

the aftermath are well written. He has a series of one-liners that I would categorize as classics; including:

“They did not know what they did not know”.

“A plant cannot be managed from an office”.

“What you don’t have, can’t leak”.

As we go full steam into an era of plant consolidations, mergers, take-overs, etc., we need to be cognizant of the author’s tip, “It is important to be clear as to who is responsible for safety in design and operation”. In connection with the Three Mile Island incident, the author says, “Designers should have to demonstrate that their designs are safe, not just follow the rules”, and “Whenever possible we should design plants that are inherently safe, rather than plants which are made safe by adding on protective equipment”. *Sage advice!*

In discussing the Aberfan accident which occurred in 1966, he states, “Aberfan shows very clearly that we should learn from all accidents, those that could have caused death or injury, as well as those that did, and that a conscious management effort is needed to make sure that the lessons of the past are not forgotten”. I especially enjoyed reading the author’s chapter entitled, *Three Weeks in a Works*. This was an investigation of all the accidents (36 in number) that occurred over a three week period of time, even though some were very minor. The author concluded that, “there is much more to be learnt from accidents than we usually learn”.

If this book were available in paperback, it would be ideal for a senior engineering course on process safety (too expensive in hardback). Certainly every plant library or reading room ought to have a copy, because of its historical value.

LESLIE E. LAHTI

How to Respond to Hazardous Chemical Spills by W. Unterberg, R.W. Melvold, S.L. Davis, E.J. Stephens and F.G. Bush, III, Noyes Data Corp. Park Ridge, NJ, 1988, ISBN 0-8155-1176-0, 274 pp, US\$ 39.00.

This book is a reference manual of the countermeasures designed to assist responders to spills of hazardous substances. The book begins with two short introductory sections dealing with how to use the manual and how to assess spill situations.

Using the techniques described in Chapter 2 and the Situation Assessment Flow Charts and the Site Assessment Checklist which accompanies it, the responder should be able to identify the chemical involved in the spill. Unfortunately, the photoreproduction of the flowchart is not good and the size of the chart is so small it is hardly distinguishable.

The list of chemicals in Chapter 3 contains 700 hazardous substances designated by the Comprehensive Environmental Response, Compensation and

Liability Act. For each chemical, the following data are given: (Table A) name, chemical class, CAS No. hazards (i.e. flammable, toxic) and behavior in water (soluble, sinks, etc.). The second, Table B, gives countermeasure actions which are technically feasible for the various chemical classes, following their recommended process. Finally, one consults the third of the tables (Table C) which contain descriptive values for each of the selected criteria: development, time, cost and cleanup efficiency. Further refinement of countermeasure selection is available through the use of the fourth chapter in which countermeasures (mechanical containment and displacement; physical, chemical and biological treatment; and ultimate disposal/destruction) are listed together with detailed, distinguishing characteristics.

The book ends with an excellent 30-page reference list and three appendices.

1. Guidelines for site assessment, entry and control.
2. Suggested guidelines for selecting chemical protective clothing.
3. Personnel and response equipment decontamination.

GARY F. BENNETT

- *Advances in Air Sampling*, by the American Council of Governmental Industrial Hygienists, Lewis Publishers, Chelsea, MI, 1988, ISBN 0-87371-115-7, 300 pp., US\$ 49.95.

The American Council of Governmental Industrial Hygienists (ACGIH) Conference on Advances in Air Sampling was held in February 1987 at the Asilomar Conference Center, Pacific Grove, California. This symposium was convened to discuss the establishment of Threshold Limit Values (TLVs) for particulate substances based on size-selective sampling, to review new developments in techniques for sampling of the workplace and community atmospheres, and to stimulate the exchange of ideas and information on the sampling of gases and vapors.

Symposium session titles which subsequently became chapter titles in this book included:

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| 1. Particle size-selective sampling | - 6 papers |
| 2. Sampling gases and vapors for analysis | - 5 papers |
| 3. Special topics | - 3 papers |
| 4. Real time aerosol sampling | - 5 papers |
| 5. Sampling strategy | - 6 papers |

Several papers deal with the all-important subject of sampling strategies. It was emphasized that sampling for compliance was not very effective in preventing acute exposure and, moreover, the current need is for prospective surveillance to correlate with, and to prevent, chronic diseases. Such surveillance involving the sampling of many substances at low concentration requires a