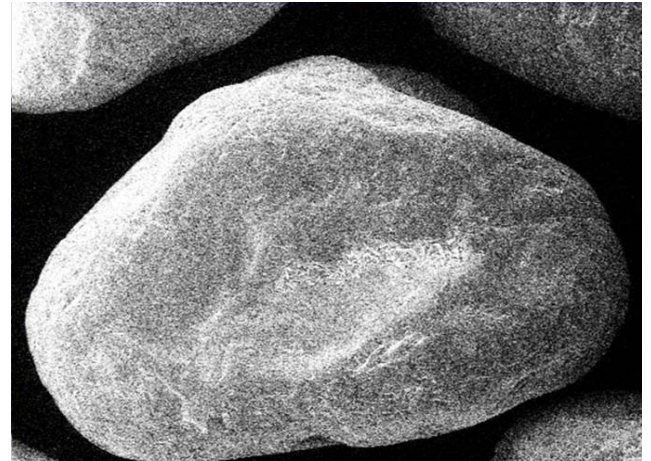


HYDROUS FERRIC OXIDE (HFO) COATED SAND

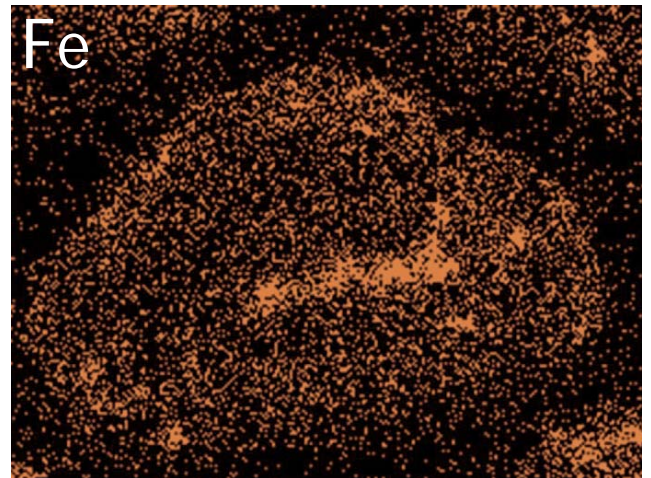
Adsorptive Media - Technical Summary

The Blue PRO® process is distinguished from other wastewater treatment processes by its mechanism of removal. Blue PRO® optimizes adsorption of contaminants, rather than relying on coagulation-filtration. Adsorption within the filters lowers contaminants to extremely low concentrations by overcoming equilibrium and diffusion limitations. The picture to the right is a scanning electron microscope (SEM) image of sand taken from deep inside a Blue PRO® filter.



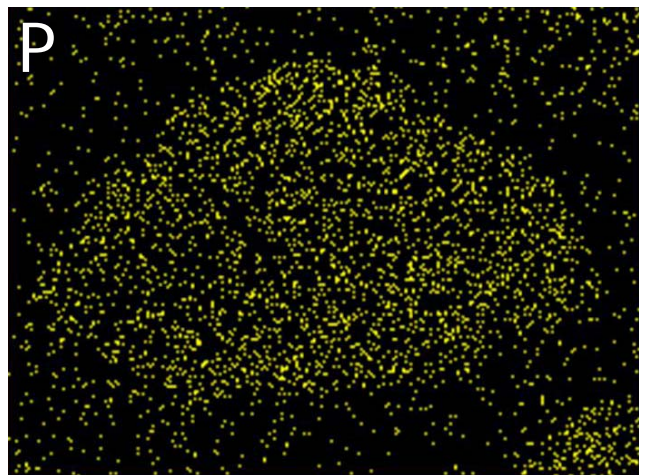
SAND GRAIN

Continuous, fresh regeneration of the HFO coating on the surface of the sand grains is a patented process applied to the Centra-flo™ moving bed filter. This process creates unusually high adsorptive capacity, even greater than aged iron oxide-coated sand (IOCS) media. This X-ray fluorescence (XRF) image of the same sand grain shows iron on the sand, ready to adsorb contaminants under a wide range of pH values and contaminant concentrations.



IRON COATING

This second XRF image shows phosphorus that is coordinated with the iron on the sand grain. After adsorption within the filter bed, the iron and phosphorus are subsequently abraded off the sand and passed out of the filter with the waste particulates. The sand is retained within the filter. The waste stream may be recycled within a wastewater plant for additional benefits from reactive capacity, may be added to the existing sludge handling system, or easily dewatered for separate handling.



PHOSPHORUS

*Images courtesy of the University of Idaho

Blue PRO®

BLUE WATER
TECHNOLOGIES 

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