

*Stabilization and Solidification of Hazardous Wastes*, by E.F. Barth, P. de Percin, M.M. Arozarena, J.L. Zieliewski, M. Dosani, H.R. Maxey, S.A. Hokanson, C.A. Pryately, T. Whipple, R. Kravitz, M.J. Cullinane Jr, L.W. Jones, P.G. Malone and the U.S. EPA of Cincinnati, OH, published by Noyes Data Corporation, Park Ridge, NJ, 1990, ISBN 0-8155-1245-7, 390 pp., \$68.00.

This book is clearly a “how-to” book rather than a scientific treatise on sterilization/solidification technology (for a book of this type consult J.R. Conner’s recent text *Chemical Fixation and Solidification of Hazardous Wastes*). As with many Noyes Data publications the book is a combination of three U.S. EPA reports. The first report (which comprised the first 72 pages of this book) was entitled, “Stabilization/Solidification (S/S) of CERCLA and RCRA Wastes — Physical Tests, Chemical Testing Procedures, Technology and Screening and Field Activities”. This report was written (according to the authors) to “provide the reader with an informative yet quick reference-type handbook that can be used by environmental professionals”, Section 2 addresses the basis for stabilization/solidification of hazardous wastes and includes a discussion of RCRA, HWSA, CERCLA and SARA and their requirements with regard to the stabilization/solidification process, i.e. BDAT standards for various wastes.

Section 3 presents state-of-the-art stabilization/solidification technologies while Section 4 discusses the physical testing methods used to characterize solid and hazardous wastes before and after stabilization/solidification. Section 5 discusses chemical testing procedures including leaching mechanisms, leach test methods and applications, factors affecting the results and the selection and interpretation of leach tests. Section 6 provides information on technology screening. Finally, Section 7 discusses the proper application of stabilization/solidification processes and site conditions that can determine if a particular stabilization/solidification process is appropriate.

The second report comprises a layer fraction (approximately 150 pages) of the book. Entitled “Handbook for Stabilization/Solidification of Hazardous Wastes”, its goal is to promote guidelines for the educated selection and use of S/S technology as a remedial action alternative at uncontrolled hazardous waste sites. Separate chapters discuss:

- Basis of stabilization/solidification technology
- Physical and chemical characteristics of untreated wastes
- Selection of sterilization/solidification processes
- Bench and pilot-scale screening of selected treatment processes
- Full-scale treatment operations
- Quality control, safety and environmental considerations for waste treatment
- Cleanup and closure