

The phenomenon of risk perception is a complex issue; the present book attempts to bring together different perspectives of risk and to offer the reader aids to restructuring and assessing the vast and loosely defined field of 'risk perception'. The authors have also attempted to present the topic of international risk perception in a unique, interesting fashion; we highly recommend this informative, well-written, and enlightening text.

BETH LADD
CURTIS C. TRAVIS

In Situ Thermal Technologies for Site Remediation, by Lawrence A. Smith and Robert E. Hinchee, Battelle Memorial Institute, 209 pages, ISBN 0-87371-604-3

This short and clearly written book provides an overview of various thermal technologies available for in situ soil remediation. In situ soil heating can be conducted in a variety of different ways (steam injection, radio frequency, joule resistance, surface modifications, and other miscellaneous technologies), and each method is discussed fully in subsequent chapters in the text.

The authors, through use of definitions and comparisons, define and describe the various uses of in situ thermal technologies. The book discusses soil temperature and heat transfer mechanisms, temperature effects on contaminant removal, and temperature effects on mass transport in soils. In addition, the book gives a general introduction to the factors that influence the performance of in situ soil heating systems, summarizes literature on the subject, and provides a basis for planning data-gathering activities to determine the applicability and selection of a soil-specific heating technology. Through use of equations and definitive graphics, the concept of in situ thermal technologies is well-defined and easily grasped.

We believe this to be a well-written, informative text and recommend it to those interested in learning more about thermal remediation techniques.

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Quality Management of Safety and Risk Analysis, by J. Suokas and V. Rouhiainen, Elsevier, Amsterdam, 1993, 296 pages, price US\$ 168.50/Dfl. 295, ISBN 0-444-89864-6

The release of methyl isocyanate at Bhopal, India, over ten years ago spurred chemical industry interest in safety analysis and risk assessment. Since then, the use of technology to evaluate the safety of chemical plants has grown rapidly. But this increase in use has its own danger – varied quality of the analyses. Consequently, Soukas and Rouhiainen edited this multi-authored (although they really wrote over one-half of it themselves) book to give the basis for a systematic quality management

of safety analysis “by presenting a framework for quick management when planning, executing and documenting safety analysis using a checklist method (given in the Appendix).”

All chapters in the book (see below) expand on the ideas and questions on which the checklist is based. They evaluate the most important hazards, identification and modeling methods, and describe the factors to be considered in their use. The application and result of consequence modeling and estimates are described in a similar manner. The book also gives guidance for determining the study objectives, defining the study boundaries, estimating the need for resources, selecting the hazard identified in modeling methods, selecting reliability data, planning consequence estimations, and, finally, evaluating and documenting the results of a safety analysis.

The book has the following 15 chapters:

1. Introduction
2. Safety Analysis, Risk Analysis, Risk Management
3. Quality of Safety Analysis
4. Advantage and Limitation of Safety Analysis
5. Definition of Goals and Planning of Resources
6. Identification of Hazards
7. Identification of Human and Organizational Factors
8. Modeling of Accident Sequence
9. Determination of Accident Frequencies
10. Modeling of Accident Consequences
11. Determination of Accident Consequences
12. Performance of the Analysis
13. Documentation of Safety Analysis
14. Evaluation of the Results
15. Measurements Necessary After the Analysis

GARY F. BENNETT

Hazardous Waste Site Soil Remediation: Theory and Application of Innovative Technologies, edited by David J. Wilson and Anne N. Clarke, Marcel Dekker, Inc., Monticello, NY, 1994, 567 pages, price US\$ 165.00, ISBN 0-824709107-X

Given the enormous costs facing the United States for cleanup of contaminated sites, the number of new books being published on this topic is not surprising. This new book deals, as the title suggests, with “innovative technologies” – and innovative technologies are needed if contaminated site cleanup costs are to be constrained.

And the audience to which the book is directed is not the usual audience, one might expect from a technical treatment. The intended audience is not (though I believe it will probably include) remediation site engineers. The book, according to the editors, “is directed to environmental managers and regulators and to engineers who are not necessarily experts in remediation technology” with a goal to allow them to work with