

IAEA SAFETY STANDARDS SERIES

Legal and Governmental Infrastructure for Nuclear, Radiation, Radioactive Waste and Transport Safety

REQUIREMENTS

No. GS-R-1



INTERNATIONAL
ATOMIC ENERGY AGENCY
VIENNA

IAEA SAFETY RELATED PUBLICATIONS

IAEA SAFETY STANDARDS

Under the terms of Article III of its Statute, the IAEA is authorized to establish standards of safety for protection against ionizing radiation and to provide for the application of these standards to peaceful nuclear activities.

The regulatory related publications by means of which the IAEA establishes safety standards and measures are issued in the **IAEA Safety Standards Series**. This series covers nuclear safety, radiation safety, transport safety and waste safety, and also general safety (that is, of relevance in two or more of the four areas), and the categories within it are **Safety Fundamentals**, **Safety Requirements** and **Safety Guides**.

Safety Fundamentals (blue lettering) present basic objectives, concepts and principles of safety and protection in the development and application of nuclear energy for peaceful purposes.

Safety Requirements (red lettering) establish the requirements that must be met to ensure safety. These requirements, which are expressed as 'shall' statements, are governed by the objectives and principles presented in the Safety Fundamentals.

Safety Guides (green lettering) recommend actions, conditions or procedures for meeting safety requirements. Recommendations in Safety Guides are expressed as 'should' statements, with the implication that it is necessary to take the measures recommended or equivalent alternative measures to comply with the requirements.

The IAEA's safety standards are not legally binding on Member States but may be adopted by them, at their own discretion, for use in national regulations in respect of their own activities. The standards are binding on the IAEA for application in relation to its own operations and to operations assisted by the IAEA.

Information on the IAEA's safety standards programme (including editions in languages other than English) is available at the IAEA Internet site

www.iaea.org/ns/coordinet

or on request to the Safety Co-ordination Section, IAEA, P.O. Box 100, A-1400 Vienna, Austria.

OTHER SAFETY RELATED PUBLICATIONS

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**LEGAL AND GOVERNMENTAL
INFRASTRUCTURE FOR NUCLEAR,
RADIATION, RADIOACTIVE WASTE
AND TRANSPORT SAFETY**

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The Agency's Statute was approved on 23 October 1956 by the Conference on the Statute of the IAEA held at United Nations Headquarters, New York; it entered into force on 29 July 1957. The Headquarters of the Agency are situated in Vienna. Its principal objective is "to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world".

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SAFETY REQUIREMENTS

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FOREWORD

by **Mohamed ElBaradei**
Director General

One of the statutory functions of the IAEA is to establish or adopt standards of safety for the protection of health, life and property in the development and application of nuclear energy for peaceful purposes, and to provide for the application of these standards to its own operations as well as to assisted operations and, at the request of the parties, to operations under any bilateral or multilateral arrangement, or, at the request of a State, to any of that State's activities in the field of nuclear energy.

The following advisory bodies oversee the development of safety standards: the Advisory Commission for Safety Standards (ACSS); the Nuclear Safety Standards Advisory Committee (NUSSAC); the Radiation Safety Standards Advisory Committee (RASSAC); the Transport Safety Standards Advisory Committee (TRANSSAC); and the Waste Safety Standards Advisory Committee (WASSAC). Member States are widely represented on these committees.

In order to ensure the broadest international consensus, safety standards are also submitted to all Member States for comment before approval by the IAEA Board of Governors (for Safety Fundamentals and Safety Requirements) or, on behalf of the Director General, by the Publications Committee (for Safety Guides).

The IAEA's safety standards are not legally binding on Member States but may be adopted by them, at their own discretion, for use in national regulations in respect of their own activities. The standards are binding on the IAEA in relation to its own operations and on States in relation to operations assisted by the IAEA. Any State wishing to enter into an agreement with the IAEA for its assistance in connection with the siting, design, construction, commissioning, operation or decommissioning of a nuclear facility or any other activities will be required to follow those parts of the safety standards that pertain to the activities to be covered by the agreement. However, it should be recalled that the final decisions and legal responsibilities in any licensing procedures rest with the States.

Although the safety standards establish an essential basis for safety, the incorporation of more detailed requirements, in accordance with national practice, may also be necessary. Moreover, there will generally be special aspects that need to be assessed by experts on a case by case basis.

The physical protection of fissile and radioactive materials and of nuclear power plants as a whole is mentioned where appropriate but is not treated in detail; obligations of States in this respect should be addressed on the basis of the relevant instruments and publications developed under the auspices of the IAEA.

Non-radiological aspects of industrial safety and environmental protection are also not explicitly considered; it is recognized that States should fulfil their international undertakings and obligations in relation to these.

The requirements and recommendations set forth in the IAEA safety standards might not be fully satisfied by some facilities built to earlier standards. Decisions on the way in which the safety standards are applied to such facilities will be taken by individual States.

The attention of States is drawn to the fact that the safety standards of the IAEA, while not legally binding, are developed with the aim of ensuring that the peaceful uses of nuclear energy and of radioactive materials are undertaken in a manner that enables States to meet their obligations under generally accepted principles of international law and rules such as those relating to environmental protection. According to one such general principle, the territory of a State must not be used in such a way as to cause damage in another State. States thus have an obligation of diligence and standard of care.

Civil nuclear activities conducted within the jurisdiction of States are, as any other activities, subject to obligations to which States may subscribe under international conventions, in addition to generally accepted principles of international law. States are expected to adopt within their national legal systems such legislation (including regulations) and other standards and measures as may be necessary to fulfil all of their international obligations effectively.

EDITORIAL NOTE

An appendix, when included, is considered to form an integral part of the standard and to have the same status as the main text. Annexes, footnotes and bibliographies, if included, are used to provide additional information or practical examples that might be helpful to the user.

The safety standards use the form 'shall' in making statements about requirements, responsibilities and obligations. Use of the form 'should' denotes recommendations of a desired option.

CONTENTS

1.	INTRODUCTION	1
	Background (1.1–1.2)	1
	Objective (1.3)	1
	Scope (1.4–1.8)	1
	Structure (1.9)	3
2.	LEGISLATIVE AND GOVERNMENTAL RESPONSIBILITIES	3
	General (2.1–2.3)	3
	Legislative (2.4–2.6)	4
3.	RESPONSIBILITIES AND FUNCTIONS OF THE REGULATORY BODY (3.1–3.5)	6
4.	ORGANIZATION OF THE REGULATORY BODY	9
	General (4.1–4.5)	9
	Staffing and training of the regulatory body (4.6–4.8)	10
	Advisory bodies to the regulatory body (4.9)	10
	Relations between the regulatory body and the operator (4.10)	11
	International co-operation (4.11)	11
5.	ACTIVITIES OF THE REGULATORY BODY	11
	General (5.1–5.2)	11
	Authorization (5.3–5.6)	12
	Review and assessment (5.7–5.11)	13
	Inspection and enforcement (5.12–5.24)	14
	Development of regulations and guides (5.25–5.28)	16
6.	SPECIFIC INFRASTRUCTURE	16
	General (6.1)	16
	Infrastructure for emergency preparedness (6.2–6.6)	17
	Infrastructure for radioactive waste management (6.7–6.13)	17
	Infrastructure for intervention (6.14–6.16)	19
	Infrastructure for services (6.17)	19

APPENDIX: REVIEW AND ASSESSMENT DURING THE
LIFE CYCLE OF A NUCLEAR POWER PLANT 21

REFERENCES 23

GLOSSARY 25

CONTRIBUTORS TO DRAFTING AND REVIEW 27

ADVISORY BODIES FOR THE ENDORSEMENT
OF SAFETY STANDARDS 29

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1. INTRODUCTION

BACKGROUND

1.1. The safety of nuclear facilities and sources of ionizing radiation, radiation protection, the safe management of radioactive waste and the safe transport of radioactive material are of great importance to individuals and society and to the environment in the State of use and in other States.

1.2. This Safety Requirements publication establishes the basic requirements for legal and governmental infrastructures for nuclear, radiation, radioactive waste and transport safety. It should be used in conjunction with the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources [1] and the Regulations for the Safe Transport of Radioactive Material [2]. It supersedes both the Code on the Safety of Nuclear Power Plants: Governmental Organization (Safety Series No. 50-C-G (Rev. 1) (1988) and the safety standard on Establishing a National System for Radioactive Waste Management (Safety Series No. 111-S-1 (1995)).

OBJECTIVE

1.3. The objective of this Safety Requirements publication is to specify requirements related to the legal and governmental infrastructure for the safety of nuclear facilities and sources of ionizing radiation, radiation protection, the safe management of radioactive waste and the safe transport of radioactive material, which must be satisfied in order to achieve the objectives and apply the principles that are presented in the Safety Fundamentals publications [3–5].

SCOPE

1.4. This publication establishes requirements for legal and governmental responsibilities in respect of the safety of nuclear facilities, the safe use of sources of ionizing radiation, radiation protection, the safe management of radioactive waste and the safe transport of radioactive material. Thus, it covers development of the legal framework for establishing a regulatory body and other actions to achieve effective regulatory control of facilities and activities. Other responsibilities are also covered, such as those for developing the necessary support for safety, involvement in securing third party liability and emergency preparedness.

1.5. This publication establishes legal and governmental responsibilities which are common to a broad range of facilities and activities including the following:

Activities

- (1) Sources of ionizing radiation; their production, use (e.g. in industrial, research and medical applications), import and export;
- (2) transport of radioactive materials;
- (3) mining and processing of radioactive ores (e.g. uranium and thorium ores), and close-out of associated facilities;
- (4) site rehabilitation; and
- (5) activities in radioactive waste management (such as discharge and clearance).

Facilities

- (1) Enrichment and fuel manufacturing plants;
- (2) nuclear power plants;
- (3) other reactors (such as research reactors and critical assemblies);
- (4) spent fuel reprocessing plants;
- (5) radioactive waste management facilities (such as treatment, storage and disposal facilities);
- (6) nuclear and irradiation facilities for medical, industrial and research purposes; and
- (7) decommissioning or closure of nuclear facilities and site rehabilitation.

1.6. This publication establishes all the legal and governmental requirements for the entire range of facilities and activities, from the use of a limited number of radiation sources to a major nuclear power programme. Not all the safety requirements will apply for all States. Each State shall identify the requirements to apply as appropriate, taking into account the State's particular circumstances, the potential magnitude and nature of the hazard presented by the facilities and activities concerned, and the guidance provided in related Safety Standards Series publications.

1.7. This publication addresses all phases of the life cycle of facilities or the duration of activities, and any subsequent period of institutional control until there is no significant residual radiation hazard. For a facility, these phases usually include siting, design, construction, commissioning, operation and decommissioning (or close-out or closure).

1.8. This publication concentrates on legal and governmental aspects, with due emphasis on regulatory control. Other Safety Standards Series publications cover in more detail requirements for the operator responsible for facilities and activities.