

In the introductory chapter, the authors give the readers background information: the laws according to the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund) and the controls that grew out of the National Contingency Plan; the technical documents used by the authors; and, finally, a description of the cost review.

This short (12 pp.) initial chapter is followed by the four major chapters:

1. Principal Media and Associated Remedial Approaches

- (a) Groundwater/leachate
- (b) Surface water
- (c) Contaminated soil and waste material
- (d) Air

2. Control Technologies

- (a) Groundwater control
- (b) Surface water control
- (c) Soil and waste
- (d) Air control

3. Treatment Technology

- (a) Biological
- (b) Chemical
- (c) Physical
- (d) Direct

4. Monitoring Techniques

The book contains a wealth of both design and cost information on many different unit operations. It would be a worthwhile addition to most environmental libraries, but should be required reading for those engineers designing remedial cleanup systems.

GARY F. BENNETT

*Hazardous and Toxic Materials: Safe Handling and Disposal*, by H.H. Fawcett, John Wiley & Sons, New York, NY, 1984, 296 pages, \$35.80.

This is the second book by Fawcett I have reviewed in the past two years. The first was *Safety and Accident Prevention in Chemical Operations*, that he edited with W.S. Wood. The newer book is neither quite so lengthy — nor will it be of quite as much use to those of us deeply involved in chemical safety and accident prevention. However, it does present a useful, balanced discussion of the problems of hazardous chemicals.

The dust jacket nicely describes the focus of the book this way:

“The book offers a balanced, unbiased view of the latest scientific information about hazardous and toxic materials, their containment, and their reliability to man, animals and plants.”

And indeed, it does, beginning with a look at the dangers of laboratory chemicals when Fawcett discusses compounds presenting unusual hazards and problems of waste disposal (the new problem for laboratories about which few of us know enough). The author then includes four informational chapters on toxicity, followed by a strangely out of place chapter on fire and explosion. Personally, I would have placed this chapter elsewhere and not disrupted the readers' focus on toxicity before he arrived at the next two chapters on protective equipment (personal and respiratory).

Other excellent chapters include an authoritative dissertation on dioxin, the current chemical at the top of the toxic hit-parade. Fawcett discusses well dioxin's chemistry and toxicity. Unfortunately, he confuses the issue by inserting PCB in the middle of the chapter; I would have separated the two. Indeed, PCB deserves a chapter of its own, but the author would be well advised to compare the two with respect to hazards, real and perceived. The dioxin chapter ends with an interesting, but again out of place, description of an office building fire involving PCB, and its toxic combustion products.

One cannot deny that hazardous waste can be toxic and hazardous. This is clear, so Fawcett's description of RCRA is in order. However, he approaches it from the point of view of the law rather than from a toxicity basis. I wish he had done the latter. Totally out of place in the book, however, is his discussion of Superfund (uncontrolled hazardous waste sites) and the needless inclusion of the list of National Policy Sites (which changes so often, the book was out of date almost before printing).

In summary, Fawcett has produced an up-to-date, readable, knowledgeable book on chemical hazards and chemical toxicity. Personally, I would have rearranged the material a little and amplified a couple of sections, but I admit that hindsight criticism by a reviewer is easy. I also would have dropped the Superfund section — perhaps that should be the base for Fawcett's next book.

GARY F. BENNETT

*Leachate from Hazardous Wastes Sites*, by D.H. Cheremisinoff and K.A. Gigliello, Technomic Publishing Co., Lancaster, PA, 1984, 92 pages, \$18.

There are few aspects of hazardous waste disposal of more current interest than leachate generation and its concomitant quality (or lack thereof). Thus when I received this book I opened it eagerly.

In the six chapters, information is given on:

- Solid waste land disposal systems
- Leachate formation, generation and characteristics
- Leachate sampling
- Leachate testing; laboratory methods
- Leachate control and treatment
- Leachate damage