

Preface

The title *Asbestos Control: Surveys, Assessment, Abatement and Maintenance—3rd Edition* broadly defines the subject matter covered. A brief explanation of asbestos control—what it is, who does it, and what it isn’t—provides a proper introduction to this manual.

As applied to asbestos-containing materials that have been manufactured for use in buildings and facilities, asbestos control involves managing the hazards associated with these materials. This activity, therefore, is also referred to as asbestos management and includes, among other things, deciding to remove asbestos-containing materials or to continue to manage them in place.

The practitioners of asbestos control bring a variety of professional disciplines to their roles as consultants, contractors, training providers, and laboratory analysts as well as facility owners and managers. Industrial hygienists and geologists are prominent in the field, but people with degrees ranging from aeronautical engineering (myself) to zoology have been involved over the years. This group of participants is part of an asbestos community that by extension includes the medical profession and also the asbestos victims whose unfortunate experiences give meaning to the work we do in asbestos control.

The scope of asbestos control as discussed in this manual is not limited to asbestos-containing materials in buildings, however. It also involves what has come to be known as naturally occurring asbestos (NOA), also referred to as natural occurrences of asbestos. NOA is encountered at construction sites and as deposits other than where asbestos is mined for commercial purposes. Asbestos mines and mills, and the factories that make asbestos products, are generally considered to represent the asbestos industry. The asbestos industry is committed to perpetuating, not controlling, asbestos hazards, as you will see in the concluding chapter of this manual. This manual is not a guide for making or installing asbestos-containing products.

Asbestos Control: Surveys, Removal, and Management—2nd Edition, published in 2005, discussed the three standards then under the jurisdiction of Task Group E06.24.03 on Asbestos Management with the objective of facilitating their use for asbestos management:

- ASTM **E1368** Standard Practice for Visual Inspection of Asbestos Abatement Projects
- ASTM **E2356** Standard Practice for Comprehensive Building Asbestos Surveys
- ASTM **E2394** Standard Practice for Maintenance, Renovation and Repair of Installed Asbestos Cement Products

Asbestos Control: Surveys, Assessment, Abatement and Maintenance—3rd Edition also covers ASTM **E1494** Standard Practice for Encapsulation Testing of Friable Asbestos-Containing Surfacing Materials. It also takes a much broader view of the topic, covering standards developed by Subcommittee D22.07 on Asbestos Sampling and Analysis, under whose jurisdiction all of the standards discussed in this manual have been consolidated:

- ASTM **D5755** Standard Test Method for Microvacuum Sampling and Indirect Analysis of Dust by Transmission Electron Microscopy for Asbestos Structure Number Surface Loading
- ASTM **D5756** Standard Test Method for Microvacuum Sampling and Indirect Analysis of Dust by Transmission Electron Microscopy for Asbestos Mass Surface Loading
- ASTM **D6480** Standard Test Method for Wipe Sampling of Surfaces, Indirect Preparation, and Analysis for Asbestos Structure Number Concentration by Transmission Electron Microscopy
- ASTM **D7390** Standard Guide for Evaluating Asbestos in Dust on Surfaces by Comparison Between Two Environments
- ASTM **D7521**, Standard Test Method for Determination of Asbestos in Soil
- ASTM **D7886** Standard Practice for Asbestos Exposure Assessments for Repetitive Maintenance and Installation Tasks

While the third edition maintains the focus on the use of ASTM standards, much more is involved in understanding and controlling asbestos hazards. Consequently, the content of the manual has been broadened to include topics such as the health effects of asbestos fibers that are the underlying reason for asbestos control. Health and safety are such important considerations in asbestos management that these topics are covered in an appendix as they relate to the standards discussed. Signs and labels as a means of asbestos hazard communication are also discussed in an appendix.

One thing made clear during the past few years is that the subject of asbestos has become increasingly complex, and as many answers have been questioned as questions have been answered. Topics in this evolving field include not only deposits of NOA but also contaminated sites that result from disposal of manufactured asbestos-containing materials. Another major development in the twenty-first century has been recognition of the problems associated with vermiculite that is contaminated with tremolite asbestos and the resulting impacts from the mine at Libby, MT. These topics and the related ASTM standards are a major addition to the manual in this third edition.

As Chairman of Task Group E06.24.03 on Asbestos Management and a member of D22.07, I have been involved in the development of the standards listed above and have had the opportunity to use most of them. However, I have nowhere near the expertise on the analysis of asbestos in soil and in vermiculite, or with NOA, as Alan Segrave, Jeanne Spencer, and Sean Fitzgerald. Their work and contribution to this edition of the manual as the co-authors who wrote the appendices and chapter on these respective subjects is greatly appreciated.

These ASTM standards represent the efforts of many people over a period of decades, not only the ASTM members and others who participated in their development but also those in the greater asbestos community whose activities influenced the standards. The collective experience that is embodied in the standards provides the technical foundation for this edition of the manual, as it has for the previous two editions.

Although this manual draws on this broad foundation, the examples and illustrations herein are almost entirely from my own experience and that of the contributing authors. This book is not a collection of anecdotes from our colleagues, and except for documented citations it does not rely on literature searches.

A couple of disclaimers are in order regarding the use of the information in this manual:

- Nothing in this manual or the ASTM standards discussed absolves a reader from compliance with federal, state, or local asbestos regulations. An approach described herein, or in a standard, may be quite legal and accepted in most jurisdictions, but there may be others where a regulation directs otherwise. In such cases the regulation, or the interpretation of a regulator, takes precedence.
- This manual does not take the place of materials provided in accreditation and licensing training courses. Those materials were designed for compliance with the EPA Model Accreditation Plan and the regulations of the licensing authorities. Information in this manual is intended to supplement, not replace, that provided in asbestos training courses and may omit some subjects taught in these courses.
- Some of the photographs in this manual may show work practices that do not reflect the use of proper health and safety precautions. The use of these photographs does not endorse such work practices. The photographs have been selected either to convey other important information or to call attention to the improper work practices for educational purposes.

As ASTM moves further into the digital age, a change in format has occurred from the previous editions. No copies of this edition have been printed by ASTM; it is only available as a downloaded file in PDF format under a license agreement for reading and viewing off-line. This provides certain advantages over a printed copy:

- The effect of color in illustrations is greatly enhanced.
- Links in the text connect to referenced chapters, sidebars, and appendices, as well as to the standards being discussed.
- Short video clips for sample collection and other illustrations are accessed with links in the text.

- Brief citations, illustrations, and forms can be copied from the document (subject to the license agreement).

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The format of this edition has allowed me the flexibility to incorporate examples and illustrations from my training materials and Web sites. As in the previous editions, the content is presented in the conversational tone that I use when making a presentation, teaching a course, or in a personal discussion. The examples that I describe are from my personal experience unless specifically attributed to another source. Those who generously provided illustrations are acknowledged with credits in the captions.

I wish to thank Frank Ehrenfeld and Tom Laubenthal for taking their valuable time to not only read the manuscript as peer reviewers but also to offer their detailed and insightful comments during the revision process that followed. I also wish to thank Kathy Dernoga and the other ASTM staff members for all of their hard work to make this publication come to fruition. Appreciation is also due to Jim Millette, who preceded Frank Ehrenfeld as Chairman of Subcommittee D22.07, for his support. Finally, all of us owe a debt to the inspiration of Mike Beard, who chaired D22.07 for many years, and to whose memory this third edition is dedicated.

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