

- Chemical Protective Clothing Recommendations
- Decontamination Procedures for Three Typical Levels of Protection
- Health and Safety Checklist
- Chemical Hazard Data-NIOSH Pocket Guide (sample)
- Toxicology Review

The last appendix (Toxicology Review) was an abstract of a chapter from the NIOSH textbook, *The Industrial Environment: Its Evaluation and Control*. The topic is so important to the purpose of the book that I would have preferred to see it included in the main section of the book in an expanded form.

Overall, this is a well written, easy to use book that should be very useful to hazardous waste site worker training programs.

Gary F. Bennett

PII: S0304-3894(01)00339-9

### **Handbook of Environmental Management and Technology, 2nd edition**

Gwendolyn Holmes Burke, Ben Ramnarine Singh, Louis Theodore (Eds.), Wiley/Interscience, New York, 2000, US\$ 125.00, 824 pp., ISBN: 0-471-34910-0

This book is advertised as a “comprehensive, easy-to-understand overview of the complex problems encountered in environmental management today”. It is intended as “a resource for ... (those) ... seeking a firm foothold in a wide range of technical, scientific and regulatory issues”.

It is indeed a text covering a wide range of environmental topics from solid radioactive waste management issues to used oil recycling and ISO 14000. There are 48 separate chapters divided almost equally under 10 major headings.

1. Introduction to the Issues
2. Air Pollution Management Issues
3. Water Pollution Management Issues
4. Solid and Radioactive Waste Management Issues
5. Hazardous Waste Management Issues
6. Pollution Prevention
7. Additional Environmental Concerns and Management Considerations
8. New Technologies and Approaches
9. Risk-Related Topics
10. Recent Developments

This book is very well written and a pleasure to read. As stated above, it covers a wide variety of topics that should make it a useful, encyclopedic resource. However, the field is changing so rapidly, much of the material will be out-of-date soon.

The authors recommend the interested reader consult the references they have included for further information. Unfortunately, the references are quite limited and often refer only to USEPA publications. Moreover, some references were to newspapers (albeit the prestigious New York Times), but I do not really accept citations to other than the scientific literature).

Additionally, details of the processes are often sparse. For example, they include no diagrams for a municipal wastewater plant. Moreover, the section describing the sludge treatment system also lacked depth.

However, to be fair in a review of such a wide-ranging book, one should not try to find “holes” in its coverage. To be truly “comprehensive” would take a series of books on the topic. Another factor limiting the coverage is publisher page limits and give those restraints, Burke et al. have done a creditable job of covering the environmental field.

I recommend the book as a resource text for libraries. It actually could be used as a course text, if student exercises and problems were included, except its price may be a little high for college students.

Gary F. Bennett

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### **Introduction to Hazardous Waste Incineration, 2nd edition**

Joseph J. Santoleri, Joseph Reynolds, Louis Theodore (Eds.), Wiley/Interscience, New York, 2000, 650 pp., US\$ 99.95, ISBN 0-471-01790-6

Hazardous wastes are an almost inescapable byproduct of modern production. But what to do with them: bury, burn or recycle? Often the first two options are the only ones available. But hazardous waste disposal facilities such as incinerators or landfills are as popular as nuclear power plants. Personally, I favor incineration over land disposal as it destroys the wastes (or at least the organics) and has the potential for heat recovery. But incinerators do have emissions, and the public fears their impact on their health, especially from the “dreaded” dioxins. However, if well-designed and supplied with appropriate air pollution control equipment, I feel incinerators and their emissions are safe and should be utilized. This book addresses that need: how to design incinerators. It is intended both for students and practicing engineers.

The book is divided into four major parts, each with three or four chapters. The first section sets the stage for the rest of the book by placing the subject of hazardous waste incineration in historical perspective. Discussed are, among other topics, the origin, nature and current and past disposal practices for hazardous wastes. Methods other than incineration for the disposal of hazardous wastes are described in Chapter 2 (i.e. chemical, biological and physical treatments). Chapter 3 is the obligatory chapter discussing laws and regulatory standards and regulations regarding the generation, transport, treatment and disposal of hazardous wastes.

The second major section (Chapters 4–6) is the “heart” of the book according to the authors. From the perspective of this former chemical engineering professor, they are, as they cover thoroughly the theoretical basics of incineration. Basics concepts (from the very simple, such as the ideal gas law, to the complex, thermochemistry) are discussed in Chapters 4 and 5. In Chapter 6, thermochemical applications and the applications of the principles developed in the previous chapter are discussed. Discussed are fuel options, stoichiometric calculations, thermochemical calculations and utilization of chemical reaction principles.