

conducted a mist eliminator performance test, and the results showed dry conditions with very little or any droplet carry over.

- Scrubber slurry solids level has been controlled to 25-30% solids to minimize potential particulate contribution from entrained droplets in the flue gas.
- Flow distribution plates have been installed on each scrubber to improve the flow balance across the scrubber, provide a more uniform flow, and improve particulate removal performance.

Colstrip also implemented additional measures to address combustion conditions to help ensure that combustion of the coal occurs in a manner that prevents to formation of small fly ash particles that are difficult to remove in the wet venturi scrubbers, including:

- Combustion tuning and incorporation of optimum conditions over variable operating conditions into the Combustion Optimizer System.
- Optimization of the furnace sootblower system to ensure optimum heat transfer in the furnace and prevent elevated temperatures in the upper part of the furnace that can contribute to formation of small particulate particles that are difficult to remove in the wet venturi scrubbers.
- Optimization of coal mill fineness by regularly performing coal mill sieve analysis to ensure correct particle size distribution of the coal entering the furnace.

Together, these comprehensive efforts reflect all known upgrades available to be implemented to the Colstrip scrubber/combustion process to reduce fPM, which enables Colstrip to achieve compliance with the current 0.030 lb/MMBtu fPM limit with an adequate compliance margin. While the majority of stack testing has shown emission rates between 0.020 lb/MMBtu and 0.025 lb/MMBtu fPM, there have been several instances where stack tests were above 0.025 lb/MMBtu fPM.⁴ In 2022, based on stack tests, the two units combined achieved approximately 0.022 lb/MMBtu fPM on an annual basis.

With the extensive scrubber/combustion process reviews by consultants and engineers and implementation of the upgrades previously identified, Talen Montana believes that these efforts have optimized the current control technology to the maximum extent feasible. While Colstrip remains dedicated to continued optimization to control fPM, Colstrip cannot meet the more stringent fPM limits in the Proposed Rule (either the 0.015 lb/MMBtu or the proposed 0.010 lb/MMBtu) without installation of a FF or ESP, which as noted previously would be a massive, complex, and expensive construction project.

⁴ See Attachment A.