

Impact of Carbon-in-Ash on Mercury Removal across Particulate Control Devices in Coal-Fired Power Plants

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Abstract

There is a considerable amount of data in the literature showing that high levels of mercury removal can occur in existing control devices on coal-fired power plants. Particulate control devices such as electrostatic precipitators and fabric filters are capable of removing mercury, but the level of removal is highly variable, depending on coal type, boiler configuration, mercury speciation in flue gas, and operating conditions in the control device. The composition of the fly ash has been shown to be an important factor in mercury removal (and oxidation). In this paper, we review recent literature on the effect of fly ash carbon content on mercury as well as present the results of current sampling campaigns on full-scale coal-fired power plants where mercury control processes are being demonstrated.

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