

Evaluation of Coal Fueled Heating Boilers

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ABSTRACT

Coal is the source of fuel for the heating boilers at the University of Kentucky (UK) and Eastern Kentucky University (EKU). The coal, fly ash, bottom ash, side stream ash, and mixed ash from the heating boilers at the aforementioned universities will be collected and analyzed petrographically and chemically. I will conduct the petrographic analyses on the coals and selected fly ashes. The fly ashes will be wet screened at 60 (for very coarse samples) and at 100, 200, 325, and 500 mesh. The mercury distribution will be evaluated with respect to the Carbon in the ash and the ash petrology. The coals used as fuel for the heating boilers at both ECU and UK are from Eastern Kentucky, but originate from different locations and coal seams. Therefore, I hypothesize that due to variations in the coal chemistry and in the boiler system there will be discernible differences in the chemistry and petrography of the coals and fly ash.

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