The book contains 19 papers from the aforementioned symposium submitted by authors from a spectrum of government, university and industrial research laboratories. The topics range from PCB analysis, through rainwater composition, to patterns in air pollution. But through all the papers, one finds the consistent application of data analysis, data quality, quality assurance and statistical techniques of handling large amounts of data.

The publisher has described the scope of the book this way:

"The complex chemical measurements necessary in present-day environmental studies require more sophisticated approaches than those readily available through conventional univariate statistics. The proper conduct of complex exposure studies requires well-defined data quality and a sufficient statistical basis to support rule-making if necessary. The challenge of multivariate data analysis has resulted in a vibrant and growing literature, much of which is represented in this thought-provoking volume."

Thought-provoking, the book may or may not be, but useful it will be.

GARY F. BENNETT

Hazardous Air Emission from Incinerators, by C.R. Brunner, Jr., Chapman and Hall, New York, NY, U.S.A., 1985, ISBN 0-412-00721-5, 200 pages, $34.50.

In a review of Brunner's other book on incinerators, I noted that it lacked a discussion of the by-products of incineration, especially, dioxins. Now I know why; he saved that discussion for his second book, and he made it a thorough one. On the book's dust jacket, the publisher had written that "incineration is the principle method for dealing with many dangerous industrial waste products" — to which I might add, it is now and will be more important in the future as the 1984 Amendments to the Resource Conservation and Recovery Act in the United States, force more hazardous waste out of landfills towards alternate methods of disposal/destruction.

The book has 18 chapters dealing with laws, air quality, emission rates, control on emissions and even noise control from incineration. They comprise comprehensive survey of the topic of incineration. The three chapters I found most useful were: (1) the second chapter dealing with laws and containing an excellent summary of the incineration laws controlling emissions state-by-state; (2) the sixth chapter on dioxins and (3) the tenth chapter on emission factors. All three chapters contained new (to me at least) and relevant material on the topic. On the basis of these three chapters alone, the book can be judged to be very worthwhile.

However, I did find some problems:

- The book was not well organized; the material did not seem to flow from section to section.

- There were 12 pages devoted to conversion factors, handy to have, but so well known, they were not needed.
- There was no discussion of stack emission tests or destruction efficiency determination, nor were the Past B application requirements of RCRA discussed.
- POHC (principal organ hazardous components) was defined, but the U.S. Environmental Agency hierarchy of POHCs based on their difficulty of combustion was not.
- As in his previous book, Brunner discussed control technology, but neither the efficiency thereof nor the emissions therefrom, were based on real-life tests of incineration systems.
- There was no discussion of the significance of temperature or residence time in the combustion process, and the concomittant per cent distribution.

There is an excellent series of chapters on pollution control as there was in Brunner's prior book but I rather would he had expanded on the topic and had more information (data) on incinerators, especially pictures and diagrams of operating systems, emission, controls and especially the efficiency of combustion. Inclusion of real-world data, pictures, diagrams, etc., of existing systems would have been most useful and markedly strengthened the book.

GARY F. BENNETT

Disposal or Hazardous Wastes in Industrial Boilers and Furnaces, by C. Castaldi et al., Noyes Publications, Park Ridge, NJ, 1986, ISBN 0-8155-1067-5, 429 pages, $48.00.

The publishers have combined two very good reports prepared for the U.S. Environmental Protection Agency:

1. A Technical Overview of the Concept of Disposing of Hazardous Waste in Industrial Boilers (1984).
2. Evaluation of the Feasibility of Incinerating Hazardous Waste in High Temperature Industrial Processes (1983).

In the first report, the goal of the authors was to:

- Survey hazardous waste generated.
- Assemble an inventory of industrial boiler capacity capable of hazardous waste combustion.
- Characterize the combustion characteristics of typical boilers.
- Characterize the hazardous wastes suitable for combustion.
- Identify the matrix of wastes/boiler type suitable for hazardous waste combustion.
- Provide an overview of considerations for further evaluating the waste/boiler destruction option.