requirements, challenges with operation, and degradation of removal efficiency over time. A compartmentalized, pulse jet baghouse is the industry standard for this application.

- EPA failed to consider the characteristics of the exhaust gases and the requisite materials of construction.

- EPA incorrectly assumed the volume of flue gas that would need to be treated based on arbitrary data from a single stack at a different plant.

- EPA failed to consider the unique retrofit requirements that would be necessary given the age, configuration, layout, and underground utilities existing at the Jewell facility.

- EPA significantly underestimated the amount of electricity usage and hazardous waste that would be generated.

- EPA used an incorrect algorithm to calculate the total capital investment for ACI (Sargent & Lundy 2011).

- EPA used an incorrect methodology to calculate the activated carbon injection rates. Based on the methodology included in a later study by the same authors (Sargent & Lundy 2017), the rate should be 699 lbs/hr rather than 50 lbs/hr, as EPA assumed.

See Attachment D (TRC, Technical Memorandum, Response to Proposed RTR, Oct. 2, 2023 ("TRC Technical Memo")). As a result of these errors, EPA's estimated costs to impose these controls at Jewell are low by orders of magnitude; a more realistic estimate is ***$474.9 million*** (not ***$7.4 million***) in capital investments and ***$66 million*** (not ***$4.7 million***) in annual costs.[21] Though this cost estimate is a high-level engineering estimate that does not account for the unique construction characteristics associated with the Jewell site and fails to consider the fact that this type of construction is infeasible at best.

C. EPA Erroneously Calculated the Emissions Reductions the Proposed BTF Measures Would Achieve at Jewell

EPA wrongly assumed the feasible addition of a baghouse with 99.9 percent reduction of metals and an ACI system with 90 percent reduction for mercury. *See* 88 Fed. Reg. 55858, 55879 (Aug. 16, 2023); *see also id.* at 55894 (assuming BTF measures would reduce air emissions by 4.0 tpy nonmercury HAP metals and 144 pounds per year mercury). According to SunCoke's analysis, 99.9 percent removal on a long-term basis is unlikely; a more realistic assumption is 99 percent removal. In addition, an outlet concentration, usually expressed as grain loading, is a better, more appropriate measure of baghouse performance, and the best performing baghouses can achieve an outlet concentration of 0.000437 grains per dry standard cubic foot.[22] Similarly, for mercury, a baghouse with ACI combination can only reasonably provide 80 percent mercury removal on a long-term basis.[23]

[21] *Compare* Tab. 6 with Attachment D (TRC Technical Memo) at 5.
[22] *See* Attachment D (TRC Technical Memo) at 3.
[23] *Id.*