Geo-Environmental Engineering: Design of Soil Vapor Extraction Systems

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1. Soil and Groundwater Contamination
    a. Sources of Contamination
    b. Remedial Technologies
    c. Relevant Laws and Regulations (US)
2. Behavior of Contaminants in Soil Systems
    a. Soil Properties
    b. Equilibrium relationship in Saturated Soil (two-phase systems)
    c. Equilibrium relationship in Unsaturated Soil (three-phase systems)
    d. Application
3. Movement of Chemicals in Soil Systems
    a. Retardation Factor (R).
    b. Application of Retardation Factor
4. Soil Vapor Extraction Systems (SVE)
    a. Overview of SVE Systems
    b. Passive Movement of Vapors in Soil Systems
    c. Batch Model for SVE Systems
    d. Modeling Single Contaminant
    e. Modeling Multiple Contaminants
    f. Design Example of an SVE Systems