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2.6 Environmental impacts from nuclear and radiological accidents2.7 Future trends; 2.8 Sources of further information; References; 3 - Radionuclide behaviour in the natural environment: an overview; 3.1 Introduction; 3.2 Description of the radionuclides (RNs) of interest; 3.3 RN migration: presentation of the different governing processes; 3.4 The RN source term; 3.5 RN speciation and precipitation; 3.6 RN retention at the solid-liquid interface; 3.7 RN transport processes; 3.8 Coupling of chemical and transport processes: towards an efficient simulation approach
3.9 Conclusion: how to reliably predict any future RN migrationReferences; Appendix: main physical and chemical properties of the most significant natural and artificial radionuclides to be found in NORM...; Part Two - Environmental restorationframeworks and processes; 4 - Stakeholder involvement in the remediation of contaminated nuclear and NORM sites; 4.1 Introduction; 4.2 Definition of stakeholders and the importance of engagement at nuclear and NORM sites; 4.3 Evolution of stakeholder engagement; 4.4 Mechanisms of engagement; 4.5 Constructing an engagement programme; 4.6 Future trends
4.7 Case studies4.8 Sources of further information and advice; References; 5 - International recommendations and guidance on regulation of contaminated nuclear and NORM sites, and aspects of national level application; 5.1 Introduction; 5.2 Regulatory challenges; 5.3 International recommendations and guidance and examples of national regulatory requirements; 5.4 Progression from recognition to resolution; 5.5 Distinguishing different nuclear legacy situations; 5.6 Factors to consider in addressing regulatory challenges at nuclear legacy sites; References
6 - Modelling of radionuclide distribution in contaminated nuclear and NORM sites

Sommario/riassunto

Nuclear sites become contaminated with radionuclides due to accidents and activities carried out without due consideration for the environment. Naturally-occurring radioactive materials (NORM) released by industrial processes such as coal power production and fertilizer manufacture may also require clean-up. Environmental remediation and restoration aim to reduce exposure to radiation from contaminated soil or groundwater. This book provides a comprehensive overview of this area. Part 1 provides an introduction to the different types of contaminated site and their characteristics. Part 2 addre