

## MiningWatchSEE: Disposal of Hazardous waste from mining – current EU and Serbian legislation

As part of an integrated waste management system, the most important place occupies a permanent and safe waste disposal on the dumpsites. In order to synchronize the domestic legislation with the regulations of the European Union, the Government of the Republic of Serbia in 2010, brought the Decree on waste disposal to the dumpsites.

The adoption of the Law on Waste Management from 2009, and its amendment in 2010, created the legal framework for the gradual establishment of an integrated waste management system in the Republic of Serbia. As in Serbia there are no landfills for hazardous waste disposal, in order to learn more about them, the paper of Ljubisa Obradovic, Jelena Stankovic, Mila Bigarina, from the Institute for Mining and Metallurgy Bor, published in the journal "Mining and Metallurgy Engineering Bor" No. 3/2013, shows their basic characteristics and structural elements, according to the Decree on landfills by the Government.

As part of an integrated waste management system, the most important place occupies a permanent and safe disposal of waste on the landfill. In order to synchronize the domestic legislation with the regulations of the European Union, the Government of the Republic of Serbia in 2010, brought the Decree on waste disposal to the dumpsites, which is slightly different from the EU Landfill Directive from 1999. Decree for the first time, introduces landfills classification where all landfills are divided into three categories: landfill for internal waste, non-hazardous waste, and hazardous waste.

Waste generated from mining exploration, investigations, processing and storage of mineral resources, as well as overburden from mines and stone pit, is excluded from the existing Law on Waste Management. This means that the flotation overburden, disposed on the old Bor flotation dump, is excluded from the above mentioned law, however, if the same flotation overburden is in recycling process, in order to valorize other useful components, the law can be applied. Copper as a useful component, extracts from the flotation overburden by hydrometallurgical way, leaving an acid waste material to be permanently and safely disposed of in a landfill.

Dumps are typically located in sheltered bays by lateral relief, former land borrow pits and flat terrains without running and stagnant water. Landfill bottom and slopes of landfill are governed, i.e., the sides in a way that will ensure the landfill stability, waterproofing, which together with a system for receiving and discharging of seepage water, prevents its penetration into landfill subsoil.

After closing the landfill until its withering, operator at the landfill takes measures concerning maintenance, surveillance, control, and monitoring of landfill area, in accordance with the Regulations and the Law.



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For the purpose of classification of waste obtained after leaching, acid waste is subjected to leaching standard test SRPS EN 12457-2. Obtained eluate study, according to the Regulations on categories, testing and classification of waste, shows that waste material after leaching can be disposed at the hazardous waste landfill.