

- 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 Handling and disposal methods, many previously unpublished, make this volume unique and highly useful.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