help to the reader. A short list of codes from two associations in the United Kingdom are also included.

Since loading and unloading facilities are generally incorporated in storage and handling systems, the guidelines for rail car and tank truck facilities, marine transfer facilities and non-permanent storage are covered in Chapter 5. A summary of instruments, control systems, electrical systems and devices for release detection is presented in Chapter 6.

A brief discussion on the use of isolation values, vent headers, enclosures, double-walled tanks, disposal systems and release countermeasures for minimizing the impact of releases is given in Chapter 7. For extensive details on these topics the reader will have to look at the references. From a management point of view, the procedures for establishing a preventive maintenance and inspection program for avoiding major accidents are described in Chapter 8.

The emphasis is placed on development of operating procedures and training in Chapter 9. The idea is to minimize accidents caused by human errors. Chapter 10 gives an overview of emergency planning requirements, available government publications and industrial assistance. Ten planning rules are given for emergency staff.

The references are kept to a minimum in each chapter. However, a carefully compiled list of references is given in Appendix A. Appendix B provides details on the chemical exposure index developed by Dow Chemical Company. A Contents list is available for the reader at the end of the book.

The book is a group effort and is well written. It includes a glossary which will be helpful for a casual reader. The book will also serve as a continuing education tool for environmental scientists, environmental lawyers and environmental managers.

ASHOK KUMAR

Mobile Waste Processing Systems and Treatment Technologies, by W. Glynn, C. Baker, A. LoRe and Quaglieri, Noyes Publications, Park Ridge, NJ, 1987, ISBN No. 0-8155-1139-6, 136 pp., US $36.00.

The book addresses one of the most interesting aspects of hazardous waste treatment systems–mobile processing technology. One reason for the increased focus on mobile systems is the growing concern about long-term environmental risk with land-based methods of waste disposal. Particularly, for large quantities of hazardous wastes, on-site treatment with mobile units may be more practicable than shipping wastes off-site. The book discusses methods of avoiding off-site treatment by bringing the treatment system to the waste instead of the usual practice of taking the waste to the treatment system. Discussed are the following technologies, for which mobile systems are available:

- Thermal Treatment – incinerators, pyrolizers, wet oxidation

- Chemical Treatment – reduction/oxidation, neutralization, precipitation, dechlorination
- Physical Treatment – air stripping, stream stripping, distillation, adsorption, evaporation, soil washing filtration, exchange, membrane separation, phase separation
- Biodegradation Treatment – aerobic, anaerobic and in-situ biodegradation

Unfortunately, other than a list that notes which processes have been turned into mobile systems, and names and addresses of companies that provide these systems, little was new for the experienced reader. The authors describe all the technologies listed above, but the description and diagrams are really simplistic reports of what is (or should be) known by most hazardous waste engineers. What is truly useful in the book are the lists which could have been published as a paper in a journal or conference proceedings; that paper would suffice to report all the data that are useful in the book.

GARY F. BENNETT

Hazardous Chemicals - Information and Disposal Guide, 3rd ed., by M.A. Armour, L.M. Browne and G.L. Weir, Department of Chemistry, University of Alberta, Edmonton, alberta, Canada T6G 2G2. printed by Univ. of alberta, 463 pp., paperback, 1987, (Copyright by the authors) price US$55.00

This is a very practical handbook covering both the literature references and summaries of much independent investigations conducted by the authors on approximately 300 compounds frequently encountered in the laboratory. Some materials are cross-referenced by their common or trivial names. Handling and disposal methods, many previously unpublished, make this volume unique and highly useful.

Some minor differences were noted in the Canadian, U.K. and U.S. Systems, but these are relatively simple to understand. For example, the Hazard Ratings for each chemical follow the NFPA 704-M system. OEL (Occupational Exposure Limit) in the U.S. would be the OSHA PEL (permissive exposure limit).

The hazardous reactions, spillage, disposal and waste disposal sections reflect deep concern for the proper handling, complete with reactions spelled out for the disposal methods considered.

We recommend this volume to every chemistry laboratory instructor and graduate student – it is a practical well-edited volume.

H.H. FAWCETT