

Fort Martin Units 1 and 2

Project Case History

Plant Owner

Monongahela Power
a subsidiary of FirstEnergy Corp.

Monongahela Power
Maidsville, West Virginia

Plant Name

Fort Martin Units 1 and 2

Location

Maidsville, West Virginia

Contract Order

2006

Commercial Operation

2009

Overview

The wet flue gas desulfurization (FGD) system from Babcock & Wilcox (B&W) features a combination of design components to provide a high level of reliability and removal efficiencies. These include B&W's signature dual tray tower design that provides excellent gas-to-liquid contact and uniform flow distribution through the absorber spray zones; its patented inlet awning; interspatial headers to reduce absorber height, pump power requirements, and internal support costs; forced oxidation system; and advanced mist eliminators.

Boiler/Plant Information

- 2 x 550 MW
- Boiler type: Pulverized coal
- Design fuel: Bituminous
- Additional environmental equipment: Electrostatic precipitator (ESP)



Project Summary

- Engineering, procurement and construction of a wet FGD system
- System designed to remove 98% of the entering sulfur dioxide (SO₂)
- Type: Limestone forced oxidation with gypsum byproduct
- Project awarded: April 2006
- Construction plan included on-site scrubber module fabrication area
- Operation dates: November 2009 (Unit 1); December 2009 (Unit 2)

B&W Scope

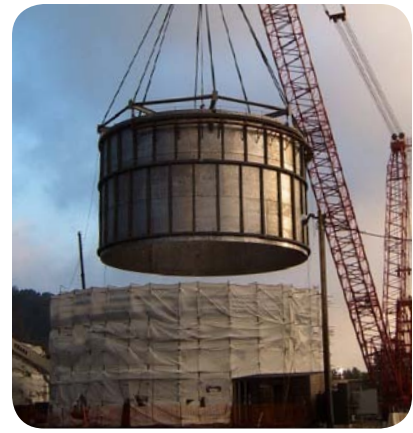
- Two (2) wet FGD absorbers (one per boiler)

- Two (2) limestone milling systems (one per boiler)
- Gypsum dewatering system including three (3) horizontal table filters (two operating, one spare)
- Buildings and structural steel
- Construction of B&W-supplied equipment and steel provided by Babcock & Wilcox Construction Co., Inc.

Results

- Both of the commissioned units have met performance guarantees
- Achieved mechanical and substantial completion milestones ahead of schedule
- Units 1 and 2 started up on schedule one month apart

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The construction plan included an on-site scrubber module fabrication area that produced absorber modules for both the Fort Martin and Hatfield's Ferry sites. This plan optimized modularization opportunities because off-site modularization was not feasible due to access constraints created by locks on the adjacent Monongahela River.



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