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Acknowledgments

The third edition of this text has been made possible by the support and vision of the contributors as well as the members of the Alliance of Hazardous Materials Professionals. Specific contributors to this volume are noted below and at the end of each chapter. In our zeal to complete this publication, we may have inadvertently neglected to mention one or two of the many people who have worked so hard to ensure that it represents the best that our profession can offer. If you are one of those people, please contact AHMP so that your name can be included in subsequent printings. We also thank the many contributors that add so much to the book. We are especially grateful to the editorial and production staff at Maryland Composition for their patience, support, and efficiency in managing an enormous amount of detail. Specifically, we would like to thank Meredith Bechtle, production editor at Maryland Composition. Most of all we thank the authors, peer reviewers, contributors, AHMP members, students, friends, colleagues, former teachers, and reviewers who answered questions, pointed out errors, and made suggestions that have greatly improved the book. We take full credit, however, for any errors or shortcomings that remain.

Three major themes run through the Hazardous Materials Desk Reference, science and technology, regulations, and management practices.

Changes to the Third Edition

We have also revised the text for readability and clarity, corrected and updated facts and figures, and made adjustments to the balance and organization of material. We have tried to improve the illustrations, photographs, and design to be clearer and more visually inviting. Enhancements include:

- Redesigned to better serve as a one-stop science, regulatory, and management technical desk reference text
- Chapter content organized into three sections to facilitate learning
- New chapters added to expand breadth of subject matter covered
- Expanded existing chapter content to provide deeper understanding
- Updated content reflects regulatory changes since the previous edition
- Review Questions with an answer key
- Designed use of text as a supplemental resource for a college level course on Hazardous Materials Management/Environmental Science
- Providing a resource for those preparing for certification exams.

The editors greatly revised the layout and content of the third edition of the *Hazardous Materials Desk Reference*. By establishing three volumes, Science and Technology, Regulations, and Management Practices, the Desk Reference is organized to move the reader through the philosophy of managing materials with hazards.

Volume I (Chapters 1-8) focuses on basic science and technology as applied to the science of managing hazardous materials.

Volume II (Chapters 9-34) takes the reader in regulatory order through compliance with the various hazardous materials standards and regulations.

Volume III (Chapters 35-53) focuses on management systems, loss control, risk assessment, best management practices, and competencies of the EHS professional.

Preface

The *Hazardous Materials Management Desk Reference* is designed to be a comprehensive overview of the field of hazardous materials management and related sciences. Its primary intent is to meet the management needs of environmental professionals who have responsibility for hazardous materials management. The topics included in this book are also of interest to allied professionals in the safety, engineering, industrial hygiene, and general environmental compliance fields.

The authors and editors of the third edition of the *Hazardous Materials Management Desk Reference* have been selected because of their knowledge and practical expertise in their fields. Most of the authors are Certified Hazardous Materials Managers (CHMMs), having met the certification's rigorous experience, peer review, and technical requirements. Each chapter of the book has been peer-reviewed for technical content—in almost every case by three professionals representing the government, private, and academic sectors.

Included in the desk reference are chapters on the science, laws and regulations, and management principles needed to properly manage hazardous materials. The chapters provide a general overview and guide to a comprehensive list of environmental and hazardous materials topics. The intent is to act as a reference or “jumping-off point” for more in-depth study. The comprehensive range of topics covered makes the book unique among currently available titles.

The topics covered by the desk reference are highly regulatory in focus and in constant change. Where appropriate, Internet references have been provided so that the reader can quickly link to reliable sources of current information. For those readers new to the field of hazardous materials management, a list of acronyms and a glossary are provided at the end of the book. Glossary items are noted in the text in ***bold italic***.

Chapters in the reference are grouped by general topics.

Volume I, Science and Technology (Chapters 1-8), focuses on basic science and technology as applied to the science of hazardous materials. This section provides an overview of the “Science of HAZMAT,” contains a basic foundation for hazardous materials management, and is followed by an overview of the concepts of environmental sampling and analysis.

Volume II, Regulations (Chapters 9-34), takes the reader in regulatory order through compliance with the various hazardous materials standards and regulations. Chapters include a regulatory overview of both environmental and health and safety issues. Detailed chapters discuss various aspects of the OSHA requirements for such key topics as process safety management, hazardous waste and emergency response safety, radiation safety, lab safety, general worker safety exposure and protective measure practices, and the current Globally Harmonized System (GHS) updates. The environmental chapters include discussions of air, water, toxic substance, soil, hazardous wastes security, spills, emergency response, indoor air quality and toxic substance rules and regulations. The Department of Transportation requirements for hazardous materials, wastes, and response are also presented.

Volume III, Management Practices (Chapters 35-53), focuses on management systems, loss control, risk assessment, best management practices, and competencies of the EHS professional. This third edition continues to address those subjects that must be mastered by those striving to attain and optimize professional status in the environmental, safety, and health field.

While the *Hazardous Materials Management Desk Reference* is comprehensive in scope, it is by no means complete. Complete coverage of these important topics would take far more than one volume to achieve and, given the rapidly changing regulatory environment, may not even be feasible. The reader, therefore, is urged to “take the leap”; to learn more by exploring the references provided in the bibliographies and Internet resource sections at the end of each chapter.

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