

General requirements for safety systems of nuclear power plants



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Subcommittee on Emergency Core Cooling Systems of Nuclear Power Plants vii

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Preface

This is the first edition of CSA N290.0, *General requirements for safety systems of nuclear power plants*. This Standard is one of a series of standards on reactor control systems, safety systems, and instrumentation for nuclear power plants.

The CSA N-Series of Standards provide an interlinked set of requirements for the management of nuclear facilities and activities. CSA N286 provides overall direction to management to develop and implement sound management practices and controls, while the other CSA nuclear Standards provide technical requirements and guidance that support the management system. This Standard works in harmony with CSA N286 and does not duplicate the generic requirements of CSA N286; however, it may provide more specific direction for those requirements.

This Standard reflects the operating experience of the Canadian nuclear power industry.

Users of this Standard are reminded that the design, manufacture, construction, commissioning, operation, and decommissioning of nuclear facilities in Canada are subject to the provisions of the *Nuclear Safety and Control Act* and its supporting Regulations.

This Standard was prepared by the Subcommittee on Emergency Core Cooling Systems of Nuclear Power Plants, under the jurisdiction of the Technical Committee on Reactor Control Systems, Safety Systems, and Instrumentation of Nuclear Power Plants, and the Strategic Steering Committee on Nuclear Standards.

October 2011

Notes:

- (1) Use of the singular does not exclude the plural (and vice versa) when the sense allows.
- (2) Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.
- (3) This publication was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as “substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity”. It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this publication.
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 - (c) wording of the proposed change; and
 - (d) rationale for the change.

N290.0-11

General requirements for safety systems of nuclear power plants

1 Scope

1.1

This Standard covers the design, qualification, installation, operation, maintenance, inspection, and documentation of the safety systems for a water-cooled nuclear power plant.

1.2

This Standard provides the general requirements for the safety systems. This Standard is a companion document of CSA N290.2 and N290.3, which outline specific requirements.

1.3

In CSA standards, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (nonmandatory) to define their application.

2 Reference publications

This Standard refers to the following publications and where such reference is made, it shall be to the edition listed below.

CSA (Canadian Standards Association)

N285.0-08/N285.6 Series 8

General requirements for pressure-retaining systems and components in CANDU nuclear power plants/Material Standards for reactor components for CANDU nuclear power plants

N285.4-09

Periodic inspection of CANDU nuclear power plant components

N285.5-09

Periodic inspection of CANDU nuclear power plant containment components

N290.0-05 (R2010)

Management system requirements for nuclear power plants