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CODES AND JURISDICTIONAL REQUIREMENTS

LECTURER: CNSC, TSSA, ANRIC Enterprises Inc., and Independent Consultants
DATE: TBD
LOCATION: ANRIC Enterprises Inc., 701 Evans Ave., Suite 202, Toronto
FEE: Register two weeks before: **\$1,395.00** (pp/plus HST)
Registrations received within two weeks: \$1,495.00 (pp/plus HST)

OBJECTIVE:
 This two-day course provides an overview of the Federal government requirements applicable to pressure retaining systems and components in CANDU Nuclear Power Plants. It reviews the Canadian Standards that have been developed for the CANDU Nuclear Power Plants and discusses the interaction between the Regulations and these Standards.

CONTENTS: A two day course consisting of the following:

<p>DAY 1:</p> <p>CANADIAN LICENSING REQUIREMENTS</p> <ul style="list-style-type: none"> Authority and Responsibility; Canadian Approach to Nuclear Safety; Nuclear Standards - Regulatory Documents; Safety Analysis Requirements; CNSC relationship with other Jurisdictions; The Future <p>PROVINCIAL REQUIREMENTS</p> <ul style="list-style-type: none"> Boiler and Pressure Vessels Act B51 - M1997: Boiler, Pressure Vessels, and Pressure Piping Code <p>SPECIFIC FEDERAL REQUIREMENTS</p> <ul style="list-style-type: none"> Obtaining Code Classification Approval; Code Classification of Systems & Components; Code Effective Date <p>CNSC/TSSA RELATIONSHIPS</p> <ul style="list-style-type: none"> Jurisdictional Agreements 	<p>DAY 2:</p> <p>QUALITY ASSURANCE PROGRAM REQUIREMENTS FOR NUCLEAR POWER PLANTS</p> <ul style="list-style-type: none"> CAN3 - N286 Series <p>GENERAL REQUIREMENTS FOR PRESSURE-RETAINING SYSTEMS & COMPONENTS IN CANDU NUCLEAR POWER PLANTS</p> <ul style="list-style-type: none"> N285 Series CAN3 - N285.0 <p>PROCUREMENT QUALITY ASSURANCE</p> <ul style="list-style-type: none"> CSA Z299 Series / ISO - 9000 <p>CORPORATE QA PROGRAM</p>
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WHO SHOULD ATTEND?
 This course is excellent training for those persons whose work activity requires them to apply the various requirements of these Codes and Standards. It will enhance their understanding of why various elements are required and enable them to conform more readily to these requirements. The course will be useful to the many disciplines that are required to understand and implement code requirements. The people in these disciplines include designers, inspectors, purchasing agents, maintenance personnel and operation personnel.

EXPECTATIONS:
 Course participants with adequate experience will have attained the following information at the end of the course:

- An understanding of the relationship between the safe regulation of Nuclear Power Plants and the Codes and Standards developed for the nuclear program.
- An understanding of the concepts of Code Classification and the relationship between the CSA Standards for Pressure Boundary and the ASME Standards with emphasis on CSA N285.0.
- An understanding of the QA programs associated with the nuclear program and their importance in the overall approach to safety. An example of the application for the participant of the program is developed.

LECTURERS:
Mr. Ken Kirkhope is a Senior Specialist at the Canadian Nuclear Safety Commission (CNSC), which he joined in 1996. His main areas of work are in pressure retaining components, refurbishment, long term operation and aging management of nuclear power plants. Ken is an associate member of the Canadian Standard Association N285A technical committee on "Requirements for Pressure Retaining Systems and Components of CANDU Nuclear Power Plants". He is also co-author of several CNSC Regulatory Documents and IAEA Safety

Guides relating to aging management and long term operation. He holds a graduate degree in Mechanical Engineering from Carleton University.

Mrs. Cathy Turylo is the Chief Engineer at TSSA, formerly MCCR. Mrs. Turylo has been Chief Engineer for 5 years and has been employed with TSSA for over 15 years holding various positions. She is currently the TSSA representative for the CSA B51 and B52 committees and has a graduate degree in Mechanical Engineering from the University of Toronto.

Mr. Brian Chan is currently employed by TSSA as a Mechanical Design Engineer. He has been involved in the Nuclear Industry for 25 years and employed by TSSA for 12 years. He has a Master's degree in Welding from the University of Waterloo.

Mr. Richard 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.

Dr. Amarjit Banwatt has been actively involved for over 35 years in the stress analysis field and the use of ASME Codes and CSA Standards. He has been involved for the past 10 years in the development of the CSA N285.0 Standard as member of the Technical Committee. He has worked at AECL to prepare registration documents for Pressure Boundary components. Dr. Banwatt is a recognized stress analyst and Codes expert; he is consulted by many groups for Code clarifications. Dr. Banwatt is the past president of the Canadian Society for Mechanical Engineering and past member of NSERC Grants Selection Committee, Ottawa. He is a fellow of the Canadian Society for Mechanical Engineering and the Engineering Institute of Canada.

Mr. Carl R. Jones has over 30 years of experience in the area of quality with the nuclear industry. The following activities are among the many QA related activities undertaken.: Implemented and audited Z299 programs in the manufacturing industry; Implemented and audited ISO 9001 programs in the manufacturing industry; Developed and audited N286.1 and N286.2 programs; Audited 10 CFR 50 appendix B and NQA-1 programs. During this period, he has served on the following working groups: Member of the Canadian Advisory Committee (CAC) to TC176, the ISO international group responsible for the ISO 9000 standards, 1990-2004; Member of the standard interpretation, Committee for ISO 9000, 1990 to present; Formerly a member of the Z299 Technical and Interpretation Committee from 1984; Member of the Auditor Certification Board of the National Quality Institute (NQI) which certified auditors in Canada, 1991 to 2002; Member of the Electric Utility Advisory Committee (EAUC) from 1987 to 2001; The Ontario representative to the Nuclear Procurement Issues Committee (NUPIC), a coalition of US and International Nuclear Utilities from 1993 to 2002.

IMPORTANT INFORMATION:

PAYMENT: Full payment is due exactly two weeks before course date or at time of registration. Payment can be made via credit card (VISA, MasterCard or American Express) or cheque. **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

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discounted towards any future course taken at the ANRIC Learning Centre.

ACCOMMODATION: The Stay Inn, 560 Evans Ave (2 minute drive to 701 Evans Ave), has provided a quote of \$99.00 per night for 1 bed and \$109.00 for 2 beds, including a continental breakfast. The Stay Inn can be contacted at info@stayinn.ca or 416-259-7899/1-888-445-4473 for more information. Please refer to ANRIC Enterprises Inc. when speaking with reservations. This is a small hotel, so it is advisable to book early.

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 caliber 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.