



## STABILITY ASSESSMENT OF PAPER SLUDGE LANDFILL COVER BARRIER

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### ABSTRACT

The use of paper sludge as the barrier material in landfill capping system has gained some attention since early 1990's. The use of paper sludge as the hydraulic barrier material in landfill covers is a innovative way to recycle residuals of paper industry..

Some slovenian landfills consider use of paper sludge in capping systems as an alternative to, or to improve the performance of, a compacted clay liner, as part of an engineered barrier layer in the landfill cap. Paper sludge may be more appropriate for some site-specific circumstances due to the nature, availability or practicality of using clay materials, the nature of the waste, or climatic conditions.

Assessment of paper sludge as landfill cover liner and landfill capping stability is a key element of this paper. Both stability and integrity of the paper sludge cover liner were assessed in order to demonstrate performance of the barrier system during the design life of the facility. For stability assessment was used computer program Plaxis. Results given by stability assessment, which are presented and commented in the paper, were finally the basis for the design of a long term landfill capping system.

**Key words:** Composites, Paper Sludge, Stability assessment, Waste Landfill Capping.