

concerned with practical methods for the assessment and measurement of potential hazards associated with the use and storage of reactive chemicals.

After an introductory chapter which illustrates with appropriate case histories the range of circumstances under which reactive chemicals may reveal, sometimes within milliseconds, the full potential of their bond energies, the remainder of the book falls naturally into three sections. The first chapter deals with non-hazardous methods of assessment, Chapter 2 covering use of literature resources of various exemplified types, and Chapter 3 the use (in detail) of computation to calculate from thermodynamic data the potential energy release from a particular compound or mixture, and the likely consequences thereof. The next section of 3 chapters covers the methods and results of the existing range of techniques for the practical assessment and evaluation of the decomposition, fire and explosion hazards associated with explosives, or unstable and reactive chemicals. In the final section, Chapter 7 deals with the activities and personalities of the safety organisations, official and professional, in various countries, and Chapter 8 describes the publications which cover the emergency response procedures for transportation of hazardous goods in several countries. The final Chapter 9, which deals with the special precautions necessary for storage of reactive chemicals in geographical areas subject to earthquake damage, will be of particular interest to U.S. chemists residing in the San Andreas region. Two appendices of thermodynamic values for hazard prediction purposes, and an index, complete the volume.

The book is a competent and well-polished English translation of the Japanese original, and has many photographs and figures to illustrate the strong practical tenor of the general presentation. It will be of use and interest to newcomers to this area of industrial chemical safety, for its distilled content of wisdom accumulated from wide experience, and also to established workers for its fresh viewpoint over a complex area of technology. It is hoped that future volumes in this new series will attain the same high standard of this first example.

L. BREThERICK

*Proc. 1986 Hazardous Materials Spills Conference: Preparedness, Prevention, Control and Cleanup of Releases*, Government Institutes Inc., Rockville, MD, U.S.A., 1986, ISBN 0-86587-131-1, 565 pages, US\$64.00.

These proceedings of the Hazardous Spills Conference held in St. Louis, MO, in May 1986, contain 88 papers on Contingency Planning; Personnel Safety and Training; Cleanup; Groundwater Contamination and Underground Storage Tanks; Reportable Quantities; Risk Analysis; Media Reactions; Detection

and Monitoring; Data Support Systems; Government Programs; Movement and Modelling and On-Site Incineration.

This biennial conference was begun in 1972 by the U.S. Environmental Protection Agency. This year, the U.S. EPA was joined by the Association of Railroads, U.S. Coast Guard and the Chemical Manufacturers Association as sponsors.

In the past, this conference was the sole source of information in chemical spills. Although papers are being published on the topic in other media (this journal included) this conference remains the single best source of papers on state-of-the-art information on hazardous materials and spill response.

This is a one conference volume I read thoroughly — almost every paper totally. The papers were excellent in toto — but of course with all conferences do vary in quality. Some of the best and most useful were written by U.S. EPA personnel themselves — especially one on the use of their mobile incinerator to burn dioxins.

The president of Government Institutes said this about the Proceedings:

“Nowhere else can you find so much in-depth, expert information on this frontpage issue by leading national authorities. Hazardous material spill prevention and cleanup is a critically important topic for not only all environmental professionals, but all those concerned with the safety of our environment. If you are involved with hazardous materials — in anyway — these proceedings are a must for your professional bookshelf.”

I agree—except the Conference Proceedings should be put on the bookshelf only after a thorough reading. If you are involved in any aspect of hazardous materials response, you should have the complete series of proceedings since 1972, but if you have not, the 1986 volume is a good place to start.

GARY F. BENNETT

*Underground Tank Leak Detection Methods*, S. Niaki and J.A. Broschius, Noyes Data Corp., Park Ridge, NJ, 1987, ISBN 0-8155-1117-5, 124 pages, \$36.00.

Of the estimated 1.5–3.0 million U.S. underground fuel storage tanks, as many as 100,000 may be leaking now and up to 300,000 will in 5 years, endangering lives and the environment. To minimize the problem, accurate leak detection methods are needed.

This book describes 36 volumetric, non-volumetric, inventory monitoring and leak effects monitoring detection methods. In doing so, the authors review the manufacturer's description of his method, the method's capabilities, its claimed precision and its accuracy.

Since the U.S. EPA is in the process of finalizing their underground storage tank regulations, this is a most timely publication.