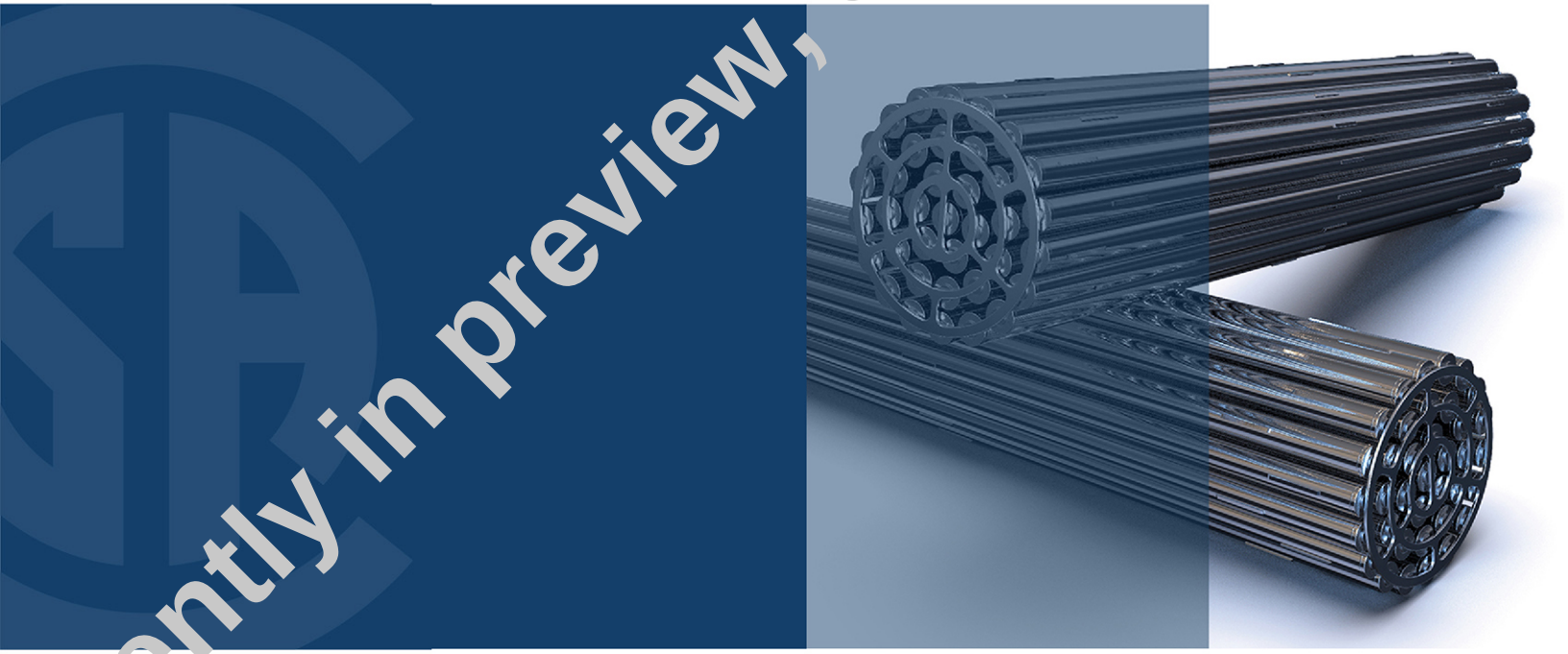
CSA N290.12:23

Human factors in design for nuclear power plants



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Preface

This is the second edition of CSA N290.12, *Human factors in design for nuclear power plants*. It supersedes the previous edition published in 2014.

Changes to this edition include the following:

a) update of requirements to ensure alignment with other recently issued CSA standards and regulatory documents;
b) update of definitions for alignment with CSA common definitions and other CSA N290A series standards;
c) addition of clause titles throughout and descriptive text for Figure A.1 to improve application, accessibility, and usability;
d) addition of a new Clause 4 on management, graded approach, and design input;
e) addition of subclauses in Clause 5 related to planning;
f) split of first subclause of Clause 9 on evaluation and Annex C on evaluation; and
g) addition of the recommendation for establishing human factors (HF) design inputs in Clause 7.2.2 a) and in Annex A as an added bar.

This Standard provides the basic framework for considerations of HF in design in nuclear power plants. It establishes an industry consensus on appropriate HF in design planning for plant modifications and new plant designs.

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.* The Canadian Nuclear Safety Commission might impose additional requirements to those specified in this Standard.

This Standard was prepared by the Subcommittee on Human Factors in Design for 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, and has been formally approved by the Technical Committee.

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 Standard 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 Standard.*