

Hazards. Probably the greatest value of the book comes from Chapter 11, which reviews various computer programs that can be used to make a quantitative assessment analysis. Chapter 12 discusses some aids that are used by Britain's Health and Safety Executive, while Chapter 13 illustrates how an industry should prepare a Safety Case. The last two chapters are comments from two inspectors in Britain discussing some of the shortcomings of the procedures. The book concludes with an excellent bibliography and collection of references, followed by text giving the complete CIMAH regulations of 1984. The book is obviously slanted for importance in Britain, but does give food for thought for people in other countries as well.

LESLIE E. LATHI

Guidelines for Technical Management of Chemical Process Safety, by the Center for Chemical Process Safety, American Institute of Chemical Engineers, New York, NY, 1989, ISBN 0-8169-0-8169-0423-5, 169 pp.

These guidelines are intended as an expansion of 12 elements of a model proposed in an earlier publication entitled "A Challenge to Commitment" published by the Center for Chemical Process Safety (CCPS), formed by the American Institute of Chemical Engineers in 1985. This particular document was prepared by a committee together with whom the peer review team, claim over 500 years of professional experience in chemical process safety. It has been written for all managers with responsibility for chemical processes, including not only the senior corporate managers, but also the line supervisors at processing plants. A separate chapter is devoted to each of the 12 elements which the committee feels is a convenient way of organizing the subject of safety management.

An overview of management systems is presented and the important functions of planning, organizing, implementing and controlling in any organization is highlighted. The first element discussed is accountability. It is considered a vital component of any system in order to ensure that conflicting views can be resolved successfully. Another chapter is devoted to process knowledge and documentation of pertinent information. Often simple maintenance tasks significantly change an operation over a period of time and may lead to trouble if appropriate systems are not in place to guard against it. One chapter provides guidelines for comprehensive process safety reviews during major capital projects. The need to manage process risk and change is clearly explained in two separate chapters.

A further chapter is devoted to the elements of process and equipment integrity, including reliability and maintenance. Excellent examples of work permits and safety checklists are provided. Additional chapters are devoted to

human factors, training, company standards and audits. A key element to any effective process safety management system is the investigation of incidents. The authors stress the importance of recording "near-misses" in order to learn valuable lessons so that major incidents are averted. Finally, the importance of sharing information among companies and colleagues is encouraged and some available on-going programs/seminars are highlighted (including organizing sponsors with addresses).

The information is well presented and should be a valuable reference book for anyone in management.

LESLIE E. LAHTI

Environmental Impact of Hazardous Waste Treatment Storage and Disposal Facilities, by R.N. Salcedo, F.L. Cross Jr. and R.L. Chrismon, Technomic Publishing Co., Lancaster, PA, 1989, ISBN 0-87762-627-8, 160 pp., \$49.00.

This is an extremely interesting book, although it deviates considerably from the title. Indeed, I found the parts of most interest were those not connected with environmental impact at all. One unusual section, on 55-gal drum reconditioning, came from the second of the three authors, whom I believe I have met in my capacity as "drum reconditioning" consultant to a very large U.S. 55-gal drum reconditioner. With my background in consulting, my interest in this poorly publicised field is not surprising.

The drum chapter is unusual because few authors write about the topic and fewer still are aware of the industry and its environmental problems. Although I am delighted that this subject has been covered, the author has missed almost all the important literature on drum site environmental impacts, including an excellent U.S. EPA report by Touhill, Schukrow & Associates. Neither have they discussed the numerous Superfund sites that former drum reconditioning facilities have spawned. Indeed, this chapter, unlike the others, has no references to the literature, or footnotes. It does, however, have an excellent checklist for site inspection, that I wish I had had access to when I was active as a drum industry consultant.

Other chapters of tangential interest (to this reviewer), include a discussion of incineration, one State's handling of the hazardous waste problems and waste management alternatives, including a discussion of recycling and waste exchanges.

The magnitude and sources of the country's hazardous waste problems are covered very well, followed by four chapters: understanding the public, the ABC's of EIS's (Environmental Impact Statement), environmental impact considerations, and liability for improper management of hazardous substances.

So indeed, environmental impact is discussed but at times, especially con-