period of time and did not exceed the normal operating turbidity for more than 12 consecutive hours. There are no on-line turbidity results for raw water on September 28, 29 and 30 because the meter was not working properly due to a maintenance issue. The meter has been cleaned and serviced and the issue appears to have been resolved.

The September 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 September 2014 in accordance with Section 4.13, Table 2 of the Operating Licence. The UV licence requirement has been met for September.

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](mailto:rgrosselle@winnipeg.ca).

Thanks for your ongoing cooperation and understanding in this matter.

Yours sincerely,

*Original signed by:*

R. Grosselle  
Acting 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  
D.P. Sacher, P.Eng  
G. Patton, P.Eng.  
T. Shanks, P.Eng.  
A. J. Weremy, 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 A

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

September 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
1/09/2014	2.91	0.09	0.11	0.04	0.13	0.05	0.17	0.08	0.12	0.05	0.20	0.06	0.18	0.04	0.06	0.01	0.10
2/09/2014	3.12	0.09	0.20	0.03	0.13	0.04	0.09	0.06	0.22	0.07	0.11	0.08	0.12	0.06	0.16	0.02	0.14
3/09/2014	3.06	0.08	0.19	0.06	0.10	0.09	0.21	0.06	0.17	0.08	0.23	0.07	0.20	0.06	0.19	0.01	0.04
4/09/2014	3.07	0.07	0.21	0.03	0.24	0.05	0.34	0.09	0.16	0.06	0.20	0.04	0.11	0.05	0.11	0.02	0.14
5/09/2014	3.34	0.03	0.13	0.01	0.12	0.02	0.12	0.04	0.16	0.04	0.08	0.04	0.07	0.05	0.13	0.00	0.08
6/09/2014	3.40	0.02	0.09	0.00	0.00	0.02	0.04	0.03	0.12	0.04	0.16	0.03	0.11	0.03	0.12	0.00	0.06
7/09/2014	3.40	0.01	0.03	0.00	0.07	0.02	0.10	0.03	0.05	0.03	0.15	0.02	0.11	0.03	0.12	0.01	0.01
8/09/2014	3.35	0.02	0.10	0.00	0.07	0.01	0.10	0.03	0.11	0.03	0.16	0.02	0.05	0.04	0.05	0.00	0.06
9/09/2014	3.56	0.02	0.09	0.00	0.00	0.01	0.02	0.03	0.12	0.04	0.06	0.03	0.12	0.03	0.12	0.00	0.06
10/09/2014	3.62	0.02	0.04	0.00	0.07	0.03	0.11	0.04	0.06	0.04	0.15	0.03	0.11	0.03	0.14	0.01	0.01
11/09/2014	3.54	0.04	0.11	0.01	0.07	0.03	0.14	0.06	0.19	0.04	0.17	0.04	0.05	0.06	0.08	0.00	0.08
12/09/2014	3.47	0.03	0.13	0.00	0.01	0.04	0.06	0.05	0.16	0.07	0.10	0.05	0.13	0.06	0.17	0.01	0.09
13/09/2014	3.29	0.03	0.05	0.01	0.08	0.04	0.15	0.06	0.08	0.05	0.17	0.04	0.13	0.05	0.18	0.01	0.02
14/09/2014	3.28	0.05	0.13	0.01	0.10	0.03	0.16	0.06	0.16	0.04	0.17	0.04	0.06	0.08	0.10	0.01	0.10
15/09/2014	3.18	0.04	0.14	0.01	0.02	0.05	0.07	0.06	0.18	0.07	0.09	0.06	0.15	0.07	0.20	0.01	0.10
16/09/2014	3.05	0.04	0.15	0.02	0.11	0.05	0.18	0.08	0.09	0.05	0.19	0.04	0.15	0.06	0.16	0.01	0.02
17/09/2014	2.92	0.06	0.09	0.03	0.11	0.05	0.19	0.06	0.20	0.05	0.18	0.04	0.08	0.05	0.08	0.01	0.13
18/09/2014	2.87	0.05	0.15	0.02	0.11	0.05	0.08	0.06	0.18	0.07	0.08	0.06	0.15	0.05	0.15	0.01	0.12
19/09/2014	2.93	0.06	0.21	0.02	0.14	0.09	0.18	0.06	0.12	0.08	0.19	0.09	0.16	0.07	0.17	0.05	0.09
20/09/2014	2.78	0.07	0.12	0.05	0.10	0.07	0.21	0.11	0.22	0.06	0.21	0.08	0.19	0.07	0.17	0.06	0.17
21/09/2014	2.66	0.05	0.16	0.02	0.12	0.04	0.16	0.05	0.18	0.04	0.16	0.05	0.10	0.06	0.10	0.02	0.13
22/09/2014	2.66	0.03	0.14	0.01	0.11	0.03	0.05	0.04	0.17	0.05	0.06	0.06	0.15	0.05	0.15	0.01	0.12
23/09/2014	2.63	0.03	0.14	0.01	0.10	0.04	0.15	0.05	0.08	0.04	0.17	0.04	0.15	0.04	0.16	0.02	0.03
24/09/2014	2.81	0.05	0.25	0.03	0.23	0.04	0.32	0.05	0.31	0.03	0.23	0.05	0.20	0.05	0.20	0.03	0.29
25/09/2014	2.89	0.04	0.10	0.01	0.06	0.03	0.09	0.05	0.14	0.05	0.13	0.06	0.12	0.06	0.11	0.01	0.06
26/09/2014	2.65	0.02	0.05	0.01	0.02	0.03	0.10	0.06	0.08	0.05	0.15	0.05	0.13	0.04	0.14	0.02	0.07
27/09/2014	2.50	0.05	0.14	0.02	0.10	0.03	0.23	0.04	0.14	0.04	0.07	0.05	0.08	0.06	0.08	0.01	0.11
28/09/2014	NR	0.03	0.13	0.01	0.10	0.03	0.05	0.04	0.16	0.06	0.10	0.06	0.14	0.05	0.15	0.01	0.03
29/09/2014	NR	0.03	0.13	0.01	0.02	0.03	0.14	0.06	0.08	0.04	0.16	0.04	0.15	0.05	0.15	0.02	0.09
30/09/2014	NR	0.04	0.07	0.02	0.13	0.03	0.15	0.05	0.16	0.04	0.15	0.04	0.07	0.06	0.08	0.02	0.05

Total Number of Measurements Taken, A:	13664	12731	13531	11132	13837	13863	12816	13700
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:	13664	12731	13513	11125	13837	13863	12816	13700
Compliance with Turbidity Standard, C = B/A X 100%:	100.00%	100.00%	99.87%	99.94%	100.00%	100.00%	100.00%	100.00%

NR = No result due to analyser maintenance requirements

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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									
Date	Raw Water	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8
01-Sep-2014	2.51	0.13	0.18	0.18	0.14	0.21	0.13	0.09	0.13
02-Sep-2014	2.43	0.18	0.12	0.13	0.19	0.10	0.12	0.12	0.18
03-Sep-2014	2.35	0.14	0.16	0.21	0.20	0.18	0.20	0.20	0.12
04-Sep-2014	2.36	0.09	0.11	0.14	0.10	0.09	0.08	0.09	0.10
05-Sep-2014	3.01	0.10	0.06	0.08	0.11	0.08	0.10	0.08	0.13
06-Sep-2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
07-Sep-2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
08-Sep-2014	2.38	0.06	0.08	0.10	0.07	0.09	0.07	0.05	0.08
09-Sep-2014	2.97	0.14	<0.05	0.05	0.11	0.08	0.09	0.08	0.06
10-Sep-2014	2.48	0.07	0.08	0.10	0.07	0.10	0.11	0.06	0.07
11-Sep-2014	2.60	0.10	0.11	0.16	0.12	0.09	0.12	0.09	0.10
12-Sep-2014	2.60	0.14	0.09	0.11	0.08	0.09	0.13	0.12	0.08
13-Sep-2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
14-Sep-2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
15-Sep-2014	2.21	0.13	0.10	0.11	0.14	0.10	0.12	0.12	0.17
16-Sep-2014	2.38	0.16	0.10	0.15	0.10	0.12	0.14	0.14	0.11
17-Sep-2014	2.69	0.12	0.11	0.12	0.12	0.08	0.08	0.09	0.14
18-Sep-2014	2.04	0.10	0.13	0.11	0.11	0.12	0.11	0.11	0.18
19-Sep-2014	2.16	0.11	0.11	0.10	0.13	0.11	0.11	0.10	0.12
20-Sep-2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
21-Sep-2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
22-Sep-2014	2.14	0.12	0.16	0.13	0.13	0.11	0.09	0.09	0.13
23-Sep-2014	1.68	0.11	0.09	0.12	0.12	0.11	0.10	0.12	0.15
24-Sep-2014	2.03	0.10	0.11	0.13	0.11	0.07	0.11	0.10	0.16
25-Sep-2014	1.67	0.09	0.08	0.11	0.10	0.10	0.14	0.11	0.13
26-Sep-2014	1.65	0.09	0.08	0.12	0.10	0.12	0.07	0.08	0.11
27-Sep-2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
28-Sep-2014	NS	NS	NS	NS	NS	NS	NS	NS	NS
29-Sep-2014	1.65	0.10	0.11	0.13	0.11	0.12	0.12	0.13	0.14
30-Sep-2014	1.25	0.11	0.11	0.12	0.13	0.09	0.09	0.09	0.10
<b>Total number of measurements taken, A:</b>	22	22	22	22	22	22	22	22	22
<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>	22	22	22	22	22	22	22	22	22
<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: H.Demchenko

Approved in LIMS By: C.Diduck/ A.Vanderstel

Date Approved: 3-Oct-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 October 2014**

Report Period: **September 2014**

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/09/2014	1.45	1.24	1.42	1.28
02/09/2014	1.46	0.93	1.31	0.71
03/09/2014	1.60	1.30	1.49	1.29
04/09/2014	1.58	1.37	1.56	1.39
05/09/2014	1.46	1.31	1.39	1.24
06/09/2014	1.59	1.38	1.41	1.15
07/09/2014	1.53	1.33	1.48	1.31
08/09/2014	1.50	1.26	1.65	1.44
09/09/2014	1.36	1.09	1.32	1.02
10/09/2014	1.57	1.27	1.38	1.11
11/09/2014	1.36	1.05	1.43	1.20
12/09/2014	1.58	1.28	1.47	1.22
13/09/2014	1.72	1.53	1.54	1.30
14/09/2014	1.59	1.29	1.49	1.42
15/09/2014	1.73	1.53	1.57	1.44
16/09/2014	1.72	1.50	1.52	1.39
17/09/2014	1.45	1.28	1.45	1.30
18/09/2014	1.47	1.18	1.42	1.18
19/09/2014	1.48	1.11	1.39	1.21
20/09/2014	1.34	1.18	1.39	1.11
21/09/2014	1.22	1.01	1.27	1.09
22/09/2014	1.40	1.29	1.27	1.15
23/09/2014	1.47	1.32	1.31	1.21
24/09/2014	1.60	1.19	1.62	1.32
25/09/2014	1.62	1.28	1.83	1.26
26/09/2014	1.33	1.14	1.23	1.10
27/09/2014	1.49	1.36	1.36	1.12
28/09/2014	1.51	1.30	1.56	1.25
29/09/2014	1.56	1.30	1.48	1.23
30/09/2014	1.67	1.45	1.62	1.43

Total Number of Measurements, A:	20595	20568
Minimum Free Chlorine Standard:	0.50	0.50
Number of Measurements Meeting Standard, B:	20595	20568
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

<b>WATER TREATMENT PLANT CHLORINE GRAB MONITORING REPORT</b>				
<b>Water System Code: 252.00</b>	<b>Deacon Booster Pumping Station Branch 1</b>		<b>Deacon Booster Pumping Station Branch 2</b>	
<b>Licence No. PWS-09-412 A</b>	<b>Free Chlorine (mg/L)</b>	<b>Total Chlorine (mg/L)</b>	<b>Free Chlorine (mg/L)</b>	<b>Total Chlorine (mg/L)</b>
<b>Date</b>				
01-Sep-2014	1.61	1.79	1.61	1.84
02-Sep-2014	1.44	1.61	1.46	1.66
03-Sep-2014	1.72	1.89	1.47	1.73
04-Sep-2014	1.52	1.73	1.49	1.71
05-Sep-2014	1.52	1.67	1.46	1.64
06-Sep-2014	NS	NS	NS	NS
07-Sep-2014	NS	NS	NS	NS
08-Sep-2014	1.56	1.72	1.53	1.79
09-Sep-2014	1.37	1.52	1.26	1.42
10-Sep-2014	1.48	1.67	1.30	1.52
11-Sep-2014	1.36	1.46	1.36	1.54
12-Sep-2014	1.61	1.78	1.37	1.63
13-Sep-2014	NS	NS	NS	NS
14-Sep-2014	NS	NS	NS	NS
15-Sep-2014	1.78	1.98	1.65	1.88
16-Sep-2014	1.72	1.89	1.61	1.78
17-Sep-2014	1.57	1.77	1.54	1.77
18-Sep-2014	1.57	1.78	1.43	1.64
19-Sep-2014	1.44	1.64	1.39	1.60
20-Sep-2014	NS	NS	NS	NS
21-Sep-2014	NS	NS	NS	NS
22-Sep-2014	1.31	1.55	1.26	1.51
23-Sep-2014	1.37	1.56	1.38	1.60
24-Sep-2014	1.76	1.98	1.79	2.11
25-Sep-2014	1.63	1.88	1.69	1.91
26-Sep-2014	1.30	1.54	1.43	1.66
27-Sep-2014	NS	NS	NS	NS
28-Sep-2014	NS	NS	NS	NS
29-Sep-2014	1.62	1.80	1.55	1.82
30-Sep-2014	1.70	1.91	1.70	1.92
<b>Total number of measurements taken, A:</b>	22		22	
<b>Chlorine Standard for Monitoring Location (mg/L):</b>	0.50		0.50	
<b>Number of measurements meeting standard, B:</b>	22		22	
<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: H.Demchenko

Approved in LIMS By: C.Diduck/ 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: **September 2014**

Report Created: **Wednesday, October 01, 2014**

Date	Transmittance %	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total				% Volume Treated To Dose			
		Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]				Water Volume [ML]							
		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	Untreated	Below	To	Total
1/09/2014	96.23	0.00	0.00	0.00	0.00	0.00	0.00	69.97	69.97	0.00	0.00	0.00	0.00	0.00	0.00	70.46	70.46	0.00	0.00	0.00	0.00	0.00	0.00	64.57	64.57	0.00	0.00	205.01	205.01			100.00	
2/09/2014	95.76	0.00	0.00	29.37	29.37	0.00	0.10	40.95	41.05	0.00	0.00	0.00	0.00	4.28	4.28	31.92	40.48	0.00	0.00	22.64	22.64	0.00	0.11	58.66	58.76	4.28	4.48	183.54	192.30			95.45	
3/09/2014	95.76	0.00	0.00	52.08	52.08	0.00	0.08	24.20	24.27	0.00	0.00	0.00	0.00	0.00	0.03	52.28	52.32	0.00	0.00	62.19	62.19	0.00	0.09	15.19	15.28	0.00	0.20	205.94	206.14			99.90	
4/09/2014	95.84	0.00	0.93	42.69	43.62	0.00	0.74	49.53	50.27	0.00	0.00	0.00	0.00	0.00	0.00	34.77	34.77	0.41	0.41	44.14	44.96	0.00	0.08	36.55	36.64	0.41	2.16	207.68	210.26			98.78	
5/09/2014	96.84	0.00	0.07	14.87	14.94	0.00	0.00	40.01	40.01	0.00	0.00	0.00	0.00	0.00	0.00	51.19	51.19	0.00	0.00	37.03	37.03	0.00	0.22	67.49	67.71	0.00	0.30	210.60	210.89			99.86	
6/09/2014	97.09	0.00	0.00	35.99	35.99	0.00	0.00	35.71	35.72	0.00	0.00	0.00	0.00	0.01	0.01	57.61	57.63	0.00	0.10	50.13	50.23	0.00	0.17	32.75	32.92	0.02	0.29	212.19	212.49			99.86	
7/09/2014	97.12	0.00	0.00	21.12	21.12	0.00	0.06	73.51	73.56	0.00	0.00	0.00	0.00	0.00	0.00	45.56	45.56	0.00	0.04	38.96	38.99	0.00	0.00	35.63	35.63	0.00	0.10	214.77	214.86			99.96	
8/09/2014	97.34	0.00	0.00	0.31	0.31	0.00	0.07	49.99	50.06	0.00	0.00	0.00	0.00	0.00	0.00	52.87	52.87	0.00	0.00	37.05	37.05	0.00	0.00	68.08	68.08	0.00	0.07	208.31	208.38			99.97	
9/09/2014	97.66	0.00	0.00	9.03	9.03	0.00	0.10	19.11	19.21	0.00	0.00	21.79	21.79	0.00	0.00	47.47	47.47	0.00	0.00	34.61	34.61	0.00	0.05	68.00	68.05	0.00	0.15	200.00	200.15			99.92	
10/09/2014	97.33	0.00	0.14	34.21	34.36	0.00	0.00	39.10	39.11	0.00	0.00	35.35	35.35	0.00	0.00	26.00	26.00	0.00	0.00	25.82	25.82	0.00	0.04	34.91	34.95	0.00	0.18	195.40	195.58			99.91	
11/09/2014	97.30	0.00	0.10	53.77	53.87	0.00	0.00	19.86	19.86	0.00	0.00	46.64	46.64	0.00	0.00	0.00	0.00	0.00	0.00	40.99	40.99	0.00	0.00	33.64	33.65	0.00	0.10	194.91	195.01			99.95	
12/09/2014	96.95	0.00	0.10	27.65	27.75	0.00	0.00	47.95	47.95	0.00	0.32	25.62	25.95	0.00	0.12	17.07	17.20	0.00	0.03	43.27	43.30	0.00	0.00	32.71	32.71	0.00	0.57	194.27	194.85			99.71	
13/09/2014	96.66	0.00	0.00	0.00	0.00	0.00	0.16	58.24	58.40	0.01	0.01	7.91	7.93	0.00	0.00	53.35	53.35	0.00	0.00	29.38	29.38	0.00	0.00	45.74	45.74	0.01	0.17	194.63	194.80			99.91	
14/09/2014	96.55	0.08	0.08	0.00	0.15	0.00	0.27	71.25	71.51	0.00	0.00	0.57	0.57	0.00	0.00	54.37	54.37	0.00	0.00	0.00	0.00	0.00	0.10	70.52	70.62	0.08	0.44	196.71	197.23			99.74	
15/09/2014	95.88	0.00	0.00	11.55	11.55	0.00	0.00	18.73	18.73	0.00	0.00	44.35	44.35	0.00	12.74	41.24	53.98	0.00	0.00	0.00	0.00	0.00	0.05	70.49	70.53	0.00	12.79	186.35	199.14			93.58	
16/09/2014	95.90	0.00	0.18	60.33	60.50	0.00	0.00	8.08	8.08	0.00	0.10	47.92	48.02	0.00	0.00	0.00	0.00	0.00	0.00	19.22	19.22	0.00	0.00	68.46	68.46	0.00	0.28	204.01	204.28			99.87	
17/09/2014	95.05	0.00	0.00	0.00	0.00	0.00	0.04	65.92	65.96	0.00	0.00	0.00	0.00	0.00	0.00	43.07	43.07	0.00	0.00	31.27	31.27	0.00	0.10	69.46	69.56	0.00	0.14	209.73	209.87			99.93	
18/09/2014	96.06	0.00	0.13	51.38	51.50	0.00	0.04	20.35	20.39	0.01	0.06	51.82	51.89	0.00	0.05	17.22	17.28	0.00	0.00	34.32	34.32	0.00	0.00	40.53	40.53	0.01	0.28	215.62	215.91			99.87	
19/09/2014	95.96	0.00	0.11	18.34	18.45	0.00	0.00	57.89	57.89	0.00	0.00	28.46	28.46	0.00	0.06	28.78	28.84	0.00	0.04	33.26	33.30	0.00	0.16	52.91	53.07	0.00	0.37	219.63	220.00			99.83	
20/09/2014	95.67	0.00	0.00	7.69	7.69	0.00	0.00	70.99	70.99	0.00	0.00	38.88	38.88	0.00	0.00	32.51	32.51	0.00	0.00	0.00	0.00	0.00	0.75	69.18	69.93	0.00	0.75	219.24	219.99			99.66	
21/09/2014	96.11	0.00	0.00	43.49	43.49	0.00	0.08	40.72	40.80	0.00	0.00	0.00	0.00	0.00	0.05	61.04	61.09	0.00	0.00	12.89	12.89	0.00	0.00	61.74	61.74	0.00	0.13	219.88	220.01			99.94	
22/09/2014	96.10	0.00	5.27	41.23	46.49	0.00	0.00	0.00	0.00	0.00	0.00	26.53	26.54	0.00	0.00	46.07	46.07	0.00	0.00	47.35	47.35	0.00	0.60	52.78	53.38	0.00	5.87	213.95	219.83			97.33	
23/09/2014	96.00	0.03	0.03	16.24	16.30	0.00	0.00	30.22	30.22	0.00	0.04	66.40	66.45	0.00	0.00	23.81	23.81	0.00	0.12	60.97	61.09	0.00	0.00	21.78	21.78	0.03	0.19	219.43	219.64			99.90	
24/09/2014	94.62	0.00	0.00	9.80	9.81	0.00	0.00	27.86	27.86	0.00	0.00	2.53	2.53	0.08	0.08	22.63	22.78	0.00	0.00	17.49	17.49	0.00	0.00	11.04	11.04	0.08	0.08	91.34	91.50			99.82	
25/09/2014	96.05	0.00	0.06	13.79	13.85	0.00	0.11	53.71	53.82	0.29	0.39	0.04	0.71	0.00	0.00	31.64	31.64	0.00	0.00	30.33	30.33	0.00	0.00	84.69	84.69	0.29	0.55	214.20	215.04			99.61	
26/09/2014	96.34	0.00	0.35	42.89	43.23	0.00	0.00	32.19	32.19	0.00	0.00	0.00	0.00	0.00	0.00	24.37	24.37	0.00	0.00	35.72	35.72	0.00	0.00	79.21	79.21	0.00	0.35	214.37	214.72			99.84	
27/09/2014	96.24	0.00	0.00	75.09	75.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.62	62.62	0.00	0.00	0.00	0.00	0.00	0.00	78.50	78.50	0.00	0.00	216.21	216.21			100.00	
28/09/2014	96.26	0.00	0.25	57.76	58.01	0.00	0.11	20.05	20.16	0.00	0.00	0.00	0.00	0.00	0.08	51.78	51.86	0.00	0.00	59.73	59.73	0.00	0.00	21.98	21.98	0.00	0.43	211.30	211.74			99.80	
29/09/2014	96.22	0.00	0.16	76.48	76.64	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.07	0.00	0.00	48.04	48.04	0.00	0.00	83.89	83.89	0.20	0.20	0.91	1.31	0.23	0.40	209.32	209.95			99.70	
30/09/2014	96.24	0.00	0.00	55.22	55.22	0.00	0.05	40.09	40.14	0.00	0.17	15.84	16.01	0.00	0.00	15.93	15.93	0.00	0.00	82.70	82.70	0.00	0.00	0.00	0.00	0.00	0.22	209.78	210.00			99.90	
		0.11	7.95	902.34	910.40	0.01	2.00	1126.18	1128.19	0.34	1.12	460.65	462.11	4.37	17.50	1145.67	1167.54	0.41	0.74	1015.36	1016.51	0.20	2.71	1448.10	1451.01	5.44	32.02	6098.30	6135.76				

**Water Volume [%]:**  
 Untreated: 0.09 %  
 Below Dose: 0.52 %  
 To Dose: 99.39 %

Submitted By (Print): D.Merredew

Signature: Original signed by D.Merredew