

*Emergency Response and Hazardous Chemical Management: Principles and Practices*, C.B. Strong and T.R. Irvin, St. Lucie Press, Delray Beach, FL, 1996, \$49.95, 236 pp, ISBN: 1-884015-77-8

The major use for this book (according to comments in the Preface) is “to support the course and credential programs in environmental management and emergency response provided by the National Registry of Environmental Professionals (NREP).” What is written in the 17 short (approximately 10-page) chapters is reasonably well done, clear and concise. The coverage is not too bad (given space limitations) but the sequencing of material is strange. Indeed, the first chapter on workplace hazards during chemical emergency response actions should, in my judgment, appear after the spill scenario is presented or the danger of hazardous waste site remediation is discussed. Likewise, monitoring and detecting hazardous chemicals (Chapter 4) precedes discussion of volatile material spills and their disposal (actually it precedes the discussion because there is none).

I did, however, enjoy two chapters on (1) patching and capping of leaking containers and (2) hazardous chemical spill containment – probably because I appreciated the excellent diagrams. Conversely, I did not appreciate the limited number of references to the literature.

Finally, I did approve of the Appendix. Readers of my reviews will perhaps recall my dislike of long appendices, especially reprints of government regulations. In this case, I found the reprinting (in 40 pp.) of 29 CFR 1910.120 the USEPA’s regulations on hazardous waste operations and emergency response very useful as these regulations are so very important to the field.

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*Urban Air Pollution and Public Health. Proceedings of a Conference held at the Environmental Change Research Centre, University College London, Sept. 1994*, C.J. Curtis, J.M. Reed, R.W. Battarbee and R.M. Harrison (Eds.), Ensis Publishing, London, 1996, 96pp., ISBN: 1-871275-35-0

Air pollution has been a significant problem in the United Kingdom for centuries. John Evelyn’s classic *Fumifugium*, published in 1661, was an early recognition of the pollution caused by burning coal: the symbiotic combination of particulates and sulfur dioxide. The Great Smog of 1952 that caused 4000 deaths moved Parliament to pass the Clean Air Act of 1956. But as measures under the act were enforced (on coal burning), other areas of pollution, i.e., motor vehicles began to cause problems.

To assist in understanding urban air pollution and to chart directions for its improvement, the Environmental Change Research Centre had a one-day symposium. These proceedings contain 15 papers from that symposium plus discussion thereof.

There is a wealth of data in the papers showing much improved air quality over the years. The first paper contained a figure on trends in SO<sub>2</sub> concentrations in London.

They ranged from a high of  $550 \mu\text{g}/\text{m}^3$  in the 1930's constantly decreasing with time to a low of (approximately)  $30 \mu\text{g}/\text{m}^3$  in 1985. Data are also given for  $\text{NO}_x$ , particulates, VOCs and CO, especially those contributed by transport emissions. Other papers in the first seminar (entitled Urban Air Pollution) dealt with defining the problem of air quality, air emission inventory, air monitoring networks and how to interpret air quality data.

In the second conference session, entitled Health Impacts, papers were delivered on the affect of air pollution on public health, acute respiratory effects of particulate air pollution, and mechanisms underlying pollution-induces lung damage.

One paper suggests a strong correlation between particulates pollution and morbidity in mortality. One author notes that total mortality is observed to increase approximately 1% per  $10 \mu\text{g}/\text{m}^3$  increase in  $\text{PM}_{10}$ . Somewhat stronger associations are observed for cardiovascular mortality (approximately 1.4% per  $10 \mu\text{g}/\text{m}^3 \text{PM}_{10}$  and considerably strong associations are observed for respiratory mortality (approximately 3.5% per  $10 \mu\text{g}/\text{m}^3 \text{PM}_{10}$ ). The impact on the lungs of air pollution is discussed in another paper in which the author notes: "Taken together these results provide a convincing basis on which to explain not only the acute broncho constrictor effect of pollutant gases, but also the enhancement of allergic-induced airway disease and predisposition for infection." The final session, solutions to the problems are discussed, focussing mainly on transportation. The following three papers were presented:

1. Traffic and health
2. Are catalytic converters enough?
3. The motorist's view

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*Safety and Engineering Aspects of Spent of Fuel Storage: Proceedings of a Symposium Vienna, Oct. 1994*, International Atomic Energy Agency, Vienna, 1995, 1320 Austrian Schillings, 451pp., ISBN: 92-0-101695-6

"The total amount of spent fuel accumulated worldwide at the end of 1994 was over 155|000 tonnes heavy metal (t HM). Of this, about 60% is presently being stored in facilities, awaiting either reprocessing or final disposal. The quantity of accumulated spent fuel is over 20 times the present total annual reprocessing capacity. The projected cumulative amount of spent fuel generated by the year 2010 is expected to reach 300|000 t HM. Assuming that part of it is reprocessed, the amount to be stored by the year 2010 is projected to be about 200|000 t HM. The first geological repository for the final disposal of spent fuel is not expected to be in operation before the year 2010. Therefore, interim storage will be the primary spent fuel management option in many countries for the next 20 years."

Given the need for safe, interior storage, the IAEA and OECD held the symposium in