

Up to now (in my reading) the book has dealt with the conventional topics, i.e. those discussed in other books on waste management practices including the one I reviewed recently by Wentz (*Hazardous Waste Management*). But Chapters 12–15, “Medical/biomedical/infectious waste management”, “Radioactive waste management”, “Underground storage tank management”, and “Hazardous waste worker health and safety”, add much to the text. Few other books treat these topics at all, or at all well. Since I am personally involved in the clean-up of a radioactively contaminated site, I reviewed Chapter 14, “Radioactive waste management”, with much interest. Although I would have (as I commonly do) liked more coverage of the topic, what was written was good and up-to-date and quite adequate from the text’s perspective.

In conclusion, I would like to commend the author for his efforts. Good topics, good material, comprehensive, well-written (easy to read style) and, most important, almost makes the laws governing hazardous waste understandable.

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Combustion and Incineration Processes: Applications in Environmental Engineering, 2nd edition, by W.R. Niessen, Marcel Dekker, New York, 1994, 680 pp. \$175.00. ISBN: 0-8247-9267-X

This book is an update of the author’s first edition that was published 15 years ago. Its focus, as was that of the earlier book, is on “the fundamentals of incineration and combustion processes rather than on specific equipment.”

Understandably, the 15-year period since the last book has resulted in a number of changes in this book. Among these changes is a focus on incinerator emissions and their removal. Another major focus change was on the combustion of municipal waste and the perplexing (regulatory) problem of the combustion of hazardous waste as regulated by RCRA. Thus, the section of the book dealing with techniques for waste data analysis and waste characterization has been expanded, reflecting the strong influence of waste composition on the incineration process and the increased regulatory attention paid to emissions of toxic, carcinogenic and otherwise environmentally significant trace elements found in wastes.

Not the least of the innovations was the inclusion of a computer disc “Spreadsheet Template for Heat Transfer and Material Balance Calculations.” The use of this program is discussed in Chapter 2, “Stoichiometry,” which is the fundamental basis on which the rest of the book is built.

Because I teach a course in air pollution control, I turned to Chapter 14 which deals with this topic to review the author’s treatment of air emissions. He did well, beginning with control of large particulates by settling chambers (a limited review suits the topic well) continuing through a discussion of cyclones and ending with scrubbers. Even dry scrubber injection technology for control of acid gasses is discussed.

The latter chapter builds on very up-to-date data information in the previous chapter (13) entitled "Air Pollution Aspects of Incineration Processes." In it, the emissions of various constituents (metals, dioxin and acid gasses) are discussed.

The only criticism of any note is this is a book designed for use (among other uses) as a text. Consequently, I believe it should have problems and exercises to be assigned. Also, for a university-adopted text, it is very expensive.

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Handbook of Water and Wastewater Treatment Technology, by P.N. Cheremisinoff, Marcel Dekker, New York, NY, 1994, \$195.00, 840 pp. ISBN: 0-8247-9277-7

In the preface of this book, the author says, "This handbook is a collection of exact and useful information relating to the treatment of water and wastewater for municipal, sanitary, and industrial uses". And with over 840 pages, the author has presented a lot of material. Unfortunately, not much of it is new nor detailed in theory sufficiently to be of real use to either the designer or practitioner.

A case in point is found in Chapter 3 which gives the Stokes equation which can be used to compute oil bubble rise velocity. The author then moves into API separation when he could have used the prior equation to show design principles (as done in other treatments I have seen). Also, he shows corrugated (coalescing) plate interceptors, but not parallel plate interceptors here (he does correct this omission later under solids removal).

On the other hand, I found uniquely refreshing his comprehensive treatment of cyclone separation of solids from liquids. He covered the topic well from theory through application.

The author and I must have used many of the same papers in our files as I recognized many of the drawings he utilized. However, like my files, the drawings, though relevant, are very old. I was amazed to find no literature references at all in the whole text. Clearly the author drew much of his information from published sources that ought to have been cited. And, in addition to aiding the reader in verifying the data, references provide supplementary sources of information. Rarely does (or should) one omit references. Indeed, I am extremely hesitant to accept a scientific paper for publication in a journal without proper reference citation and a good literature review.

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Naturally Occurring Radioactive Materials—Principles and Practices, by Philip T. Underhill, Society for Environmental Management and Technology (SEMT) and St. Lucie Press, 100 East Linton Blvd, Delray Beach, FL 33483, 145 pp. \$49.95 plus \$7.95 handling and shipping. ISBN: 1-57444-009-8.