## CONTENTS

		Page
Introduction		1
	Section I	
	Starting the Project	
Chapter 1	Defining Treatment Parameters	7
	g .: H	
	Section II  Proporties of the Conteminants	
Chapter 2	Properties of the Contaminants Relating the physical and Chemical Properties of Petroleum Hydrocarbons to Soil	
Chapter 2	and Aquifer Remediation	13
Chapter 3	Using the Properties of Organic compounds to Help Design a Treatment System	27
Chapter 4	The Effects of Biochemical Reactions on Investigations and Remediations	43
	Section III	
	Developing Treatability Data	
Chapter 5	Using Laboratory Data to Design a Full-Scale Treatment System	55
	Section IV	
	Developing Detailed Design	
Chapter 6	Engineering	65
	Section V	
	Unit Operations	
Chapter 7	Would the Real Air Stripper Please Stand up?	75
Chapter 8	The Application of Biological Treatment to a Landfill Leachate  Laboratory and Bilet Plant Evaluation of Ultraviolet (UV). Ovidetion Treatment	83
Chapter 9	Laboratory and Pilot Plant Evaluation of Ultraviolet (UV) –Oxidation Treatment Methods	93
	Section VI	
	Selection of Treatment Alternatives	
Chapter 10	Treatment of BTXE compounds at Low Flow Rates	105
Chapter 11	Total Dissolved Solids in ground water	115
Chapter 12	Treatment of Herbicides in Ground Water	123
	Section VII	
Cl . 12	Practical Problems	105
Chapter 13 Chapter 14	Some Practical Problems The Effect of Time on Treatment Economics	135
Chapter 14 Chapter 15	The Effect of Time on Treatment Economics One Small Voice for Pump-and-Treat	139 147
Chapter 16	The Five Worst Design Mistakes I Have Seen on Superfund Projects	153
Chapter 10		133
	Section VIII In Situ and Natural Biochemical Remediations	
Chapter 17	Priming the Pump for In Situ Treatment	167
Chapter 18	Biochemical Effects on Contaminants' Fate and Transport	171
Chapter 19	Hydrogeologists Should Manage Biological In Situ Remediations	185
Chapter 20	How to Determine the End of Active Remediation	193
Contributors	3	201
Index		203