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Mercury Speciation in Coal-Fired Power Plant Plumes

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Abstract

The fate of mercury emitted from a power plant depends on its oxidation state. Oxidized mercury likely deposits near a power plant, while elemental mercury will be transported long distances before removal. Recent research suggests that oxidized mercury may be reduced in power plant plumes. If true, this has important implications on the design of regulations to control mercury emissions from coal-fired power plants. This project is to investigate the speciation of mercury in coal-fired power plant plumes, specifically to examine changes in speciation between stack conditions and the plume. The project involves a combination of stack sampling at a large, commercial coal-fired power plant using a dilution sampler and analysis of ambient speciated mercury data.