



SHALLOW AQUIFER POLLUTION WITH HEAVY METALS AND ALUMINIUM IN NEFERAL AREA

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Abstract

The paper is focused on the shallow aquifer contaminated with leaching metals from the waste dump of S.C. Neferal A.S. The slag from industrial processing of Neferal plant is disposed in direct contact with the soil, without any kind of isolation in the base. The dump is crossed by a drain with a length of several kilometers that collect the precipitation and superficial waters from industrial waste disposal area. The contaminated water of shallow aquifer is drained to Pantelimon Lake, situated at 3 kilometers distance from Neferal S.A., in the south direction. Evaluation of contaminants dispersion within the shallow aquifer and the prognosis of pollution for the next five, ten and twenty years are developed using a detailed sampling of the site and a numerical model that couple the flow from unsaturated zone to the shallow aquifer. The shallow aquifer from the studied area is used by local community for drinking water, through local fountains. This source of water is used without any other preliminary treatment.

Key words: evaluation of contaminants dispersion, pollution with heavy metals, shallow aquifer

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