1.	Record Nr.	UNINA9911006990903321
	Autore	Vallero Daniel A
	Titolo	Engineering the risks of hazardous wastes / / Daniel A. Vallero ; with a contribution by J. Jeffrey Peirce
	Pubbl/distr/stampa	Burlington, MA, : Butterworth-Heinemann, c2003
	ISBN	1-281-00679-3
		9786611006792
		0-08-049125-1
	Descrizione fisica	1 online resource (329 p.)
	Altri autori (Persone)	PeirceJ. Jeffrey
	Disciplina	628.4/2
	Soggetti	Hazardous wastes - Risk assessment
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Cover; Copyright Page; Contents; Foreword; Preface; Acknowledgments; Chapter 1. An Engineering Perspective on the Risks of Hazardous Wastes; How Engineers Can Help Reduce the Risks Posed by Hazardous Wastes; History of Hazardous Waste Engineering; Why Engineers Should Care about Hazardous Wastes; What Is Our Focus?; What Human Values Are Important in Hazardous Waste Decisions?; What Is Hazardous Waste, Anyway?; Toxicity Testing; Chapter 2. Entering the Risk Era; How Engineers Can Manage Hazardous Waste Risks; How Toxicity Is Calculated and Applied to Risk
		Estimating Exposure to Hazardous WasteWhere Does the Engineer Fit in the Risk-Assessment Paradigm?; Risk Roles for the Engineer; Chapter 3. The Fate, Transformation, and Transport of Hazardous Chemicals; How Hazardous Compounds Move and Change in the Environment; What Kinds of Hazardous Chemicals Are There?; Using Physical Movement and Chemical Changes to Estimate Possible Chemical Risks; Chapter 4. Opportunities for Hazardous Waste Intervention by Engineers; Intervention to Prevent and Control the Risks Associated with Hazardous Wastes
		Opportunities in Science, Engineering, and Technology to Control the Risks Associated with Hazardous WastesA Prerequisite Consideration: The Peirce Progression; Thermal Processing: Examples of the Science, Engineering, and Technology of Hazardous Waste Incineration;

Microbiologic Processing: Examples of the Science, Engineering, and Technology of Hazardous Waste Biotreatment; Hazardous Waste Storage Landfills: Examples of the Science, Engineering, and Technology of Long-Term Storage of Hazardous Waste Chemoluminescence and Fluorescent In Situ Hybridization (FISH): Examples of the Science, Engineering, and Technology Available to Monitor the Magnitude of the Risks Associated with a Hazardous Waste ProblemChapter 5. A Risk-Based Assessment to Support Remediating a Hazardous Waste Site; How Risk Information Is Used in Hazardous Waste Site Remediation; Chapter 6. The Role of the Engineer in Emergency Response; Lessons from the Emergency Response at the World Trade Center; Chapter 7. Risk Perception: What You Say May Not Be What They Hear

What Are People's Perceptions of Risks Posed by Hazardous Waste?What Is the Possibility of a Severely Negative or Catastrophic Outcome?; How Familiar Are the Situation and the Potential Risks?; Can the Engineer Succinctly Explain the Processes and Mechanisms Being Proposed or Undertaken?; How Certain Is the Science and Engineering?; How Much Personal Control Is Perceived?; Is the Exposure Voluntary or Involuntary?; Are Children or Other Sensitive Subpopulations at Risk?; When Are the Effects Likely to Occur?; Are Future Generations at Risk?; Are Potential Victims Readibly Identifiable?

How Much Do People Dread the Outcome?

Sommario/riassunto	Many engineers, from the chemical and process industries, waste treatment system management and design to the clean-up of contaminated sites, are engaged in careers that address hazardous wastes. However, no single book is available that explains how to manage the risks of those wastes. At best it is dealt with in diverse sections of books on the general field of environmental engineering, and in various treatments of the subject of risk, statistics and hazard assessment.This is a reference and text that blends together theoretical explanations, techniques and case study examples to