

Facility and Affected Sources

Requesting Facility: Schuylkill Energy Resources, Inc.'s St. Nicholas Cogeneration Project, PFID: 467540; ORIS ID: 54634

Affected Sources: CU 031, CFB Boiler

Length of compliance period being requested: Delayed compliance until July 6, 2029

Background of SER

SER is a 100-megawatt (net 80-megawatt) anthracite waste coal-fired Independent Power Production (IPP) facility located in Mahanoy Township, Schuylkill County. SER uses anthracite waste coal, known as culm, from existing abandoned waste coal banks to generate energy. SER is a base-load power generation facility.

SER is part of the small waste coal to energy power generation industry. SER converts culm into reliable source of electricity, while simultaneously improving land, air, and water quality by remediating waste coal banks, thereby reducing acid mine drainage as well as GHG and pollutant emissions, fugitive dust, and physical hazards. SER works in close conjunction with the Pennsylvania Department of Environmental Protection ("PADEP") in its reclamation efforts and uses PADEP-certified Beneficial-Use ash to restore many acres of abandoned mine lands, and ultimately revegetating them and further supporting regional air and water quality.

SER's Facility is unlike most other solid fuel fired generators in that it consumes an anthracite waste coal material, also referred to as culm, of a low Btu value and high ash content; up to 80% by weight. Other than being used as fuel for the Facility and similar facilities in the waste coal to energy industry, these culm banks have little to no value and/or use. SER successfully complied with the limitations originally enforceable under the MATS rule, but not without a great deal of effort, cost, and time. SER currently maintains PM Low Emitting EGU (LEE) status, despite a flue gas that is laden with six-to-ten times the particulate load of a traditional solid fuel unit. To further reduce the MATS Rule limitations by 66% would be unreasonable and not technically or financially feasible. Further, beyond being technically impractical, it would likely be impossible to achieve this dramatic reduction in such a short timeframe, as would be simultaneously commissioning a PM CEMS at this new, likely unachievable, lower PM level.

Justification for Exemption

Technology

The three issues are interrelated regarding the standard, the technology to implement it, and the option to use existing compliance methods for low emitting EGU's (LEE Units). As a first point of information, the pending 0.01 lb/MMBtu limit is likely technically feasible under the current compliance demonstration methods of a periodic Method 5 Performance Test, which consists of approximately 3-hours of testing as frequently as once per calendar quarter, or in the case of LEE units, once LEE status is demonstrated, once every 36 months. Ongoing compliance is demonstrated by opacity monitors in the stack.

The ability to meet an emission standard is based on the numerical limit of that standard, the reliability of the test method for that standard, and the frequency of the testing. In the case at hand the requirement to use a PM CEMS introduces a significant question of technical feasibility to meet the more restrictive standard on a continuous basis. PM CEMS do not measure PM directly but use methods such as light scatter or beta attenuation to estimate the PM concentration. Many of these device's outputs are adversely