

Issues and Countermeasures for the Geophysics Investigation of Contaminated with Chlorinated Hydrocarbon

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Environmental geophysics survey has the advantages of survey rapidly, high resolution result and less affected by the surface topography and objects. It is suitable to either a wide range of general survey or a small-scale precise survey. Recently, non-invasive technologies such as geophysical technology have been introduced to provide the plane and space information of pollution in subsurface by integrating few bore-hole data. The most common used geophysical technologies are ground-penetrating radar method (GPR) and electrical resistivity tomography (ERT). The electrical resistivity tomography (ERT) is one of the most widely used geophysical methods in geological, hydro-geological, and geo-environmental investigations. This study would first discuss how DNAPL and its soluble-phase components invade into the low permeable layer based on the field observation. Then, the importance of geophysical technology is introduced with comparing to the limitations of bore-hole investigation. Last, the case studies on using geophysical technologies including geophysical well logging are introduced to snapshot the complex profile of DNAPL distribution for improving future application.

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