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™ flocculating clarifiers. Each RapiSand unit provides:

- An integral coagulation tank with a hydrofoil mixer and tube settlers
- Two flocculation tanks

The integral coagulation tank uses the hydrofoil mixer to completely combine the raw-water influent with a coagulating agent that is injected upstream of the RapiSand. It uses tube settlers to clarify the influent. The two flocculation tanks blend polymer and recycled microsand with the influent mixture to form a ballasted floc for rapid settling. 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

95-98%
Plant Uptime

< 19 PPM TSS
Effluent Quality

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^3/h) Total
2,000 gpm (454 m^3/h) per Treatment Train

Highlights

- The free and interstitial raw influent ranges from 0-100 parts per million (ppm) total suspended solids (TSS). The temporary mobile system reliably delivers effluent < 19 ppm TSS.
- Each RapiSand unit treats 2,000 gpm (454 m^3/h) of free and interstitial water pumped from the pond, for a total of 4,000 gpm (908 m^3/h).

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