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PRODUCTION CAPACITY OF LEACHATE FROM BIHOR LANDFILL

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Abstract

Landfilling is one of the most important issues that can be discussed nowadays related to waste management, mainly concerning the importance of what we have to do with waste quantities and how energy can be recovered. The paper proposes a three-dimensional mathematical model applied to calculate the production capacity of leachate from Bihor landfill, situated in Bihor County, Romania. The leachate production capacity is related to the total amount of waste disposed in landfill during active phase. The parameters taken into consideration in the research refer only to the municipal solid waste quantity disposed and the life of the landfill. Leachate production time was divided into two well-defined periods: active phase, in which the waste was stored in landfill and the post-closure phase – the period of time until the landfill is definitively closed (30 years). The mathematical model has been elaborated and tested using TableCurve 3D software based on data provided by SC EcoBihor SA and based on the assessment of leachate quantity that can be collected from the landfill. The mathematical model proposed offers a viable solution to determine the maximum leachate production capacity during municipal solid waste landfilling.

Key words: landfill, leachate, mathematical model, Municipal Solid Waste, time

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