The scope of the book, well described by the title, is further detailed by the Table of Contents:

I. Studying the problem
- nature of acute chemical hazards: the current situation
- guiding framework for the study (model)
- research procedures and data

II. Findings: preparations for emergencies
- risk, vulnerability and threat perception
- availability and mobilization of resources
- patterns of community social organizations
- social climate
- the planning process and preparedness

III. Findings: responses to emergencies
- effects of preparedness planning on responses
- impact and situational contingencies
- first responders and initial definitions
- convergencies and outflow pattern
- similarities and differences between chemical and non-chemical disaster response
- conclusions and implications

It is a far different book to those normally read by technologists, but well worth the effort, I feel, to go through it, for the social scientist has a far different but very worthwhile perspective that we, who are so close to the technical aspects of hazardous chemicals, need to consider.

GARY F. BENNETT

Reliability and Risk Analysis: Methods and Nuclear Power Applications, by N.J. McCormick, Academic Press, London, 1981, 446 pp inc. index, £26.20

This book is designed as a teaching text and as a reference work for those professionally involved in the field of risk analysis. Exercises are included to meet the needs of the undergraduate engineer. The nineteen chapters are grouped in three parts. Part 1 deals with the basic techniques of reliability engineering, including chapters on failure data, probability concepts and distributions, reliability and availability, event and fault tree analysis and computer programs for the latter. Part 2 examines risk assessments for nuclear reactors, nuclear-materials transportation and waste disposal. Part 3 deals with risk comparisons for non-nuclear risks, risk-benefit assessments, and risk acceptance. There are ample references, the index is good and much illustrative

material has been included. Parts 1 and 2 are very well written, and provide a rigorous and well co-ordinated treatment which will be very useful to the intended readership. Part 3 (about 55 pages) is not as up to date or as rigorous as one would expect from the quality of the rest of the book; for example, the treatment does not take account of recent criticisms concerning the validity of various risk comparisons. However, this is redeemed by Parts 1 and 2, which are well worth the purchase price for those wishing to read a good account of the treatment of the reliability engineering side of risk analysis.

R .F. GRIFFITHS

Risk Analysis of Six Potentially Hazardous Industrial Objects in the Rijnmond Area, a Pilot Study, D. Reidel Publishing Co., Dordrecht, ISBN 90-277-1393-6, 793 pp inc. index, cloth U.S.$ 110.00.

This is a report of a "Canvey Island" style risk analysis carried out by Cremer and Warner, covering installations in the Rijnmond area. Previous risk studies such as the Rasmussen Report on US light water reactors and the 1978 Canvey Island study generated subsequent independent reports criticising the work. Here the Rijnmond Public Authority have included critiques from other consultants (Battelle and Science Applications Incorporated) as well as the comments of representatives from industry and of the commision that was appointed as the steering committee. The study cost 2½ million Dutch guilders (about the same as the Canvey Report of 1978), and took 2½ years to complete. The report of the steering committee, which comprises part 1 of the book, is dated March 1981. Part 2 is the main report by Cremer and Warner (August 1979), Part 3 a supplementary report (March 1980) from Cremer and Warner, Part 4 the review by Batelle (January 1980), Part 5 the comments by various industrial representatives and members of the steering committee. SAI's comments are given in an appendix; a 1979 conference paper on the behaviour of ammonia in the event of spillage authored by J.M. Blanken of UKF is reproduced as an appendix.

The whole report makes stimulating reading in that the material is reproduced, as it were, "in the raw". There are the unrestrained signs of exasperation from the industrial commentators : "Whether it is cost effective to spend enormous amounts of money in calculating useless data is not for us to judge", and "Batelle's explosion model is yet another of an endless series of models for unconfined vapour cloud explosions". Cremer and Warner, as the principal consultants, are the targets for criticism from all sides. There is much discussion on the assumptions and uncertainties, including the importance of establishing adequate models for such items as initial air entrainment and rain-out fraction for releases from pressurised containment, and the toxic response to irritant gases. UKF claims that it has been demonstrated by animal tests that the acute toxicity of ammonia is less severe than represented by the model used, but offers no results or references on this work. Perhaps the most disheartening