

OVERVIEW OF THE IAEA'S SAFETY STANDARDS PROGRAMME

Under a new approach to the preparation and publication of IAEA Safety Standards, many documents are being reviewed and revised. The programme's status is presented here under five categories: General Safety; Nuclear Safety; Radiation Safety; Waste Safety; and Transport Safety. Publications in *italic bold* were or will be issued under authority of the IAEA Board of Governors, the Agency's 35-member policy-making body. Others were or will be issued under authority of the IAEA Director General. New publications in preparation or under revision are prefaced by the ▲ symbol. Please contact the IAEA Division of Publications for ordering copies of published Safety Series documents.



GENERAL SAFETY

SAFETY FUNDAMENTALS

Safety Series No. 110: ***The Safety of Nuclear Installations*** (1993)

Safety Series No. 111-F: ***The Principles of Radioactive Waste Management*** (1995)

Safety Series No. 120: ***Radiation Protection and the Safety of Radiation Sources*** (1996)

EMERGENCY PREPAREDNESS AND RESPONSE

Safety Series No. 50-SG-G6: ***Preparedness of Public Authorities for Emergencies at Nuclear Power Plants*** (1982)

Safety Series No. 50-SG-O6: ***Preparedness of the Operating Organization (Licensee) for Emergencies at Nuclear Power Plants*** (1982)

Safety Series No. 109: ***Intervention Criteria in a Nuclear or Radiation Emergency*** (1994)

Safety Series No. 98: ***On-Site Habitability in the Event of an Accident at a Nuclear Facility*** (1989)

▲ ***International Requirements for Nuclear and Radiation Emergency Preparedness and Response*** (in preparation/reference NS 43)

GOVERNMENTAL ORGANIZATION

▲ Safety Series 50-C-G (Rev. 1): ***Code on the Safety of Nuclear Power Plants: Governmental Organization*** (1988). Being revised under the working title ***Legal and Governmental Infrastructure for Nuclear, Radiation, Radioactive Waste and Transport Safety*** (in preparation/reference NS 180; to be issued under the General Safety category of publications.)

▲ Safety Series No. 50-SG-G1: ***Qualifications and Training of Staff of the Regulatory Body for Nuclear Power Plants*** (1979). Being revised under the working title ***Organization and Staffing of the Regulatory Body for Nuclear Facilities and Activities*** (reference NS

247; to be issued under the General Safety category of publications).

Safety Series No. 50-SG-G2: ***Information to be Submitted in Support of Licensing Applications for Nuclear Power Plants*** (1979)

▲ Safety Series No. 50-SG-G3: ***Conduct of Regulatory Review and Assessment during the Licensing Process for Nuclear Power Plants*** (1979). Being revised under the working title ***Conduct of Regulatory Review and Assessment of Nuclear Facilities and Activities*** (reference NS 248; to be issued under the General Safety category of publications).

Safety Series No. 50-SG-G4 (Rev. 1): ***Inspection and Enforcement by the Regulatory Body for Nuclear Power Plants*** (1996)

Safety Series No. 50-SG-G8: ***Licenses for Nuclear Power Plants: Content, Format and Legal Considerations*** (1982)

Safety Series No. 50-SG-G9: ***Regulations and Guides for Nuclear Power Plants*** (1984)

QUALITY ASSURANCE

The following publications also were issued in 1996 in a single document, Safety Series No. 50-C/SG-Q:

Safety Series No. 50-C-Q: ***Quality Assurance for Safety in Nuclear Power Plants and other Nuclear Installations*** (1996).

Safety Series No. 50-SG-Q1: ***Establishing and Implementing a Quality Assurance Programme*** (1996)

Safety Series No. 50-SG-Q2: ***Non-conformance Control and Corrective Actions*** (1996)

Safety Series No. 50-SG-Q3: ***Document Control and Records*** (1996)

Safety Series No. 50-SG-Q4: ***Inspection and Testing for Acceptance*** (1996)

Safety Series No. 50-SG-Q5: ***Assessment of the Implementation of the Quality Assurance Programme*** (1996)

Safety Series No. 50-SG-Q6: ***Quality Assurance in the Procurement of Items and Services*** (1996)

Safety Series No. 50-SG-Q7: ***Quality Assurance in Manufacturing*** (1996)

Safety Series No. 50-SG-Q8: ***Quality Assurance in Research and Development*** (1996)

Safety Series No. 50-SG-Q9: ***Quality Assurance in Siting*** (1996)

Safety Series No. 50-SG-Q10: ***Quality Assurance in Design*** (1996)

Safety Series No. 50-SG-Q11: ***Quality Assurance in Construction*** (1996)

Safety Series No. 50-SG-Q12: ***Quality Assurance in Commissioning*** (1996)

Safety Series No. 50-SG-Q13: ***Quality Assurance in Operation*** (1996)

Safety Series No. 50-SG-Q14: ***Quality Assurance Decommissioning*** (1996)

NUCLEAR SAFETY

OPERATION OF NUCLEAR POWER PLANTS

▲ Safety Series No. 50-C-O (Rev. 1): **Code on the Safety of Nuclear Power Plants: Operation** (1988). Being revised under the working title **Requirements for the Safety of Nuclear Power Plants: Operation** (reference NS 179)

Safety Series No. 50-SG-O1 (Rev. 1): *Staffing of Nuclear Power Plants and the Recruitment, Training and Authorization of Operating Personnel* (1991)

▲ Safety Series No. 50-SG-O2: *In-service Inspection for Nuclear Power Plants* (1980). Being revised under the working title *Maintenance, Testing, Surveillance and In-Service Inspection of Nuclear Power Plants* (reference NS 273) which will combine this Safety Series publication with two others, Safety Series No. 50-SG-07 and -08.

▲ Safety Series No. 50-SG-O3: *Operational Limits and Conditions for Nuclear Power Plants* (1979). Being revised under the working title *Operations: Operating Limits, Conditions, and Procedures* (reference NS 185).

Safety Series No. 50-SG-O4: *Commissioning Procedures for Nuclear Power Plants* (1980)

▲ Safety Series No. 50-SG-O5: *Radiation Protection during Operation of Nuclear Power Plants* (1983). Being revised under the working title *Radiation Protection and Radioactive Waste Management in Nuclear Power Plants* (reference NS 187) which will combine this Safety Series publication with Safety Series No. 50-SG-011.

▲ Safety Series No. 50-SG-O7 (Rev. 1): *Maintenance of Nuclear Power Plants* (1990). Being revised and incorporated in NS 273 noted above.

▲ Safety Series No. 50-SG-O8 (Rev. 1): *Surveillance of Items Important to Safety in Nuclear Power Plants* (1990). Being revised and incorporated in NS 273 noted above.

▲ Safety Series No. 50-SG-O9: *Management of Nuclear Power Plants for Safe Operation* (1984). Being revised under the working title of *Operating Organization* (reference NS 250).

Safety Series No. 50-SG-O10: *Core Management and Fuel Handling for Nuclear Power Plants* (1985)

▲ Safety Series No. 50-SG-O11: *Operational Management of Radioactive Effluents and Wastes Arising in Nuclear Power Plants* (1986). Being revised and incorporated in NS 187 noted above.

Safety Series No. 50-SG-O12: *Periodic Safety Review of Operational Nuclear Power Plants* (1994)

Safety Series No. 93: *System of Reporting Unusual Events in Nuclear Power Plants*

▲ *Fire Safety During Operation* (in preparation/reference NS 263)

▲ *Modifications to Nuclear Power Plants* (in preparation /reference NS 251).

DESIGN OF NUCLEAR POWER PLANTS

▲ Safety Series No. 50-C-D (Rev. 1): **Code on the Safety of Nuclear Power Plants: Design** (1988). Being revised under the working title **Requirements on the Safety of Nuclear Power Plants: Design** (reference NS 181).

Safety Series No. 50-SG-D1: *Safety Functions and Component Classification for BWR, PWR and PTR* (1979)

Safety Series No. 50-SG-D2 (Rev. 1): *Fire Protection in Nuclear Power Plants* (1992)

▲ Safety Series No. 50-SG-D3: *Protection System and Related Features in Nuclear Power Plants* (1980). Being revised under the working title *Instrumentation and Control for Systems Important to Safety in Nuclear Power Plants* (reference NS 252) which will combine this Safety Series publication with Safety Series No. 50-SG-D8.

Safety Series No. 50-SG-D4: *Protection Against Internally Generated Missiles and their Secondary Effects in Nuclear Power Plants* (1980)

Safety Series No. 50-SG-D5 (Rev. 1): *External Man-induced Events in Relation to Nuclear Power Plant Design* (1996)

▲ Safety Series No. 50-SG-D6: *Ultimate Heat Sink and Directly Associated Heat Transport Systems for Nuclear Power Plants* (1981). Being revised under the working title *Reactor Cooling Systems in Nuclear Power Plants* (reference NS 282) which will combine this Safety Series publication with Safety Series No. 50-SG-D13.

Safety Series No. 50-SG-D7 (Rev. 1): *Emergency Power Systems at Nuclear Power Plants* (1991)

▲ Safety Series No. 50-SG-D8: *Safety-related Instrumentation and Control Systems for Nuclear Power Plants* (1984). Being revised and incorporated in NS 252 noted above.

Safety Series No. 50-SG-D9: *Design Aspects of Radiation Protection for Nuclear Power Plants* (1985)

▲ Safety Series No. 50-SG-D10: *Fuel Handling and Storage Systems in Nuclear Power Plants* (1984). Being revised under the working title *Fuel Handling and Storage Systems in Nuclear Power Plants* (reference NS 276).

▲ Safety Series No. 50-SG-D11: *General Design Safety Principles for Nuclear Power Plants* (1986). Being revised under the working title *Design Verification and Safety Assessment* (reference NS 253).

Safety Series No. 50-SG-D12: *Design of the Reactor Containment Systems in Nuclear Power Plants* (1985)

▲ Safety Series No. 50-SG-D13: *Reactor Coolant and Associated Systems in Nuclear Power Plants* (1986). Being revised and incorporated in NS 282 noted above.

▲ Safety Series No. 50-SG-D14: *Design for Reactor Core Safety in Nuclear Power Plants* (1986). Being revised under the working title *Reactor Core Safety in Nuclear Power Plants* (reference NS 283).

▲ Safety Series No. 50-SG-D15: *Seismic Design and Qualification for Nuclear Power Plants* (1992)

▲ *Software for Computer Based Systems Important to Safety* (reference NS 264)

SITING OF NUCLEAR POWER PLANTS

Safety Series No. 50-C-S (Rev. 1): **Code on the Safety of Nuclear Power Plants: Siting** (1988)

Safety Series No. 50-SG-S1 (Rev. 1): *Earthquakes and Associated Topics in Relation to Nuclear Power Plant Siting* (1991)

▲ Safety Series No. 50-SG-S3: *Atmospheric Dispersion in Nuclear Power Plant Siting* (1980). Being revised under the working title *Dispersion of Radioactive Material Around Nuclear Power Plants*, which will combine this Safety Series publication and numbers 50-SG-S4, 50-SG-S6, and 50-SG-S7 (reference NS 182).

▲ Safety Series No. 50-SG-S4: *Site Selection and Evaluation for Nuclear Power Plants with Respect to Population Distribution* (1980). Being revised and incorporated in NS 182 noted above.

▲ Safety Series No. 50-SG-S5: *External Man-induced Events in Relation to Nuclear Power Plant Siting* (1981). Being revised under the same title (reference NS 258).

▲ Safety Series No. 50-SG-S6: *Hydrological Dispersion of Radioactive Material in Relation to Nuclear Power Plant Siting* (1985). Being revised and incorporated in NS 182 noted above.

▲ Safety Series No. 50-SG-S7: *Nuclear Power Plant Siting: Hydrogeological Aspects* (1984). Being revised and incorporated in NS 182 noted above.

Safety Series No. 50-SG-S8: *Safety Aspects of the Foundations of Nuclear Power Plants* (1986)

Safety Series No. 50-SG-S9: *Site Survey for Nuclear Power Plants* (1984)

▲ Safety Series No. 50-SG-S10A: *Design Basis Flood for Nuclear Power Plants on River Sites* (1983). Being revised under the same title (reference NS 280).

▲ Safety Series No. 50-SG-S10B: *Design Basis Flood for Nuclear Power Plants on Coastal Sites* (1983). Being revised under the same title (reference NS 281).

▲ Safety Series No. 50-SG-S11A: *Extreme Meteorological Events in Nuclear Power Plant Siting, excluding Tropical Cyclones* (1981). Being revised under the working title *Extreme Meteorological Events in Nuclear Power Plant Siting* which will combine this Safety Series publication with number 50-SG-S11B (reference NS 184)

▲ Safety Series No. 50-SG-S11B: *Design Basis Tropical Cyclone for Nuclear Power Plants* (1984). Being revised and incorporated in NS 184 noted above.

RESEARCH REACTOR SAFETY

▲ Safety Series No. 35-S1: ***Code on the Safety of Nuclear Research Reactors: Design*** (1992). Being revised under the working title ***Safety Requirements for the Design and Operation of Research Reactors*** (reference NS 272) which will combine this Safety Series publication with number 35-S2.

▲ Safety Series No. 35-S2: ***Code on the Safety of Nuclear Research Reactors: Operation*** (1992). Being revised and incorporated in NS 272 noted above.

Safety Series No. 35-G1: *Safety Assessment of Research Reactors and Preparation of the Safety Analysis Report* (1994)

Safety Series No. 35-G2: *Safety in the Utilization and Modification of Research Reactors* (1994)

▲ *Safety in the Commissioning of Research Reactors* (in preparation/reference NS 259)

▲ *Research Reactors: Maintenance, Periodic Testing and Inspections* (in preparation/reference NS 260)

▲ *Research Reactors: Operational Limits and Conditions* (in preparation/working identification number NS 261)

▲ *Design, Operation and Safety Assessment of Spent Fuel Storage for Research Reactors* (in preparation/reference NS 262)

RADIATION SAFETY

Safety Series No. 115: ***International Basic Safety Standards for Protection Against Ionizing Radiation and for the Safety of Radiation Sources*** (1996)

▲ Safety Series No. 26: *Radiation Protection of Workers in the Mining and Milling of Radioactive Ores* (1983). Being revised under the same title (reference NS 17).

▲ Safety Series No. 89: *Principles for the Exemption of Radiation Sources and Practices from Regulatory Control* (1988). Being revised under the working title *Application of the Principles for Exclusion, Exemption and Clearance of Radiation Sources and Practices from Regulatory Control* (reference NS 33)

Safety Series No. 101: *Operational Radiation Protection: A Guide to Optimization* (1990)

Safety Series No. 107: *Radiation Safety of Gamma and Electron Irradiation Facilities* (1992)

▲ *Radiation Protection in the Medical Exposure* (in preparation/reference NS 22)

▲ *Occupational Radiation Protection in the Decommissioning of Nuclear Facilities* (in preparation/reference NS 21)

▲ *Occupational Radiation Protection: Application of Principles* (in preparation/reference NS 69)

▲ *Occupational Radiation Protection: Assessment of Exposure from Intakes of Radionuclides* (in preparation/reference NS 85)

▲ *Occupational Radiation Protection: Assessment of Exposure from External Sources of Radiation* (in preparation/reference NS 12)

▲ *Consumer Products Containing Radioactive Substances* (in preparation/reference NS 31)

▲ *Application of the Principles of Radiation Protection to Chronic Exposure Situations* (in preparation/reference NS 51)

▲ *Preventing, Detecting of and Responding to Illicit Trafficking in Radioactive Materials* (in preparation/reference NS 61)

▲ *Training in Radiation and Waste Safety* (in preparation/reference NS 73)

▲ *Quality Assurance in Radiation Protection* (in preparation/reference NS 113)

▲ *Safety of Radiation Sources* (in preparation/reference NS 114)



RADIOACTIVE WASTE SAFETY

Safety Series No. 69: ***Management of Radioactive Wastes from Nuclear Power Plants*** (1985)

Safety Series No. 78: ***Definition and Recommendations for the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, 1972 — 1986 Edition*** (1986)

Safety Series No. 79: *Design of Radioactive Waste Management Systems at Nuclear Power Plants* (1986)

Safety Series No. 105: *The Regulatory Process for the Decommissioning of Nuclear Facilities* (1990)

Safety Series No. 108: *Design and Operation of Radioactive Waste Incineration Facilities* (1992)

INFRASTRUCTURE

Safety Series No. 111-S-1: ***Establishing a National System for Radioactive Waste Management*** (1995)

Safety Series No. 111-G-1.1: *Classification of Radioactive Waste* (1994)

▲ *Application of the Principles of Radiation Protection to the Rehabilitation of Contaminated Areas (Practices and Interventions)* (in preparation/reference NS 286)

DISCHARGES

▲ ***Discharges of Radionuclides into the Environment*** (in preparation/reference NS 285)

▲ Safety Series No. 77: *Principles for Limiting Releases of Radioactive Effluents into the Environment* (1986). Being revised under working title *Regulatory Control of Radioactive Discharges into the Environment* (reference NS 25).

Safety Series No. 90: *The Application of the Principles for Limiting Releases of Radioactive Effluents in the Case of the Mining and Milling of Radioactive Ores* (1989)

▲ *Sources and Environmental Monitoring for Radiation Protection of the Public* (in preparation/reference NS 62)

PRE-DISPOSAL

▲ ***Pre-disposal Management of Radioactive Waste (Including Decommissioning)*** (in preparation/reference NS 152)

▲ *A System for Management of Residual Radioactive Waste Including Clearance Levels* (in preparation/reference NS 161)

▲ *Pre-disposal Management of Low and Intermediate Level Waste from Nuclear Fuel Cycle Facilities* (in preparation/reference NS 159)

▲ *Pre-disposal Management of High Level Waste* (in preparation/reference NS 163)

▲ *Pre-disposal Management of Radioactive Waste from Medicine, Industry and Research* (in preparation/reference NS 160)

▲ *Decommissioning of Nuclear Power and Large Research Reactors* (in preparation/reference NS 257)

▲ *Decommissioning of Nuclear Fuel Cycle Facilities* (in preparation/reference NS 171)

▲ *Decommissioning of Medical, Industrial and Research Facilities* (in preparation/reference NS 173)

▲ *Safety Assessment for Pre-disposal Waste Management* (in preparation/reference NS 284)

DISPOSAL

▲ ***Near Surface Disposal of Radioactive Waste*** (in preparation/reference NS 153)

Safety Series No. 111-G-3.1: *Siting of Near Surface Disposal Facilities* (1994)

▲ *Design, Construction, Operation and Closure of Near Surface Repositories* (in preparation/reference NS 165)

▲ *Safety Assessment for Near Surface Disposal* (in preparation/reference NS 166)

▲ Safety Series No. 99: ***Safety Principles and Technical Criteria for the Underground Disposal of High Level Radioactive Wastes*** (1989). Being revised under the working title ***Geological Disposal of Radioactive Waste*** (reference NS 154)

Safety Series No. 111-G-4.1: *Siting of Geological Disposal Facilities* (1994)

▲ *Design, Construction, Operation and Closure of Geological Repositories* (in preparation/reference NS 168)

Safety Series No. 96: *Guidance for Regulation of Underground Repositories for Disposal of Radioactive Wastes* (1989)

▲ *Safety Assessment for Geological Disposal* (in preparation/reference NS 169)

▲ Safety Series No. 85: ***Safe Management of Wastes from the Mining and Milling of Uranium and Thorium Ores*** (1987). Being revised under working title *Strategies and Protocols for the Management of Waste from Mining and Milling of Uranium and Thorium Ores* (reference NS 277)

REHABILITATION

▲ ***Rehabilitation of Contaminated Areas in Intervention Situations*** (in preparation/reference NS 162)

▲ *Rehabilitation of Areas with Contamination from Past Activities and Accidents, in Intervention Situations* (in preparation/reference NS 172)

TRANSPORT SAFETY

Safety Series No. ST-1: ***Regulations for the Safe Transport of Radioactive Material (Requirements)*** (1996)

▲ Safety Series No. 7: *Explanatory Material for the IAEA Regulations for the Safe Transport of Radioactive Material* (Second Edition 1990). Being revised under working title *Advisory Material for the Regulations for the Safe Transport of Radioactive Material* (reference NS 245) which will combine this Safety Series publication with number 37.

▲ Safety Series No. 37: *Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material* (Third Edition, 1990). Being incorporated in NS 245 noted above.

▲ Safety Series No. 87: *Emergency Response Planning and Preparedness for Transport Accidents Involving Radioactive Material* (1988). Being revised under working title *Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material* (reference NS 246).

Safety Series No. 112: *Compliance Assurance for the Safe Transport of Radioactive Material* (1994)

Safety Series No. 113: *Quality Assurance for the Safe Transport of Radioactive Material* (1994)