

or industrialist. It is on the other hand unlikely to provide enough detail to satisfy the specialist. Like some of the chemical information systems now being developed, the book will perhaps appeal most to those with a general interest in environmental protection and enough scientific knowledge to pick out the items of relevance to their work — and to follow these up in the original literature. It may also help specialists to become acquainted with developments in fields other than their own. It is well produced with a high standard of printing and illustration and although not cheap will no doubt find its way onto the book shelves of many of those concerned with the study and control of toxic chemicals in the environment.

G.N.J. PORT

The Evaluation of Toxicological Data for the Protection of Public Health

edited by W.J. Hunter and J.G.P.M. Smeets, Proceedings of an International Colloquium, Luxembourg, 1976, 427 pp., published by the Commission of the European Communities by Pergamon Press, Oxford, reprinted 1978, \$ 35.

Ecological disasters have been with us as long as the Industrial Revolution, yet is only in recent years, in the wake of Flixborough, Minamata, Seveso, Michigan, the "Betelgeuse" and now Shipham, that toxicology of the environment has achieved the importance which it deserves. Despite the topicality of environmental contamination in the United Kingdom, it did not make reading this volume any easier.

The volume reports the proceedings of an International Colloquium held in Luxembourg in February 1976. The editorial note tells us that the colloquium was held to critically review current toxicological tests and methods in use for toxicological evaluation of chemicals; and somewhat vaguely "to reappraise the procedures in this respect leading to decision-making processes involved in the protection of the public health". I feel sure readers will agree that the redundant jargon in these nebulous claims does little to enhance the scientific credibility of this book. The first thirty pages contain a large helping of professional courtesies, mutual backslapping and institutional compliments that would be worthy of any romantic novelist.

In the first section devoted to a critical review of toxicological methods in current use, Poulson reviews current acute toxicity tests and discusses the significance of derived data. A laboratory-oriented review of methods for environmental mutagenicity testing is offered by Sobels and Vogel from Leiden. It is a solid, reliable review backed up by a mountain of 81 references.

Fetal toxicity is succinctly reviewed by M. Tuchmann-Duplesis in both English and French translation. The work appears to be a revision of an earlier contribution to an obstetrics textbook but it nonetheless notable for its brevity and use of tabular presentation. It is also interesting for its background to Seveso and Minamata, as well as review of teratology. The participants turned their critical minds subsequently to toxicological data. The session tried to

define criteria in extrapolating from data to standard settings and thence to practical guidelines. The result is a wholly praiseworthy aim unable to withstand scientific scrutiny.

Sharratt's paper on the uncertainties associated with the evaluation of toxicological data from the health hazard viewpoint, is undoubtedly one of the highlights of the colloquium. Written in a clear, lucid style, it is of immediate relevance to anyone remotely concerned with environmental health. His conclusions that data should only be applied when thoroughly understood and assessed from criteria of accuracy, sensitivity and above all, applicability seem obvious, but patently will need repeating, especially as the mass of toxicological data hits the occupational health and safety scene when S.6 of the Health and Safety at Work Act begins to gain ground.

Popper's assessment of the rat liver model makes worthwhile reading. But again, I baulk at the idea of screening for industrial injury using percutaneous needle biopsy techniques. Apart from the inherent physical risks, the ethical position of the method is far from clear.

Health information systems are assessed in another paper by Alderson, a field in which he has a well-deserved reputation. The material is clear and concise, presented in a particularly succinct fashion, reviewing albeit superficially the main epidemiological concepts. The material may well be new to many active in the field of environmental hazards.

Geoffrey Dean, an epidemiologist of international standing, makes a plea for definition and attention to the needs of critical groups, when defining pollutant criteria. It is an approach he derives from a study of national mortality and morbidity records, which underlines the importance of the collection of routine vital statistics. Within this strategy, are the seeds of an idea for a community-wide action to pool information sources in an effort to identify potential areas of environmental pollution.

The remaining sections were devoted to the concept of a safe level and ecotoxicology as the field has been named. In volumes of this nature, the lack of uniformity is irritating to say the least. In this, it is even more annoying as several papers are represented in both French and English. Both convenience of the reader and the needs of dissemination of scientific information would have been far better served by a single language volume.

Who should read this book? This, unfortunately, must be the most difficult question. One or two of the contributions are worthwhile. Academics might find references of value, but little else. Environmental scientists will be well advised to devote their time elsewhere. Community health specialists will have too much to do to bother with a volume in which they will find nothing of worth for them.

The overall impression of the book is that it is a single cover for a large number of papers with little uniformity and certainly pitiful attempts to bridge the gaps between the disciplines. First published in 1977, a year or more after the colloquium, it comes a great surprise, when mercifully finishing the book, that this edition is a reprint. Presumably then somebody must be buying it.

At a price of approximately £ 20, this is astonishingly expensive and could be better spent on further subscriptions to this journal.

DENIS D'AURIA

Time Bomb. LNG: The Truth about our Newest and Most Dangerous Energy Source by Peter van der Linde with Naomi A. Hintze, Doubleday & Company, Garden City, New York, 183 pages, \$6.95.

Liquefied natural gas (LNG) is an energy source of increasing importance to the U.S., to Canada, to England, and to Japan. Like any fuel, it has recognized hazards. It is difficult to believe that "LNG has an explosive force second only to a nuclear holocaust", or that the "industry was pushed too far, too fast by critical demands for energy".

Time Bomb is a very negative book which predicts, in graphic terms, the disasters which misadventures, such as ship collisions, could trigger-off in highly populated areas where LNG is stored. There can be no doubt that Mr. van der Linde has researched the subject; but, we do note serious technical gaps in his bibliography, including an in-depth review of engineering controls sponsored by the U.S. Coast Guard under the work of the National Academy of Sciences' Committee on Hazardous Materials, held in Boston, June 13-14, 1972. LNG is *not* an unknown or uncontrollable hazard.

While much of the material on which the book is based is doubtlessly factual, the tone of downgrading both technical knowledge and protection of investment (the LNG ships being built have a \$200 million price tag), hardly gives credit to incentives based on self-interest.

We recognize the many hazards, including sabotage, which Mr. van der Linde discusses; this reviewer cannot agree that the LNG industry, and the regulations, are as lax or careless as he suggests. Perhaps the book can be noted as an example of concern which is out of proportion to the problem. We pray Mr. van der Linde's fears are not realized, and that LNG will be prove to be a useful servant — not a destructive force.

H.H. FAWCETT