

Appendix C4

ESEM/EDS Data for Test #4 Day-30 Fiberglass in High-Flow Zones

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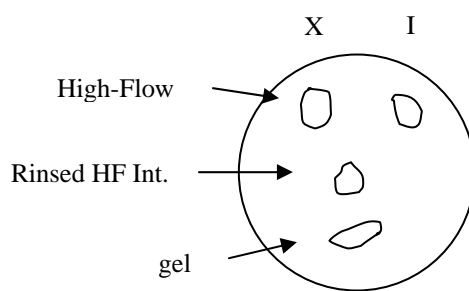
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In this appendix, the fiberglass samples submerged in a high-flow zone were extracted on the date Test #4 was shut down (June 23, 2005). Both exterior and interior locations of the fiberglass samples were examined. Environmental SEM (ESEM) was employed to analyze the hydrated fiberglass samples without any coating under a low vacuum condition (i.e., 80 Pa), to minimize the modification of the fiberglass samples through drying process. The results of Test #4 Day-30 high-flow fiberglass samples were obtained on June 24, 2005. EDS results provide a semi-quantitative elemental analysis of the debris attached on fiberglass.

Transcribed Laboratory Log

Laboratory session from June 24, 2005.

Test #4 Day-30 High-Flow Fiberglass.



High-Flow Exterior

Image:	T4HFEx01	100 ×	ESEM image	Figure C4-1
	t4hfex02	100 ×	ESEM image	Figure C4-2
	t4hfex07	500 ×	ESEM image	Figure C4-3
	t4hfex06	800 ×	ESEM annotated image	Figure C4-4
EDS:	t4hfex05		Spot of film for t4hfex06	Figure C4-5

High-Flow Interior

Image:	t4hfin01	100 ×	ESEM image of fiberglass	Figure C4-6
	t4hfin02	100 ×	ESEM image	Figure C4-7
	t4hfin03	500 ×	ESEM image high magnification	Figure C4-8
	t4hfin04	500 ×	ESEM image high magnification	Figure C4-9

Washed (with RO water) High-Flow Interior

Image:	T4Rnd01	100 ×	ESEM image	Figure C4-10
	t4rnd02	100 ×	ESEM image	Figure C4-11
	t4rnd03	500 ×	ESEM image	Figure C4-12
	t4rnd04	500 ×	ESEM image	Figure C4-13
	t4rnd05	500 ×	ESEM image	Figure C4-14
	t4rnd06	500 ×	ESEM image	Figure C4-15

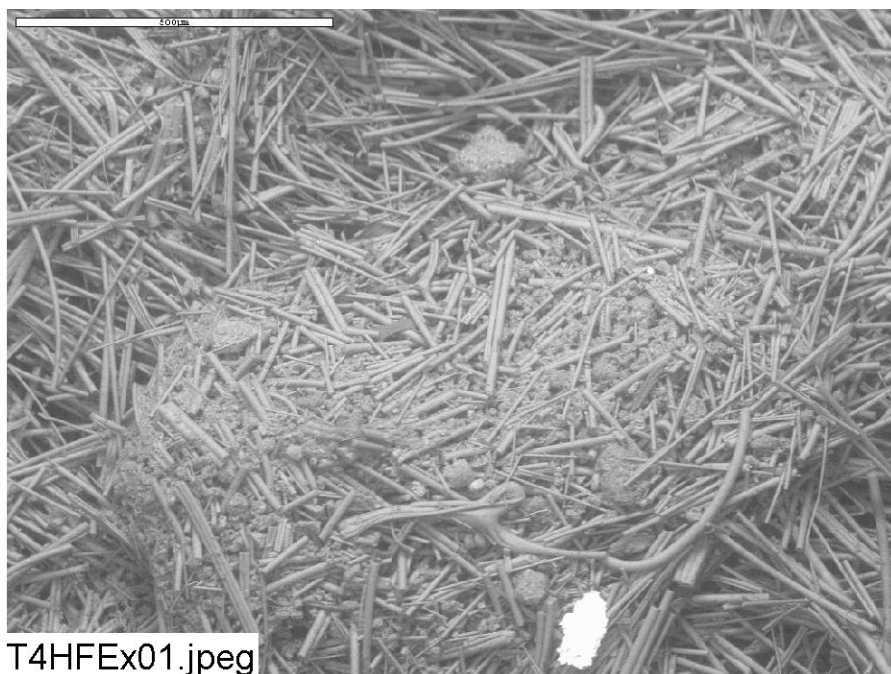


Figure C4-1: Environmental SEM image magnified 100 times for a Test #4 Day-30 exterior high-flow fiberglass sample. (T4HFEx01.jpg)

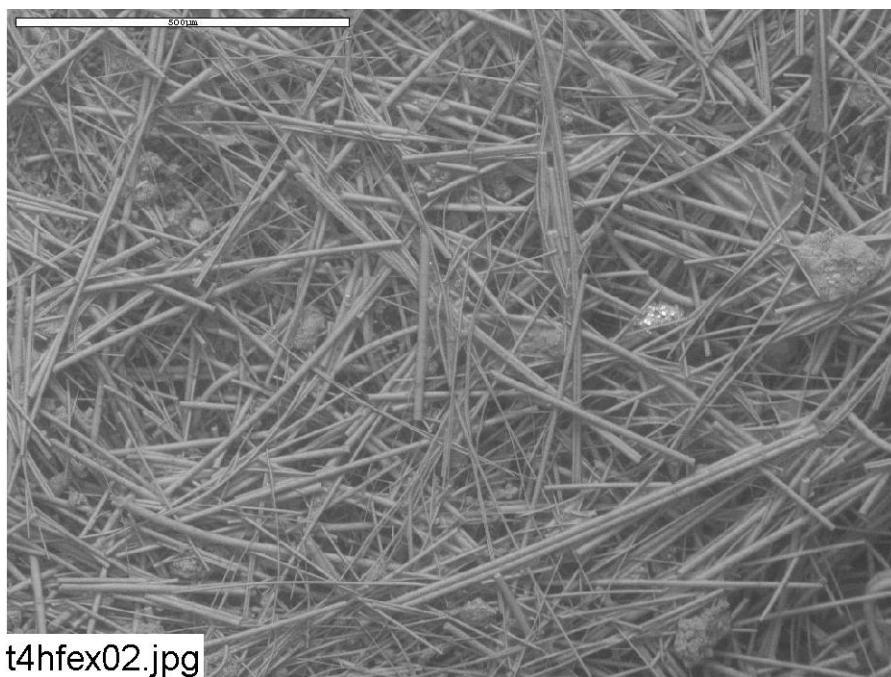


Figure C4-2: Environmental SEM image magnified 100 times for a Test #4 Day-30 exterior high-flow fiberglass sample. (t4hfex02.jpg)

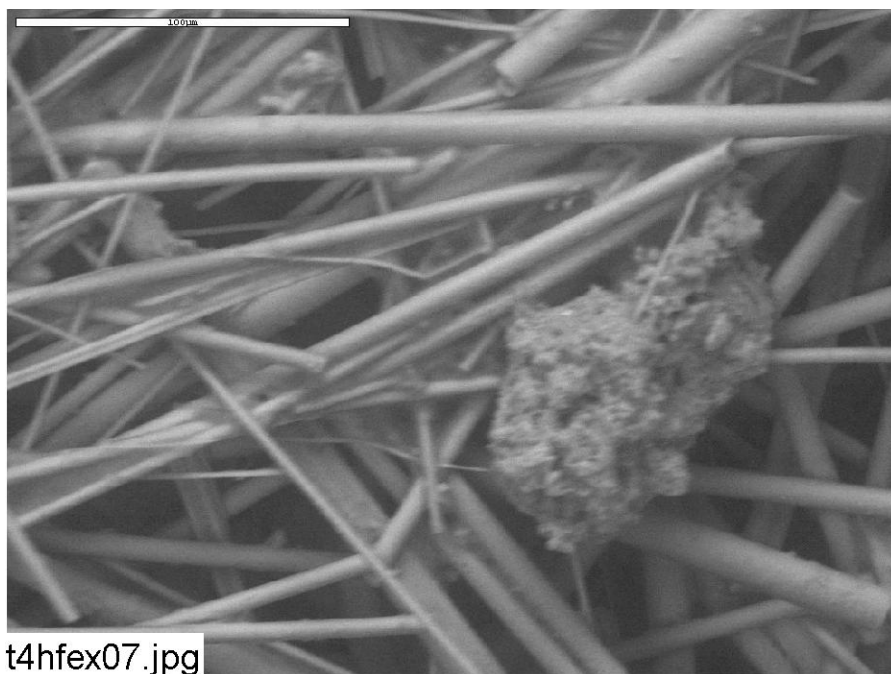


Figure C4-3: Environmental SEM image magnified 500 times for a Test #4 Day-30 exterior high-flow fiberglass sample. (t4hfex07.jpg)

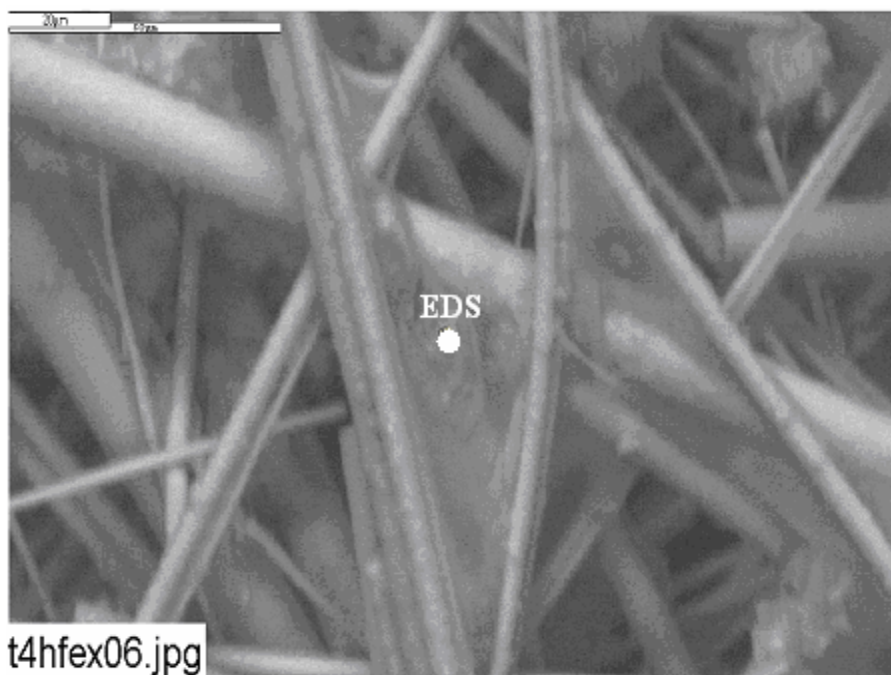


Figure C4-4: Annotated environmental SEM image magnified 800 times for a Test #4 Day-30 exterior high-flow fiberglass sample. EDS spot is shown in the picture. (t4hfex06.jpg)

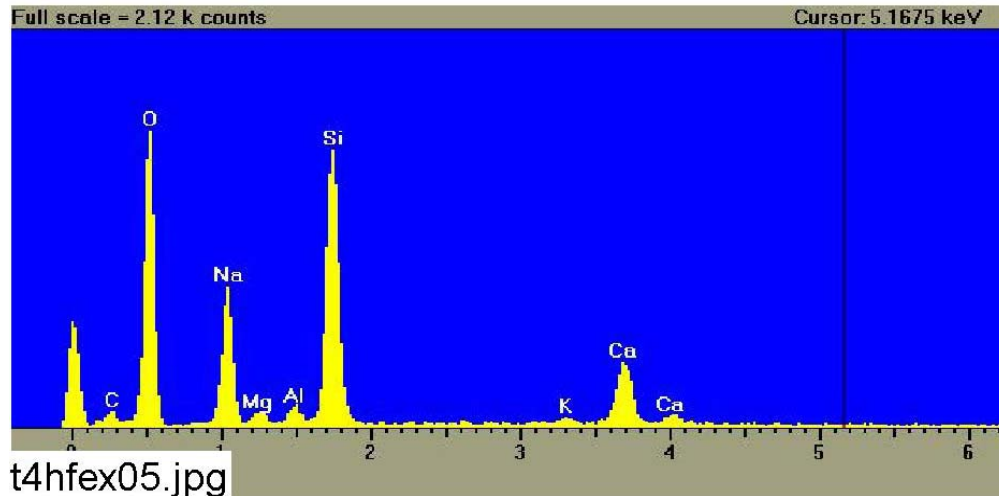


Figure C4-5: EDS counting spectrum for the spot of film between fibers shown in Figure C4-4. (t4hfex05.jpg)

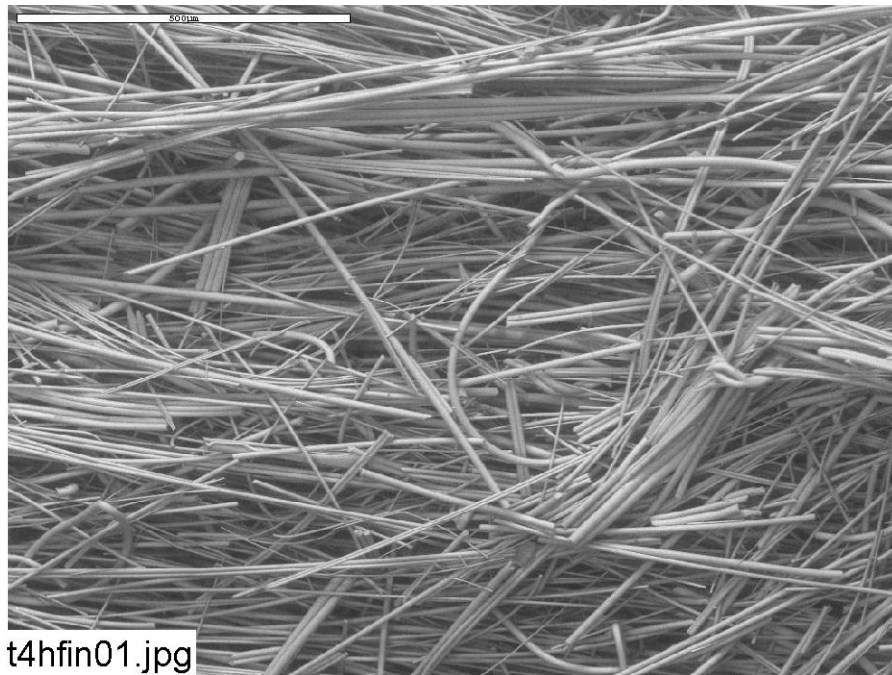


Figure C4-6: Environmental SEM image magnified 100 times for a Test #4 Day-30 interior high-flow fiberglass sample. (t4hfin01.jpg)

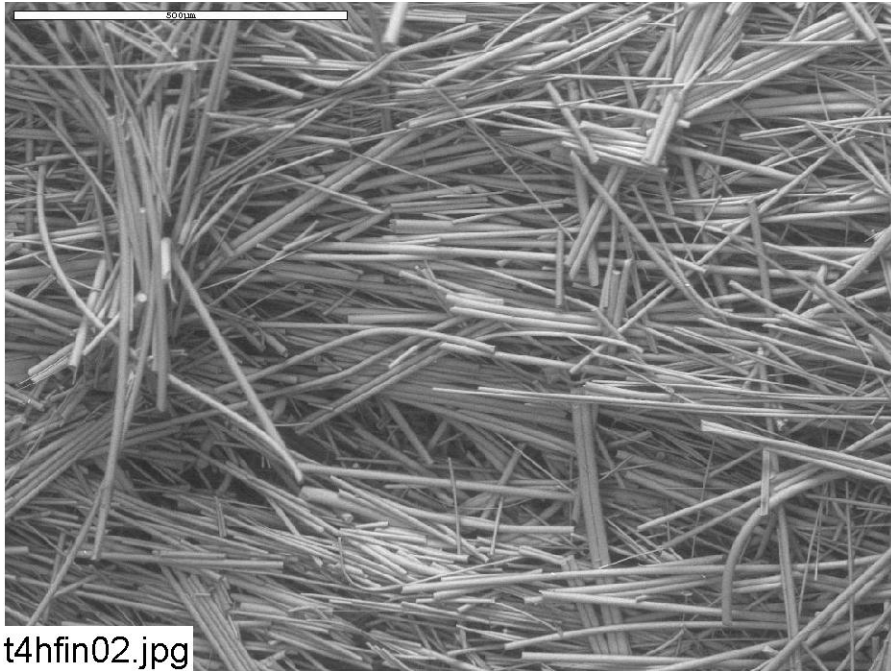


Figure C4-7: Environmental SEM image magnified 100 times for a Test #4 Day-30 interior high-flow fiberglass sample. (t4hfin02.jpg)

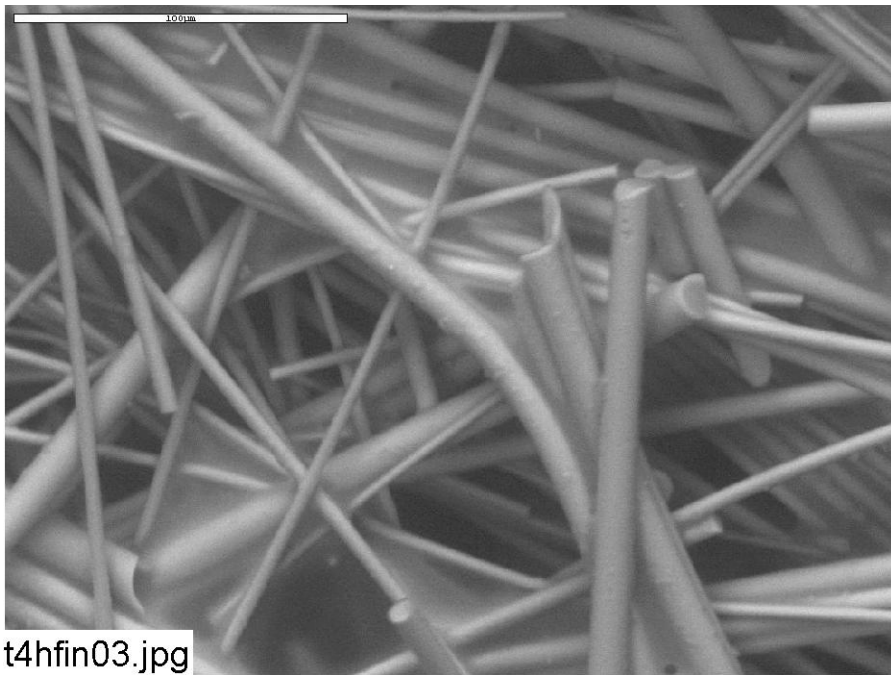


Figure C4-8: Environmental SEM image magnified 500 times for a Test #4 Day-30 interior high-flow fiberglass sample. (t4hfin03.jpg)

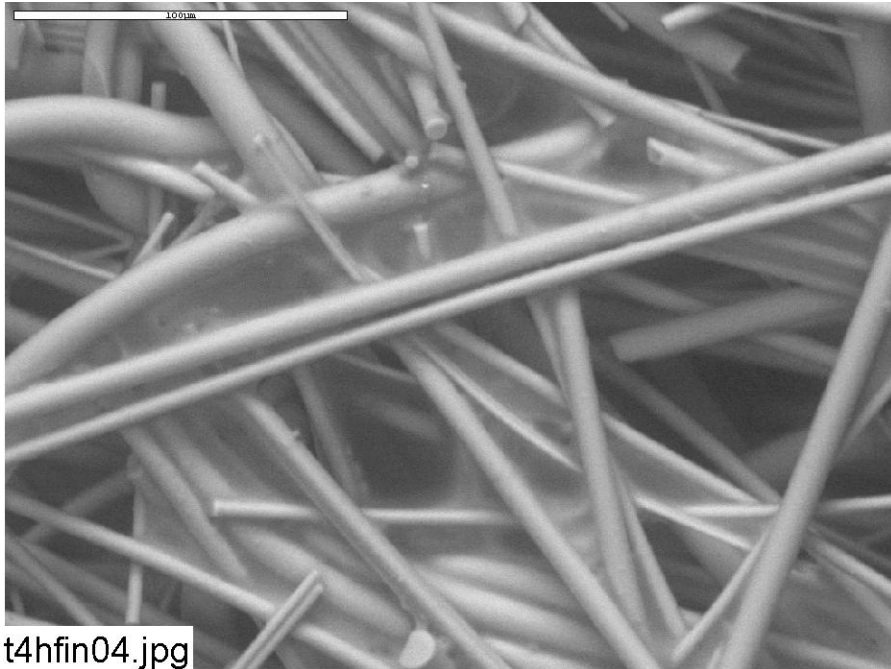


Figure C4-9: Environmental SEM image magnified 500 times for a Test #4 Day-30 interior high-flow fiberglass sample. (t4hfin04.jpg)

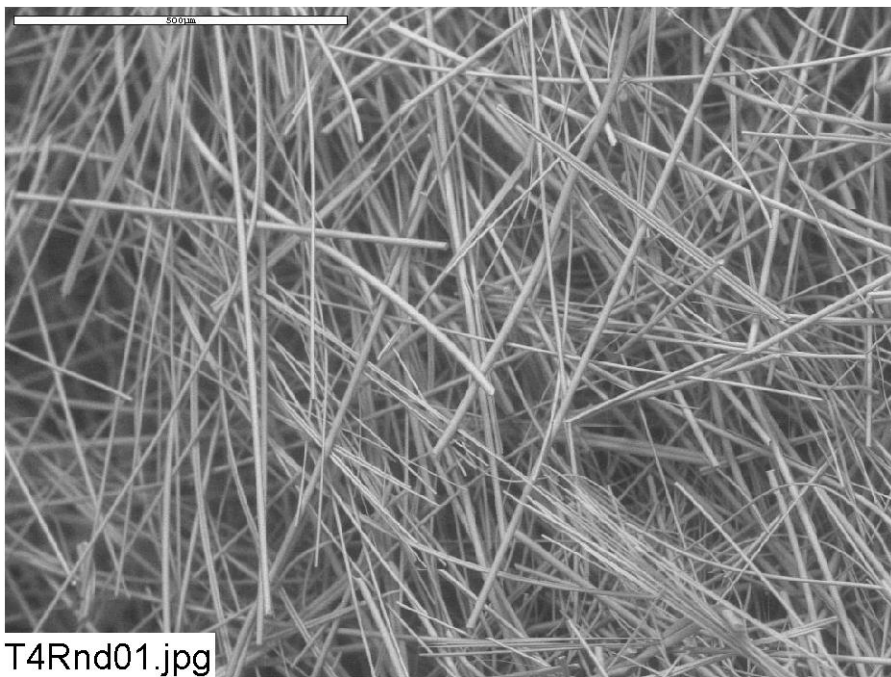
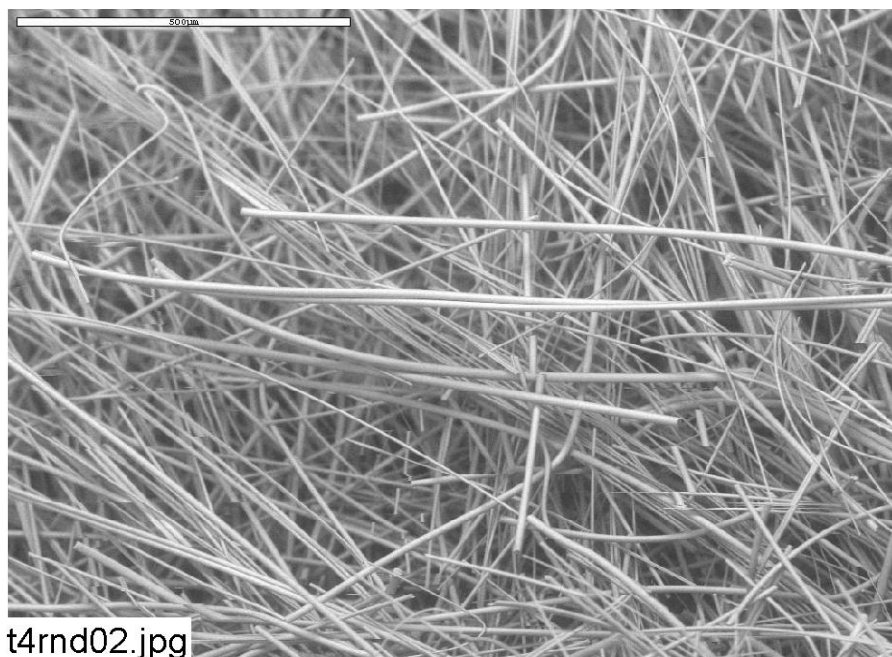
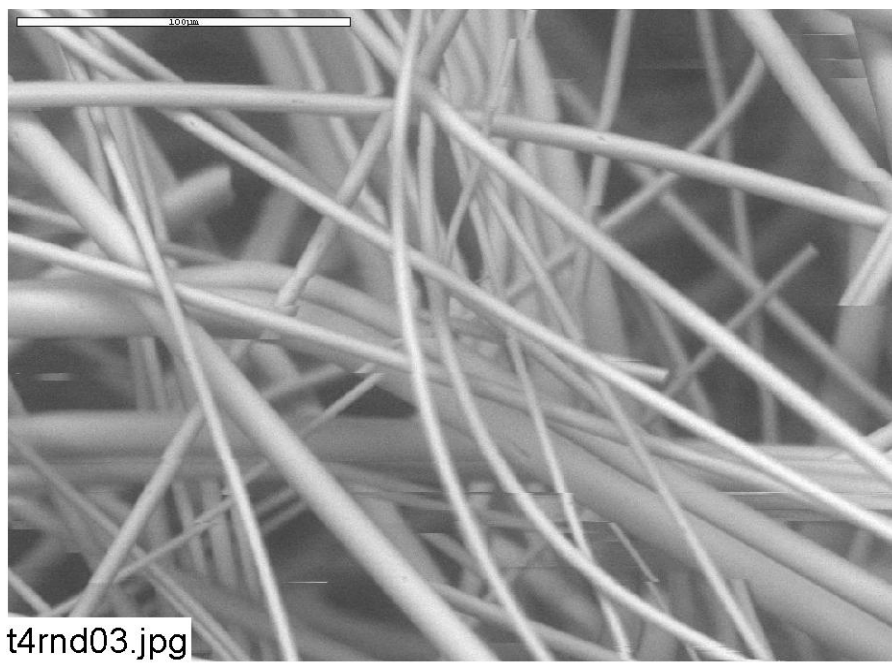


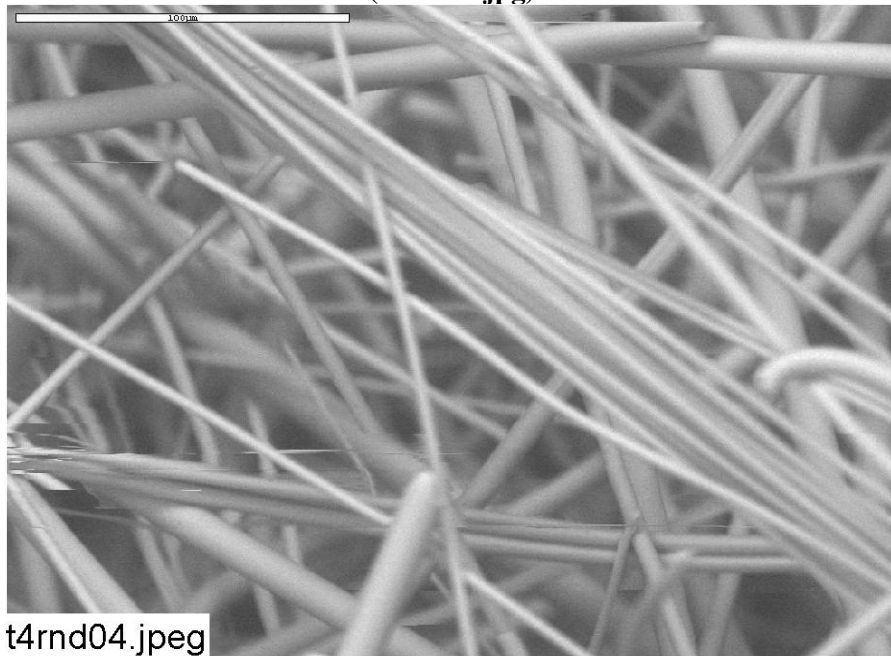
Figure C4-10: Environmental SEM image magnified 100 times for a Test #4 Day-30 interior high-flow fiberglass sample. The sample was gently pre-rinsed with RO water. (T4Rnd01.jpg)



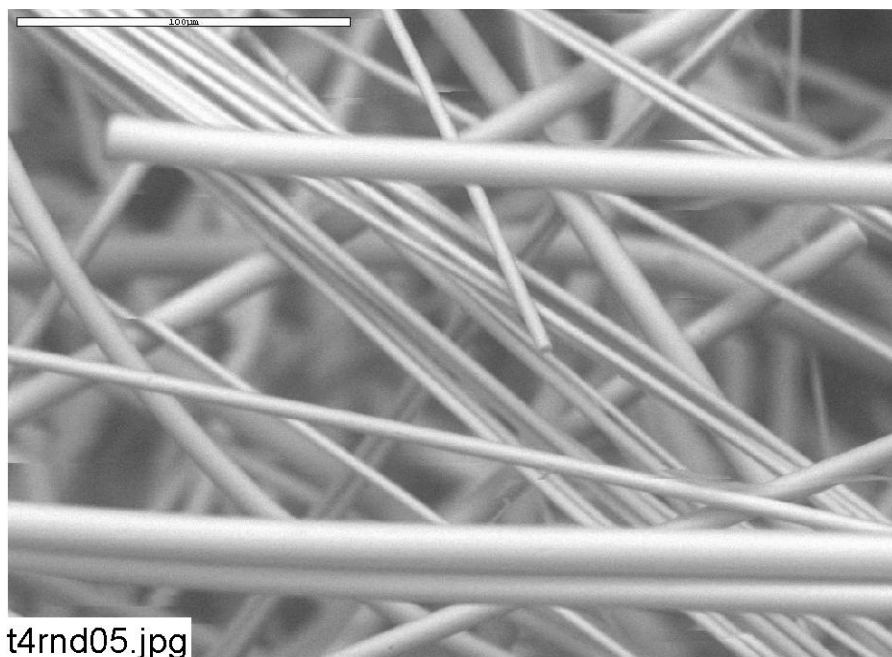
**Figure C4-11: Environmental SEM image magnified 100 times for a Test #4 Day-30 interior high-flow fiberglass sample. The sample was gently pre-rinsed with RO water.
(t4rnd02.jpg)**



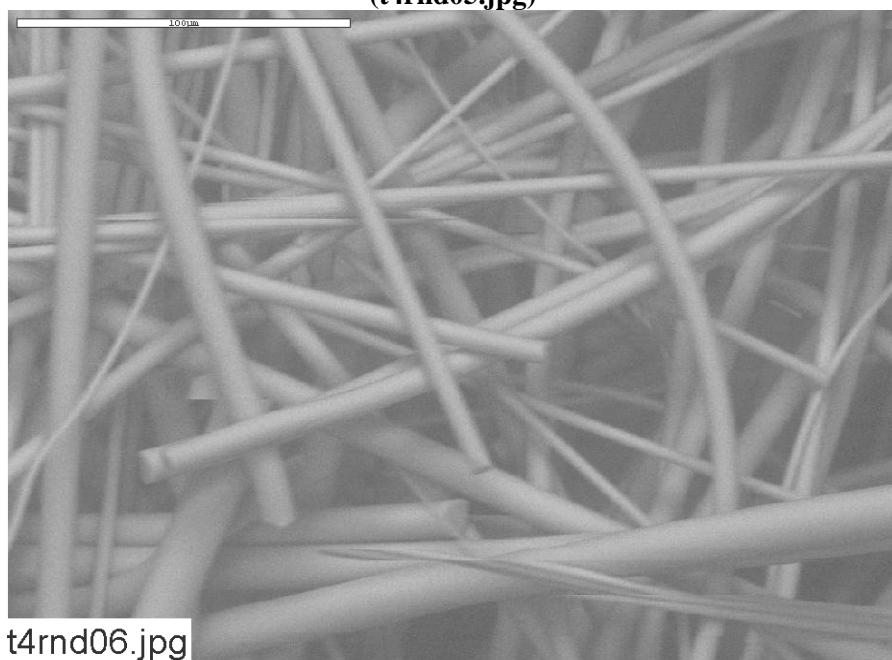
**Figure C4-12: Environmental SEM image magnified 500 times for a Test #4 Day-30 interior high-flow fiberglass sample. The sample was gently pre-rinsed with RO water.
(t4rnd03.jpg)**



**Figure C4-13: Environmental SEM image magnified 500 times for a Test #4 Day-30 interior high-flow fiberglass sample. The sample was gently pre-rinsed with RO water.
(t4rnd04.jpg)**



**Figure C4-14: Environmental SEM image magnified 500 times for a Test #4 Day-30 interior high-flow fiberglass sample. The sample was gently pre-rinsed with RO water.
(t4rnd05.jpg)**



**Figure C4-15: Environmental SEM image magnified 500 times for a Test #4 Day-30 interior high-flow fiberglass sample. The sample was gently pre-rinsed with RO water.
(t4rnd06.jpg)**