

sium's purpose was to assist AIChE's Ammonia Safety Committee in "making plants that manufacture ammonia and related chemicals such as urea, nitric acid, ammonium nitrate, and methanol, as safe as possible." The papers published in the symposium volume were presented by speakers from 14 countries. The papers covered a wide variety of safety-related topics such as:

- compressor failure;
- lifetime assessment of plants;
- risk-based assessment;
- inspection strategy;
- welds;
- retrofit experience;
- *Legionella pneumophila* in cooling towers;
- fire in a secondary reformer;
- ammonia venting study;
- primary reformer failure;
- LTS catalyst design;
- energy savings.

Most papers are followed by a synopsis of the question and answer session following the presentation.

The book provides the latest information by experts in the field on important safety and operational issues. AIChE is to be commended for continuing this series and thereby enhancing markedly the safety of chemical plants and their operation.

Gary F. Bennett

doi: 10.1016/S0304-3894(02)00365-5

The Particulate Air Pollution Controversy: A Case Study and Lessons Learned

Robert F. Phalen (Ed.), Kluwer Academic Publishers, Boston, MA, 2002, US\$ 56.00 (EUR\$ 58.401), 141 pp., ISBN 1-40207-225-2

The preface to this short, but excellent book states: "small invisible particles in the urban air, by human activities, especially those produced debate, regulation, have recently stimulated intense scrutiny, and legal proceedings. The stakes are high, both with respect to health impacts and economic costs, and the methods used previously to resolve similar issues are no longer adequate. Everyone on earth inhales thousands to millions of particles in each breath, particulate matter (PM)—so if urban particulate pollution—is significantly hazardous, the negative impact on health could be staggering...This complex issue presents opportunities for critically assessing the relevant knowledge and for adopting more rigorous approaches to this and similar problems.

What is the PM controversy, and why is it a good case study for how science and public policy might better interface? The PM controversy is the sum of the frequently heated debates related to the potential health risks from urban PM. The debates in the scientific, political, legal, and public arenas have placed pressure on scientists and regulators to generate

better data and to consider creative solutions to reduce the impact of PM on human health. The pressure has been intensified by the clash between economic and regulatory interests. Because science and technology work slowly in relation to the speed at which regulations proceed, there is a need for new ideas and approaches.”

According to the publisher’s literature, “this concise book presents the relevant scientific data, historical developments, unsolved problems, and new research opportunities related to particulate air pollution and human health. Included are chapters on the nature of particulate air pollution, fates and toxicity of inhaled particles, evidence of harmful effects of air pollution, events that led to the current controversy, interpretation of modern epidemiology studies, needed research, challenges to commonly accepted ideas about pollutants and health, and recommendations for scientists, regulators, legislators, the public and industry.”

While the book focuses mainly on ambient air, indoor air pollution is not ignored. Most indoor living or working environments have air pollutant sources. These sources include pets, heating, cooking, combustion sources, tobacco emissions, surface abrasion, vapor outgasing, soil gas intrusion, and biological. High concentrations of pollution in indoor settings can, at times, dominate short- and long-term exposures and may even be associated with discomfort, irritation, illness, and even death.

The problem of particulate pollution and control is exceedingly well discussed as well as the topic of both over and under control. Phalen ends his book this way: “today, we are at an important crossroad with respect to the future of air pollutant regulation. One road involves performing the needed research and making decisions on the basis of the science, with full consideration of the many tradeoffs associated with new regulation. The other road involves adopting regulations driven by politics and pressure groups. The first road is obviously the more beneficial one for protecting human health. However, it requires a more patient and reasoned approach that invests in research, allows time for the science to work, and then allows the time needed for technological change. The second approach promises uncontrolled, chaotic, and rapidly changing rules. A great deal is at stake. Will science and reason, or expediency, fear and ignorance be the determinants of public health decisions. To travel the better road, there must be a new era of cooperation and communication among scientists, regulators, legislators, advocacy groups, and the public.”

Gary F. Bennett

doi: 10.1016/S0304-3894(02)00366-7

Solvent Recovery Handbook

Ian M. Smallwood, 2nd edition, Blackwell Publishing Ltd., Osney Mead, Oxford, UK, 2002, £ 125.00 (UK), 432 pp., ISBN 0-632-05647-9

Organic solvents are ubiquitous chemicals used in large amounts by the modern chemical industry. Unfortunately, they end up being destroyed or vaporized where they make up approximately 35% of the VOC compounds that enter the atmosphere. This book addresses those losses by providing practical guidance on technologies available for solvent recovery and recycling.