- Hazard control
  - -legislation
  - -management's role
  - -the role of professional institutions
  - -safety professionals and their training
  - -research and consulation

In the frontspiece, Marshall quotes from Tennyson's writing: "Oh yet we trust that somehow good will be the final goal of ill". The book serves that purpose well. Marshall has learned much from prior chemical accidents and through this book has made his deep experience available to us. This book should be the key reference for design, safety and process engineers for years to come. Beyond that, it would make a superb text for senior or graduate chemical engineering students.

GARY F. BENNETT

Toxic Air Pollution, by P.J. Lioy and J.G. Darsey (Eds.), Lewis Publishers, Chelsea, MI, 1987, ISBN 0-87371-057-6, 294 pages, $44.95.

With major criteria air pollutants (SO, NO_x, particulates, CO, O_3 and Pb) coming under control in the United States, the U.S. Environmental Protection Agency (U.S. EPA) has turned its attention to trace toxic elements in the air, and there appears to be reason for concern. A recent U.S. EPA study has shown risks from cancer-causing chemicals are greater than considered acceptable. Moreover, it appears the U.S. government may direct that the U.S. EPA specifically control more than the handful of toxic air pollutants it has promulgated regulations for.

Thus, the appearance of the book is very timely. It provides a wealth of information on many toxics found in the air: metals, zinc and carcinogenic pollutants – I counted nine metals, 50 organics and five conventional pollutants for which there are data.

The book resulted from a comprehensive study of air toxics in New Jersey entitled, appropriately enough, "The Airborne Toxic Element and Organic Substances (ATEOS) Study". This study involved numerous research scientists. Work was carried on from 1981 to 1985.

The bottom line is in the main, good news.

> "Generally levels of most types of toxic air pollutants measured (in New Jersey) were low enough to dimiss the motion of a statewide air toxics problem. The problems are probably directed towards situations in which a population subgroup is in close proximity to a source or group of sources (i.e. the local environment close to a small source such as an automobile).

The New Jersey Toxics Study group broke, new ground in a number of areas including the monitoring of small discontinuous sources by adsorbing organics

on preferential media. This study has provided an invaluable amount of data for comparative purposes, evaluating future trends in ait toxics and new study designs.

Major chapters of the book are:

1. The airborne toxic elements and organic substance study design.
2. Chemical composition of inhalable particulate matter – seasonal and intersite comparison.
3. Volatile organic compounds at urban sites in New Jersey.
4. Analysis of polycyclic hydrocarbons.
5. Mutagenicity of inhalable particulate matter at four sites in New Jersey.
6. Air pollution episodes during the ATEOS – there nature and signifigance.
7. Inhalable particulate matter and extractable organic matter.
8. Receptor source apportionment models for ATEOS urban sites.
9. The New jersey ATEOS project: an overview of its importance and health/regulating implications.

GARY F. BENNETT

Hazardous Waste Management Engineering, by E.J. Martin and J.H. Johnson, Jr., Van Nostrand Reinhold, New York, NY 1986, ISBN 0-442-24439-8, 520 pages, $67.95.

In the foreword to this book, Leon Weinberger, writes:

> "The management of hazardous wastes requires an understanding of technical regulatory, economic, permitting, institutional, and public policy issues. The Resource Conservation and Recovery Act (1976) and the Comprehensive Environmental Response, Compensation and Liability Act (1980) at the federal level, along with equivalent state with the problems of hazardous wastes.
>
> The editors have assembled a group of knowledgable authors who have first hand experience in hazardous waste management. They have prepared a useful, comprehensive text, particularly for engineers. The text provide a single source reference of environemtal legislation; technical alternatives for storage, treatment, and disposal; risk analysis; and siting of hazardous waste facilities".

I agree completely with Weinberger's analysis. this is one of the best hazardous waste books I have seen to date. It is well written and is as thoroughly comprehensive as a single book of moderate length can be. Appropriately, Chapter 1 starts with a review of the law that governs hazardous wastes and toxic substances. The second chapter on risk assessment, is no less appropriately placed for risk analysis is a topic of very great interest in the United States for assessing the effects of exposure of individuals to toxic and hazard-