

of chemicals and the occasional incidents that occur. This book is their first attempt towards this objective, and is both very practical and sensible.

Beginning with the Right to Know and the Toxic Chemical Releases, as mandated under US PL 99-499 (1986), the book tells how useful these laws can be to a reporter or writer when properly used. The societal distrust of institutional authority gives the reporter serious problems in getting really high quality data which is complete and timely.

The section on actual 'how to' approach a chemical emergency is excellent, and includes a check list for use in developing and writing the story. Especially significant is the section on use of computers in emergency management and reporting, with details as to how to tap the resources of the National Library of Medicine in Bethesda, MD by computer modems.

The section 'How toxic is toxic' is an excellent introduction to dispel human concerns about toxic releases and chemicals in general.

It is noted that an Independent Press Advisory Committee has been established, with additional environmental contacts in each of the 50 states and territories.

It is puzzling to this reviewer why no mention is made of professional societies which can provide excellent in-depth sources of information. The Division of Chemical Health and Safety of the American Chemical Society (Washington, DC) and the Center for Chemical Process Safety of the American Institute of Chemical Engineers (New York) are examples of groups sincerely interested in environmental as well as human safety and could contribute much to a reporter's data base and background.

It would be helpful in future editions to list the official Occupational Safety and Health Administration (OSHA) human carcinogens, the recognized mutagens and teratogens, as well as the lists of chemicals regulated under Title III of PL 99-499 (301 through 313 as updated) for immediate reference. In addition, an index to the whole book is needed. Somewhere it should be noted that over eleven million chemicals are known, and perhaps 50,000 are in commerce in some form.

In general, the book is a long overdue treatment of the subject and is highly recommended, not only to reporters and writers but to industry and environmental groups as well.

HOWARD H. FAWCETT

*Short-term Toxicity Tests for Non-genotoxic Effects*, by P. Bourdeau, E. Somers, G.M. Richardson and J.R. Hickman (Eds.), SCOPE 41, IPCS Joint Symposium 8, SGOMSEC 4. Wiley, New York, NY, 1990, ISBN 0-471-92506-3, 354 pp. + 7 pp. index, \$ 69.95.

This volume results from a workshop held in Ottawa, Canada, in August 1984, that explored the predictive value of small-scale *in vivo* studies in characterizing the toxicity of chemicals of interest, both from a public health and an ecological viewpoint. This report from the Scientific Committee on Problems of the Environment (SCOPE) represents the consensus from that workshop. The first six chapters, of approximately 60 pages, are devoted to relatively short reports by the various workgroups at the SCOPE conference. The chapters cover general conclusions and recommendations; non-specialized mammalian cell cultures for toxicity testing; detection of toxic effects in specific mammalian organs and physiological systems; methods to predict toxicity, mostly by quantitative structure-activity relationships (QSAR); and short-term tests in ecotoxicology. The general conclusions were that short term tests provide much information but cannot yet replace long term animal tests as a basis for safety judgment; *in vitro* tests for acute, local effects should be developed, but chronic effects are unlikely to be detected using *in vitro* tests. The specific limitations of the short term tests are discussed in the respective chapters and recommendations are made where further research or even greater cooperation between governments, industry and private organizations would enhance the data base on which QSAR could be strengthened.

The remainder of this book is devoted to individual chapters by various authors, covering conceptual approaches to the development of methodology for short term tests; toxicity tests with mammalian cell cultures; the gastrointestinal tract and short term toxicity; specific organ/system toxicity using liver cells; developing kidney cells in toxicity tests; skin cells in predictive tests; use of hematopoietic cell renewal systems; short term tests for neurotoxicity, effects of chemicals on the endocrine system and on the immune system; reproductive and developmental dysfunction; ecotoxicologic testing; predicting safe levels of chemicals; and computer-aided techniques. Each chapter has extensive references, discusses the background and limitations of the specific test systems, and provides, to some degree, a view toward future trends. The major drawback of the book is that it was published five years late. Nevertheless, it appears to be a valuable compendium of available information on short term tests and their place in the armamentarium of toxicity tests.

E. WEISBURGER

*Fire and Polymers: Hazards Identification and Prevention*, by Gordon L. Nelson (Ed.), ACS Symposium Series, 425, American Chemical Society, Washington, DC, 1990, ISBN 0-8412-1779-3, 627 pp., \$ 99.95.

Fire continues to be a serious problem in society. 6,200 deaths, 30,000 injuries and \$ 8 billion in lost property occur annually, to which plastic or polymers