

ous chemicals. The scenario is familiar: contamination discovered in municipal water, new water sources are sought, a search for responsible parties, new legislation restricting certain industrial activities in sensitive areas. Perhaps the most important element common to these case studies is contamination from industries commonly considered “clean” and from nonpoint sources. Public officials in towns served by groundwater should read these case studies with the realization that “it could happen here” and implement plans to protect their drinking water before it becomes contaminated. Experience has shown that, compared to aquifer restoration, prevention is cost-effective.

DONALD J. STIERMAN

Hazardous and Toxic Materials, by H.H. Fawcett, John Wiley and Sons, New York, NY, 1988, ISBN 0-471-62729-1, 514 pp., US \$59.95.

Several years ago, I reviewed *Safety and Accident Prevention in Chemical Operations* by Fawcett and Wood. I said it was a good book, but I like this one better. In his new book Fawcett, a member of the editorial board of the *Journal of Hazardous Materials*, has given the reader the benefit of a long career in safety operations — many of those years were spent working for General Electric Research Laboratories as a consulting engineer in safety, health, fire protection and radiation protection.

In addition to chapters written by Fawcett himself, 13 other experts report on the currently important topics of the Toxic Substance Control Act (TSCA), Superfund Amendments Reauthorization Act (SARA), long-term toxicity, the Delaware River Pollution Problem, medical care and surveillance for hazardous waste workers, oil spills, aqueous foams, remediation of contaminated sites, facility siting and safe transport of dangerous goods.

In the chapters, he personally edited, Fawcett utilizes an almost homespun conversational style giving the reader the benefit of his long career. The first six chapters are his and make some most interesting reading — but besides being interesting, they are full of good information and safety advice. The titles of those chapters are:

- The ABCs of Chemical Safety
- Clichés
- Effective Presentations, The Key to Successful Hazardous Communications
- Emergency Planning and Community Right-To-Know
- Legal Cost/Benefits and Ethical Aspects
- Fires and Explosions

In addition to the above noted chapters, there are 19 other chapters discussing topics from Superfund, to Vapour Suppression of Volatile Chemical Spills and finally Fawcett’s personal observations of the recent Rhine River pollution as

a result of a warehouse fire (Sandoz incident 1986, Basle, Switzerland). Each chapter has well developed bibliographic reading lists.

In summary, I found this to be a broad-based book with wide coverage, thoroughly modern and up to date on current key U.S. environmental topics, and lots of good advice. It would be an excellent addition to the professional bookshelf.

GARY F. BENNETT,

- *The SFPE Handbook of Fire Protection Engineering*, by P.J. DiNunno, C.L. Beyler, R.L.P. Custer, W.D. Walton and J.M. Watts, Jr., National Fire Protection Association, Quincy, MA and Society of Fire Protection Engineers, Boston, MA, 1986, ISBN 0-87765-353-4, 841 pp., US \$125 (non-member).

On the dust jacket is written: "The main purpose (of this book) is to integrate fire protection theory and practice in a readily accessible form, concentrated on quantifiable calculation methods."

The reviewer, not a fire protection engineer, cannot (or at least should not try) to critically review whether or not the fire protection sections are sound, but I am a chemical engineer and an educator and can evaluate the soundness of the fundamental theory of fluid flow and the quality of the explanations and the pertinence of the examples given. From that standpoint based on my reading of the hydraulic section, I can say the authors have produced an excellent book and a very large one at that, being the 841 pages of 8.5×11 in. size.

Organized into four sections, the Handbook presents a sound, theoretical discussion of the state-of-the-art of fire protection technology. The first and largest section at 400 pages is a book itself and discusses fundamentals that range from a basic discussion of hydraulics, to heat and mass transfer in fires and finally structural mechanics; Section 2, "Hazard Analysis" and Section 3 "Design Calculations" use the theoretical material of the prior section to provide a practical discussion of solving analytical and design problems. The last (and shortest) Section No. 4 entitled "Risk Analysis" gives a detailed overview of the newly emerging field of risk analysis in fire protection.

In summation, I found the book almost overwhelming in the amount of material presented. It clearly is a most valuable contribution to the field of fire protection engineering and should become the standard reference.

GARY F. BENNETT