Results of MS2 Tests Conducted at the T&E Facility on the Harmsco Small Community Filtration System with UV and E-Sep

March 31, 2009

ALL TESTS CONDUCTED AT 50 GPM

Test 1 - No Cartridge						
Min	UV	E-Sep	Inlet pfu/100 mL	Outlet pfu/100 mL	Log Removal	"Predicted" UV Dose*
0	OFF	OFF	100	1.00E+02	-	
10	ON	OFF	2.20E+07	1.00E+02	5.34	120
20	ON	OFF	2.10E+07	1.00E+02	5.32	120
30	ON	OFF	2.40E+07	1.00E+02	5.38	120
45	OFF	OFF	1.40E+07	2.00E+07	(0.15)	No UV
55	OFF	ON	1.90E+07	1.10E+07	0.24	No UV
55 dup	OFF	ON	1.50E+07	7.80E+06	0.28	No UV
65	OFF	ON	1.20E+07	1.30E+07	(0.03)	No UV
75	OFF	ON	1.60E+07	1.30E+07	0.09	No UV
85	ON	ON	1.90E+07	1.00E+02	5.28	120
95	ON	ON	2.10E+07	1.00E+02	5.32	120
Injection			3.8E+11			

Cartridge "A" (Test 3)						
Min	UV	E-Sep	Inlet pfu/100 mL	Outlet pfu/100 mL	Log Removal	"Predicted" UV Dose*
0	ON	OFF	3.00E+02	3.00E+02	-	0
10	ON	OFF	2.20E+07	1.00E+02	5.34	120
20	ON	OFF	3.10E+07	1.00E+02	5.49	120
30	ON	OFF	2.40E+07	1.00E+02	5.38	120
45	OFF	OFF	2.50E+07	8.30E+07	(0.52)	No UV
55	ON	ON	3.30E+07	2.00E+03	4.22	90
55 dup	ON	ON	2.00E+07	2.00E+02	5.00	110
65	ON	ON	2.70E+07	3.00E+02	4.95	110
75	ON	ON	2.30E+07	1.00E+02	5.36	120
85	OFF	ON	2.30E+07	6.40E+06	0.56	No UV
95	OFF	ON	2.60E+07	7.20E+06	0.56	No UV
Injection			3.10E+11			

Cartridge "N" (Test 2)						
Min	UV	E-Sep	Inlet pfu/100 mL	Outlet pfu/100 mL	Log Removal	"Predicted" UV Dose*
0	ON	OFF	3.00E+05	1.00E+02	3.48	70
10	ON	OFF	1.00E+07	1.00E+02	5.00	110
20	ON	OFF	3.20E+07	3.00E+02	5.03	110
30	ON	OFF	2.10E+07	4.00E+02	4.72	100
45	OFF	OFF	3.50E+07	2.10E+07	0.22	No UV
55	ON	ON	4.00E+07	2.20E+03	4.26	90
55 dup	ON	ON	4.40E+07	4.00E+02	5.04	110
65	ON	ON	2.80E+07	4.00E+02	4.85	100
75	ON	ON	4.90E+07	1.00E+02	5.69	130
85	OFF	ON	2.60E+07	1.30E+06	1.30	No UV
95	OFF	ON	4.30E+07	1.40E+06	1.49	No UV
Injection			5.00E+11			

* - "Predicted" UV dose is based on the regression equation developed from collimated beam tests conducted on the MS2 batch used in these tests. The results are less accurate above a predicted dose of >100 mJ/cm ^{2} or less than a predicted dose of <20 mJ/cm ^{2}