

*Risk Assessment and Management in the Context of the Seveso II Directives*, Christian Kirchsteiger, (Ed.), Michalis D. Christou and Georgios A. Papadakis, (Co-Eds.), Elsevier Science, Amsterdam/New York, NY, Industrial Safety Series No. 6, 1998, NLG 490.00/US \$281.50, 560 pp. ISBN: 0-444-82881-8

The Abstract that begins this book describes its contents quite succinctly: “This book examines the ‘performance based’ and ‘goal oriented’ regulatory requirements of the European Council’s new ‘Seveso II Directive’ for the identification of large scale industrial hazards, prevention of sudden and uncontrolled releases of dangerous substances from industrial plants and mitigation of serious consequences of industrial accidents to people and the environment. It is intended to show in this book that risk assessment and management are key elements to such form of regulation. While the ‘Seveso Directive’ defines ‘what’ has to be achieved on the control of major-accident hazards involving dangerous substances within the European Union, the methods of risk assessment and management give guidance ‘how’ to achieve it.”

Two items, drawn from the Directive, are worthy of note: (1) An operator of industrial establishments where dangerous substances are present must demonstrate “that adequate safety and reliability have been incorporated into the design, construction, operation and maintenance of any installation, storage facility, equipment and infrastructure connected with its operation which are linked to major-accident hazards inside the establishment” and (2) a clear definition of risk (as follows) must be indicated: “the likelihood of a specific effect occurring within a specified period or in specified circumstances”

Thus the Directive encourages the inclusion of risk assessment and risk management in safety related decisions of regulatory authorities.

The Directive is comparable to the US EPA and OSHA programs to prevent, mitigate, and respond to the releases of toxic compounds from chemical and related industries. As such, the book should be of interest (i.e. useful) to engineers on both continents.

The book (as advertised) provides practical information for those who are not familiar with the concepts of risk assessment but who want some information on the fundamentals of, and principal results from, risk assessment studies, primarily for compliance with the Seveso II Directive.

To this end, the book has four major sections: (1) Introduction and Legal Framework: existing approaches to risk analysis are discussed along with the backgrounds and requirements of European legislation for the control of major-accident hazards involving dangerous substances; (2) Risk Assessment: the important elements for the technical basis of risk assessment with regard to their consideration in the Seveso Directive are discussed here; (3) Risk Management: the authors provide guidance on the practical procedures used to conduct qualitative and quantitative risk assessment studies, risk comparison and corresponding decision-making procedures; (4) Implementation of the Seveso Directive: the final section of the book discusses how the Seveso Directive has been implemented in response to the risk assessment and management principles discussed in the three prior sections.

The book appears to have resulted from a series of lectures given by the contributors to the book. As such, their slides appear to have been included in the book (following their contributions). These slide reproductions do provide an interesting summary of their text, but really contribute no new information. Personally, I think they should not have been published. Moreover, there are several 'photographic figure reproductions' that are so dark they are very hard to read.

One very interesting (and useful) feature of the book is the exercises with solutions. I found the feature much to my liking.

The book ends with three appendices detailing the Seveso I and Seveso II Directives and the MARS accident reporting forms.

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