chapters (labeled monographs) dealing with occupational exposure to mists and vapors from: (1) sulfuric acid and other strong inorganic acids; (2) sulfur dioxide and some sulfates, bisulfate, and metabisulfates; (3) hydrochloric acid; (4) diethyl sulfate; (5) diisopropyl sulfate; and (6) 1,3-butadiene.

In 1960, the IARC began a program to evaluate the carcinogenic risk of chemicals in humans. This program has produced 54 monographs dealing with the evaluation of carcinogenic risks to humans and 119 miscellaneous publications; all of the titles of the 173 books are found in the appendix of this book.

This volume begins with a fairly long (20 pp.) preamble that outlines the IARC's approach to the study of potentially cancer-causing chemicals.

The selection of strong inorganic acids as the main subject of this volume was prompted by the publication of several epidemiological studies that suggested that exposure by inhalation to mists and vapors was associated with excess risk for laryngeal and other respiratory cancers. These acids are in widespread industrial use in the manufacture of isopropanol, ethanol, phosphate fertilizer, lead batteries, plating of metal, etc. The manufacturing processes (in lead battery production) using these acids are described in some detail. Also much information on production risks in many countries is tabulated. Workplace exposure to acid mists and vapors is also discussed along with much tabulated data on workplace acid concentrations. Four pages of references conclude the chapter which is approximately 90 pages long.

Shorter chapters were devoted to the other five chemicals of the group. 1,3-Butadiene and diethylsulfate were classified as probably carcinogenic to humans; diisopropyl sulfate was classified as possibly carcinogenic to humans. Sulfur dioxide, sulfates, bisulfate, metabisulfates, and hydrochloric acid could not be classified on the basis of currently available data.

Each chapter is comprehensive, well written and very well documented. A cumulative cross index of IARC monographs on the carcinogenic risks to humans completes the book.

GARY F. BENNETT

Hazardous Materials Action Data, by C.R. Forden and J.L. Weddell, Lewis Publishers, Boca Raton, FL, ISBN 0-87371-598-5, 1992, approx. 1100 pp., US$ 225

This book contains chemical, health and safety, and incident response information on 1050 toxic and hazardous chemicals — compiled for use by first responders to hazardous materials incidents, paramedics and safety specialists.

The chemicals are found in alphabetical order with one (8 1/2 × 11 in.) page utilized for each different chemical. Given (if available) for each chemical entry are:

- Chemical name
- DOT designation
- Synonyms
- Incompatibilities
- Neutralizing agents

- Special warnings
- Chemical suit listings
- Emergency first aid treatment
- Hazard rating
- Fire fighting
- Evacuation distances
- Health hazard information
- Threshold limit values
- Chemical Abstract Service registry number

Preceding the chemical data section is a one-page introduction (that needs a thorough editing for grammar) essentially noting companion (competing) chemical information sources. The 11-page preface following contains:

- Explanation of hazard rating
- General response procedures: containment, adsorption, dilution, neutralization, vapor control
- Structural fire fighting advice
- Levels of personal protection

Following this too brief preface (it could well be supplemented or just dropped leaving the book as a chemical information source), is a table of contents listing:

- Chemical name
- Company
- Telephone number

I assume this listing identifies one of the manufactures (or the manufacturer) who supplied the MSDS containing the published data — but the authors do not explain the context or rationale for their list. Following this section is a listing of chemicals by synonym, trade name or chemical name.

My overall assessment is the book will be a very valuable quick information source for first responder on chemical data and impacts of chemical releases. It is one book I will recommend to our local hazardous response team to have on board their response vehicle. The preface section needs work though.

GARY F. BENNETT

SSDI 0304-3894(93)E0113-G

DNAPL Site Investigation, by Robert M. Cohen and James W. Mercer, Lewis Publishers, CRC Press, Inc., 2000 Corporate Blvd., Boca Raton, FL 33431, USA, ISBN 0-87371-977-8, 1993, 338 pp., including appendices

This book addresses one of the more illusive technical challenges of the day, determination of the presence of dense non-aqueous phase liquids (DNAPLs) in the environment. When DNAPLs are present, they have a significant impact on the effectiveness and the period of performance for groundwater remediation. Therefore, design and performance expectations will be enhanced by our ability to determine