# Decommissioning Health Physics: A Handbook for MARSSIM Users, Second Edition

*Eric W. Abelquist*
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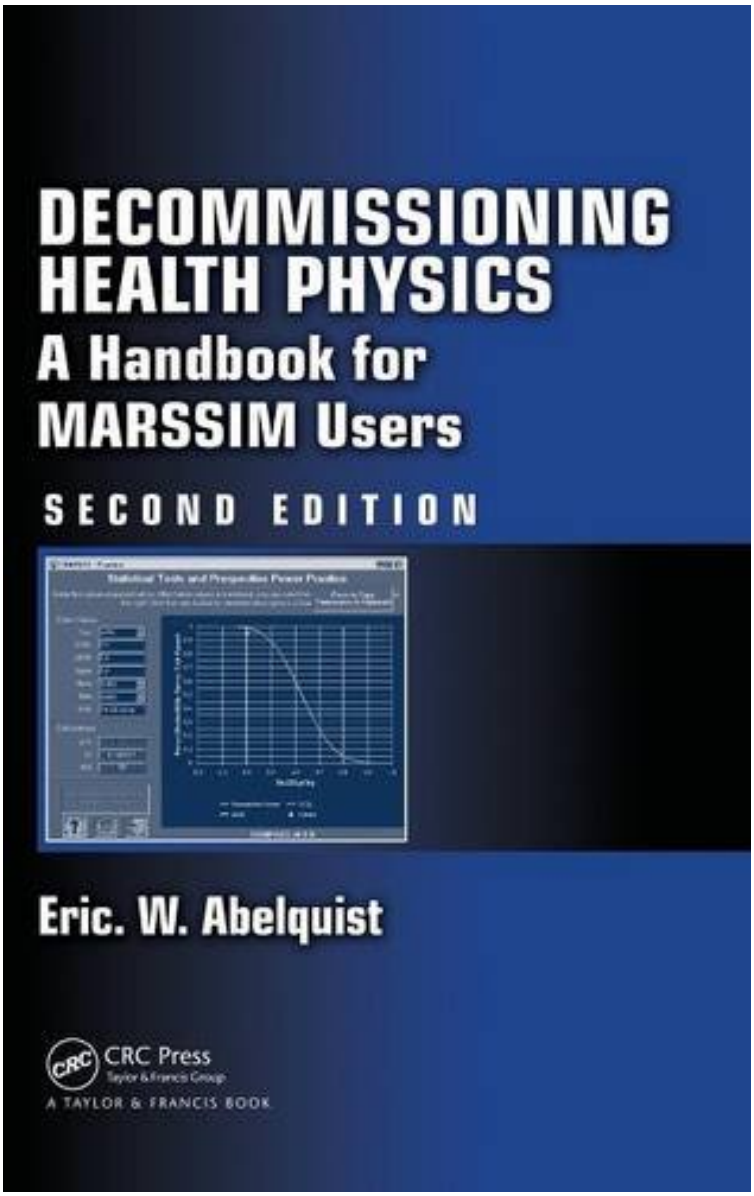




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**Eric W. Abelquist : Decommissioning Health Physics: A Handbook for MARSSIM Users, Second Edition** before purchasing it in order to gage whether or not it would be worth my time, and all praised Decommissioning

Health Physics: A Handbook for MARSSIM Users, Second Edition:

Experienced Guidance on the Technical Issues of Decommissioning ProjectsWritten by one of the original MARSSIM authors, Decommissioning Health Physics: A Handbook for MARSSIM Users, Second Edition is the only book to incorporate all of the requisite technical aspects of planning and executing radiological surveys in support of decommissioning. Extensively revised and updated, it covers survey instrumentation, detection sensitivity, statistics, dose modeling, survey procedures, and release criteria. New to the Second Edition Chapter on hot spot assessment that recognizes appropriate dosimetric significance of hot spots when designing surveys and includes a new approach for establishing hot spot limits Chapter on the clearance or release of materials, highlighting aspects of the MARSAME manual Revised chapter on characterization survey design to reflect guidance in ANSI N13.59 on the value of data quality objectives (DQOs) Updated regulations and guidance documents throughout Updated survey instrumentation used to support decontamination and decommissioning (DD) surveys, including expanded coverage of in situ gamma spectrometers Revised statistics chapter that includes an introduction to Bayesian statistics and additional double sampling and ranked set sampling statistical approaches More case studies and examples throughout Implement the Surveys Effectively and Avoid Common PitfallsWith more than 20 years of experience as a practitioner in the decommissioning survey field, author Eric W. Abelquist prepares you for the technical challenges associated with planning and executing MARSSIM surveys. He discusses the application of statistics for survey design and data reduction and addresses the selection of survey instrumentation and detection sensitivity. He presents final status survey procedures and covers pathway modeling to translate release criteria to measurable quantities. He also offers solutions for navigating the complexity inherent in designing and implementing MARSSIM and MARSAME surveys. Detailed derivations, thorough discussions of technical bases, and real-world examples and case studies illustrate effective strategies for demonstrating to regulators and stakeholders that contaminated sites can be released for other beneficial uses.

"This layout makes the book useful for those with less experience at implementing the MARSS1M process and allows those with more experience to go directly to individual chapters to review specific information As with the first edition, this book is a valuable addition to the MARSSIM practitioner's libraryI recommend this book for all who are involved in the decommissioning process."James Reese in Health Physics "This book is the most complete treatment of the topic Ive seenincluding chapters on virtually every aspect of MARSSIM as well as problems to solve and worked-out solutions for many of them in the back (making it a great textbook on the topic for anyone teaching a graduate class or short course on the topic). Its also a great reference since the chapters include equations, reference tables and plots, and a nice selection of case studies and examples. The second edition is not only updated to reflect the latest and greatest guidance, it also includes some new material. a tremendously useful book to have on your shelf. If you are actively involved in characterizing or remediating sites, I dare say its essential. But even if youre not engaged in this sort of work, its worth adding to your library for the chapters on counting and sampling statistics, for the discussion of developing survey plans, for the material on instruments, and for much more. Throughout, the writing is clear and easy to follow, and Eric does a great job of explaining concepts that are often not intuitive. Im glad to have it on my bookshelf, and I anticipate using it as a professional reference as well as for teaching in coming years."Health Physics NewsAbout the AuthorEric W. Abelquist, PhD, CHP, is the executive vice president of Oak Ridge Associated Universities (ORAU) and deputy director of the Oak Ridge Institute for Science and Education (ORISE). He helps oversee organizational best practices, program and business unit leadership, and community relations. He also works directly with the president/CEO to formulate organizational strategic objectives, manage key strategic initiatives, and advise on scientific and engineering issues that advance research and education opportunities. He was previously the associate director for Independent Environmental Assessment and Verification (IEAV) at ORAU, where he contributed to the development and implementation of the Multiagency Radiation Survey and Site Investigation Manual (MARSSIM). He received a Ph.D. in nuclear engineering from the University of Tennessee.