

cally but socially – that of hazardous waste facility siting. Although the author has several suggestions for approaching the siting process, his example of a siting process that failed, lends credence to my belief that siting a TSD facility (especially a hazardous waste landfill) is harder than siting a nuclear power plant. Public fears and the NIMBY (not in my back yard) syndrome override reason.

My assessment overall is that this is a very good book and were I to give a course in hazardous waste disposal, *Hazardous Waste Management Engineering*, along with one other book, would be my text. It is not, however, a book of deep technology for the currently involved expert.

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*Engineering Safety Assessment: An Introduction*, by J.R. Thomson, Longman group, Essex, United Kingdom, 1987, ISBN 0-470-20712-4 221 pages, £10.95

In assessing industrial plant safety, Thomson has analyzed a number of operations: chemical plants, nuclear reactors, boilers, dams and even transportation. The analysis he did and the book that developed from it is based on a course he teaches. And from my reading of the book, I am sure it is a very good course.

It is clear that major chemical releases at Seveso and Bhopal and the nuclear accident at Chernobyl has increased public awareness of the potential danger of chemicals. Indeed, there has been much regulatory activity in the United States after Bhopal as there was in the United Kingdom after Flixborough. Paralleling the regulatory reaction, professional societies have responded. In the United States, the American Institute of Chemical Engineers has established "The Center for Chemical Plant Process Safety" and encourages chemical engineering faculty members to include process safety in their courses. But perhaps inclusion of safety as a small part of several classes is not enough and a full course such as the one the authors suggest is preferable.

This book, Thomson notes, "is suitable for use as a textbook in senior undergraduate and postgraduate courses in chemical, mechanical and nuclear engineering...". I agree. the book is well written and contains numerous examples (although some are a little difficult to follow) and questions (or problems) for student homework.

Major chapters include:

- Basic probability
- Systems reliability
- Reliability of metal structures
- Major industrial hazards
- Probability risk assessment

The author notes that "no attempt has been made to cover all aspects of what

has become a very large subject. Comprehensive coverage would produce a very large book..." indeed, Marshall, who is quoted extensively in the section on chemicals has just written a very large book entitled Major Chemical Hazards (See this volume, first book review). Together these books are excellent companions.

While citing Marshall, I might note that Thomson says dioxin (TCDD) is carcinogenic and mutagenic, based on a reference to Marshall. Marshall's text, noted above, does not go quite as far in condemning dioxins. Clearly, he says dioxins cause chloracne (chemical acne), but notes only that animal experiments have indicated the possibility of teratogenic effects (damage to the unborn fetus) and carcinogenic effects; neither of these effects have been confirmed in humans.

But do not let that minor, negative comment deter you from reading the book and seriously considering it as a text for a safety, assessment course. I am.

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