

etc. An experienced review team can use the analysis to generate possible deviations from design, construction, modification, and operating intent that define potential consequences. these consequences can then be prevented or mitigated by the application of the appropriate safeguards.’’

The relevant chapters describing the establishment and performance of these vital tasks are as follows:

- Team Members, Qualifications and Responsibilities
- Management Support and Responsibilities
- Review Applications
- HAZOP and What-If Review Procedures
- HAZOP and What-If Worksheets
- Report Preparation and Distribution
- Handling and Resolution of Recommendations
- Schedule and Cost Estimates

The book ends with five very useful appendices:

- Typical Company Safety Policy Statement
- Quality Assurance Audit Checklist
- Probability, Severity, Risk and Risk Acceptance Tables
- What-If/Checklist Questions
- HAZOP Parameters, Deviations, and Possible Causes
- PC LCD Projection Panes

GARY F. BENNETT

Volatile Organic Compounds in the Atmosphere R.E. Hester and R.M. Harrison, eds.,
Issues in Environmental Science and Technology 4, The Royal Society of Chemistry,
Cambridge, UK, 1994, L 15.00 (U.S. \$27.00), 40 pp. ISBN 0-85404-215-6

This most excellent review of the topic of Volatile Organic Compounds (VOCs) was published as part of The Royal Society of Chemistry’s biannual volume on Issues in Environmental Science and Technology. Prior volumes have dealt with:

- mining and its environmental
- impact waste incineration and the environment
- waste treatment and disposal.

This volume, the fourth in the series, contains eight papers dealing with many aspects of VOCs – from their production in nature to their emission from building materials in modern homes. In this book, the contributors explored many of the scientific aspects relating to VOCs in the atmosphere under the following chapter titles:

1. Sources, Distributions, and Fates of VOCs in the Atmosphere
2. Atmospheric VOCs From Natural Sources
3. The UK Hydrocarbon Monitoring Network
4. Source Inventories and Control Strategies for VOCs
5. Gas Phase Tropospheric Chemistry of Organic Compounds

6. Alternatives to CFCs and their Behaviour in the Atmosphere
7. Volatile Organic Compounds in Indoor Air
8. Volatile Organic Compounds: The Development of UK Policy

G.F. BENNETT

Ion Exchange Technology A.K. Sengupta, ed., Advances in Pollution Control (Series), Technomic Publishing Co., Lancaster, PA, 1995, \$89.00, 385 pp. ISBN 1-56676-241-3

The editor's goal in compiling this book was "...to provide comprehensive coverage to those recent developments in ion exchange areas which would continue to have impacts... (on) pollution control and pollution prevention." The book contains nine chapters that can be placed in one of four broad categories: (1) trace contaminants, (2) removal as new materials, (3) desalination and gaseous pollutant control, and (4) gaseous pollutant control.

By title, the chapters are:

1. Removing Uranium and Radium From Groundwater by Ion Exchange Resins
2. Nitrate Removal From Contaminated Groundwater by Anion Exchange
3. Chromate Ion Exchange
4. Sorption and Desorption Behavior of Natural Organic Matter Onto Strong-Base Anion Exchangers
5. Complex Hexacyanoferrates for the Removal of Cesium From Solution
6. Immobilized Biomass: A New Class of Heavy-Metal Selective Ion Exchangers
7. Carix Process—A Novel Approach to Desalination by Ion Exchange
8. Sorption of Gaseous Pollutants on Ion Exchangers
9. Removal of Acid Gases From Combustion Flues by Adsorption on Ion Exchangers

The diverse chapters appear in several cases to be a blend of the author's research data and an extensive literature survey. Most were very informative although some could have been edited more closely to improve the English.

However, lest that negative reflection deter a potential reader, the coverage of Ion Exchange Technology is very good and as the publisher's series indicated, contributes positively to the literature and pollution control.

G.F. BENNETT

Integrated Pollution Control J.A.G. Drake, ed., The Royal Society of Chemistry, Cambridge, UK, 1994, £ 37.50, 102 pp. ISBN: 0-85404-705-0

This book contains the majority of the papers presented at a 1993 symposium entitled, "Environmental Update: Advances in Integrated Pollution Control." The 14 papers presented span a wide variety of topics from radioactivity to deep shaft industrial effluent treatment.