Europe and the United States. Recent environmental legislation in the UK has focused on the need to protect the environment within reasonable economic constraints; the role of risk assessment in this is examined (Chapters 7–10).

The importance of incorporating site-specific data into risk assessments in described (Chapter 11) along with the collection of information on new and existing chemical substances, with particular regard to recent European Union legislation (Chapters 12–14). The book concludes with a discussion of the interplay between environmental risk assessment and the realities of public perception (Chapters 15 and 16).

The purpose of compiling the papers for this book was to provide an insight into a technique that is being used to help predict the environmental impact of chemicals in specific circumstances, i.e. risk assessment. The tools used in this task include toxicology, epidemiology, exposure modelling and analytical chemistry. Toward this goal, the editors have compiled the following chapters:

1 Overview of Risk Assessment and its Application
2 The Role of Toxicology in Risk Assessment
3 Toxicological Information from Animal Data: Methylene Chloride
4 Dealing with Genotoxic Carcinogens: A UK Approach
5 Dealing with Genotoxic Carcinogens: Refining the US Approach
6 Epidemiological Investigation of Environmental Health Issues
7 Integrated Pollution Control: Application of Principles to Establish BPEO and BATNEEC
8 Guideline Values for Contaminated Land: Underlying Risk Assessment Concepts
9 Contaminated Land and Water Quality Standards
10 OPRA (Operator and Pollution Risk Appraisal): A Practical System for Rating and Managing Environmental Risks From Industrial Processes
11 Site-specific Considerations in Risk Assessment
12 Information Sources Covering the Environmental Impact of Chemicals
13 The Acquisition of Environmental Data for Legislative Purposes
14 Environmental Classification and Risk Assessment
15 Communication the Results of a Risk Assessment: Lessons From Radioactive Waste Disposal
16 Risk Assessment and Reality: Recognising the Limitations

Unique and current is a listing of information sources available in the Internet with their computer addresses.

G.F. Bennett

Microbiology of Landfill Sites, edited by E. Senior, CRC Press, Boca Raton, FL, 1995, $74.95, 205 pp., ISBN: 0-87371-968-9

This text discusses the latest findings in landfill leachate treatment, co-disposal and fundamental microbiology with a goal of providing a basis for the scientific design and

management of landfills. To this end, Senior has assembled the following seven chapters, authored by a total of nine different scientists from South Africa and the UK:

1 On Isolating a Landfill from the Surrounding Water Regime
2 Selected Approaches for the Investigation of Microbial Interaction in Landfill Sites
3 Mathematical Modelling of the Methanogenic Ecosystem
4 Co-disposal of Industrial Wastewaters and Sludges
5 Landfill Leachate Treatment
6 Landfill-Covering Soils
7 Revegetation of Landfill Sites

The first chapter deals with measures necessary to prevent the escape of water from a landfill. Three main topics are considered: (1) surface water control; (2) leachate generation; (3) leachate seeping control. Both liners and caps are discussed.

The second chapter discusses laboratory studies of microbial interaction in landfill sites. Models discussed are closed culture models, continuous culture models and the anaerobic methanogenic ecosystem, is continued in the following chapter. Co-disposal of industrial wastewaters and sludges, a practice followed in the UK but not in the US, comprise the subject matter of Chapter 4. Co-disposal, of course, is the disposal, in the same site, of industrial wastewaters and sludges with domestic or commercial and industrial waste. The impact of these materials on the microbial community in the combined landfill is discussed.

Leachate is a universal landfill product. Its rate of production, treatment and ultimate disposal are of major concern in landfill operation. Leachate is a complex liquid mixture of organics, formed by the percolation of precipitate (as well as emplacement water) through the residue. Its treatment is discussed in Chapter 5. Discussed are a number of physical/chemical procedures (evaporation, chemical oxidation, precipitation, carbon adsorption, reverse osmosis, ammonia stripping, and gamma irradiation) biological treatment (aerobic and anaerobic) and combined physical/chemical/biological systems. Leachate recirculation also is discussed.

The final two chapters deal with the completion of the landfill process. First comes a discussion of landfill covers; then cover vegetation follows.

This book is well written, well researched and thoroughly documented/referenced. Written by well-published researchers, the editor has collected an excellent series of chapters that thoroughly report the current research in each of the topic areas noted.

G.F. Bennett

The TSCA Compliance Handbook, G.L. Griffin, John Wiley, New York, 1996, $29.95, 368 pp., 3rd edn., ISBN: 0-471-16227-2

This book is one of a series of five handbooks published by Wiley in their Environmental Compliance Handbook Series. Other volumes are devoted to RCRA, Superfund, the Clean Water Act and the Clean Air Act.