

Impacts of industrial wastes on regional groundwater

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Abstract The wastes left after mineral-resource development usually have a high concentration of chemical compounds. Environmental problems such as groundwater pollution will result from leakages of the waste-deposition-site if the site was not treated adequately during its early stage of construction. Due to the complicated hydro-geological conditions within the impact area of the waste site, it is difficult to reflect these complexities into a simulation model. Therefore, in this paper an unstructured finite volume model (FVM) is proposed. To overcome the difficulty in the selection of time step, a completely implicit numerical scheme of FVM was developed. A case study was conducted at a waste deposition site located in Qian-nan Prefecture, Guizhou Province and a satisfactory result has been achieved.

Key words groundwater; unstructured grid; pollution; simulation
