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WASTE MANAGEMENT OF COAL PREPARATION PLANTS IN UKRAINE AND ASSESSMENT OF ENVIRONMENTAL AND ECONOMIC EFFICIENCY OF ENVIRONMENTAL MEASURES FOR WASTE STORAGE

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The article gives a brief analysis of the state of all environmental spheres on the territory of eastern Ukraine and the impact of large-scale waste from coal mining and coal preparation enterprises on it. The urgency of the problem of ensuring the maximum greening of technological processes and the creation of low-waste technologies due to the involvement of secondary material and energy resources in the production cycle has been revealed. It is shown that one of the directions for the disposal of valuable components of the aforementioned industrial waste can be the technology of extraction of rare and heavy metals from waste dumps and sludge collectors.

The features of techno genic deposits in eastern Ukraine are shown, the distribution of environmental pollutant elements is analyzed, the main substances and materials suitable for extraction are listed in them. Among these, special attention is paid to the rare elements Sc, Zr, V, Ni, etc., as well as a certain amount of coal and dispersed carbonaceous matter, which contains almost all waste heaps and dumps of mines and concentration plants. Promising areas for processing waste from mining and coal beneficiation are formulated.

The necessity of appropriate sequence and stages in determining the categories of resource-valuable industrial waste is substantiated. A subsystem of indicators is described, they determine the assessment of the suitability of industrial waste for further processing (use) taking into account the available technological capabilities.

To implement a systematic approach to environmental and economic assessment of the impact of sources of large-tonnage industrial waste on the state of all environmental spheres in the area where coal mining and coal processing enterprises are located, a methodology has been proposed for determining the size of the ecological and economic optimum region when handling coal sludge from processing plants and assessing environmental damage during minimum losses for the facility generating and disposing of waste.

Based on the actual data, a mathematical model of the area of ecological and economic optimum is constructed.

Keywords: industrial waste, waste management, sludge collectors, waste dumps, environmental damage assessment, industrial deposits, technology; utilization, natural and techno genic system, ecological and economic optimum, natural and secondary resources.

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