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

helpful. It touches on most issues of concern to the waste manager. Where it does not exhaust a topic, such as community relations, it at least gives directional advice to assist in further study.

CURTIS TRAVIS and VICKI GAMBLE

PCBs and the Environment, by John S. Waid (Ed.), CRC Press, Inc., Boca Raton, FL, 1987, ISBN 0-8493-5929 (set), Vol. 1, 228 pp., Vol. 2, 191 pp., Vol. 3, 272 pp., prices: $ 145, $ 129, $ 175, respectively.

Although polychlorinated biphenyls (PCBs) have generally been associated with the electrical transformer application because of non-flammable properties, and heat resistance, they have found many other applications, which have lead to worldwide contamination questions. 209 congeners (isomers) are possible from chloride substitution of the phenyls, often cited in the United States as Aroclors, such as Aroclor 1221, 1232, 1242, 1248, 1254, 1260, 1262 and 1268. Molecular structural type was defined by the first two digits; 12 for PCBs, 25 and 44 for blends of PCBs and polychlorinated terphenyls (PCTs), and 54 for PCTs. The last two digits were an approximate estimate of the weight percentage of chlorine. Concerns about the environmental fate of the millions of pounds in the United States and other countries were alerted by the first reported findings of PCBs in fish and wildlife by Jensen in 1966.

The editor of this historic study is Chair and Head of the Department of Microbiology, LaTrobe University, Bundoora, Victoria, Australia, and has called upon 18 contributors for Volume 1; 11 for Volume 2, and 15 for Volume 3. The contributors are from a wide geographical area and have specialized knowledge in the subject at hand.

Volume 1 covers the analytical chemistry of PCBs; the reliability of PCB analysis; the chemistry and properties of PCB in relation to environmental effects, including the atmospheric transport of PCB to the oceans, the solubility and soil mobility of PCBs; the factors controlling the bioaccumulation of PCBs in food chains, distribution, behavior and loads of PCBs in the oceans; what is happening to PCBs (environmental monitoring); and non-metabolic alternation of PCBs.

Volume 2 continues with PCBs accumulation and effects upon plants; accumulation and effects of PCBs in marine invertebrates and vertebrates; accumulation and effects on birds; PCBs and the environment: pertubations of biochemical systems, uptake, retention, biodegration and depuration of PCBs by organisms; modification of PCBs by bacteria and other microorganisms; effect of PCBs on reproduction in mammals; and the use of organisms to quantify PCBs in marine and estuarine environments.

Volume 3 concludes the three volumes with differences between Yusho and