

Book Reviews

Incineration Systems, by C.A. Brunner, Van Nostrand Reinhold, New York, NY, 1984, 417 pages, \$52.50.

As solid (and hazardous) waste landfills become full and increasing numbers are closed, and as government regulatory agencies more closely scrutinize what should go into land disposal sites, incineration of wastes becomes increasingly attractive to municipalities and industries. For solid wastes, incineration markedly reduces the volume; for combustible, hazardous materials, incineration reduces (or eliminates) the toxic threat initially posed by the toxic elements in the waste.

On the dust jacket of the book, the publisher has written:

"This single comprehensive text shows you how to design state-of-the-art facilities for incinerating refuse, paper, and sludges as well as liquid industrial wastes, gases, radioactive and hazardous wastes. It explains a new method for quickly and accurately calculating design and operating parameters for any type of incinerator."

As far as I could determine (with my limited knowledge of incineration) the author has done just that — and from a professional writer's viewpoint, he did it in a logical fashion starting with regulatory requirements and ending the 20th chapter with a comprehensive design example. A useful glossary of (baffling) acronyms and abbreviations and of cited references used in all chapters follows this last chapter (personally, I prefer the references be given at the end of each chapter).

Two points not discussed in the book (or at least I did not find discussed) were: (1) the information of dioxins, and (2) the need to dispose of ashes from the incineration of hazardous wastes in hazardous waste landfills. The latter point is minor: the former is not, and probably could have had a chapter devoted to it — i.e., the production and minimization of dioxins in a combustion process. There is much concern about toxic chemicals in the United States and one of the public's current concerns as new municipal waste incinerators are proposed are toxic components in the off-gases.

Brunner's chapter on air pollution control was one I felt comfortable in evaluating since I teach a course in this area. It was good; it was easy to read and was a complete and up-to-date review of control methods, but it lacked emissions data. I would have liked to have seen tables or a report of air quality analysis and stack gas analysis of various incinerators as a function of the type of wastes burned, type of incinerator and control system employed. Nothing of this type was supplied in the chapter. However, at various points during the book one can find data on particulate emissions — i.e., Table 10-1 reports a particulate emission from typical fluid-fed incinerators — but it is not quite the format I would have liked and not tied to "real" control systems.

Since I lack the deep expertise I would have preferred to have in a review, I cannot say the book will be highly useful to the design engineers, but I

can say if I were going to teach a course in the field, the book would be at the top of my list for a text.

GARY F. BENNETT

Environmental Law Handbook, by J. Gordon Arbuckle et al., Government Institute Inc., Rockville, MD, 8th edn., 1985, 586 pages, \$49.50.

Ten legal experts have contributed to this revised and updated handbook. The advertising brochure said "The Environmental Law Handbook has the reputation as one of the most useful and relevant texts in the environmental field" and I for one agree with that assessment. My copies of the prior edition are well used.

The book has the 14 chapters listed below:

1. Environmental Law Fundamentals and Common Law
2. Resource Conservation and Recovery Act (RCRA)
3. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
4. Toxic Substances Act
5. Safe Drinking Act
6. Air Pollution Control
7. Water Pollution Control
8. The Occupational Safety and Health Act
9. National Environmental Policy Act
10. Federal Regulation of Pesticides
11. Marine Protection, Research and Sanctuaries Act
12. Noise Control
13. Land Use: Major Issues in the Control of Industrial Development
14. Enforcement and Liabilities

Of these chapters, the three on Safe Drinking Water, Marine Sanctuaries and Civil and Criminal Liability are new. All the other chapters have been updated.

There are several features of the book (in addition to its authoritative well-written content) that makes the book useful and useable:

- A comprehensive, detailed, well-developed, 14-page table of contents at the beginning) listing the information given under each law.
- A 16-page index, by topics (at the end).
- Good size, easy-to-read type.

The one thing I did not like was abundant of footnotes; lawyers use them with abandon; engineers do not; however, this is a engineer speaking, not a lawyer.

But this is a book written by lawyers for engineers and they have done us a great service. It is a good book and should (must) be on the shelf of all practicing environmental engineers.

GARY F. BENNETT