

Although I started my career as a bio(chemical) engineer and worked in a laboratory with *Chlostridium botulinum* (and learned to be very careful), I am not a biohazard expert. Given that background, I leafed through the text reading parts of interest and critically evaluating the sections I could. My overall assessment is that the *Biohazards Management Handbook* is excellent.

The first chapter begins at the beginning. Written by an architect, it describes the design of a biohazard facility beginning with the owner's determination (with the help of the architect or planner); the architect calls this process the development of the program. Then he discusses all aspects of the facility design from zoning to safety. Other chapters in the Facility Considerations section of the book deal with:

- ventilation
- biosafety cabinet certification
- pest management
- hazardous chemical management
- animal resource safety.

I found both a chapter in the first section on Hazardous Chemical Management and one in the section on Chemical Health Risks in Biohazardous Management to be excellent. This is one area I feel truly competent to evaluate. The authors discuss topics ranging from how much of a hazardous chemical to purchase (it is very expensive to dispose of excess chemicals) to design of storage facilities and cleanup of spills. In Chemical Health Risks in Biohazards Management, chemical health risks, toxicity, exposure, risk control and ventilation are discussed.

The above chapter is in the second (of three) major section of the book. Chapters in this section deal with:

- research/diagnostic laboratory biosafety
- medical surveillance program
- new frontiers in biosafety
- personal hygiene
- microorganism destruction
- infectious/medical waste management
- chemotherapy agent use and disposal
- infection control.

In the last section, three chapters deal with OSHA regulations and procedures required by law as well as providing specific outlines that will allow the reader to develop effective compliance programs.

GARY F. BENNETT

Emerging Technologies in Hazardous Waste Management IV, D.W. Tedder and F.G. Pohland, Eds., American Chemical Society Symposium Series 554, American Chemical Society, Washington, DC, 1994, \$89.95, 317 pp., ISBN: 0-8412-2857-4

This book is a continuation of the publication of selected papers from the American Chemical Society (ACS) Symposium Series of the same name (as the book title).

Earlier volumes that appeared in 1990, 1991 and 1993 focussed on advances in hazardous waste management. This volume extends the coverage into complementary areas with new information and applications not previously emphasized. The 18 chapters in the book were selected (by peer review) from the 100 manuscripts submitted for review; the conference itself heard 242 presentations. Given that number, less than 10% of the papers given at the conference are published – a very highly selective process.

This book contains papers in three major areas:

- Remedial Technologies for Soils and Sediments
 - vapor extraction
 - electrokinetic remediation
 - bioavailability and biodegradation of phenols and alkylphenols
 - mobilization of metals (Bi, Cd, Pb, Th, and U) ions
- Waste Minimization and Management Technologies
 - artificial intelligence
 - crystallization of pulp mill effluents
 - microemulsion liquid membrane mercury extraction
 - gas vapor biofiltration
 - low SO₂-emitting fuel production
 - organo-oxide sorption of aqueous-borne nonionic organics
 - electron-beam irradiation of TCE
 - Fenton's reagent enhanced PCB biodegradation
 - s-triazine pesticide oxidation
- Radioactive and Mixed-Waste Management
 - cyclic releases at Hanford
 - mechanistic thermal chemistry studies of Hanford wastes
 - rate of hydrolysis of phenylboronic acid
 - sulfur polymer cementation of radioactive wastes.

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Fluid Mechanics for Industrial Safety and Environmental Protection, T.K. Flannelop, Elsevier, Amsterdam, 1994, Dfl 425.00, US \$242.75, 546 pp., ISBN: 0-444-89863-8

This book focusses on the applications of the principles of fluid mechanics to the twin fields of environmental protection and industrial safety. The material is logically organized if an accident happens, chain-of-events sequence starting with the loss-of-containment of a hazardous fluid going on to the spreading and mixing processes in water and air, and ending with the damage caused by explosion, fire or toxic chemical release.

The emphasis is on analytical methods that will be useful for students of fluid mechanics interested in mathematical applications outside the traditional engineering field. Given the material in the book has been used by the author in teaching his