

Integrating Combustion-Collection-Separation-Reinjection Technologies to Reduce Fly Ash Carbon and Increase Ash Value

Charles A. Lockert, Rui Afonso, Stephen A. Johnson

Tephra Resources, LLC, 16490 Chillicothe Road, Chagrin Falls, OH 44023

Fly ash generated in coal-fired power boilers can be an ever-growing source of problems for engineers and managers charged with its disposal. Current emission regulations have forced operators to modify combustion and diversify fuel sources, resulting in ash that may contain unacceptable amounts of unburned carbon and/or other undesirable contaminants. Wide swings in ash quality result in less income from ash sales and increased ash disposal costs. The difference between selling and disposing of the ash could be several million dollars per year for a given plant.

Tephra Resources helps boiler operators avoid the cost of ash disposal by considering the entire ash “life cycle”, including fuel selection, preparation, combustion, collection, beneficiation, and markets/end uses. This paper summarizes the evaluation process and provides case histories. Advanced combustion diagnostics and low-cost separation techniques form the cornerstones of our approach.

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