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Quality assurance program requirements for the supply of items and services for nuclear power plants, Category 2

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Contents

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Preface

This is the first edition of CSA N299.2, *Quality assurance program requirements for the supply of items and services for nuclear power plants, Category 2.*

The CSA N299 series of Standards defines a consistent set of quality assurance program requirements for the provision of items and services for nuclear power plants.

Users of this Standard are reminded that civilian nuclear facilities in Canada are subject to the provisions of the *Nuclear Safety and Control Act* and its *Regulations*. The Canadian Nuclear Safety Commission (CNSC) can therefore impose additional requirements to those specified in this Standard.

The CSA N-Series 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 Group 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.

The following people made valuable contributions to the development of the seed documents for the N299 series of Standards: G. Cairns; L. Colligan; A. Galati (COG); N. Gaudani (COG); S. Harris (Ontario Power Generation); P. Karsten (Bruce Power); W. Kettle (Ontario Power Generation); J. Lopez (Bruce Power); M. Pletosu (Ontario Power Generation); D. Rowland (Bruce Power); and M. Small (Ontario Power Generation).

This Standard was prepared by the Subcommittee on Quality Assurance Program Requirements for Supply of Items and Services for Nuclear Power Plants, under the jurisdiction of the Technical Committee on Management Systems for Nuclear Facilities 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.*

4) *To submit a request for interpretation of this Standard, please send the following information to inquiries@csagroup.org and include "Request for interpretation" in the subject line:*

a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*

b) *provide an explanation of circumstances surrounding the actual field condition; and*

c) *where possible, phrase the request in such a way that a specific "yes" or "no" answer will address the issue.*

Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization *and are available on the* Current Standards Activities *page at standardsactivities.csa.ca.*

5) *This Standard is subject to review five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to inquiries@csagroup.org and include "Proposal for change" in the subject line:*

a) *Standard designation (number);*

b) *relevant clause, table, and/or figure number;*

c) *wording of the proposed change;*
d) *rationale for the change.*

N299.2-16
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0 Introduction

0.1 Background

The CSA Z299 series of Standards (referred to collectively as "CSA Z299") was selected by Ontario Hydro and AECL in the 1970s as the quality assurance standard for the procurement of items and services for their nuclear facilities. As a result, the CSA Z299 Standards were embedded in the design bases of all nuclear power stations and some utility-owned nuclear facilities licensed in Canada, and continue to be used. These Standards were initially developed from Ontario Hydro quality standards and contained many of the requirements that were in force at that time. When the CSA N286 series of Standards were developed in the late 1970s, they referenced CSA Z299 as the recommended quality assurance standard for items and services. CSA Z299 was a commercial standard used broadly both nationally and internationally, and it was the pre-cursor to development of the ISO 9000 series of Standards. With the development of ISO 9001 in 1994, ISO 9001 became the commercial quality standard that was generally adopted by industry. CSA Z299 was no longer supported by the Technical Committee in charge of CSA Z299, and it was eventually withdrawn.

Internationally, there have been mixed approaches to creating industry-specific QA standards, such as augmenting ISO 9001 or creating completely new standards. CSA Z299 has not been issued since 1985 and needed to be updated to reflect current needs. To fulfill this need, nuclear utilities have developed, through a joint COG project, a set of graded standards that align with the withdrawn CSA Z299 series so that the impact to the design basis and content transition to the new standards is minimized. These graded standards were used as the seed documents for the new N299 series of Standards, which incorporates operating experience and current best practices and harmonizes, to the extent possible, with other standards (both national and international).

0.2 Category series

This is the second in a series of four standards for the four quality assurance program categories (Category 1 to Category 4). See Figure 1 for a summary of this series of Standards and applicable elements.

This Standard was developed in response to industry need for a quality assurance standard for items and services supplied to nuclear power plants.