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Altri autori (Persone)	IllmanWalter A (Walter Arthur)
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Soggetti	Groundwater - Purification Groundwater flow - Mathematical models In situ bioremediation Hazardous wastes - Natural attenuation
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Nota di contenuto	BIOREMEDIATION AND NATURAL ATTENUATION; CONTENTS; Preface; 1. Introduction to Bioremediation; 2. Geochemical Attenuation Mechanisms; 3. Biodegradation Principles; 4. Fundamentals of Groundwater Flow and Contaminant Transport Processes; 5. Fate and Transport Equations and Analytical Models for Natural Attenuation; 6. Numerical Modeling of Contaminant Transport, Transformation, and Degradation Processes; 7. Field and Laboratory Methods to Determine Parameters for Modeling Contaminant Fate and Transport in Groundwater; 8. Bioremediation Technologies 9. Performance Assessment and Demonstration of Bioremediation and Natural AttenuationAppendix A. Chemical Properties of Various Organic

Compounds; Appendix B. Free Energy and Thermodynamic Feasibility of Chemical and Biochemical Reactions; Appendix C. Commonly Used Numerical Groundwater Flow and Solute Transport Codes; Appendix D. Nonparametric Statistical Tests for Determining the Effectiveness of Natural Attenuation; Appendix E. Critical Values of the Student t-Distribution; Glossary; Index

Sommario/riassunto

A groundbreaking text and professional resource on natural attenuation technology Natural attenuation is rapidly becoming a widely used approach to manage groundwater and soil contamination by hazardous substances in petroleum-product releases and leachate from hazardous waste sites and landfills. This book provides, under one cover, the current methodologies needed by groundwater scientists and engineers in their efforts to evaluate subsurface contamination problems, to estimate risk to human health and ecosystems through mathematical models, and to design and formulate appropriate r
