

Namysłowska-Wilczyńska, B., Skorupska, B., Wieniewski, A. Geostatistical Analysis of Variation in Technological Parameters of Ash-slugs Disposed of on an Industrial Waste Disposal Site: A Case Study. *Ochrona Środowiska* 2012, Vol. 34, No. 2, pp. 43–48.

**Abstract:** The object under study is an industrial waste disposal site located in the proximity of Swiecie (district Wojewodztwo Kujawsko-Pomorskie), which receives ash-slugs from power generation. Geostatistical analysis was carried out for some part of this waste disposal site (Tank A). Two technological parameters of the ash-slugs were made subject to analysis of spatial variation: ash content and moisture content. Structural analysis of variation in the two parameters was conducted using the directional variogram function, and was followed by estimation of average values ( $Z^*$ ) using ordinary (block) kriging (3D). A geostatistical model (3D) was established, which describes variations in the technological parameters of the waste disposal site, thus visualizing the spatial variation of their values in the horizontal and vertical extension of the ash-slag layers. It has been demonstrated that the use of geostatistical methods for describing the technological parameters of the ash-slugs (treated as an anthropogenic deposit) offers the possibility of building up a comprehensive database that provides complete input information for a research project on the utilization of the material being disposed of.

**Keywords:** Ash-slugs, moisture content, ash content, spatial analysis, variation, geostatistical methods, directional variogram, ordinary kriging.