

This book, the reproduction of a Radian Corporation Report to the US EPA, presents a description of sources of organic-containing wastewater, volatile organic compound (VOC) emission estimation procedures for treatment and collection system units and available VOC emission control strategies. In addition, secondary impacts and the control costs associated with stream stripping are presented.

Data are given that (a) allow estimation of emissions of VOCs from the collection and treatment of industrial wastewaters and (b) give best available control technology (BACT) and lowest achievable emission rate (LAER) for controlling emission of VOCs from industrial wastewaters.

The book begins with a description of the industries generating volatile organics: (a) organic chemicals, plastics and synthetic fibers manufacturing; (b) pesticides manufacturing; (c) pharmaceuticals manufacturing; (d) hazardous waste treatment, disposal and storage facilities; (e) pulp, paper and paper board; and (f) builders' paper and board mills industry.

Next the book outlines sources of emissions during wastewater collection and treatment: drains, manholes, junction boxes, lift stations, trenches, sumps, weirs, oil/water separators, equalization basins, clarifiers, biological treatment basins, treatment tanks and surface impoundments.

The real 'meat' of the book is found in the next three chapters (4-6) where the authors discuss (a) VOC emission control equipment; (b) environmental impact of steam stripping; and (c) cost analysis of steam stripping systems. Seven appendices give data and calculational procedures to back up the rest of the book. Of special note, for me is the steam stripping unit operation, a process not well covered in the literature.

GARY F. BENNETT

*Safe Laboratories: Principles and Practices for Design and Remodeling*, by P.C. Ashbrook and Malcolm M. Renfrew (Eds.), Lewis Publishers, Inc., Chelsea, MI, 1991, ISBN 0-87371-200-5, 166 pp., \$ 49.95 (Northern America) (\$ 59.95 outside).

This vital and often overlooked procedure for the design and reconstruction of laboratories is often a second thought, with little attention to economics or safety.

Two chemists and educators, both with flawless credentials and experience, assembled 22 co-authors to approach the problems. This reviewer is favorably impressed with the volume. The 18 chapters are grouped into five sections, with general classifications as Different Perspectives on Design of Safe Laboratories; Generic Issues Affecting Design of Safe Laboratories; Ventilation and Fume Hoods, Putting Principles into Practice; and Working Together to De-

sign Safe Laboratories. The overall impression is good, but additional references are badly needed (10 of the 18 chapters have no references, although several have photos and drawings of good quality). Several chapters could be expanded, for example, Leslie Bretherick should certainly have written many more than five pages. The discussions in Section III, Chapters 9-12 could be coordinated and made less confusing as to what is really required to produce a 'safe' fume hood or ventilation system. A paperback edition would have reduced the price and added to the work's contribution to the real world.

In summary, this is a useful and informative volume.

HOWARD H. FAWCETT

*Managing Industrial Hazardous Waste*, by Gary F. Lindgren, Lewis Publishers Inc., Chelsea, MI, 1989, ISBN 0-87371-147-5, 389 pp., \$ 59.95.

Gary Lindgren has done an excellent job giving the how-to's of waste management in *Managing Industrial Hazardous Waste*. After a basic introduction to the waste management system in Section I, Lindgren delves into comprehensive guidelines and practical aids for implementing a waste management strategy.

Section II helps the reader to classify what kind of waste generator his or her industry is and what regulations are then directly applicable. This could be an invaluable timesaver to the waste manager beginning a waste management program.

The third section presents a philosophical basis for a compliance program and key ways to conduct such a program. Lindgren discusses environmental audits as a management tool, specifics of developing and implementing the environmental program, Occupational Safety and Health's (OSHA's) chemical hazard communication requirement, community right-to-know and documentation needs.

After you know what kind of program you need, Section IV gives information on the alternatives available for selection of a treatment or disposal facility, instructions for container handling and storage, appropriate options for waste sampling and analysis (with pictures of equipment), advice on dealing with the regulators, legal responsibilities and liabilities, and utilizing the skills of a consultant.

The whole volume is a practical application guide for a company's compliance in waste management. Gary Lindgren includes many special helps for the waste manager, such as lists of definitions, a list of 'Useful Telephone Numbers', addresses of industrial waste exchanges and pictures of guidance documents and forms.

This book's target audience should find this book quite informative and