

# Temporary System Chosen for Ash Pond Closure

## Mobile and Temporary Systems Solution With Plant Operations Support

### Overview

Temporary systems offer value for long-running projects because they allow plants to deploy treatment trains on an as-needed basis, as opposed to purchasing capital equipment.

A power plant in the Southeastern U.S. chose a temporary system solution from WesTech to dewater a large coal ash settling pond – a project that the plant estimated would take 10-15 years to complete. Based on the plant's desired flow and discharge specifications, WesTech designed a solution that features two mobile RapiSand™ ballasted flocculation systems. Each RapiSand unit provides:

- Three-stage mixing with hydrofoil mixers
- Clarification with tube settlers

The integral mixing tanks use hydrofoil mixers to aid with coagulation, as well as to blend polymer and microsand to form ballasted floc for rapid settling. The clarifier also uses tube settlers for additional projected settling area. Settled solids are pumped through a hydrocyclone, where ballast is recovered and reintroduced into the mix basins. Rather than providing its own operators to run and maintain these two treatment trains, the plant contracted with WesTech's Plant Operations and Services for expert engineering and technical support as well as round-the-clock operations and monitoring.

To further reduce contaminants, WesTech installed gravity filters with anthracite media downstream of each unit. The system also includes WesTech's mobile ChemCenter, which monitors the influent and adjusts chemistry as needed for effective coagulation and flocculation.

### Results

**24/7**

Operations Support

**<8 PPM TSS**

Average Effluent  
Quality

**95–98%**

Plant Uptime

### Project Summary

Temporary Power Plant  
Treatment System

Location:  
Southeastern U.S.

Application:  
Coal Ash Pond Dewatering

Process:  
Mobile RapiSand Ballasted  
Flocculation  
ChemCenter  
Plant Operations and Services

Size:  
4,000 gpm (908 m<sup>3</sup>/h) Total  
2,000 gpm (454 m<sup>3</sup>/h) per  
Treatment Train

### Highlights

- Various water sources range from 0-100 parts per million (ppm) average total suspended solids (TSS), with peak values up to 2,000 ppm.
- The temporary mobile system reliably delivers an average effluent <8 ppm TSS, with peak values <20 ppm during high inlet events.
- Each RapiSand unit treats 2,000 gpm (454 m<sup>3</sup>/hr) of ash pond water (which comes from multiple sources), for a total of 4,000 gpm (908 m<sup>3</sup>/hr).

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