

Example Abstract (maximum 275 words)

Management Practices if EPA Classifies Coal Combustion Products as Solid Waste

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Current practices in the coke and coal-fueled electric power industry often yield combustion products with low or insufficient strength to allow for long-term stability when stacked or subject to seismic conditions. A low cost method to increase static and seismic stability has been proven at several power plants. The method leverages the natural chemistry of the weak ash to create strength through mineral growth and an increase in the internal friction of ash particles. This patented technology increases the strength of high moisture content ash from wet systems, or ash landfills attempting to address slope stability.

Bench and Pilot tests at the Kingston site have increased the strength from zero to over 100 psi Unconfined Compressive Strength. The ash had an initial moisture contents in excess of 50%, and no measurable strength. The method leverages the chemistry of the existing ash, and creates strength by decreasing moisture content while causing mineral growth. Two primary minerals are produced. Both minerals consume water in their reaction, and bind particles together much as Calcium Silicate Hydrate gives concrete its strength.

This talk will detail the various applications of this technology for increasing long-term strength. Results will be presented for bench and pilot tests, as well as actual projects at fly ash ponds and landfills.