

LEACHATE AND BIOGAS MANAGEMENT IN PATRAS LANDFILL

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ABSTRACT

The sanitary landfill of the Municipality of Patras operates since 1993 and receives 220tn MSW/d rich in organic compounds (45%). Leachate management is based on a recirculation technique, aiming to increase the moisture and the microbial activity in the refuse mass by returning the leachate back in it. Biogas management consists of biogas collection and flaring systems, while the electricity production is examined as a future technique. Long-term variations of COD, BOD and pH values of leachate and CH₄, CO₂ and O₂ of biogas during the landfill life, show a rapid passing to methanogenesis stage and high-energy value biogas production, both caused by the recirculation system in combination with the large organic compound of MSW collected.

Key words – landfill, leachate, biogas, methanogenesis, recirculation, municipal solid waste