

- Calculation of basic physical properties
- Technical evaluation
- Equipment selection

Discussed are the following types of treatment devices:

- Surface aerators
- Surface sprayers
- Bubble columns
- Cooling towers
- Steam strippers
- Spray columns
- Packed columns
- Impoundments

The book provides the necessary theoretical background and equations for the engineer who wished to make the appropriate calculations. Excellent tables and figures showing the results of the calculations are included. However, I would have liked to have seen several, detailed, worked examples to assist me in duplicating (or checking) these results.

The author discusses VOC emissions from the treatment devices, but does not discuss control of these emissions. I think a section on that topic would have been useful to complete the system design, because air pollution controls are most often needed with these air stripping units, and their cost is not cheap. The cost of an air pollution control system would have to be added to the cost of the chosen volatilization system, and if those cost data had been included, one could calculate a more complete system cost.

The six chapters in the text are:

- Introduction
- Site characterization
- Material properties and estimation methods
- Technology evaluation
- Design basis
- Factors affecting evaluation

GARY F. BENNETT

Chemical Hazards in the Workplace, by R.M. Schott, Lewis Publishers, Chelsea, MI, 1989, ISBN 0-87371-134-3, 196 pp., \$39.95.

As an environmental engineer, my concern with chemicals is generally with their impact outdoors, on the aquatic or ambient air environment. And part of this concern is for the toxicological threat to human beings. There is, however, a more serious threat, i.e. indoor exposure of workers. Industrial toxicology addresses that threat and its minimization – and this book will markedly assist

the industrial toxicologist by helping the laymen with whom he/she works to understand the problem. Perhaps the preface states it best:

“This book is intended as an introduction to industrial toxicology. It is intended for the person who needs to understand the basic principles and practices of industrial toxicology without becoming an expert in the field and is the first step for the individual who wishes to pursue the field in depth. The nonspecialist is introduced to the vocabulary and practices of toxicology, allowing him or her to understand available sources of information about the hazards of chemicals in use and to appreciate the implications of government regulations. Furthermore, the book provides insight into the processes used to determine toxicity and thereby to set safety standards for the workplace.”

The book is divided into three separate sections of approximately four chapters each:

Section 1. Basic Toxicology

- Kinds of toxic effects
- Generating safety recommendations
- Toxicants and the human body

Section 2. Hazards in the Workplace

- Inhalation toxicology
- Solvents
- Metals
- Plastics
- Elastomers
- Adhesives

Section 3. Regulations and Protection

- Government
- Monitoring plant atmosphere
- Protecting the worker

The book is well written, clear, concise and easy to read. It provides good explanations of health effects of chemicals and contains much data on specific chemicals. It would be an excellent book for an undergraduate course in safety and health or for the engineer who wishes to read on his own about the topic. I strongly recommend this book to both groups.

GARY F. BENNETT

Principles of Hazardous Material Management, by R.D. Griffin, Lewis Publishers, Chelsea, MI, 1988, ISBN 0-87371-145-9, 212 pp., \$45.00.

Like many other books, this one evolved from the frustrations of a lecturer who could find no suitable text for his course. What Griffin desired was a text to provide a framework for his students to allow them to understand the mul-