

POWER PLANT CHOOSES RELIABLE MOBILE SOLUTION

RapiSand™ — SuperDisc™ Systems Provide Flexible Configurations



Overview

A power plant in the Southeastern Region of the U.S. needed a short-term treatment solution for dewatering a coal ash pond. It also needed a long-term wastewater treatment solution to reduce coal ash solids and turbidity in its cooling and cleaning wastewater. Both treatment trains would need to treat influent total suspend solids (TSS) concentrations that could be as high as 3,000 mg/L.

The plant chose WesTech's Mobile and Temporary Systems equipment coupled with our full operations support to meet both needs. The short-term treatment solution (Train 2) consists of one [RapiSand™ ballasted flocculation system](#) and one [SuperDisc™ filter unit](#). This system treats 2,500 gpm (568 m³/h) to an average of 6.87 mg/L TSS.

Currently under a three-year contract, the long-term solution (Train 1) consists of two mobile RapiSand clarifiers and a SuperDisc filter. Each of the RapiSand units uses physical chemistry, ballasted sand flocculation, and settling tubes to treat 2,500 gpm (for a total of 5,000 gpm – 1,136 m³/h) of influent. The treated water then flows to a SuperDisc filter, which treats 5,000 gpm. Effluent from this system averages 2.89 mg/L TSS – a level suitable for water reuse.

Reliability is of paramount concern for the long-term treatment train – a system failure would result in a plant shutdown. Full-time operations support from WesTech's Plant Operations and Services helps ensure that the plant remains operational around the clock.

Flexible configuration is a hallmark of WesTech's Mobile and Temporary Systems equipment. Should the plant's needs change, WesTech can add equipment or reconfigure existing equipment to meet those needs. ■

RESULTS

100%

Discharge Capacity Met

2.89 mg/L

Train 1 Average Effluent TSS

24/7

Operation Regardless of Weather

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Project Summary

Power Plant Treatment for Solids Removal

Location:

Southeastern U.S.

Application:

Low Volume Wastewater
Ash Pond Dewatering

Process:

Mobile RapiSand Ballasted
Flocculation and Clarification
SuperDisc Filtration
Plant Operations and Services

Size:

5,000 gpm (Train 1 - Reuse)
2,500 gpm (Train 2 - Discharge)

Highlights

- Train 1 was designed to discharge treated water into a canal; however, low TSS effluent also allows the plant to discharge excess water to nearby waterways if necessary.
- System flexibility enables the plant to increase and decrease capacity as needed.
- Full plant operations and maintenance provides the qualified personnel needed for daily operation.
- WesTech personnel have maintained a perfect record of zero OSHA and zero EPA violations.