

accepted for the meeting, 173 are presented in these proceedings. Major topics include:

0. General (opening session)
1. Glass
2. Reactive transport and microbes
3. Buffer materials
4. Groundwater and flow transport processes
5. Performance assessment/safety assessment
6. Spent fuel durability
7. Container materials
8. Ceramic waste forms
9. Cement
10. Radionuclide sorption in barriers and geological materials
11. Radionuclide solubility and speciation
12. Natural systems and analogue studies
13. Processing/separation
14. Site characterization
15. Radiation effects

A different perspective (from the listing in the Table of Contents shown above) in the coverage is given in the preface. “The principal topics addressed in this meeting included: (1) glass and crystalline waste forms; (2) spent nuclear fuel; (3) canister and overpack materials; (4) cement as a waste form and engineered barrier; (5) radiation effects; (6) radionuclide speciation, solubility and retardation; (7) colloids; (8) groundwater flow and transport processes; (9) performance and safety assessments; (10) site characterization; (11) processing and separation technologies; and (12) the use of natural systems to model long-term processes.

The papers, as the above two lists note, cover an immense range of topics. Theoretically, the book was edited, but with so many papers contributed by non-native English-speaking scientists, the quality of writing was not up to publishable standard in some papers. Additionally, there were lapses in the quality of standardization of various segments of the papers, i.e., references, abstract, conclusions.

GARY F. BENNETT

Handbook of Environmental Management and Technology, by G. Holmes, B.R. Singh and L. Theodore, John Wiley and Sons, New York, NY, 1994, \$74.95, 651 pp., ISBN: 0-471-58584-X

This book covers a large number of wide-ranging environmental topics, discussing their cause, effect and solution. It has 35 chapters divided into six sections.

1. Introduction to the Issues — offers an overview of the field as seen from the global perspective, dealing with topics such as the sources of pollution, the international effects of pollution and various regulatory approaches.

2. Air Pollution Management Issues — a broad but not comprehensive approach to air pollution and its control. Discussed are acid rain (this section should have been entitled acid deposition), the greenhouse effect, indoor air quality, dispersion modelling (very light on the mathematics) and a description of air pollution control equipment.

3. Water Pollution Management Issues — discussed are water pollution modelling and control followed by municipal and industrial wastewater treatment, but there is no good discussion of water pollution in general and its impact on the environment.

4. Solid and Hazardous Waste Management Issues — this section has nine separate chapters discussing general solid waste management issues, including municipal, medical and hazardous waste control. Chapters are devoted to a number of individual hazardous pollutants, including asbestos, oils and metals. Also discussed are household hazardous waste, underground storage tanks and Superfund.

5. Additional Environmental Concerns — covers a potpourri of topics that include noise pollution, energy conservation and pollution prevention.

6. Environmental Management Considerations — devoted to daily environmental management issues such as worker training and safety crisis management, the monitoring of background contamination levels and risk assessment and communication.

The book jacket says this book is written for those with little or no experience in pollution prevention and control and for that purpose, it is not badly written although I feel it lacks continuity and depth in several topics (air and water, as noted above). Also, I found an absence of diagrams for pollution control equipment a major detriment. It is just difficult to imagine a cyclone or a bag house without a picture. Also, a flow diagram of a wastewater treatment plant is totally absent. A final criticism — totally inadequate references from zero references for the Superfund chapter and only five for hazardous waste incineration (and three of these references were one of the author's own books and the other two were U.S. EPA reports, which I often find difficult to obtain).

GARY F. BENNETT

Application of HAZOP and What-If Safety Reviews to the Petroleum, Petrochemical and Chemical Industries, by D.P. Nolan, Noyes Data Corp., Park Ridge, NJ, 1994, \$45.00, 128°pp., ISBN: 0-815S-1353-4

“This publication is intended to provide guidance to HAZOP (Hazard and Operability) and What-If review teams associated with the petroleum and chemical industries. It describes the nature, responsibilities, methods and documentation required in the performance of such reviews. This ensures the reviews are conducted in a timely, effective and professional manner as may be prescribed by a company's Process Safety Management (PSM) Policy.”

“HAZOP and What-If reviews are two of the most common petrochemical industry qualitative methods used to conduct process hazard analyses. Up to 80% of a company's process hazard analyses may consist of HAZOP and What-If reviews with the remainder 20% from checklist, Fault Tree analysis, Event Tree, Failure Mode and Effects Analysis,