



# PROFESSIONAL DEVELOPMENT COURSE

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## CSA N299 STANDARDS TRAINING WORKSHOP

**LECTURER:** Mr. Richard Barnes. P. Eng.  
**DATE:** **Mar 26-27, 2020**  
**LOCATION:** ANRIC Enterprises Inc., 701 Evans Ave., Suite 202, Toronto  
**FEE:** **Register four weeks before and pay at time of registration: \$1,465.00 (pp/plus HST)**  
**Registrations received within four weeks: \$1,615.00 (pp/plus HST)**

Canadian Utilities evaluate the quality assurance programs of potential manufacturers and suppliers for the supply chain of their Nuclear Power Plants using the requirements of the CSA N299 Series of Quality Assurance Standards. With the continued refurbishment and maintenance of the plants in Canada, manufacturers and suppliers who want to be part of this activity will most times be required to meet these requirements. This course provides an in-depth basis for understanding and selecting the appropriate qualification level of items and services. Using the knowledge gained from this program, manufacturers and suppliers will be able to effectively manage their existing programs to identify the differences between the quality levels and select the appropriate level for subsuppliers.

### OBJECTIVE:

This two-day course will lead the participants, through active discussion and workshops, to a clear understanding of the various N299 standards' differences and selection processes. Practical examples are workshopped in a group environment to help participants determine which N299 program would apply to sub-suppliers of materials and components using the preferred prescribed method in the CSA standard N299.

### CONTENTS: A two-day course consisting of the following:

<p><b>DAY 1:</b></p> <p><b>SUBJECTS</b></p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Terminal Objectives</li> <li>• Enabling Objectives</li> <li>• What is Quality Assurance?</li> <li>• Review and Scope of the four Standards (including Appendix A)</li> <li>• Review and Structure/Organization of the Material in the Standards</li> <li>• What are the regulatory requirements governing the use of the Standard (License, N286, N285)</li> <li>• Brief comparison of N299 Standards with the Z299 Standards</li> </ul> <p><b>WORKSHOPS</b></p> <ol style="list-style-type: none"> <li>1. Review and discussion of the Requirements in Clause 4</li> <li>2. Review and discussion of the Requirements in Clauses 5.1 - 5.4</li> <li>3. Review and discussion of the Requirements in Clauses 5.5 - 5.21</li> </ol>	<p><b>DAY 2:</b></p> <p><b>SUBJECTS</b></p> <ul style="list-style-type: none"> <li>• Review of Annex A requirements and application</li> </ul> <p><b>WORKSHOPS</b></p> <ol style="list-style-type: none"> <li>1. Application of Annex A Case Study No: 1</li> <li>2. Application of Annex A Case Study No: 2</li> </ol> <ul style="list-style-type: none"> <li>• Review of Annexes B, C, D and E</li> <li>• Checkout</li> </ul>
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### WHO SHOULD ATTEND?

Persons requiring an in-depth knowledge of the N299 series of QA standards and how to apply them. This workshop will be useful to the many disciplines involved in the manufacturing and utility industries supporting the refurbishment projects. The personnel in these disciplines include managers, supervisors, designers, inspectors, QA officers, manufacturers and regulators.

## EXPECTATIONS:

Course participants will be expected to actively participate in the discussions with both questions and comments. These discussions are expected to allow the participants to understand the details of the N299 QA standards as well as preparing them to be able to select the appropriate N299 standard for any product. Participants are expected to engage in guided workshop activities and present rationale to other groups.

## LECTURERS:

**Mr. Richard W. Barnes** is the Principle Engineer at ANRIC Enterprises Inc. and has been actively involved for over 30 years in the development of the ASME and CSA Codes and Standards associated with Pressure Boundary for both nuclear and non-nuclear power plants. Mr. Barnes leads the team at ANRIC Enterprises Inc that offers technical assistance for companies registering Pressure Boundary products, and provides expert consultation on the application of the various pressure boundary codes. The ANRIC team also develops and delivers training on both the CSA and ASME Codes and Standards for delivery on-site at the ANRIC Learning Centre and off-site at the clients' premises. Mr. Barnes sits on various code committees responsible for the development of Codes and Standards. He is the past-chair and member of the ASME Standard Committee of the BPV III, which is responsible for the development of Section III of the ASME BPV Code; past Vice-Chair and member of N285A Technical Committee on CANDU Nuclear Power Plant Systems and Components, member of the B51 Technical Committee on Boilers and Pressure Vessels, and member of N286 Technical Committee on Overall Quality Assurance for Nuclear Power Plants of the CSA Standards Committee; and member of ASME B16 Standards Committee of Standardization of Valves, Flanges, Fittings and Gaskets and member of the Subcommittee responsible for development of the B16:34 Standard. Mr. Barnes has received the ASME Dedicated Service Award and the highest ASME Nuclear award, the Bernard F. Langer Nuclear Codes and Standards Award in recognition for his contributions to the nuclear industry. In 2007, was elected to the ASME Grade of Fellow. In 2009, Mr. Barnes received the CNA Outstanding Contribution Award and in 2011 the CSA Award of Merit. In 2018 he received the Melvin R. Green Codes and Standards medal.

## IMPORTANT INFORMATION:

**PAYMENT:** Full payment is due at time of registration. Payment can be made via credit card (VISA, MasterCard or American Express), cheque or purchase order. **PLEASE NOTE:** Payment is non-refundable.

**CANCELLATION POLICY:** Cancellation must be received in writing 7 days prior to course start date. If cancellations are made after that date, the cancellation fee will be 50% of the course cost. You may send a substitute. Notification of a substitute must be received at least 48 hours prior to the commencement of the course or a cancellation fee will be charged. **PLEASE NOTE:** The cancellation fee can be discounted towards any future course taken at the ANRIC Learning Centre.

**FOOD AND BEVERAGE:** At the start of the day juice, fruit, pastries, coffee and tea will be provided before the course. Coffee and Tea will be provided at mid-morning break, including pop in the afternoon and lunch will be provided. Please indicate when you are enrolling for the course if you have any specific food requirements. Every effort will be made to accommodate your needs in this area.

**COURSE TIMES:** Registration begins at 8:00 a.m. The course will begin at 8:30 a.m. and conclude at 4:30 p.m.

**DRESS:** Please dress so that you will be comfortable. It is prudent to dress light and bring a light jacket in case you need it during the course. The tolerance to temperature varies for people and sometimes room temperature acceptable to the majority may not be right for an individual.

**PARKING:** There is parking available for a fee of \$5.00 per day. There is parking at 701 and 703 Evans Ave.

**ANRIC Enterprises Inc. specializes in courses of calibre to industry by providing lecturers who have recognized expertise and who are involved with the development and application of Codes and Standards.**

ANRIC Enterprises Inc. reserves the right to cancel any course and/or change lecturers.