

PROJECT BACKGROUND:

PROCESS SYSTEM: Tail Gas Unit, 400 GPM

POOR FLUID QUALITY: Wide range of solid particles causing foaming incidents.

HIGH ELEMENT CHANGEOUT RATE: Conventional filter changeouts occurring every 8 -36 hr.

HIGH OPERATING AND ENERGY COSTS: Annual expense of \$1mm+ conventional filter cost.

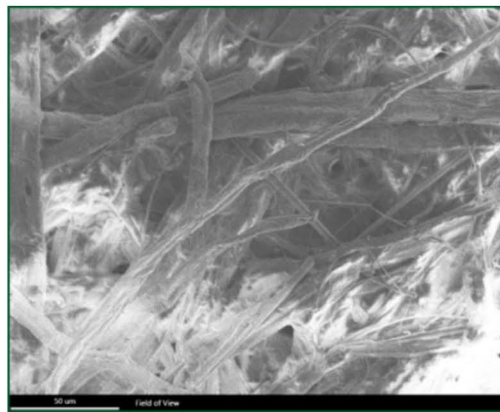
ADVANCED SEPARATION MEDIA DEVELOPMENT:

CONVENTIONAL MEDIA: Comprised of large diameter fibers. With low void volumes.

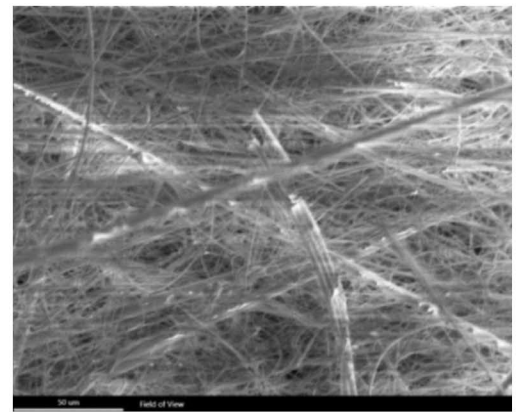
NOVALITE MEDIA: Inorganic nano and microfiber media, with high void volume.

MEDIA VELOCITY: Improving available media for flow reduces media velocity and increases contaminant holding capacity.

Scanning electron micrographs of conventional cellulose and Novalite™ media under the same magnification.



Cellulosic Media



Novalite™ Media

RESULTS:

IMPROVED FLUID QUALITY: Analytical data verified improved

INCREASED ELEMENT RUNLIFE: 1 - Day to over 10 - days.

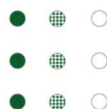
REDUCED OPERATING SOSTS: 85% = savings over \$1,000,000 per year.



Conventional Filter - Inlet
Concentration: 4.2 mg/L



Conventional Filter - Outlet
Concentration: 1.7 mg/L



TRANSCEND Element - Inlet
Concentration: 1.3 mg/L



TRANSCEND Element - Outlet
Concentration: 0.5 mg/L

TRANSCEND samples were collected 2 hrs. after startup and 4 hrs after conventional filters were sampled.