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",

by J.W. Kiceniuk and R.A. Khan (40 references) (especially timely in view of the crude oil spills in the Gulf of Mexico and Middle East waters in recent times), "Review of Ecotoxicity of Matacil in Freshwater Environment: Chemical and Phytobiological Impact Studies", by P. Weinberger and Roy Greenhalgh (22 references) (Matacil is an insecticide also known as aminocarb, used in Canada to control the spruce budworm in spruce and fir forests in Canada), "The Use of Algal Batch and Continuous Culture Techniques in Metal Toxicity Study", by P.T.S. Wong, Y.K. Chau and D. Patel (35 references), "Detailed Method for Quantitative Toxicity Measurements Using the Green Algae *Selenastrum capricornutum*", by G. Joubert (30 references), "Use of Algae in Aquatic Ecotoxicology", by R. Van Coillie, P. Couture and S.A. Vissar (41 references), and "Algal Fluorometric Determination of the Potential Phytotoxicity of Environmental Pollutants", by R.P. Moody, P. Weinberger and R. Greenhalgh (14 references).

The index is well done, and permits easy access to the wide variety of information in the volume. The volume should be of interest to professionals and graduate students in marine biology, limnology, ecology and systematics, chemical oceanography, water management, hazardous waste management, and general toxicology. It clearly reflects state-of-art views on the subjects covered.

H.H. FAWCETT

Proceedings: 1984 Hazardous Material Spills Conference: Prevention, Behavior, Control and Cleanup of Spills and Waste Sites, Government Institutes, Inc., 966 Hungerford Drive, 24, Rockville, MD 20850, 445 pages, $56.

The above conference, which has been held every two years since 1972, took place in Nashville, Tennessee in April 1984, under the sponsorship of the Association of American Railroads/Bureau of Explosives, the Chemical Manufacturers Association, the U.S. Coast Guard, and the U.S. Environmental Protection Agency.

Under the co-chair of the U.S. Coast Guard and the U.S. EPA, the meeting presented papers arranged in the following major areas: Case Histories (8 papers); Cleanup (11 papers); Data Support Systems (3 papers); Detection/Monitoring (8 papers); Dioxin (5 papers); Government Programs (4 papers); Modeling/Risk Assessment (7 papers); Personnel Safety (7 papers); Regulatory Considerations/Community Relations (5 papers); and Training (10 papers).

The case histories provide a diverse set of emergencies, including 62,000 tons of material contaminated with solvents at an Army depot; a hazardous waste processing site; a chemical plant clean-up involving 1,095 55 gallon