

Powder components containing calcium, alumina, silica, iron, magnesium, and a halogen sorbent are used in combination during coal combustion to produce environmental benefits. Sorbents are added to the coal ahead of combustion and/or are added into the flame or downstream of the flame. The alkalinity and chlorine of the powder is minimized in order to mitigate unwanted fouling, especially when used with sub-bituminous and lignite coals.