

dures that are presented are reminiscent of those followed religiously by personnel engaged in government-sponsored propellant research.

There are six Sections in this work, three in each volume. Section 1, "Laboratory Design, Handling and Management", consists of eight papers which include descriptions of laboratory facilities, safe-handling techniques, and a good review paper on U.S.A. regulations for the packaging and transport of hazardous materials. Section 2 contains six papers on "Chemical Monitoring and Medical Surveillance" which describe methods for both environmental and personnel monitoring. Section 3, "Informational Needs and Chemical Classification", has five papers. The first two deal with on-going attempts to classify and catalog carcinogenic, mutagenic and teratogenic substances; many helpful resources are identified. Two papers deal with the special topics of synthetic fuel technology and industrial alkylating agents. The last paper, on the causes of pre-natal mal-development, seems out-of-place in this Section.

In Volume 2, Section 4, "Structure-Activity and Toxicity Prediction" is the topic discussed in six papers. This difficult approach is treated objectively by all authors as they present their contributions to a potentially important tool for predicting chemical toxicity. For those interested in this fascinating and challenging topic, there are many references cited. Section 5, "Spill Control, Degradation and Deactivation", and Section 6, "Disposal", each consists of four papers. General requirements for spill control are outlined and chemical and physical methods of destruction and their usefulness are presented; the limitations of photolysis as a destruction method are also discussed. Disposal of carcinogens by several incineration techniques, and their destruction to innocuous products in a microwave plasma and in a molten-salt bath, are described and evaluated. A final paper addresses the need for monitoring stack effluents to ascertain that complete destruction has indeed occurred.

Mr. Walters is to be congratulated for his efforts in assembling this group of well-written technical papers on safe management of highly toxic substances. The appearance of these two volumes is timely. This reviewer recommends *Safe Handling* as an excellent resource and reference for others who now work, or plan to work, with highly toxic chemicals.

JAMES P. FLYNN

The Assessment and Perception of Risk, The Royal Society, London, 1981,
206 pp., £12.50 hardback

This book contains fifteen papers (and the associated discussion) that were given at the Royal Society's Discussion Meeting in November 1980. The presentations are grouped under four main headings: Perception of Risk, Quantification of Biological Risk, Quantification of Physical and Engineering

Risks, and Overview. The meeting was international in scope and attendance, and it is very clear that the organisers have their finger on the pulse of this very wide field. Some of the papers were lighter than others, but there is a wealth of pertinent reference material in all of them. The material on perception of risk was very illuminating, reporting results of actual studies in the field. This will be salutary reading for anyone who believes that the public perception of risk is readily characterised.

Of more immediate interest to those who operate industrial plant will be the paper by David Okrent, who describes a regulatory proposal put to the U.S.N.R.C. by the U.S. Advisory Committee on Reactor Safeguards. This proposal consists of a quantified scheme of regulatory control in terms of the frequency of occurrence of specified hazard states in the reactor, limits on the risk of death to individuals and on the risk of multiple-fatality accidents, and cost-effectiveness criteria for impact reduction in terms of deaths averted. Although directed towards nuclear installations, the overall approach clearly has far-reaching implications which merit widespread consideration.

There are now several books available that consist of collected papers from conferences on risk. This is one of the most substantial.

R.F. GRIFFITHS

Waste Management; Planning, Evaluation, Technologies, by D.C. Wilson, Oxford University Press, 1981, 530 pp., £45 hardback

This thorough book is the result of many years work in the field of waste management. The author clearly knows his material very well, and takes a comprehensive approach to the subject that is both practical and scholarly, a rare combination. Part 1 deals with Planning and Evaluation in Waste Management, including the topics of Planning, Strategy Evaluation, Economics, Costs of Transport, Diseconomies, Uncertainty, Resources Recovery, and A Systems Approach. Part 2 concerns The Technology of Waste Management, including Critical Evaluation of Technologies, Landfill, Treatment prior to Landfill, Incineration, Physical Separation, Refuse-derived Fuels, Wet Pulping, Thermal Processes, Biological Processes, Hazardous Wastes, and a discussion of the state of the art in waste management technology. The book is well indexed and referenced, and deserves a place on the shelves of anyone working in this field.

R.F. GRIFFITHS