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.

This volume is intended as a basic guide to TSCA (Toxic Substances Control Act) passed by the US Congress in 1976. Given that TSCA spawned hundreds of pages of regulations (much beyond the scope of a single volume), the author notes this book is only a starting point for reading by members of the regulatory community.

The main text portion of the book provides an overview of the TSCA provisions that are of most direct importance to the regulated community, such as the rules and requirements relating to premanufacture notification (PMN), chemical testing, and recordkeeping and reporting. The following chapters are found:

1 Introduction to TSCA
2 New Chemical Substances and Significant New Ones
3 Managing and Testing Existing Chemicals
4 Recordkeeping, Reporting and Confidentiality
5 Regulation of Hazardous Chemical Substances
6 Inspection and Enforcement

The major portion of this book is comprised of the following seven appendices:

1 Summary of Regulations Published Under the Toxic Substances Control Act
2 Premanufacture Notice Form and Instructions
3 TSCA Section 8(e) Reporting Guide and Draft Policy Revisions
4 Final Action Plan: TSCA CBI Reform
5 TSCA Penalty Policy
6 TSCA Industry Seminar Questions and Answers (1992 and 1898)
7 Pollution Prevention Strategy for Toxic Chemicals

G.F. Bennett

Biohazardous Waste: Risk Assessment, Policy and Management, W.L. Turnberg, Wiley, New York, 1996, $74.95, 448 pp., ISBN: 0-471-59421-0

This very important topic is covered by the author in three major text sections (9):

(1) Risk Assessment – address risks associated with this type of waste
(2) Policy – discusses regulation guidelines and industry standards
(3) Waste Management

The first part of this text describes the human infection risks associated with biohazardous waste streams and the health implications of pathogenic microorganisms. Information is provided on:

- elements of human infection
- communicable disease, isolation precautions and blood-borne pathogens
- tracking source of medical wastes and calculating theoretical transmission rates
- Infectious agents in solid waste, and
- infectious agents in wastewater, including HIV survival in waste and wastewater.