Table 2: Measured Microbial LRV from Raw Wastewater through MBR Permeate

Date	Male Specific Coliphage	Somatic Coliphage	Entero-cocci	*Giardia*	Total Culturable Virus	Entero-virus	Norovirus			Turb-idity	MBR Status
							GIA	GIB	GII		
Ironhouse WRF											
12-14-15	> 3.9	1.6	> 3.4	> 6.0*	> 3.8	> 3.9	> 4.4	> 2.7	> 5.1	0.07	Normal operation
1-25-16	> 5.1	3.4	> 6.4	> 5.0*	-	-	-	-	-	0.09	Post maintenance clean
3-29-16	5.3	3.2	> 4.9	> 5.3*	> 3.3	> 8.7	> 7.0	> 7.3	> 7.7	0.06	Normal operation
8-24-16	> 4.8	2.9	> 6.6	> 5.5	> 3.2	> 8.4	> 5.5	> 6.0	> 6.4	0.08	Post recovery clean
Hamby WRF											
3-9-16	4.2	2.3	> 6.1	> 3.3*	> 3.6	> 7.1	> 7.0	> 6.8	> 5.4	0.06	Post maintenance clean
4-19-16	> 4.8	2.7	6.7	> 3.4**	-	-	-	-	-	0.11	Normal operation
5-10-16	> 3.3	2.3	> 5.3	> 4.0*	ND	ND	ND	ND	ND	0.12	Post maintenance clean
6-21-16	-	-	-	> 4.3	-	-	-	-	-	0.13	Normal operation
9-6-16	4.0	2.8	> 4.0	> 4.8	> 3.0	> 7.7	> 5.3	> 5.8	> 7.2	0.10	Post recovery clean (3.5 h)
9-7-16	> 5.1	2.2	4.9	> 5.4	> 3.7	> 8.1	> 4.9	> 5.7	> 6.9	0.09	Post recovery clean (22 h)
Summary											
Range	>3.3 - >5.3	1.6 – 3.4	>3.4 – 6.7	>3.3 - >6.0	>3.0 - >3.8	>3.9 - >8.7	>4.4->7.0	>2.7->7.3	>5.1->7.7	0.06 – 0.13	
Non-paired Analysis	4.6	2.8	5.4	> 4.2	> 3.5	> 8.2	> 6.5	> 6.7	> 7.1	**Avg. Permeate Concentration**	
	3.9	2.4	4.6	> 3.3	> 3.5	> 8.2	> 6.5	> 6.7	> 7.1	**Max. Permeate Concentration**	
Normal operation	>3.9 – 5.3	1.6 – 3.2	>3.4 – 6.7	>3.4 - >6.0	>3.3 - >3.8	>3.9 - >8.7	>4.4->7.0	>2.7->7.3	>5.1->7.7		
Post cleaning	>3.3 - >5.1	2.2 - 3.4	>4.0 - >6.6	>3.3 - >5.5	>3.0 - >3.7	>7.1 - >8.4	>4.9->7.0	>5.7->6.8	>5.4->7.2		
Ave. influent concentration	79.4k pfu/100mL	114k pfu/100mL	1.96m cfu/100mL	1.84k cysts/L	67 MPN/L	63.2m GC/L	1.34m GC/L	1.99m GC/L	5.10m GC/L		

* / ** These *Giardia* results were based on less sample volume and therefore lower resolution than later samples (** =1L & * =100L vs. 250L)

ND = Effluent samples were non-detect but influent samples for that test were not able to be analyzed to calculate an LRV