for the necessary ESP upgrades. *See PGEN Comments on EPA's Proposed Rule: NESHAP Coal- and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review*, Docket No. EPA-HQ-OAR-2018-0794-5994, at 12 (June 28, 2023) [hereinafter "PGEN Comments"]. In addition, operational limitations hinder the units' ability to continuously comply with the fPM standard. Although some units may be able to achieve a rate of 0.010 lb/MMBtu under certain conditions, the Rule requires continuous compliance. Even units that can achieve the limit in ideal conditions may not be able to continuously meet that limit during peak load conditions when they cannot do power off rapping or maintenance and cleaning of PM controls. During peak conditions, most units operate at base load and run at high-capacity factors. It may be difficult to maintain optimal operation of control technologies during peak conditions unless there are additional outages scheduled for such maintenance, which may not always be feasible. Moreover, the characteristics of coal vary depending on location. Ash content of the coal being fired may impact the ability of units to comply with the fPM limit, regardless of the effectiveness of the control technologies in place. Other operational factors such as cleaning frequency, operational duration, and maintenance frequency of ESPs impact the performance of controls and, thus, the facility's ability to comply with the proposed limit. These issues make continuous compliance with the fPM standard difficult to ensure.

b. CEMS Technology is Not Available

The MATS RTR requires coal-fired units to implement the revised fPM standard using CEMS. As explained above, this requirement is an integral part of the numeric limit itself. Martin Lake does have PM CEMS; however, these CEMS have not been calibrated and certified to reflect the revised, lower standard. There are technological limitations, as well as costs and market limits, that make using the existing CEMS to demonstrate compliance with a significantly lower fPM standard by July 2027 unavailable.

PM CEMS does not provide direct measurements; it uses correlation curves to calculate emissions levels. However, the low fPM standard in the Rule makes developing this correlation curve "virtually impossible." PGEN Comments at 22 (citing PM CEMS Technical Memo at 3). Similarly, the QA/QC criterion for CEMS are extremely difficult to meet at such low levels. *See Comments of the Class of '85 Regulatory Response Group on the Proposal on National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units Review of the Residual Risk and Technology Review*, Docket No. EPA-HQ-OAR-2018-0794-5989, at 16 (June 28, 2024) [hereinafter "Class of '85 Comments"]. In fact, at the time of the proposed MATS RTR, no commercially available PM CEMS would have been able to meet the tight confidence and tolerance intervals associated with the low proposed fPM standard. PGEN Comments at 23 (citing PM CEMS Technical Memo at 5). EPA was, thus, forced to address these issues in the final MATS RTR by loosening the QA criterion and correlation procedures. *See* 89 Fed. Reg. at 38,528-29. However, it has not yet been shown that these changes are enough to address the fundamental issue that PM CEMS have difficulty reliably measuring such low fPM levels due to the error rates of the instrument. *See* PGEN Comments at 23 (finding insurmountable the "uncertainties inherent in the measurement device" and the "problems associated with relative size of the uncertainty to the limited data range of fPM concentrations and the confidence levels and tolerances"); *see also* Class of '85 Comments at 18. And, in reality, units would need to target