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Evidence for an underground runoff and soil permeability at the Ouled Fayet (Algiers, Algeria) buried waste pilot project: needs for a specific landfill implantation code

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Abstract

Results from geophysical investigations (electrical resistivity, electromagnetic mapping and seismic refraction) on an empty excavated rack of the Ouled Fayet (Algiers, Algeria) pilot landfill evidenced a more permeable soil than found by a feasibility study and the presence of an underground runoff underneath the rack. The problem was to evaluate the degree of confidence of the feasibility study, based on 76 10-m drilling cores only, 6 of them performed on the studied rack. To the contrary of what is claimed in the feasibility study a threat of lixiviate pollution is real. It is more than urgent to elaborate a code for landfill implantation in Algeria, which should include mandatory geophysical prospecting and deeper drilling cores.

Keywords: Landfill, Geophysical prospecting, Underground runoff, Permeability, Algeria.