

- Section 4 — Information on how to select a disposal site, what to expect during an inspection, insurance options, legal liabilities and examples of best management practices.

Appendices include addresses of USEPA and State hazardous waste offices, inspection reports and a list of hazardous waste management tips.

There are some books, in one's own field, that one can pick up, read like a novel and enjoy. This book on hazardous waste does not fall into this category because the subject material will not let it. The RCRA regulations are complicated and difficult and although the author makes a valiant attempt at simplifying them, he could only go so far. One has to read and reread sections and referenced sections to get a full understanding of the law and its requirements. Additionally, since the author routinely refers to the Code of Federal Regulations, which is the official publication of the federal rules and regulations, the user would want to have the section referring to RCRA on hand also.

GARY F. BENNETT

*Treatment and Disposal of Pesticide Wastes*, by R.F. Krueger and James N. Seiber (Eds.), ACS Symposium Series 259, American Chemical Society Distribution Office, 1155 16th St., N.W., Washington, DC 20036, August 1984, 368 pages, U.S. and Canada \$64.95, other countries \$77.95.

Based on a symposium sponsored by the Division of Pesticide Chemistry of the ACS at the Washington, D.C. National Meeting in August 1983, this volume records the work of 51 authors and co-authors in 20 papers on this subject. When one considers that 370,455 metric tons of active ingredients (70.3% of the total poundage) were applied to agricultural lands in the U.S. in 1982, the magnitude of the problem becomes apparent. While some is fairly rapidly degraded, much runs off and eventually affects the ground water, which is the source of drinking water for nearly half the population of the U.S., according to one paper.

The 20 papers are presented in three major sections:

- two papers on Regulatory Aspects (pesticide disposal laws and RCRA),
- nine papers on Field-Demonstration Scale Technologies (such as papers on disposal and degradation, as well as treatment of polluted ground water by activated carbon and other techniques),
- nine papers on Technology Development (including papers on UV-ozone degradation, use of sodium perborate with organophosphate esters, use of plasmid transfer techniques by *Bacillus megaterium* to *Bacillus subtilis* for partially degrading DDT, PCBs, TCDD (dioxin) and other substrates.

This volume is a technical book in every sense, and should be useful

to anyone interested in new advances in the treatment and disposal problem, including chemists, aerial applicators, agricultural extension service technical personnel, manufacturers, distributors, and users of pesticides. Environmental control engineers will find the presentation of the fate of various pesticides in soil and water of especial interest.

H.H. FAWCETT

*Aquatic Toxicology*, by J.O. Nriagu (Ed.), Wiley/Interscience, 605 Third Ave., New York, NY 10158, 1983, 525 pages, \$89.95.

In the introduction, Dr. Nriagu notes that environmental toxicology has become a full-fledged scientific discipline. In this volume, which is Volume 13 in the Wiley series in *Advances in Environmental Science and Technology*, the focus is on the action of polluting materials on aquatic systems — very timely in this day of concern for hazardous waste leachate in water systems.

The volume contains papers by 34 authors from Canada, France, Germany and the U.S. The papers range from general, such as “Reactions of Aquatic Ecosystems to Pesticides”, by C.W. Heckman (with 161 references), to very specific items, such as “Vanadium in the Aquatic Ecosystem”, by K. Lee (with 222 references). Other papers include “The Influence of Chemical Speciation on the Toxicity of Heavy Metals to the Microbiota”, by H. Babich and G. Stotzky (196 references), “Metal Speciation and Toxicity of Free Metal Ions to Aquatic Biota”, by U. Borgmann (69 references), “Contamination of Aquatic Biocenosis by Mercury Compounds: An Experimental Ecotoxicological Approach”, by A. Boudou and F. Ribeyre (91 references), “Ecotoxicological Role of the Membrane Barriers in Transport and Bioaccumulation of Mercury Compounds”, by A. Boudou and D. Georgescauld, with J.P. Desmazes (81 references), “Toxic Responses of Planarians to Various Water-Borne Heavy Metals”, by J.B. Best and M. Morita (35 references), “Intraspecific Differences in Susceptibility to Toxicants Due to Short-Term or Chronic Preexposure”, by J.S. Weis and P. Weis (75 references), “Physiological Effects of Contaminant Dynamics on Fish”, by A.J. Niimi (225 references), “Pollutants and Chemoreception in Aquatic Organisms”, by T.J. Hara, S.B. Brown and R.E. Evans (195 references), “Adenylate Energy Charge and ATPase Activity: Potential Biochemical Indicators of Sublethal Effects Caused by Pollutants in Aquatic Animals”, by K. Haya and B.A. Waiwood (100 references), “Fish Cell Cytogenetics: A Measure of the Genotoxic Effects of Environmental Pollutants”, by M.L. Landolt and Richard M. Kocan (58 references), “Aquatic Toxicology of Nitrogen Heterocyclic Molecules: Quantitative Structure—Activity Relationships”, by T.W. Schultz (68 references), “Toxicology of Chronic Crude Oil Exposure: Sublethal Effects on Aquatic Organisms”,