

Lowering Utility Cost with Continuous Emissions Monitoring Systems (CEMS)

Celanese Acetate, LLC – Narrows, Virginia

Client Benefits

The NOx emissions reduction mandated by Rule 126 would require Celanese to install control equipment on existing boilers. This capital-intensive project added no value to the manufacturing facility or to its products. Peregrine was able to free up Celanese's personnel from managing this non-core project by funding, owning and delivering the project on a turnkey basis. This transfer of project risk allowed Celanese to focus both its people and its capital on core business objectives.



The Opportunity

Nine boilers support the Celanese acetate manufacturing facility; two are subject to Rule 126. To start the compliance process, Celanese needed to install a system that would monitor the NOx emissions of these units. They also wanted to preserve their capital for use in core business areas while addressing this regulatory issue.



The Solution

Peregrine rose to the challenge by partnering with Celanese under a Utility Services and Lease Agreement. Project scope included installation of two CEMS on the stacks of the two boilers (one unit is coal-fired (230,000 #/hr) and one is gas-fired (200,000 #/hr)). The project also involved the installation of fuel flow measurement equipment – gravimetric coal feeders, fuel oil mass flow meters and natural gas flow meters. An ultrasonic flue gas flow meter and a NOx concentration meter are also installed on each stack.



The emissions data collected by CEMS will provide design criteria for upgrading of the two boilers to effectively lower their NOx emissions to meet Rule 126 compliance.