



New Dust Collection System Developed for Power Plant

Installed on line and before required deadline



Project Description

This West Virginia power station is a large coal fired facility producing enough electricity to power as much in one hour as 160 average homes use in one year. The station is located in the Allegheny Mountain range.

The energy production process at the power station produces combustible dust, which must be collected and burned off. The bunker room which is located on the 7th floor is the main location where the combustible dust is collected and burned. Coal is fed into the bunker room via a tripper belt system. The Waco team installed the blowers and a ventilation system used to collect this dust, as well as the water supply system that adds moisture to the dust so that it can fall back into a container to be burned off.

This project included a structural layout, development, installation and testing. It involved several different trades including pipefitting, TIG welders, millwrights and sheet metal workers; all of which are core competencies at Waco.

Unique Project Challenges

- 1 The blower system was designed to be located on the 7th floor of the building. This created two challenges. First, a crane had to be used to hoist the 10 foot diameter fans up to the 7th floor. Second, a hole had to be cut into the side of the building so that the large fans could be moved into this area. Safely removing structural portions of the exterior of the building and replacing them proved challenging.
- 2 A monorail-type system had to be temporarily installed in order to move the large fans into their final position within the building. This was required due to a large opening in the floor across which the fans had to be moved.
- 3 The structure of the building and the water line requirements combined to create another challenge. 6 inch steel pipe was run from the basement bunker room to the 6th floor of the building and then teed off to get the water supply up to the 7th floor. This required boring holes through walls and added complexity to the water supply system.
- 4 Due to ceiling heights, scaffolding structures had to be built because much of the water line work was overhead.
- 5 The power generating systems were taken offline to complete this project and were scheduled to go back into service on a firm date. The timing demands of this project and the critical nature of ensuring it was completed safely and correctly required precise project management and coordination.

Why Waco Was Chosen?

Waco has an excellent history of completing challenging projects with large power companies. Our previous experience as an industrial mechanical contractor and knowledge of the working conditions allowed us to be the successful bidder.

Summary of Results

Billy Shoemaker and Jimmy Edwards, experienced project managers at Waco, co-managed this project. The entire project was completed on-time with no workplace injuries. All systems tested fine and the power generating systems were brought back online before the stated deadline.

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