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TECHNOLOGIES OF SAFETY PROVISION OF MUNICIPAL SOLID WASTE LANDFILLS IN UKRAINE

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**ТЕХНОЛОГІЇ ЗАБЕЗПЕЧЕННЯ БЕЗПЕКИ ПОЛІГОНІВ ЗБЕРІГАННЯ
ТВЕРДИХ ПОБУТОВИХ ВІДХОДІВ В УКРАЇНІ**

Today, one of the most acute problems facing Ukraine is the problem of the environmental hazard of municipal solid waste (MSW). Due to the lack of available production facilities for waste processing, the waste management system today is mainly focused on the storage of the generated volumes of solid waste at landfills.

According to the current building codes, MSW landfills are specialized engineering structures that, during operation, must ensure the sanitary and epidemiological well-being of the population, as well as the environmental safety of the environment. To fulfill these requirements, a number of protective measures should be implemented at the landfills, in particular, to prevent the spread of toxic substances, it is necessary to create a waterproofing base, as well as a drainage pipe system to drain the filtrate. During storage, in order to limit waste transfer by wind, it is necessary to pour the solid waste layers with soil, and upon reaching the service life limit, conduct mandatory land reclamation, which is not limited to applying a covering layer, but also includes the creation of a monitoring system for the state of the reclaimed object.

Due to the worsening economic situation in Ukraine, the costs of closing solid waste landfills and creating new ones in accordance with the requirements of existing building codes are too high for territorial communities, which forces them to extend the life of waste-loaded facilities or to carry out the above measures with significant violations. In both cases, the level of environmental hazard of landfills increases significantly. At the same time, the absence of separate collection of solid waste leads to the disposal of other substances and objects, such as expired drugs, energy-saving lamps with mercury, cans with paint, varnish, and other things.

The presented components of the problem of solid waste landfill sites increase the risk of natural and man-made emergencies on them, and also lead to a deterioration in the environmental situation of the adjacent territories. The problem of landfills also cannot be considered separately from the problem of the system of collection and removal of waste from their places of distribution. Due to the rapid growth of territories occupied by large cities, not only the number of solid waste generated is increasing, but also the distance to which they need to be transported. In many cases, this stimulates the appearance of unauthorized landfills. A set of measures to reduce the hazard of landfills should be aimed at reducing the volume of generated waste, as well as creating an effective system for separate collection and disposal of solid waste using modern technologies for their processing.

The last task to be resolved is based on creation and improvement of technologies of safety provision for MSW landfills. Such technological schemes as those used today do not provide proper protection level as they are not directed on complex resolution of existing problems so they are to be made on the basis of integrity and systematic approaches.