



“Gheorghe Asachi” Technical University of Iasi, Romania



BELGRADE SOLID WASTE MANAGEMENT OPTIMIZATION - POTENTIAL OF LANDFILL GAS RECOVERY

Vesna Alivojvodic^{1*}, Miroslav Stanojevic², Dragi Antonijevic³

¹*Belgrade Polytechnics, Department of Environmental Engineering, 17 Brankova Street, 11000 Belgrade, Serbia*

²*Faculty of Mechanical Engineering, Department of Chemical Engineering, University of Belgrade,
Kraljice Marije 16, 11000 Belgrade, Serbia*

³*Faculty of Applied Ecology, Singidunum University, 83a Pozeska Street, 11000 Belgrade, Serbia*

Abstract

Establishing a management system for collecting and disposing the solid waste materials is of great importance in urban areas. Belgrade, the capital city of Serbia, is at its initial phase of managing this problem. Currently, landfill disposal is the main option for dealing with rapidly growing amounts of waste. This paper's research goal is to estimate the landfill gas quantity at Belgrade's only landfill site Vinca, and to estimate the potential for collection and utilization of methane. Considering that this landfill site has no gas collecting system, data from previous measurements of landfill gas were collected and analyzed. In addition to that, the globally acknowledged software for modeling landfill gas generation, LandGEM, was applied.

Key words: Belgrade, landfill gas, LandGEM, methane, solid waste management

Received: May, 2013; Revised final: January, 2014; Accepted: January, 2014
