

retained the same base format but with a greatly expanded number of chemicals. The USCG press release notes there are more than 2200 pages containing data on 1200 chemicals. I know the manual is 5 inches thick in 1985 vs. 2 inches in 1974 or 2½ times larger.

All chemicals are listed alphabetically. For each of the numerous chemicals listed, the manual gives the specific chemical's physical and biological data and emergency response information. Using a standard form; complete data in 12 categories are given:

1. Response to Discharge — Fire, Exposure, Pollution
2. Labels
3. Chemical Designation
4. Health Hazards
5. Fire Hazards
6. Chemical Reactivity
7. Water Pollution (Water Toxicity)
8. Shipping Information
9. Hazard Assessment
11. Hazard Classification
12. Physical and Chemical Properties

Prior to the Chemical Data Sheets, there is an introduction section containing:

1. Description of CHRIS
2. Explanation of terms
3. Other information systems
4. Conversion factors
5. Selected properties of fresh water, sea water, ice and air
6. Guide to compatibility of chemicals
7. Index of synonyms
8. Index of codes
9. Data sources (References)

If I were limited to a single data source for an emergency response, the CHRIS Chemical Data Handbook would be the one I would want. It is simply excellent and in my personal opinion should be in the library of every hazardous materials response entity.

GARY F. BENNETT

Environmental Applications of Chemometrics, by J.J. Breen and P.E. Robinson (Eds.), American Chemical Society, Washington, DC, 1985, 286 pages, \$54.95.

As with many ACS publications, this book was developed from a symposium (in this case sponsored by ACS' Division of Environmental Chemistry at the August 1984 meeting in Philadelphia, PA).

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.