



The Specialty Membrane Company



POWER PLANT ASH POND WATER



PROJECT HIGHLIGHTS

- + iSep™ 500-PES UF Elements
- + Ash pond water
- + Power plant in Midwest
- + Feed TSS: 3,000 mg/l
- + Permeate TSS: <1.0 mg/l
- + Operating Flux: 25 gfd
- + No pre-treatment required

UF Features & Benefits

- + Air scour
- + Open flow channel design
- + Frequent Draining
- + Backwashing Capabilities
- + High TSS handling
- + Durable construction
- + High effluent quality
- + Vacuum operation



iSep 500 UF SYSTEM



POWER PLANT COAL PILE



iSep UF ELEMENT

A coal fired power plant in the

Midwest is faced with the problem of dealing with water run-off from their coal piles. The run-off stream, generated from both storm events and dust control spray systems, is collected in a large holding pond to allow the coal particles to settle before discharge. However, due to the finely dispersed sub-micron sized coal particles, sedimentation was ineffective at reducing their TSS discharge levels. Other methods, such as flocculation/coagulation and filtration, proved ineffective as well.

The power plant was conducting an ultrafiltration (UF) pilot study on river water to qualify an alternative water source for their boiler water make-up system. At the end of the successful river water pilot study, the power plant decided to test the feasibility of using UF membranes to treat their ash pond water.

In order for a technology to be a viable treatment option, the TSS of the pond must be reduced from 3,000 mg/l down to 10 mg/l. Despite the severe TSS loading, the iSep 500 UF membrane was able to successfully handle the coal fines loading while providing high quality effluent that far exceeded their discharge permit requirements. No UF pre-treatment was required for the membranes to successfully operate on the ash pond water.

Delivering Customized Products to Solve Unmet Customer Needs