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ANALYTICAL CONTROL OF SOIL AND GROUND WATER QUALITY ON A NORTHERN ROMANIAN LANDFILL

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Abstract

This paper evaluates the efficiency of some technical depollution actions applied on a Northern Romanian landfill of solid municipal wastes, that provides ca 128 000 inhabitants and 171 economic companies, considering a great variety of specific physicochemical quality indicators for soil (8 indicators) and ground waters (34 indicators).

The environmental status of the landfill was previously studied in 2004, through periodic analytical control of ground water (4 observation drilling wells) and soil (6 control points, depths of 5 and 30 cm) quality before the application of some specific depollution actions (surface minimization, recyclable waste selection and valorisation, construction of a new drainage system). Initially, some environmental data exceeded the normal or maximum admissible limits and the necessity of depollution measures was obvious. The re-proved environmental data carried out in 2007 underlined the effectiveness of management practices as the levels of almost physicochemical indicators shown a decrease (30 to 90 %).

Key words: analytical control, environment pollution, ground water, landfill, quality indicator, soil

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