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NATURAL ATTENUATION OF COD RELEASED FROM SAVINESTI CHEMICAL PLATFORM

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Abstract

Natural attenuation is a remediation method in situ. Since 1995 natural attenuation is a second method used for remediation in more than 28 % soil pollution situations in the world. Natural attenuation controls contaminants released from source zones via dispersion, diffusion, sorption, degradation (either biodegradation or abiotic processes such as hydrolysis), volatilization, and dilution.

The BIOSCREEN was used to try to simulate the movement of the COD plume from Lactama II installation in groundwater from 1996 to 2002. The first order decay model indicate that the COD concentration is almost 0 at 60.96 m from source; that because the natural attenuation is very high. In this case, the plume mass if no biodegradation is 360.5 kg. Actual plume mass (after 6 years) is 36.5 kg, so the plume mass removed by biodegradation is 324.1 kg (90%).

Keywords: natural attenuation, dispersion, and biodegradation, modeling, simulation

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