Stabilization of chemically contaminated sedimentary soil

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Chemical accidents can cause chemicals to flow into water bodies and settle on river beds. Contaminants contained in the sediment require treatment, but it is costly and time-consuming to determine the degree and degree of contamination. Therefore, stabilization that prevents the movement of chemicals is emerging as a solution. In this study, substances that can efficiently stabilize benzene, toluene, phenol, and methyl ethyl ketone, which have a large amount of handling among chemicals, were discovered. In addition, aromatic substances can change depending on the environment, and various conversion products and oxidizing substances are synthesized during oxidation. Therefore, a stabilization method for the oxidizing material was also considered. As a result, activated carbon was evaluated as the most effective stabilizer for benzene, toluene, phenol, and methyl ethyl ketone, and activated carbon coated with iron oxide was evaluated as the most suitable stabilizer for stabilizing oxidized substances.
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