

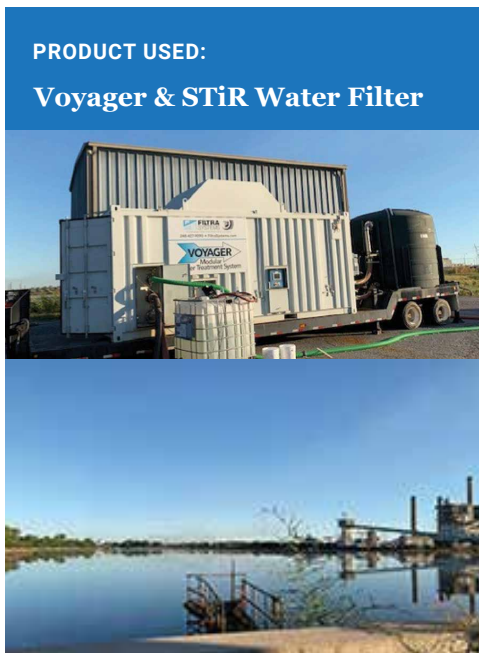
Coal Pond Water Filtration

SAND FILTER REPLACEMENT | WALNUT SHELL MEDIA FILTERS | FILTRA-SYSTEMS

Coal Fired Power Plant In America

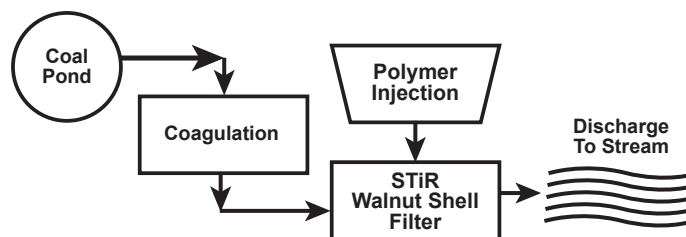
PRODUCT USED:

Voyager & STiR Water Filter



END USER:	Coal Fired Power Plant
LOCATION:	USA
UNITS:	Voyager® and STiR Filter with Polymer Dosing
FLOW RATE:	200 gpm
PROCESS:	Coagulation Process & Walnut Shell Filtering With STiR

POWER PLANT COAL POND WATER FILTRATION-PROCESS FLOW DIAGRAM



MORE INFO

Filtra-Systems' engineers were invited to this American power plant to evaluate their water chemistry which needed to meet a specific set of KPI's for discharge.

The Voyager® unit was setup near the coal pond with the filtered effluent discharging to a nearby stream and back-washed solids sent back into the coal pond.

Polyaluminium chlorohydrate (ACH) was dosed into the sump that was feeding the Voyager filter which resulted in a longer contact time with the coal pond water. The extended contact time improved the coagulation process, removing the charge from the coal fines in solution and allowing them to come more closely together – forming visible particulate.

The final result (inlet & outlet) is shown above to the right of the pond photo. The inlet TSS concentration varied,

and was averaged to 130 ppm. The outlet TSS was 4 ppm, which exceeded the KPI goal of 50 ppm TSS discharge, meaning the Voyager filtration system is providing 97% TSS removal efficiency with the ACH and polyacrylamide dosing described in this case study.

The Voyager ran in three hour filtration cycles at 200 GPM with about 30-minutes of backwash/tank fill where the unit is not discharging.

This resulted in a discharge volume of 245K GPD. The entire 13M gallon coal pond is estimated to be treated in 60 – 80 days with one Voyager unit.

Contact us today, 248-427-9090 to see how you can improve your coal pond discharge from your power plant while reducing your filtration costs by renting the Voyager Mobile Filtration System.