

the potentially affected community. In addition, the book is designed to provide some practical thoughts on strategic issues and how to respond." A chapter which discusses state enforcement and common law liability for hazardous substances is also included.

The book has the following chapters:

1. Superfund Overview
2. Hazardous Substance Release Reporting
3. Governmental Response Authority and Duties
4. The National Contingency Plan and National Priority List
5. Liability and Enforcement
6. The Relationship between Superfund and RCRA
7. Response Strategies for Potentially Responsible Parties
8. Natural Resource Damages
9. Uses of Superfund
10. Emergency Planning and Community Right-to-Know
11. Role of the States Under Superfund, State Statutes and the Common Law
12. Appendix: The Law: Superfund/CERCLA (this section, the replication of the actual law itself, covers 127 pages)

This book is very well written, easy to read, and well footnoted with legal citations.

GARY F. BENNETT

*Hazardous Chemicals Handbook*, by P.A. Carson and C.J. Mumford, Butterworth Heinemann, Oxford, UK, 1994, 378 pages, price UK£ 25.00, ISBN 0-7506-0278-3

The goal of this handbook written by a UK safety manager and chemical engineering faculty member/safety and loss prevention consultant is to provide a source of rapid information to help in the safe use and disposal of chemicals.

Chemicals, the authors note, pose dangers due to their very nature: flammable, toxic, carcinogenic, corrosive, radioactive and/or reactive. The danger to personnel could be from an accident, such as an acid burn to the skin or could be chronic resulting from continual exposure to or accumulative poison. The hazards are multiple, the exposures widespread and the results potentially deadly. Hazard recognition and assessment are stressed — starting with a knowledge of the individual properties of a chemical: physical characteristics, corrosivity, flammability, reactivity, toxicity, biological properties, exposure effects and radioactivity.

Chapter 1 introduces the reader to the aforementioned needs for chemical (affect) information and overviews the material found in the rest of the book. Chapter 2 is a five-page list of terminology definitions.

Chapter 3 entitled "Physicochemistry" discusses the hazards of chemicals which can often be foreseen from a knowledge of the following physicochemical principles: vapor pressure, gas-liquid solubility, liquid-to-vapor phase change, solid-to-liquid phase change, density difference of gases and vapors, etc. A discussion of corrosion and corrosion prevention includes several excellent tables of the corrosive resistance of metals and plastic to a wide variety of chemicals.

(Relevant toxic and flammable properties and appropriate precautions to take during their handling, use and disposal are given in the next two (Chapters 4 and 5). These chapters are entitled “Toxic Chemicals” and “Flammable Chemicals”. In these chapters, three long but very useful chapters are found:

1. Hygiene Standards, TLV, STEL, TWA for approximately 1000 chemicals.
2. Properties of flammable chemicals: specific gravity, vapor density, flashpoint, ignition temperature, boiling point, melting point, water solubility in vapor pressure of approximately 800 chemicals.
3. Discusses explosive characteristics of combustible solids: ignition temperature, minimum explosive concentration, minimum ignition energy, maximum explosion pressure, maximum rate of pressure-rise and maximum oxygen concentration to prevent ignition for approximately 400 chemicals.

Reactive hazards are discussed in Chapter 6 while Chapters 7 and 8 deal with the specific hazards of cryogenic materials and chemicals under pressure. The unique problems associated with radioactive chemicals are discussed in Chapter 10.

The book ends with three general chapters. Chapter 11 deals with administrative methods of controlling work place (laboratory) hazards. Discussed are chemical spacing, ventilation, maintenance, confined space entry, emergency procedures, spill response, first aid, personal protection, etc.

Chapter 12 deals with the legal obligations of manufacturers, suppliers and importers of chemicals in marketing and transportation. The final chapter, Chapter 13, is devoted to “Pollution and Waste Disposal”.

The book ends with sections on conversion tables (for units), a bibliography and an index.

GARY F. BENNETT

*Managing Risks in the Public Interest*, by N.C. Lind, J.S. Nathwani and E. Siddall, Institute for Risk Research, Waterloo, Ontario, Canada, 1993, 242 pages

Scientists and engineers are often exasperated and frustrated by the vast misallocation of resources which often occurs in our society by the existing approach to risk assessment and risk reduction. According to the authors, “There is ample evidence that our collective response to risk tends to be dominated by the sensational, particularly if the risk is of a new technological origin. Sensational reporting not only commands the disproportionate attention of legislators and policy-makers but also leads to the expenditures of vast resources with little gains. . . . Sober scientific assessment of the level of actual harm involved in most of the dramatic and sensational cases (for example PCBs, asbestos, alar, [radon and nuclear power], trichloroethylene, [incinerator dioxan emissions], etc. invariably confirm a low level of risk.” Thus, they suggest that even a modest degree of consistency in the way we manage the burden of risks could yield enormous benefits in redirecting resources to more useful and productive results.