

Controlling Particulate Emissions

Kannapolis Energy, LLC – Kannapolis, North Carolina

Client Benefits

Compliance with lower particulate emission standards in the state of North Carolina required Kannapolis Energy to install control equipment on existing boilers. Although electro static precipitators (ESPs) have historically been used in this application, Peregrine's environmental staff was aware of future maximum achievable control technology (MACT) standards that would require acid gas removal as well as particulate collection. Installation of bag filter technology with provisions for lime injection would provide the basis for future boiler MACT compliance. This forward looking selection of control technology will allow the facility to meet current and future air emission regulatory requirements with minimal investment and disruption in operations.

The Opportunity

Two coal boilers are the heart of the Kannapolis operation. Immediate compliance with more stringent particulate emission requirements is needed. What control technology can be installed that will satisfy current and proposed regulatory requirements?

The Solution

Peregrine's environmental group researched pending and proposed regulations that could impact boiler operation over the next 10 years. Boiler MACT standards would certainly be an issue in the next 5 years. What current technology could be installed that would solve the current problem and prepare the site for MACT? Baghouses could meet the current particulate requirement and provisions could be made for the future installation of neutralization and adsorption injection systems to accommodate the proposed emission limits on chlorides and mercury.



A pulse jet baghouse system was installed containing approximately 56,000 square feet of bag surface area. The system easily met the particulate emission limits and is poised to comply with the boiler MACT.