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DECHET RADIOACTIF	ELIMINATION DES DECHETS
DECHARGE CONTROLÉE	RADIOACTIFS - NECESSITE DE
DEJET EN SOUS-SOL	PRINCIPES DE SECURITE TRÈS STRICTS
SOUS-SOL	POUR PRÉSERVER LE BIEN-ÊTRE
SECURITE	DES GÉNÉRATIONS FUTURES. DOCUMENT
REGENERATION	TRÈS GÉNÉRAL ET DANS LEQUEL
	LA TECHNIQUE EST ÉVOQUÉE MAIS
	NON ASSOCIÉE

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safety series
safety series

No. 99

IAEA SAFETY STANDARDS

**Safety Principles
and Technical Criteria
for the Underground Disposal
of High Level
Radioactive Wastes**

REVIEW COPY



INTERNATIONAL ATOMIC ENERGY AGENCY, VIENNA, 1989

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1.2. Objectives

The main objective of this book is to set out an internationally agreed set of principles and criteria for the design of deep underground repositories for the disposal of high level radioactive wastes.

To the extent possible at this stage in the development of high level radioactive waste repositories, and recognizing the technical differences of approach in Member States, the aim is towards achieving harmonization of the philosophical basis for their design.

The safety principles and technical criteria are intended to form a common basis for the subsequent development of more detailed and quantitative performance standards, some of which may need to be site specific in nature.

1.3. Scope

The safety principles and technical criteria have been developed with particular regard to the post-closure period of high level waste repositories located deep underground. This publication sets out the basic design objectives for underground high level radioactive waste repositories such that humans and the human environment will be protected after the closure of the repository and for the long time periods for which the wastes remain hazardous. It establishes principles for the protection of future generations and quantifies the level to which they should be protected. Finally, it provides guidance on the technical aspects of repository design such that the principles may be complied with.

The book is concerned with the post-closure period. Consideration of the operational requirements which must be met when wastes are being handled, stored and emplaced are not therefore included.

This book does not address the need for, nor the form or content of, any retrievability requirements that might be appropriate, either during the period of waste emplacement or during a subsequent testing or observation period prior to final sealing of the repository.

Because the text was developed with particular regard to disposal of high level wastes in deep underground repositories, these safety principles and technical criteria are not necessarily suitable for disposal of other types of wastes or for disposal of high level wastes by other means such as sub-sea-bed emplacement.

1.4. Structure

The book begins with a set of definitions considered necessary to provide a proper understanding of the text (Section 2). Next, the safety principles and technical criteria are presented as two separate groups. In the first group are the basic safety principles, including those that arise directly from radiological protection principles