STUDY OF GROUNDWATER POLLUTION REDUCTION BY INTEGRATING NATURAL ATTENUATION PROCESSES

Teză susținută pentru obținerea titlului de doctor în domeniul de doctorat
civil engineering

(sinteză)

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Rezumat: This work started from a notion of "natural attenuation" aimed at explaining this term and determining the applicability of this methodology (concept). Based on the definition and explanation of the processes underlying the concept it was performing mathematical simulations to demonstrate the effectiveness of natural attenuation.

In the thesis introduction is noted that in a balanced environment, pollutants are degraded and new useful materials are produced. With this work we wanted to show that the environment, even now when it can be no question of balance, not lost the ability to "self-repair". In some cases degradation processes must be stimulated but the existence of these processes cannot be denied.

I worked in a relatively new field and in this case it was necessary to describe the concepts of natural attenuation to make sure that this methodology finds their applicability in our country.

Principalele contribuții revendicate: Performing simulations of contaminant transport (Modflow) and thermodynamic equilibrium reactions (PhreeqC) taking place in the pollutant plume. Combining the two programs used to simulate natural attenuation concept. Performance of a study to facilitate choosing a suitable concept of natural attenuation for the sites that will be rehabilitated also we present the possibility to apply such a concept.

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