Abstract

Tracer test is a common characterization technique that has been used to obtain site's hydrogeologic information. The most important parameter obtained from tracer test is a *dispersivity* value. In this research, the multiple tracers test or MTT module was developed based on a well-known and widely-used 3-D finite difference codes MODFLOW/MT3D. The MTT module can be used to analyze both conservative and partitioning tracers test data. Both equilibrium and rate-limited partitioning behavior of partitioning tracer can be simulated. This rigorous 3-D modeling approach is much better and more realistic than using 1-D analytical solution although the model setup is somewhat time-consuming. The experimental data obtained from three scales (laboratory column, intermediate pilot experiment, and field-scale tracer tests) were used to validate the applicability of the developed MTT module.