



Water and Waste Department • Service des eaux et des déchets

Environmental Standards Division • Division des Normes Environnementales

March 7, 2018

Derek Clarke
Office of Drinking Water
Manitoba Sustainable Development
Box 6000
Gimli, Manitoba R0C 1B0

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

Dear Mr. Clarke:

**RE: FEBRUARY 2018 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 February 2018. There are no corrective action reports to be submitted for February 2018.

The February 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 February 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 February 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

Enclosures

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



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

February 2018 Turbidity (NTU)

Date	Raw		Filter #1		Filter #2		Filter #3		Filter #4		Filter #5		Filter #6		Filter #7		Filter #8	
	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
1/02/2018	0.62	0.04	0.09		0.03	0.09	0.02	0.03	0.03	0.08	0.04	0.08	0.06	0.13	0.08	0.11	0.01	0.02
2/02/2018	0.62	0.06	0.08		0.06	0.08	0.01	0.05	0.03	0.07	0.03	0.07	0.06	0.11	0.08	0.12	0.00	0.03
3/02/2018	0.62	0.05	0.08		0.03	0.08	0.01	0.15	0.04	0.07	0.05	0.08	0.08	0.13	0.06	0.12	0.00	0.01
4/02/2018	0.61	0.04	0.09		0.04	0.06	0.03	0.05	0.03	0.09	0.03	0.08	0.06	0.13	0.09	0.12	0.01	0.03
5/02/2018	0.61	0.07	0.08		0.05	0.09	0.02	0.07	0.03	0.05	0.03	0.08	0.08	0.12	0.08	0.13	0.01	0.03
6/02/2018	0.62	0.05	0.09		0.04	0.11	0.03	0.10	0.05	0.08	0.06	0.08	0.08	0.15	0.06	0.13	0.01	0.01
7/02/2018	0.63	0.05	0.09		0.06	0.07	0.04	0.06	0.03	0.10	0.04	0.09	0.06	0.15	0.08	0.15	0.01	0.08
8/02/2018	0.63	0.07	0.10		0.05	0.11	0.04	0.10	0.05	0.07	0.04	0.07	0.10	0.16	0.06	0.15	0.01	0.06
9/02/2018	0.64	0.05	0.10		0.03	0.08	0.04	0.11	0.05	0.12	0.06	0.09	0.07	0.16	0.09	0.14	0.01	0.02
10/02/2018	0.66	0.07	0.09		0.09	0.13	0.06	0.08	0.05	0.13	0.04	0.09	0.06	0.13	0.05	0.11	0.01	0.06
11/02/2018	0.66	0.05	0.08		0.06	0.12	0.04	0.09	0.06	0.10	0.04	0.07	0.07	0.12	0.04	0.08	0.00	0.03
12/02/2018	0.66	0.05	0.09		0.06	0.11	0.04	0.09	0.04	0.10	0.04	0.07	0.05	0.10	0.06	0.07	0.01	0.01
13/02/2018	0.84	0.05	0.07		0.09	0.11	0.06	0.08	0.03	0.09	0.04	0.07	0.04	0.09	0.03	0.07	0.01	0.03
14/02/2018	0.79	0.06	0.08		0.06	0.11	0.06	0.11	0.05	0.08	0.03	0.07	0.06	0.08	0.04	0.06	0.01	0.03
15/02/2018	0.73	0.06	0.17		0.05	0.20	0.07	0.19	0.02	0.08	0.04	0.07	0.05	0.10	0.05	0.08	0.00	0.02
16/02/2018	0.73	0.03	0.07		0.07	0.10	0.04	0.09	0.04	0.07	0.02	0.07	0.04	0.09	0.03	0.06	0.01	0.05
17/02/2018	0.71	0.02	0.03		0.04	0.09	0.03	0.07	0.01	0.07	0.02	0.04	0.03	0.09	0.03	0.07	0.01	0.01
18/02/2018	0.71	0.02	0.05		0.05	0.09	0.03	0.07	OL	OL	0.02	0.05	0.05	0.09	0.04	0.05	0.01	0.01
19/02/2018	0.70	0.02	0.05		0.05	0.10	0.02	0.06	OL	OL	0.02	0.05	0.04	0.09	0.04	0.09	0.01	0.01
20/02/2018	0.70	0.02	0.06		0.06	0.07	0.02	0.04	OL	OL	0.02	0.06	0.04	0.08	0.04	0.07	0.01	0.02
21/02/2018	0.68	0.03	0.05		0.06	0.13	0.04	0.10	OL	OL	0.03	0.06	0.04	0.13	0.05	0.10	0.01	0.05
22/02/2018	0.67	0.03	0.09		0.05	0.12	0.03	0.11	OL	OL	0.02	0.05	0.05	0.09	0.04	0.07	0.01	0.03
23/02/2018	0.68	0.02	0.05		0.04	0.06	0.01	0.07	0.01	0.07	0.02	0.03	0.03	0.09	0.03	0.07	0.01	0.01
24/02/2018	0.67	0.01	0.03		0.05	0.10	0.03	0.04	0.02	0.03	0.01	0.06	0.02	0.08	0.02	0.07	0.00	0.02
25/02/2018	0.66	0.02	0.05		0.04	0.10	0.02	0.08	0.02	0.08	0.01	0.02	0.04	0.05	0.03	0.05	0.00	0.02
26/02/2018	0.66	0.01	0.05		0.05	0.06	0.02	0.04	0.01	0.08	0.02	0.05	0.03	0.09	0.03	0.08	0.01	0.01
27/02/2018	0.66	0.02	0.03		0.04	0.11	0.03	0.08	0.03	0.05	0.01	0.05	0.03	0.10	0.03	0.08	0.00	0.03
28/02/2018	0.64	0.02	0.05		0.04	0.11	0.02	0.08	0.02	0.08	0.01	0.03	0.04	0.09	0.03	0.05	0.00	0.03

Total Number of Measurements Taken, A: 13414 10382 13774 8559 13984 13032 12177 13385

Turbidity Standard for Monitoring Location (NTU): 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.3

Number of Measurements Meeting Standard, B: 13414 10382 13774 8559 13984 13032 12177 13385

Compliance with Turbidity Standard, C = B/A X 100%: 100.000% 100.000% 100.000% 100.000% 100.000% 100.000% 100.000% 100.000%

OL Off-line

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Turbidity\2018\02-February

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)																		
	Raw Water		Filter 1		Filter 2		Filter 3		Filter 4		Filter 5		Filter 6		Filter 7		Filter 8		
Date	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	Grab	Analyser	
01-Feb-2018	0.51	0.59	OL	OL	0.06	0.06	0.07	<0.02	0.08	0.06	0.07	0.05	OL	OL	0.07	0.09	0.07	0.02	
02-Feb-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
03-Feb-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
04-Feb-2018	0.49	0.59	0.06	0.05	0.06	0.06	0.08	0.03	OL	OL	0.07	0.05	0.06	0.10	0.07	0.09	0.07	0.03	
05-Feb-2018	0.49	0.60	0.06	0.06	0.06	0.02	0.08	0.04	0.06	0.04	OL	OL	0.06	0.10	0.06	0.10	OL	OL	
06-Feb-2018	0.48	0.62	OL	OL	OL	OL	0.08	0.03	0.08	0.06	0.08	0.05	0.08	0.11	0.07	0.10	0.07	0.03	
07-Feb-2018	0.49	0.59	0.08	0.06	0.07	0.06	0.08	0.04	OL	OL	0.08	0.06	0.07	0.10	0.08	0.11	0.08	0.03	
08-Feb-2018	0.52	0.62	0.09	0.07	0.09	0.08	OL	OL	0.08	0.05	0.07	0.05	0.08	0.11	0.07	0.10	OL	OL	
09-Feb-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
10-Feb-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
11-Feb-2018	0.56	0.62	0.07	0.06	0.10	0.13	0.09	0.08	0.08	0.06	0.07	0.04	0.08	0.07	0.06	0.05	OL	OL	
12-Feb-2018	0.59	0.62	OL	OL	0.06	0.09	0.10	0.08	0.08	0.06	0.06	0.04	OL	OL	0.07	0.05	0.07	<0.02	
13-Feb-2018	0.52	0.64	0.06	0.05	0.06	0.09	0.07	0.06	OL	OL	0.07	0.05	0.06	0.07	0.05	OL	OL	0.08	0.02
14-Feb-2018	0.58	0.75	0.07	0.06	OL	OL	0.08	0.09	0.07	0.06	0.06	0.03	0.07	0.07	0.04	OL	OL		
15-Feb-2018	0.50	0.70	0.08	0.06	OL	OL	0.09	0.09	OL	OL	0.06	0.04	0.09	0.08	0.08	0.05	0.07	<0.02	
16-Feb-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
17-Feb-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
18-Feb-2018	0.48	0.68	0.07	<0.02	OL	OL	0.09	0.04	OL	OL	0.07	<0.02	0.09	0.06	0.07	0.03	0.07	<0.02	
19-Feb-2018	NA	NA	NA	NA	NA	NA	NA	NA	OL	OL	NA								
20-Feb-2018	0.52	0.67	0.06	<0.02	0.06	0.06	0.07	0.02	OL	OL	0.07	<0.02	OL	OL	0.09	0.04	0.09	<0.02	
21-Feb-2018	0.56	0.72	0.07	<0.02	0.10	0.07	0.09	0.03	OL	OL	0.12	0.04	0.09	0.04	OL	OL	0.09	<0.02	
22-Feb-2018	0.49	0.64	0.07	<0.02	0.09	0.08	0.09	0.03	OL	OL	0.08	<0.02	0.10	0.05	0.09	0.03	OL	OL	
23-Feb-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
24-Feb-2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
25-Feb-2018	0.53	0.66	0.07	<0.02	OL	OL	0.10	0.05	0.09	0.04	0.07	<0.02	0.09	0.04	0.08	0.02	OL	OL	
26-Feb-2018	0.50	0.73	OL	OL	0.08	0.06	0.08	0.03	OL	OL	0.08	<0.02	0.12	0.08	0.10	0.04	0.08	<0.02	
27-Feb-2018	0.55	0.66	0.09	<0.02	0.10	0.07	0.10	0.03	0.11	0.03	OL	OL	0.09	0.04	OL	OL	0.12	<0.02	
28-Feb-2018	0.47	0.59	0.08	<0.02	OL	OL	0.11	0.04	0.09	0.03	0.09	<0.02	0.10	0.04	0.09	0.03	OL	OL	
Total number of measurements taken, A:			15		13		18		12		17		16		16		12		
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:			15		13		18		12		17		16		16		12		
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 4 was offline for maintenance February 18 to 22.

Report Compiled By: H.Demchenko

Approved in LIMS By: C.Diduck



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 March 2018

Report Period: February 2018

Date	BRANCH 1 [mg/L]		BRANCH 2 [mg/L]	
	Average	Minimum	Average	Minimum
01/02/2018	1.15	1.03	1.20	1.15
02/02/2018	1.20	0.83	1.17	0.99
03/02/2018	1.12	1.03	1.13	1.09
04/02/2018	1.10	1.00	1.13	1.09
05/02/2018	1.11	1.03	1.10	1.05
06/02/2018	1.15	1.01	1.15	1.05
07/02/2018	1.19	1.11	1.22	1.11
08/02/2018	1.18	1.12	1.20	1.10
09/02/2018	1.10	1.05	1.10	1.05
10/02/2018	1.09	1.03	1.13	1.09
11/02/2018	1.11	1.05	1.14	1.09
12/02/2018	1.09	1.02	1.14	1.10
13/02/2018	1.08	0.99	1.14	1.05
14/02/2018	1.11	0.78	1.18	0.90
15/02/2018	1.12	0.93	1.17	0.98
16/02/2018	1.18	1.10	1.23	1.15
17/02/2018	1.10	1.01	1.14	1.09
18/02/2018	1.07	1.02	1.13	1.10
19/02/2018	1.10	1.03	1.18	1.11
20/02/2018	1.12	1.05	1.21	1.17
21/02/2018	1.03	0.93	0.92	0.73
22/02/2018	OL	OL	0.99	0.72
23/02/2018	OL	OL	1.11	1.05
24/02/2018	OL	OL	1.10	1.06
25/02/2018	OL	OL	1.12	1.09
26/02/2018	OL	OL	1.12	1.09
27/02/2018	OL	OL	1.12	1.09
28/02/2018	OL	OL	1.11	1.08

Total Number of Measurements, A: 13945 19440

Minimum Free Chlorine Standard: 0.5 0.5

Number of Measurements Meeting Standard, B: 13945 19440

COMPLIANCE, C = B/A X 100%: 100.00 100.00

Off-line OL

File Path: N:\Water Treatment Branch\Administration\Reports\Regulatory Submissions\Chlorine\2018\02-February

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		
	Date	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Free Chlorine (mg/L)	Total Chlorine (mg/L)	
		Analyser	Grab	Grab	Analyser	Grab
01-Feb-2018		1.14	1.28	1.46	1.21	1.29
02-Feb-2018		NA	NA	NA	NA	NA
03-Feb-2018		NA	NA	NA	NA	NA
04-Feb-2018		1.06	1.11	1.27	1.09	1.16
05-Feb-2018		1.12	1.16	1.31	1.12	1.19
06-Feb-2018		1.19	1.21	1.35	1.17	1.18
07-Feb-2018		1.19	1.27	1.47	1.25	1.33
08-Feb-2018		1.20	1.29	1.47	1.22	1.27
09-Feb-2018		NA	NA	NA	NA	NA
10-Feb-2018		NA	NA	NA	NA	NA
11-Feb-2018		1.11	1.20	1.37	1.15	1.22
12-Feb-2018		1.06	1.17	1.32	1.15	1.18
13-Feb-2018		1.10	1.15	1.35	1.17	1.20
14-Feb-2018		1.11	1.20	1.37	1.20	1.23
15-Feb-2018		1.13	1.23	1.43	1.18	1.22
16-Feb-2018		NA	NA	NA	NA	NA
17-Feb-2018		NA	NA	NA	NA	NA
18-Feb-2018		1.06	1.12	1.35	1.12	1.23
19-Feb-2018		NA	NA	NA	NA	NA
20-Feb-2018		1.10	1.21	1.39	1.20	1.26
21-Feb-2018		OL	OL	OL	0.96	1.01
22-Feb-2018		OL	OL	OL	1.00	1.04
23-Feb-2018		OL	OL	OL	NA	NA
24-Feb-2018		OL	OL	OL	NA	NA
25-Feb-2018		OL	OL	OL	1.11	1.20
26-Feb-2018		OL	OL	OL	1.13	1.17
27-Feb-2018		OL	OL	OL	1.12	1.16
28-Feb-2018		OL	OL	OL	1.10	1.16
Total number of measurements taken, A:		13			19	
Chlorine Standard for Monitoring Location (mg/L):		0.50			0.50	
Number of measurements meeting standard, B:		13			19	
Compliance with Chlorine Standard, C= B/A X 100%:		100%			100%	

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

Comments:

Branch I offline February 21 to 28 to facilitate maintenance work at the Water Treatment Plant and Tache Booster Station

Report Compiled By: H.Demchenko

Approved in LIMS By: C.Diduck



CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
WATER SERVICES

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

WATER TREATMENT PLANT UV REPORT

Report Period: February 2018

Report Created: Thursday, March 01, 2018

Date	Transmittance %	UVR-D100A				UVR-D200A				UVR-D300A				UVR-D400A				UVR-D500A				UVR-D600A				Total Water Volume [ML]				% 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														
01/02/2018	94.35	0.00	0.00	0.08	0.08	0.00	0.00	59.91	59.91	0.00	0.00	63.67	63.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.51	62.51	0.00	0.00	186.17	186.17	100.00			
02/02/2018	94.36	0.00	0.00	0.00	0.00	0.00	0.00	59.14	59.14	0.00	0.00	63.44	63.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	60.15	60.15	0.00	0.00	182.72	182.72	100.00			
03/02/2018	94.51	0.00	0.00	38.34	38.34	0.00	0.00	55.43	55.43	0.25	0.25	7.66	8.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	69.21	69.21	0.25	0.25	170.65	171.15	99.71			
04/02/2018	94.25	0.00	0.00	44.21	44.21	0.00	0.00	55.21	55.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	71.25	71.25	0.00	0.00	170.66	170.66	100.00			
05/02/2018	94.18	0.00	0.00	45.48	45.48	0.00	0.00	60.46	60.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	67.01	67.01	0.00	0.00	172.96	172.96	100.00			
06/02/2018	93.81	0.00	0.00	45.62	45.62	0.00	0.00	60.64	60.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.75	43.75	0.00	0.00	173.00	173.00	100.00			
07/02/2018	93.62	0.00	0.00	45.69	45.69	0.00	0.00	60.47	60.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.84	66.84	0.00	0.00	173.00	173.00	100.00			
08/02/2018	93.47	0.00	0.00	45.83	45.83	0.00	0.00	60.63	60.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	66.52	66.52	0.00	0.00	172.98	172.98	100.00			
09/02/2018	93.56	0.11	0.11	39.99	40.22	0.00	0.00	62.91	62.91	0.00	0.00	0.00	0.00	0.00	0.00	9.37	9.37	0.00	0.00	0.00	0.00	64.89	64.89	0.11	0.11	177.16	177.39	99.87			
10/02/2018	93.58	0.00	0.00	0.00	0.00	0.00	0.00	67.46	67.46	0.00	0.00	0.00	0.00	0.00	0.00	63.88	63.88	0.00	0.00	0.00	0.00	64.64	64.64	0.00	0.00	195.98	195.98	100.00			
11/02/2018	94.31	0.00	0.00	0.00	0.00	0.00	0.00	67.50	67.50	0.00	0.00	0.00	0.00	0.00	0.00	63.79	63.79	0.00	0.00	0.00	0.00	64.73	64.73	0.00	0.00	196.03	196.03	100.00			
12/02/2018	94.30	0.00	0.00	0.00	0.00	0.00	0.00	67.16	67.16	0.00	0.00	0.00	0.00	0.00	0.00	63.91	63.91	0.00	0.00	0.00	0.00	64.94	64.94	0.00	0.00	196.01	196.01	100.00			
13/02/2018	94.33	0.00	0.00	0.00	0.00	0.00	0.00	62.06	62.06	0.00	0.00	0.00	0.00	0.00	0.00	59.73	59.73	0.00	0.00	0.00	0.00	58.05	58.10	0.00	0.04	179.84	179.88	99.98			
14/02/2018	94.24	0.00	0.00	0.00	0.00	0.03	0.03	61.88	61.95	0.00	0.00	0.00	0.00	0.01	0.01	58.86	58.89	0.00	0.00	0.00	0.00	57.34	57.37	0.05	0.06	178.09	178.20	99.94			
15/02/2018	94.15	0.00	0.00	0.00	0.00	0.00	0.00	65.48	65.48	0.00	0.00	0.00	0.00	0.00	0.00	52.12	52.12	0.00	0.00	0.00	0.00	52.78	52.78	0.00	0.00	170.39	170.39	100.00			
16/02/2018	94.11	0.00	0.00	0.00	0.00	0.00	0.00	75.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	50.98	50.98	0.00	0.00	0.00	0.00	59.04	59.04	0.00	0.00	185.02	185.02	100.00			
17/02/2018	93.79	0.00	0.00	0.00	0.00	0.00	0.00	75.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	51.43	51.43	0.00	0.00	0.00	0.00	58.59	58.59	0.00	0.00	185.02	185.02	100.00			
18/02/2018	93.68	0.00	0.00	0.00	0.00	0.00	0.00	75.01	75.01	0.00	0.00	0.00	0.00	0.00	0.00	51.18	51.18	0.00	0.00	0.00	0.00	58.84	58.84	0.00	0.00	185.02	185.02	100.00			
19/02/2018	93.60	0.00	0.00	0.00	0.00	0.00	0.00	75.00	75.00	0.00	0.00	0.00	0.00	0.00	0.00	50.69	50.69	0.00	0.00	0.00	0.00	58.56	58.56	0.00	0.00	184.25	184.25	100.00			
20/02/2018	93.91	0.00	0.00	0.00	0.00	0.00	0.00	75.01	75.01	0.00	0.00	0.00	0.00	0.00	0.00	49.81	49.81	0.00	0.00	0.00	0.00	57.20	57.20	0.00	0.00	182.01	182.01	100.00			
21/02/2018	95.25	0.00	0.00	0.00	0.00	0.00	0.00	74.22	74.22	0.00	0.00	0.00	0.00	0.00	0.00	49.59	49.59	0.00	0.00	0.00	0.00	57.78	57.78	0.00	0.00	181.58	181.58	100.00			
22/02/2018	95.55	0.00	0.00	0.00	0.00	0.00	0.00	60.49	60.49	0.00	0.00	0.00	0.00	0.00	0.00	46.53	46.53	0.00	0.00	0.00	0.00	67.81	67.81	0.00	0.00	174.83	174.83	100.00			
23/02/2018	96.07	0.00	0.00	0.00	0.00	0.00	0.00	60.48	60.48	0.00	0.00	0.00	0.00	0.00	0.00	46.53	46.53	0.00	0.00	0.00	0.00	67.99	67.99	0.00	0.00	175.00	175.00	100.00			
24/02/2018	95.97	0.00	0.00	0.00	0.00	0.00	0.00	60.46	60.46	0.00	0.00	0.00	0.00	0.00	0.00	46.48	46.48	0.00	0.00	0.00	0.00	68.07	68.07	0.00	0.00	175.01	175.01	100.00			
25/02/2018	95.82	0.00	0.00	0.00	0.00	0.00	0.00	60.50	60.50	0.00	0.00	0.00	0.00	0.00	0.00	46.48	46.48	0.00	0.00	0.00	0.00	68.03	68.03	0.00	0.00	175.00	175.00	100.00			
26/02/2018	95.71	0.00	0.00	0.00	0.00	0.00	0.00	67.27	67.27	0.00	0.00	0.00	0.00	0.00	0.00	51.02	51.02	0.00	0.00	0.00	0.00	74.71	74.71	0.00	0.00	193.01	193.01	100.00			
27/02/2018	95.59	0.00	0.00	0.00	0.00	0.00	0.00	70.24	70.24	0.00	0.00	0.00	0.00	0.00	0.00	52.84	52.84	0.00	0.00	0.00	0.00	76.92	76.92	0.00	0.00	200.00	200.00	100.00			
28/02/2018	95.50	0.00	0.00	0.00	0.00	0.00	0.00	70.42	70.42	0.00	0.00	0.00	0.00	0.00	0.00	52.84	52.84	0.00	0.00	0.00	0.00	76.76	76.76	0.00	0.00	200.02	200.02	100.00			

Total [ML]:

0.11 0.11 305.23 305.46 0.03 0.03 1825.44 1825.51 0.25 0.25 134.77 135.27 0.01 0.01 1041.06 1041.08 0.00 0.00 0.00 0.00 0.01 0.06 1784.90 1784.97 0.42 0.47 5091.41 5092.29

Submitted By: D.Merredew

Signature: Original Signed by D.Merredew