ASSESSMENT OF ENVIRONMENTAL EFFECTS OF SOLID WASTE FROM COAL-FIRED THERMAL-POWER PLANTS IN TURKEY

BABA,A.DOKUZ EYLUL UNIVERSITY, FACULTY OF ENGINEERING, DEPARTMENT OF GEOLOGICAL ENG., 35100, BORNOVA, IZMIR, TURKEY

The solid wastes resulting from coal combustion are mainly fly ash, bottom ash, and slag. Fly ash and bottom ash from coal-fired thermal power-plants is known to contain a variety of toxic elements which under certain conditions, can leach out and contaminate soils as well as surface and groundwater resources.The lower the quality of the coal used, the more the amount of waste produced. The growth of the dimensions of the solid waste problem is directly proportional with the quality of the coal used. Especially, because of coal-fired thermal power-plants that run into operation in order to compensate the increased energy deficiency between 1970-1980 coal demand increased rapidly in Turkey. For example, while total coal consumption amount of power plants was nearly 880 thousand tons, this figure rose to 42.4 million tons in 1996. This study presents and summarizes the environmental geological effects of coal-fired thermal power-plants waste having an amount more than 100 million tons in Turkey.