

NB16-0609 - Calibration and Testing Requirements – 7/17/17

1.6.6.2 I), 1.6.7.2 I), 1.6.8.2 I)

Add to Category 1, 2, and 3 the following:

The NR Certificate Holder may utilize calibration and test activities performed by subcontractors when surveys and audits are performed. As an alternative to performing a survey and audit for procuring Laboratory Calibration and Test Services, the NR Certificate Holder as documented in their Quality Program may accept accreditation of an International Calibration and Test Laboratory Services by the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) provided this alternative method is described in the NR Certificate Holder' Quality Program and the following requirements are met:

- a) The NR Certificate Holder shall review and document verification that the supplier of calibration or test services was accredited by an accredited body recognized by the ILAC MRA encompassing ISO/IEC-17025:2005, "General Requirements for the Competence of Testing and Calibration Laboratories";
- b) For procurement of calibration services, the published scope of accreditation for the calibration laboratory covers the needed measurement parameters, ranges and uncertainties.
- c) For procurement of testing services, the published scope of accreditation for the test laboratory covers the needed testing services including test methodology and tolerances/uncertainty.
- d) The NR Certificate Holder's purchase documents shall include:
 - 1) Service provided shall be in accordance with their accredited ISO/IEC-17025:2005 program and scope of accreditation;
 - 2) As-found calibration data shall be reported in the certificate of calibration when items are found to be out-of-calibration;
 - 3) Standards used to perform calibration shall be identified in the certificate of calibration;
 - 4) Notification of any condition that adversely impacts the laboratories ability to maintain the scope of accreditation;
 - 5) Any additional technical and/or quality requirements, as necessary, which may include; tolerances, accuracies, ranges, and standards.
 - 6) Service suppliers shall not subcontract services to any other supplier.
- e) The NR Certificate Holder shall upon receipt inspection, validate that the laboratory documentation certifies that:
 - 1) Services provided by the laboratory has been performed in accordance with their ISO/IEC-17025:2005 program and performed within their scope; and
 - 2) Purchase order requirements have been met.

NB17-0702

Category 2 Paragraph 1.6.7.2 n) 2)

f. Non Destructive Examination reports, including results of examinations, shall identify the ~~ASNT, SNT-TC-1A, CP-189, or ACCP~~ name and certification level of personnel interpreting the examination results. as ASME Section XI.

17-154 Withers 7-17-17

Add additional wording to paragraphs 1.6.6.2 r); 1.6.7.2 r) and 1.6.8.2 r):

r) Audits

The provisions identified in ASME NQA-1, Part 1, and Requirement 18 shall apply and shall include the following:

A comprehensive system of planned and periodic ~~internal~~ audits of the "NR" Certificate Holder's Quality Assurance Program shall be performed ~~by the "NR" Certificate Holder~~. Audits shall include internal audits by the Certificate Holder and audits by the Authorized Inspection Agency.

Audit frequency shall be specified in the organization's Quality Assurance Manual. Audits shall be conducted at least annually for any ongoing code activity to verify compliance with Quality Assurance Program requirements, performance criteria and to determine the effectiveness of the Quality Assurance Program. When no code work has been performed, the required annual audit need only include those areas of responsibility required to be continually maintained such as training, audits, organizational structure, and Quality Assurance Program revisions. The Quality Assurance Manual shall as a minimum describe the following:

- 1) Audits shall be performed in accordance with written procedures or checklists by qualified audit personnel not having direct responsibility in areas being audited;
- 2) Audit personnel shall be qualified in accordance with the current requirements of ASME NQA-1;
- 3) Audit results shall be documented and reviewed by responsible management;
- 4) Requirements for follow-up actions shall be specified for any deficiencies noted during the audit;
- 5) Audit records and applicable documentation shall be made available to the Authorized Nuclear Inspector for review;
- 6) Audit records shall include as a minimum;
 - a. Written procedures;
 - b. Checklists;
 - c. Reports;
 - d. Written replies; and
 - e. Completion of corrective actions.



ACCREDITATION OF “NR” REPAIR ORGANIZATIONS

The National Board of Boiler and Pressure Vessel Inspectors

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ACCREDITATION OF "NR" REPAIR ORGANIZATIONS

1.0 Scope

This document establishes the requirements for organizations seeking a National Board *Certificate of Authorization* to use the "NR" Symbol Stamp (*Certificate of Authorization*) for the Repair/Replacement activities for nuclear items performed in accordance with National Board Inspection Code (NBIC) and American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME BPV Code) Section III for Category 1, Section XI for Category 2, and/or other codes or standards for Category 3 requirements.

- 1.1 Organizations seeking a *Certificate of Authorization* must have and maintain an Inspection Agreement with an Authorized Inspection Agency that is authorized for nuclear inspection. Additionally, such organizations are required to have a written Quality System in the English language, that complies with the NBIC. The written Quality System must include the expected scope of activities.
- 1.2 *Certificates of Authorization* may be issued to organizations whose business is to perform nuclear repair/replacement activities, to manufacturers or assemblers that hold an ASME BPV Code "N"-type *Certificate of Authorization* and Certification Mark, to owners and users of nuclear components and to other organizations that qualify in accordance with these requirements.

2.0 Application

- 2.1 Organizations seeking to obtain or renew a *Certificate of Authorization* must apply to the National Board using forms obtained from the National Board. Application for renewal must be made prior to the expiration date of the *Certificate of Authorization*.
- 2.2 When an organization has plants or shops in more than one location, the organization must submit a separate application for each plant or shop.
- 2.3 For field-only scopes, the address of record shown on the *Certificate of Authorization* is the location from which the administrative, technical and quality aspects of the business are controlled.

3.0 Review of Applicant's Facility

3.1 Prior to issuance or renewal of an "NR" *Certificate of Authorization*, the repair organization, its written Quality System, and its facilities are subject to a review and verification of implementation of its written Quality System by a Survey Team. The organization shall demonstrate sufficient implementation of the written Quality System to provide evidence of the organization's knowledge of repair/replacement activities appropriate for the requested scope of work. The demonstration may be performed using current work, a demonstration mock-up, or a combination of both.

3.2 The Survey Team, as a minimum, shall consist of one representative ~~each~~ from:

- ~~the National Board;~~
- ~~the Authorized Inspection Agency including the Authorized Nuclear Inspector Supervisor (ANIS) and the Authorized Nuclear Inspector (ANI) assigned to the location; and and~~

~~Additionally, the Survey Team may include a representative from the National Board member jurisdiction where the organization is located and/or the Regulatory Authority.~~

~~3.23.3~~ The applicant shall have the latest mandatory edition of the NBIC, all parts; the ASME BPV Code Sections the organization is including in its scope, and the applicable edition of ASME BPV Code Section XI, as required by the regulatory authority.

~~3.33.4~~ Upon notification of the review dates from the National Board, it is the responsibility of the organization to make arrangements for the review.

~~3.43.5~~ A recommendation to issue, renew, or withhold the *Certificate of Authorization* shall be included in a Qualification Review Report prepared by the Survey Team. The completed Qualification Review Report shall be forwarded to the National Board.

~~3.5~~ When all requirements have been met, a *Certificate of Authorization* will be issued evidencing permission to use the "NR" Symbol Stamp. The *Certificate of Authorization* shall expire on the triennial anniversary date.

4.0 Repair of Nuclear Valves

An applicant seeking National Board authorization to repair ASME "NV"/"NB" stamped pressure relief devices, shall hold a valid "VR" *Certificate of Authorization* for the repair of ASME Section III pressure relief valves and also meet the applicable requirements for "NR" certification and NBIC Part 34, Supplement 76. When all requirements have been met, the applicant may be issued an "NR" *Certificate of Authorization*, which clearly outlines the scope of work for Section III pressure relief devices.

5.0 Use of the "NR" Certificate of Authorization

5.1 Stamp Use

Each "NR" symbol stamp shall be obtained from the National Board and shall be used only by the repair organization within the scope and limitations, under which it was issued. The organization's written Quality System shall provide for constant control of the "NR" Symbol Stamp. The organization shall not permit others to use the "NR" symbol stamp assigned to them.

5.2 Return of Stamp

Each applicant shall agree that the stamp is the property of the National Board and will be promptly returned upon demand. The "NR" Symbol Stamp shall be returned to the National Board if the organization discontinues the use of the "NR" Symbol Stamp or if there exists no inspection agreement with an Authorized Inspection Agency, or if the *Certificate of Authorization* has expired and a new certificate has not been issued.

5.3 *Certificate of Authorization* Contents

The name and address of the repair organization, the scope and category of the certificate (shop only, field only, both shop and field), the certificate number, the issue date, expiration date and special processes shall be specified on the organization's "NR" *Certificate of Authorization*.

5.4 Changes in Scope, Ownership, Name, Location or Address

The National Board must be notified when an organization holding a *Certificate of Authorization* changes scope, ownership, name,

location, or address. The National Board will provide appropriate forms to revise the *Certificate of Authorization*. At the option of the National Board, a re-review of the organization's written quality, system and/or its implementation may be required.

5.5 Issuance of Multiple "NR" Symbol Stamps

The holder of a *Certificate of Authorization* may obtain more than one "NR" symbol stamp provided its written Quality System manual controls the use of such stamps from the address of record shown on the *Certificate of Authorization*.

6.0 Written Quality System

6.1 A holder of a *Certificate of Authorization* shall have and maintain a written Quality System. It shall be treated confidentially by the National Board and by the Survey Team. An outline of the Quality Program requirements for each category of ~~for a written Quality System~~ can be found in the NBIC, Part 3.

6.2 Revisions to the written Quality System shall be acceptable to the Authorized Nuclear Inspector Supervisor of the Authorized Inspection Agency before implementation.

6.3 The *Certificate of Authorization* holder shall be subject to an audit annually by the Authorized Inspection Agency to ensure compliance with the written Quality System.

7.0 Due Process

The National Board provides procedural due process in connection with accreditation activities. There are several levels to which an aggrieved party may appeal. The process may be initiated by contacting the National Board's Executive Director.

June 30 2017

DRAFT

Summary Notes :

**2017 Workshop on the
The National Board Accreditation Program**

National Archives, 395 Wellington St, Ottawa, Salon D, May 25, 2017

PURPOSE:

The CNSC hosted a one day workshop on "The National Board Accreditation Program" with representatives of the National Board of Boiler and Pressure Vessel Inspectors (National Board), the licensees and Authorized Inspection Agencies (AIAs) for nuclear power plants and NRU research reactor.

The one day workshop was held on May 25, 2017 at National Archives, 395 Wellington St, Ottawa, Salon D. The workshop provided an opportunity to learn about and discuss the National Board Accreditation Program, with presentation from the National Board representatives and various perspectives from both the licensees and the AIA.

MEETING AGENDA:

See attachment 1.

ATTENDEES:

The workshop was hosted by the CNSC Engineering Design Assessment Division (EDAD) and attended by representatives from/for the National Board, Bruce Power, Canadian Nuclear Laboratories (CNL), New Brunswick Power (NB Power), New Brunswick Department of Public Safety (NBDPS), Ontario Power Generation (OPG), Ontario Technical Standards and Safety Authority (TSSA), as well as CNSC staff from the Directorate of Power Reactor Regulation (DPRR) and from the Management Systems Division (MSD).

See attachment 2 for a complete list of attendees.

BACKGROUND

The National Board is an internationally recognized organization composed of chief inspectors for the states and cities of the United States and provinces of Canada. The National Board plays an essential role in ensuring the acceptance and interchangeability among jurisdictional authorities and Authorized Inspection Agencies responsible for enforcing the safety codes and standards of the American Society of Mechanical Engineers' (ASME) Boiler and Pressure Vessel Codes (ASME BPV Code). The National Board administer the rules for commissioning of Authorized Inspectors, Authorized Nuclear Inspectors, and they also publish "The National Board Inspection Code (NBIC)" which establishes rules for inspection and repairs to boilers and pressure vessels.

In September 2016, the National Board sent a letter (Reference 1) to the CNSC requesting formal

recognition and communication to the Canadian nuclear industry about the National Board “NR Accreditation Program” for performing repair/replacement activities on nuclear components and systems before, during, and after installation within a nuclear facility.

The CNSC has been reviewing this request by the National Board and has held several consultations with members of the Canadian industry, including members of the CSA N285A Technical Committee which is responsible for the development of the CSA N285 Series of Standards on “Pressure Retaining Systems and Components in CANDU Nuclear Power Plants”. Through these discussions it became clear that there are several aspects of the current “Canadian” regulatory, technology and industry framework that need to be explored. It was determined that it would be most efficient and beneficial to have a workshop on this topic, with representatives of the National Board to make a presentation and to answer our questions.

Mr. Charles Withers and Mr. Bob McLaughlin from the National Board agreed to participate in the workshop. As well, a range of participants from the Provincial Authorized Inspection Agencies, each of the Nuclear power Plant utilities and the industry, as well as CNSC staff that deal with engineering, quality assurance and regulatory aspects were invited to attend.

SUMMARY OF MEETING

The meeting was co-chaired by Ken Kirkhope and Yanpeng Wang of the CNSC Engineering Design Assessment Division (EDAD).

Chris Cole, Director CNSC-EDAD, welcomed the participants and encouraged everyone to share their views and feedback. Following a round of introductions, Y. Wang briefly reviewed the meeting purpose and objectives.

K. Kirkhope then made a presentation which covered the CNSC mandate and regulatory framework, expectations, current activities and challenges relating to the regulation of pressure boundaries at nuclear facilities (see Attachment 3, Item 1).

C. Withers, representing the National Board, then made a presentation which covered the National Board NR and NVR Accreditation Programs (see Attachment 3, Item 2).

The remainder of the workshop included roundtable discussions and review of questions by the participants (see Attachment 3, Item 3).

4. Wrap-Up / Closing remarks

C. Cole thanked everyone for participating, following which Y. Wang and K. Kirkhope gave a summary of the results, recommendations and follow-up actions.

FOLLOW-UP ITEMS

- 1) CNSC to continue discussion with National Board, Licensees and provincial jurisdictions.
- 2) CNSC to follow up with CSA N285A Technical Committee.

Reference:

1. Letter, from C. Withes (National Board) to Y. Wang (CNSC), "*Request CNSC Recognition of the National Board Accreditation Program Not Understood By the Nuclear Industry*", September 09, 2016, Edoc#5082537.

Attachment 1

2017 CNSC Workshop on The National Board NR Accreditation Program Agenda

Library and Archives Canada, 395 Wellington St, Ottawa (meeting room Salon D)

- 9:00 am** **Meet and Greet**
- 9:30 am** **Session 1 – Introduction and CNSC Presentation**
- Opening Remarks (C. Cole)
 - Round of introduction(All)
 - Review preliminary agenda (All)
 - CNSC presentation on Canadian Regulatory Framework
- 10:15 am** *Networking Break*
- 10:30 am** **Session 2 – Presentation by National Board**
- National Board NR and NR-VR Accreditation Programs
- 11:45 am** **Session 3 – Selection of Afternoon Discussion Topics**
- Roundtable – key messages from participation
 - Review of Questions List (attached) and Selection of Afternoon Discussion Topics
- 12:15 pm** *Lunch (work lunch will be provided)*
- 1:00 pm** **Session 4 – Workshop Discussion Topics**
(The final Topics will be decided in Session 3)
- 3:00 pm** *Networking Break*
- 3:10 pm –** **Session 5 – Workshop Conclusions**
- Summary of actions
 - Closing Remarks
- 3:30 pm – Adjourn**

Attachment 2

WORKSHOP ATTENDEES

- | | |
|----------------------|--|
| 1. Bruce Power | P. Tang |
| 2. Black & MacDonald | G. Lemay |
| 3. CNL | K. Lundie, J. de Ruiter |
| 4. CNSC | C. Cole, K. Kirkhope, Y. Wang, K. Chaudhry, S. Eom, G. Sagals, S. Xu,
X. Wei, Z. Zeng, B. Carroll, K. Dulhanty P. Wong, D. Papaz, |
| 5. National Board | C. Withers, R. McLaughlin |
| 6. NB-DPS | E. Creaser |
| 7. NB Power | J. Lepper |
| 8. OPG | R. Chander, G. Deleanu, I. Nicolau |
| 9. TSSA | B. Chan, V C. Dinic |

Attachment 3

WORKSHOP PRESENTATIONS

1. CNSC Presentation 1 (K. Kirkhope)



2. National Board Presentation (C. Withers)



3. Questions for National Board (Y. Wang)



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