

- Do chemicals play an important role in reproductive impairment?
- How good is the screening system for identifying chemical hazards to reproduction?
- Can the magnitude of human risks be assessed?
- Is scientific knowledge of reproductive toxicity sufficient to justify regulatory action?
- Is there scientific justification for differential regulation of exposure to men and women?

And finally, a concluding comment from the report that may put the current problem in perspective:

“The present state of scientific knowledge of chemical hazards to reproduction is similar to the state of knowledge of chemical carcinogens in the late 1960s . . . It is not clear that chemical hazards to reproduction will prove to be as large a public health issue as chemical carcinogens, or to what extent they will require attention in the 1980s. However, if reproductive hazards are an important regulatory problem, they should be predicted with as much scientific knowledge as possible.”

GARY F. BENNETT

*Land Treatment of Hazardous Wastes*, by J.F. Parr, P.B. Marsh and J.M. Kla (Eds.), Noyes Data Corporation, Park Ridge, NJ, February 1983, 422 pages, \$45.00.

The objective of this report made by scientists of the Agricultural Environmental Quality Institute, Agricultural Research Service, of the US Department of Agriculture, was to critically review and evaluate existing data relevant to land treatment of hazardous wastes. In the report, 12 different contributors discuss this information, identifying management controls needed to improve the effectiveness and environmental safety of land treatment, and suggest research activities that would improve the technology of land treatment while minimizing its environmental risks.

The book is divided into two parts, the first dealing with processes that influence the fate and effects of land-applied waste, i.e. interaction with soils, degradation and inactivation, plant uptake of inorganics, fate of toxic organics, effects of toxics on food chain, bioassay, fate of pathogens and composting. The second part of the book discusses the problems and potentials of land application for 11 different industries, including petroleum processing, pulp and paper, etc.

In addition to critically reviewing and evaluating the available information on land treatment of hazardous waste, the contributors of each of the 19 chapters give their perception of research needs in the area they have discussed.

This is an excellent book — first the overall principles of the area, next specific applications, and finally research needs are given. It is well written and uniformly authored (which is not always the case for multi-authored books). It will be a valuable addition to the libraries of both researchers and disposers.

GARY F. BENNETT

*Introduction to Safety in the Chemical Laboratory*, by N.T. Freeman and J. Whitehead, Academic Press, London, 1982, 244 pages, £16.00 (\$29.00).

The large number of laboratories (in both the educational and industrial sector), their increasing complexity of equipment, and heightened worker concern over exposure to chemicals (especially carcinogens) has increased management's concern for worker safety. Many of the concerns are addressed in this basic book by Freeman and Whitehead.

In Chapter 1, the authors discuss the general aspects of laboratory design and layout, including storage (especially of flammable, corrosive and incompatible materials), basics of ventilation and the fundamentals of safety equipment. The second chapter is concerned with worker's conduct, cleanliness, eating and drinking in the laboratory (and smoking, which the author admits is a contentious matter), working alone, and rubbish disposal. In the US, this latter section would have been greatly expanded to a discussion of the laws regarding hazardous waste; this is one section that could well be expanded, both from a legal and a methodological point of view.

Other chapters deal with hazards of laboratory equipment, laboratory technique (including handling toxic and reactive chemicals — followed by an especially good reference reading list), classifications of commonly used chemicals and their hazards (which I feel is perhaps the best and most important chapter in the book dealing with TLVs, Dose Rate, absorption, monitoring, LEL, etc.), electromagnetic radiation hazards, compressed gases, protective clothing and devices, fire protection and prevention, safety procedures, office safety and first aid.

The book is pleasantly produced: pleasing, easy-to-read type and an appropriate number of excellent photographs, a good list of references at the end of each chapter and a comprehensive index. It is indeed a useful, generally comprehensive and readable text on laboratory safety. It could well be made required reading for all new, and maybe even more importantly, current laboratory workers.

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