

# Characterization of fly ash from the Kangal power plant, Eastern Turkey

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## **ABSTRACT**

A total of 25 fly ash samples was systematically collected, once a week from November 1999 to May 2000, from two boiler units (I and II) of the Kangal power plant (300 MW) that burns fossiliferous lignites of Lower Pliocene age. The fly ashes are high in total sulphur content (av. 3.82%). SEM-EDX study shows that the glasses of the fly ash samples were typically formed from Ca-Fe-Al-Si with traces of Ti, Mg and K. Common minerals in the crystalline phase of the samples are anhydrite, quartz, lime, feldspar and hematite. Minor and trace amounts of gehlenite, calcite, cristobalite, ettringite, hercynite, and unburnt carbons are also present in the samples. The average values of some element concentrations of the samples are relatively higher in Ca (22.3 %), As (143 µg/g), Mo (218 µg/g), Sr (1448 µg/g), U (82 µg/g) and Zn (282 µg/g) than in the fly ashes from the Cayirhan power plant (630 MW) that burns zeolite-bearing coals of Late Miocene age.