

heves (and treats) noise as a common air pollutant. Having been exposed to a number of guest lectures on noise control in pollution courses I teach, I have read the chapter in a little more detail than the others, and must commend the author for his completeness and conciseness. It is well done.

Heat stress too is another important industrial hygiene consideration, and the author discusses industrial heat and its control in his last chapter in his text.

There are two appendices -- one giving detailed calculation procedures for solving gas-purging problems graphically, the control of explosive or toxic air-gas mixtures, evaporation rates, etc. Appendix B will be appreciated by faculty who might use the book as a text, as it has a good compilation of problems supplementing the text material.

GARY F BENNETT

PCBs Human and Environmental Hazards, by F M D'itri and M A Kamrin (Eds), Butterworths, London, 443 pages, £50 00

PCBs are simultaneously one of the most useful and one of the most feared chemicals manufactured and used by man. Because of their non-biodegradability in the environment, and the suspicion that they will cause cancer, their use is extremely limited. In 1976, Senator Gaylord Nelson introduced a bill to amend the pending Toxic Substances Control Act (TSCA) to require the U.S. Environmental Protection Agency to establish labelling and disposal requirements for PCBs, and mandated an eventual ban on their manufacture and processing.

As a result of the continuing concern for the health effects and the large numbers of unanswered questions surrounding PCBs, Michigan State University in Lansing, Michigan, held an International Symposium in March 1982. This book contains 29 of the papers presented at the symposium plus a final chapter resulting from a panel discussion. The book is divided into five sections:

- 1 Scientific, social and political overview — 8 papers
- 2 PCB analysis and monitoring — 4 papers
- 3 Metabolism and toxicology — 7 papers
4. Effects on human health — 3 papers
- 5 Regulations — 7 papers

As with most symposiums discussing controversial topics, the papers definitively answer few questions, ask many, and present a great deal of information.

The key incident that focussed attention on PCBs concerned an accident in Yusho, Japan. From calculations, we know that the rice oil consumed by the people there contained approximately 2,000 mg/l of PCBs — but they were not the only toxic materials present, chlorinated naphthalene

derivatives, chlorinated dibenzofurans and quarterphenyls were also present. The perspectives of different authors are evident. One author writes "for an 8 year old boy, we figure it took about 500 mg exposure before the appearance of any disease." Another author writes "It is therefore doubtful whether any generalization can be made from this incident to lower level environmental or occupational exposure to PCB."

Other papers discuss average concentration of PCB in water, fish and air, and the resultant human intake. The health problems that could be caused by PCBs, including cancer, are discussed.

The only aspect of PCBs that is not covered are their control and disposal. To an engineer, concerned with waste disposal, this information would have been of additional value. But I am sure the editors would say that was not their concern -- which was "how much" PCBs are in the environment, how much is the population being exposed to, what is the danger of that exposure, and how should (legally, not physically) that exposure be controlled. That was their aim and one I feel they accomplished well.

The book was photo-reproduced -- cheaper, I'll admit, but not as pleasing as print. The papers were printed as delivered. Colloquialisms, the use of the chit-chat approach and the first person were not edited out. Personally, I feel the editor could have much improved the flow and quality of the writing by a thorough editing job.

GARY F BENNETT

Soot in Combustion Systems and Its Toxic Properties, by J. Lahaye and G. Prado (Eds.), Plenum Press/NATO, 1983, 433 pages, \$57.50

On the cover of his book the publisher writes

"this volume provides a comprehensive exploration of subjects integral to the understanding of the properties and dynamics of soot formation and burnout. This volume examines the reasons that make it necessary to control soot and polyaromatic hydrocarbons (PAH), their toxic properties and the possible genetic hazards in their components. Also considered are the mechanisms of PAH and soot formation and burnout."

The book was the result of a 1981 NATO workshop held in France. Twenty-one papers, divided into four major sections, have been printed: (1) introduction, (2) mechanism of soot formation and burnout, (3) aerodynamics of soot flames, and (4) optical diagnostics. Each of the papers is followed by a report of the discussion by the audience.

The four papers in the introduction section will be of most interest to readers of the journal.

- 1 Soot components as a genetic hazard -- W. G. Thilly, MIT, Cambridge, MA
- 2 The toxicology of soot -- E. Boyland, Centenary Institute of Occupational Health, London