



**THE
NATIONAL
BOARD**
OF BOILER AND
PRESSURE VESSEL
INSPECTORS

**NATIONAL BOARD
TASK GROUP
NR**

MINUTES

Meeting of July 12th, 2021
Cincinnati, OH

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The National Board of Boiler & Pressure Vessel
Inspectors 1055 Crupper Avenue

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1) Call to Order

Mr. Edwards called the meeting to order at 8:00 AM Eastern Time.

2) Introduction of Members and Visitors

- a) Introductions took place amongst all members and visitors, and an attendance sheet was completed by the Secretary. ([Attachment 1](#)).
- b) Secretary Hellman will reach out to C. Withers and E. Maloney for participation status.

3) Announcements

- a) The National Board will host a reception for all committee members and visitors on Wednesday evening from 5:30pm – 7:30 pm in the Continental Room on the Mezzanine Level.
- b) The National Board will host a breakfast for all committee members and visitors on Thursday morning at 7:00 am and a lunch at 11:30 am in the Rosewood room on the 4th floor of the Hotel.
- c) A coffee station with snacks will be provided in the morning and afternoon outside of the meeting rooms on the 3rd and 4th floors.
- d) The 2021 NBIC is available as of July 1st, 2021. at 5:30pm.
- e) Paul Edwards to retire and withdraw from NBIC officer positions. A new NRTG Chair to be appointed by the SC Chair of R&A.

4) Adoption of the Agenda

The adoption of the Agenda was motioned, seconded, and unanimously approved.

5) Approval of the Minutes of the January 11, 2021 Meeting

There was a motion to approve the Minutes of January 11, 2021. The motion was seconded and unanimously approved.

6) Action Items

Item Number: 19-68	NBIC Location: Part 3, 1.6	Attachment 2
General Description: Quality System For Qualification For The National Board “R” Certificate		
Subgroup: Repairs and Alterations		
Task Group: B. Wielgoszinski (PM), R. Spuhl, T. Roberts		
Explanation of Need: Review of 1.6 for possible requirement for ANI's and ANII's to hold the (R) and/or (I) Endorsements for "NR" activities.		
Jan 2021 Meeting Action: B. Wielgoszinski presented and discussion took place regarding the need for Category 1 activities within the NR program given ASME Code cases (N801 and N870) now in ASME Section III. The need for Inspectors to hold the (I) Endorsement and the impact on the ANIAs was discussed at length. Additional discussion on Category 1 (prior to fuel loading) and ANI vs ANII is needed. A Review and Comment Letter Ballot to go to NR TG, SC R&A, SG R&A, and SG PRD once a proposal is revised. This was a Progress Report .		
Meeting Action: B. Wielgoszinski presented – proposal was revised to correct references of “s” to “t” and was unanimously approved to go to a Rvw & Comment LB to NRTG, SG, and SC for Part 3 and PRD SG and SC for Part 4.		

Item Number: 20-47	NBIC Location: Part 3, 9.1	Attachment 3
<p>General Description: Revision of the definition of ANIA in Section 9 of all Parts</p> <p>Subgroup: Repairs and Alterations</p> <p>Task Group: R. Spuhl (PM), B. Wielgoszinski and T. Roberts</p> <p>Explanation of Need: ANIA can be revised to clarify requirements and activities of AIA's performing NR inspection activities.</p> <p>Jan 2021 Meeting Action: B. Wielgoszinski and T. Roberts were added to the Task Group for this Item. Discussion took place regarding the ASME Scopes required may include Section III and/or Section XI in order to be an “ANIA”. A new Item was opened (20-52) to address additional requirements to be considered such as the Inspector having familiarity with ASME Section XI Div. 1 to meet revised “ANIA” requirements. This was a Progress Report.</p> <p>Meeting Action: R. Spuhl presented, and the proposed definition was revised to better define the scope of activities an ANIA Inspector and the applicable standards (i.e. Section III, B31.1, etc) and the related Category scopes they work to. The proposal was revised and unanimously approved.</p>		
Item Number: 20-48	NBIC Location: Part 3, 1.6	Attachment 4
<p>General Description: Review NR Program (1.6) to 2015 NQA-1 Edition</p> <p>Subgroup: Repairs and Alterations</p> <p>Task Group: P. Edwards (PM)</p> <p>Explanation of Need: Latest NQA-1 revision to be compared to NR program (1.6) for consistency.</p> <p>Jan 2021 Meeting Action: P. Edwards presented and Mr. Roberts presented his comments on the Review and Comment LB for this Item. Discussion on NQA (2019 Edition) was held vs the regulatory approved version (2015), and the references in Section 1.6. Additional proposed requirements may be prescribed dependent on the Quality Program being based on NQA-1 or 10 CFR Appdx B. More discussion will be needed based on what action ASME takes. The Proposal is to be revised to remove External Audit requirements for Cat. 2. Additional changes are still needed. This was a Progress Report.</p> <p>Meeting Action: P. Edwards presented. The comment from Mr. Tom Roberts on the last Rvw and Comment LB discussed regarding the adopted NQA-1 edition and applicable requirements a QA Program based upon 10CFR50 Appx B would require specific to Category 2 NR Cert. Holders. Zoom meeting with NRTG to be scheduled in 2 weeks with Mr. Roberts to work on this item.</p> <p>Progress Report</p>		

Item Number: 20-52	NBIC Location: Part 3, 1.6.2 a) 2)	No Attachment
General Description: Rvw NR requirements for ASME Section XI Div. 2 potential applications		
Subgroup: Repairs and Alterations		
Task Group: T. Roberts (PM)		
Explanation of Need: This was created based on discussion from Item 20-47 dealing with ANIA requirements. R&A activities for XI Div. 2 and action by the NR TG may be needed in response to the NRC developing new Part 53 for Advanced Reactors.		
Jan 2021 Meeting Action: Action Item 20-52 was opened to track if the NR TG wants to address the R&A activities for XI Div. 2 and action by the NR TG may be needed in response to the NRC developing new Part 53 for Advanced Reactors.		
Meeting Action: P. Edwards presented (Mr. Roberts not in attendance). Progress Report		

Item Number: 21-02	NBIC Location: Part 3, 1.6	No Attachment
General Description: Define “Fuel Loading” as it pertains to NR activities		
Subgroup: Repairs and Alterations		
Task Group: P. Edwards (PM) – New TG: R. Spuhl (PM), B. Toth		
Explanation of Need: the NR TG would like to clarify “Fuel Loading” as used to determine Category 1,2 or 3 NR activities.		
Meeting Action: P. Edwards presented and discussion on Cat. 1 vs Cat. 2 activities. A new TG was formed to start working on this item since Paul is retiring. New PM selected was Ray Spuhl and TG member B. Toth.		
Progress Report.		

7) **New Business:**

- a) **NEW ITEM** – (Submitted via Business Center at meeting, ID 1533). Bob W presented: Clarification that parts used in NR activities are fabricated by NR Certificate Holders and inspected by appropriately endorsed National Board commissioned Inspectors. This may require revision of the NR Form to include parts. – Bob W. (PM) unless new TG Chair would like to assign a PM.
- b) **Nominations for NR TG Chair** – No volunteers - SC R&A Chair to make selection

8) **Update on Promoting NR Accreditation Program**

- a) Discussion of Sect. XI Div. 2 – Published in 2019 – Advanced Reactor Technologies
- b) Action Item 20-52 was opened to track if the NR TG wants to address the R&A activities for XI Div. 2 and action by the NR TG may be needed in response to the NRC developing new Part 53 for Advanced Reactors. – Mr. Roberts was not present. No progress.

9) **Future Meetings**

- a) January 17-20, 2022 – Westgate Hotel, San Diego, CA

10) Adjournment

There being no further business before the Task Group, the Chair adjourned the meeting at 11:30 AM, without objection

Respectfully submitted,

Terrence Hellman

Terrence Hellman NR TG
Secretary

NB19-68
NR Program Requirements
Endorsement requirements for the Inspector
RVW 01/09/21

Scope: Review Part 3, paragraph 1.6 for the need to define or elaborate on the Endorsement requirements for the ANI inspecting within the NR Program.

Statement of need:

Currently the NBIC only defines the need for the ANI to hold a valid commission with the appropriate endorsement (Ref Part 3, para 1.3). But the concern expressed was that the NBIC does not specify what commission or endorsement is actually required to make inspections. The provisions for qualification of Inspectors, including Endorsements is specified in RCI-1 (NB-263), Rules for Commissioned Inspectors. This document specifies the duties of Inspectors and Supervisors as well as the qualification.

There seems to be a gap in the NBIC with regard to making it clear which Commission and which Endorsement(s) are required to be maintained for the Inspector. So this change to the NBIC is to close that gap without having to repeat the detailed information from RCI-1 into the NBIC. And only pertinent references to RCI-1 are included.

Narrative:

A little history first...In 2010(?) the National Board split the National Board Commission into two separate and distinct Commissions. The IS Commission for the qualification of Inspectors performing inservice inspection of boilers and pressure vessels. (Note here that this does NOT include inservice inspection of nuclear equipment. The second endorsement was the AI Commission, which was for the qualification of Inspectors performing new construction (i.e. ASME) inspection. The purpose of this split was to make it easier for candidates to obtain a Commission to perform new construction inspections. Previous to then, all Inspectors held the single commission which was based on inservice inspection of B/PV's. There were several other advantages to creating the split, but they are not germane to this discussion.

Supporting the new construction theory was the need to focus additional qualification and training for different segments of the B/PV industry, and the role established by ASME for Inspector Supervisors. To achieve this special Endorsements were available for these needs. The table below summarizes these endorsement and their applicability.

Endorsement	Activity
A *	Inspection of ASME non nuclear B/PV's. ASME Sections I, IV, VIII, X, and XII
N	Inspection of ASME nuclear components. ASME Section III Division 1
I	ASME Inservice Inspection of nuclear power plants, ASME Section XI.
C	Inspection of ASME nuclear concrete components. ASME Section III Division 2
B	Supervision of A endorsed Inspectors
S	Supervision of N endorsed Inspectors
IS	Supervision of I endorsed Inspectors
CS	Supervision of C endorsed Inspectors

*Ultimately dropped and made part of the AI Commissioning process.

It should be noted that these endorsements may only be obtained by a new construction Inspector, or an AI Commissioned Inspector. They were not made available to the IS Commissioned Inspector.

Repair work was considered an inservice (not nuclear) activity and not new construction. Therefore an Inspector performing any repair or alteration work needed to hold the IS commission for this purpose. This would include any work in accordance with Part 3 of the NBIC. You can recall that the NR program

contained an additional requirement that the Inspector must be an Authorized Nuclear Inspector, which would require him to hold the N endorsement.

It was several years later that the National Board determined that repair and alteration work was rather unique since the NBIC contains some special rules that modify or augment the rules on the Code of Construction, i.e. ASME BPV Code. So the National Board created the R endorsement dealing solely with the rules and activities on the NBIC. And they also deemed that the endorsement could be held by either an IS Inspector or an AI Inspector.

As we progressed through time there was never an issue within the NBIC as to which Inspector could perform inspections of repairs/alteration. As long as the individual held a NB Commission they were good to go. But with the advent of the Commission splitting process and development of the R endorsement it makes a difference today who may perform such inspections. And just a bit more complicated with the NR Program.

So now may be the time to make it clear in the NBIC which individuals may make repair and alteration inspections, including the additional requirements for the NR program. RCI-1 contains all the rules for qualification, examination, and maintenance of Commissions and Endorsements. Also, it contains the duties of the Inspectors and Supervisors. There is no need to repeat the information, but with some additional changes to the NBIC Part 3, we can point the reader to RCI-1 to obtain any detailed information they may need.

With regard to the NR Program, is noted that the Authorized Nuclear Inspector (ANI) provisions for Category 3 lack some of the fundamentals that would apply to all Categories of Activities under the NR Program. A change should be made to incorporate some of those fundamentals into Cat 3 activity.

Proposal:

- 1) Revise paragraph 1.3 to make reference to RCI-1 for qualifications of Inspectors/Supervisors.
- 2) Revise paragraphs 1.6.6.2 t) and 1.6.7.2 t) to reference 1.6.9, Interface with the Owner.
- 3) Revise paragraph 1.6.8.2 t) to be more in line with 1.6.6.2 and 1.6.7.2.

THIS PAGE FOR INFORMATION ONLY1.6.6.2 t) *(NOTE: applicability to Category 1)*

t) Authorized Nuclear Inspector

Measures shall be taken to reference the commissioned rules for National Board Authorized Nuclear Inspector, in accordance with NB-263, RCI-1 *Rules for Commissioned Inspectors*. The "NR" Certificate Holder shall ensure that the latest documents including the Quality Assurance Manual, procedures and instructions are made available to the Authorized Nuclear Inspector. The Authorized Nuclear Inspector shall be consulted prior to the issuance of a repair/replacement plan by the "NR" Certificate Holder in order that the Authorized Nuclear Inspector may select any in-process inspection or hold points when performing repair/replacement activities. The "NR" Certificate Holder shall keep the Authorized Nuclear Inspector informed of progress of the repair/replacement activity so that inspections may be performed. The Authorized Nuclear Inspector shall not sign Form NR-1 or Form NVR-1, as applicable, unless satisfied that all work carried out is in accordance with this Section. The Authorized Nuclear Inspector and Authorized Nuclear Inspector Supervisor shall have access to areas where work is being performed including subcontractors facilities in order to perform their required duties. The ANI shall be involved in dispositions and verification for non-conformances and corrective actions involving quality or code requirements.

1.6.7.2 t) *(NOTE: Applicability to Category 2)*

t) Authorized Nuclear Inspector

Measures shall be taken to reference the commissioned rules for National Board Authorized Nuclear Inspector, in accordance with NB-263, RCI-1 *Rules for Commissioned Inspectors*. The "NR" Certificate Holder shall ensure that the latest documents including the Quality Assurance Manual, procedures and instructions are made available to the Authorized Nuclear Inspector. The Authorized Nuclear Inspector shall be consulted prior to the issuance of a repair/replacement plan by the "NR" Certificate Holder in order that the Authorized Nuclear Inspector may select any in process inspection or hold points when performing repair/replacement activities. The "NR" Certificate Holder shall keep the Authorized Nuclear Inspector informed of progress of the repair/replacement activity so that inspections may be performed. The Authorized Nuclear Inspector shall not sign Form NR-1 or Form NVR-1, as applicable, unless satisfied that all work carried out is in accordance with this section. The Authorized Nuclear Inspector and Authorized Nuclear Inspector Supervisor shall have access to areas where work is being performed including subcontractors facilities in order to perform their required duties. The ANI shall be involved in dispositions and verification for nonconformances and corrective actions involving quality or code requirements.

1.6.8.2 t) *(NOTE: Applicability to Category 3. Also, the references to 1.6.6.2 s) and 1.6.7.2 s) are related to Audits. The text therein is almost identical to 1.6.8.2 s) except there is no reference to mandatory compliance to ASME NQA-1 for Category 3.)*

t) Authorized Nuclear Inspector

Qualifications and duties shall be as specified in ASME QAI-1 and NB-263, RCI-1 for the Authorized Inspection Agencies, Authorized Nuclear Inspector and the Authorized Nuclear Inspector Supervisor. Additional requirements are specified in NBIC Part 3, 1.6.6.2 s), 1.6.7.2 s), and 1.6.9.

THIS PAGE FOR INFORMATION ONLY

**1.6.9 INTERFACE WITH THE OWNER'S REPAIR/REPLACEMENT PROGRAM
(FOR CATEGORIES 1, 2, AND 3 AS APPLICABLE)**

Interface with the owner's repair/replacement program shall meet the following:

- a) The "NR" Certificate Holder's repair/replacement plan (see Table 1.6.9) shall be subject to the acceptance of the owner and the owner's Authorized Nuclear Inservice Inspector (ANII) and shall be subject to review by the Jurisdiction and Regulatory Authorities having jurisdiction at the plant site.
- b) Repair/Replacement activities of nuclear components shall meet the requirements of ASME Section III, ASME Section XI, and/or other applicable standard, and the owner's requirements, and shall be subject to verification by the Jurisdiction and Regulatory Authorities having jurisdiction at the plant site.
- c) Documentation of the repair/replacement activities of nuclear components shall be recorded on the Report of Repair/Replacement Activities of Nuclear Components and Systems for Nuclear Facilities, Form NR-1, or Report of Repair/Replacement Activities for Nuclear Pressure Relief Devices, Form NVR-1, in accordance with the NBIC Part 3, Section 5. The completed forms shall be signed by a representative of the "NR" Certificate Holder and the Authorized Nuclear Inspector when the repair/replacement activity meets the requirements of this section. For repair/replacement activities that involve design changes, Form NR-1, or Form NVR-1, as applicable, shall indicate the organization responsible for the design or design reconciliation in accordance with the owner's requirements.
- d) The "NR" Certificate Holder shall provide a copy of the signed Form NR-1 or Form NVR-1, as applicable, to the owner, the Enforcement, and the Regulatory Authority if required, and the Authorized Nuclear Inspection Agency. The original Form NR-1 or Form NVR-1, as applicable, shall be registered with the National Board by the "NR" Certificate Holder. A NB registration log shall be maintained by the "NR" Certificate Holder. See NBIC Part 3, Section 5.5 and 5.6.
- e) The "NR" Certificate Holder shall provide a nameplate/stamping for repair/replacement activities for each nuclear component unless otherwise specified by the owner's Quality Assurance Program. The required information and format shall be as shown in NBIC Part 3, Section 5.

Existing	Proposed
<p>1.3 INSPECTOR a) Inspection and certification shall be made by an Inspector holding a valid commission with the appropriate endorsement issued by the National Board and employed by an Authorized Inspection Agency (see NBIC Part 3, Section 9, Glossary of Terms for definition of Authorized Inspection Agency).</p>	<p>1.3 INSPECTOR a) Inspection and certification shall be made by an Inspector holding a valid National Board Commission with the “R” appropriate endorsement issued by the National Board and employed by an Authorized Inspection Agency in accordance with RCI-1. (see NBIC Part 3, Section 9, Glossary of Terms for definition of Authorized Inspection Agency).</p>
<p>1.6.6.2 t) <u>t) Authorized Nuclear Inspector</u> Measures shall be taken to reference the commissioned rules for National Board Authorized Nuclear Inspector, in accordance with NB-263, RCI-1 <i>Rules for Commissioned Inspectors</i>. The “NR” Certificate Holder shall ensure that the latest documents including the Quality Assurance Manual, procedures and instructions are made available to the Authorized Nuclear Inspector. The Authorized Nuclear Inspector shall be consulted prior to the issuance of a repair/replacement plan by the “NR” Certificate Holder in order that the Authorized Nuclear Inspector may select any in-process inspection or hold points when performing repair/replacement activities. The “NR” Certificate Holder shall keep the Authorized Nuclear Inspector informed of progress of the repair/replacement activity so that inspections may be performed. The Authorized Nuclear Inspector shall not sign Form NR-1 or Form NVR-1, as applicable, unless satisfied that all work carried out is in accordance with this Section. The Authorized Nuclear Inspector and Authorized Nuclear Inspector Supervisor shall have access to areas where work is being performed including subcontractors facilities in order to perform their required duties. The ANI shall be involved in dispositions and verification for non-conformances and corrective actions involving quality or code requirements.</p>	<p>Add the following:</p> <p>The Authorized Nuclear Inspector shall hold the “N”, “I”, and “R” endorsements on his/her Commission.</p> <p>Additional requirements regarding Owner Interface are specified in 1.6.9</p>
<p>1.6.7.2 t) <u>t) Authorized Nuclear Inspector</u> Measures shall be taken to reference the commissioned rules for National Board Authorized Nuclear Inspector, in accordance with NB-263, RCI-1 <i>Rules for Commissioned Inspectors</i>. The “NR” Certificate Holder shall ensure that the latest documents including the Quality Assurance Manual, procedures and instructions are made available to the Authorized Nuclear Inspector. The Authorized Nuclear Inspector shall be consulted</p>	<p>Add the following:</p> <p>The Authorized Nuclear Inspector shall hold the “N”, “I”, and “R” endorsements on his/her Commission.</p>

Existing	Proposed
<p>prior to the issuance of a repair/replacement plan by the “NR” Certificate Holder in order that the Authorized Nuclear Inspector may select any in-process inspection or hold points when performing repair/replacement activities. The “NR” Certificate Holder shall keep the Authorized Nuclear Inspector informed of progress of the repair/replacement activity so that inspections may be performed.</p> <p>The Authorized Nuclear Inspector shall not sign Form NR-1 or Form NVR-1, as applicable, unless satisfied that all work carried out is in accordance with this Section. The Authorized Nuclear Inspector and Authorized Nuclear Inspector Supervisor shall have access to areas where work is being performed including subcontractors facilities in order to perform their required duties. The ANI shall be involved in dispositions and verification for non-conformances and corrective actions involving quality or code requirements.</p>	<p>Additional requirements regarding Owner Interface are specified in 1.6.9</p>
<p>1.6.8.2 t) <u>t) Authorized Nuclear Inspector</u> Qualifications and duties shall be as specified in ASME QAI-1 and NB-263, RCI-1 for the Authorized Inspection Agencies, Authorized Nuclear Inspector and the Authorized Nuclear Inspector Supervisor. Additional requirements are specified in NBIC Part 3, 1.6.6.2 t), 1.6.7.2 t), and 1.6.9.</p>	<p>1.6.8.2 t) <u>t) Authorized Nuclear Inspector</u> Measures shall be taken to reference the commissioned rules for National Board Authorized Nuclear Inspector, in accordance with NB-263, RCI-1 <i>Rules for Commissioned Inspectors</i>. The Authorized Nuclear Inspector shall hold the “N”, “I”, and “R” endorsements on his/her Commission. The “NR” Certificate Holder shall ensure that the latest documents including the Quality Assurance Manual, procedures and instructions are made available to the Authorized Nuclear Inspector. The Authorized Nuclear Inspector shall be consulted prior to the issuance of a repair/replacement plan by the “NR” Certificate Holder in order that the Authorized Nuclear Inspector may select any in-process inspection or hold points when performing repair/replacement activities. The “NR” Certificate Holder shall keep the Authorized Nuclear Inspector informed of progress of the repair/replacement activity so that inspections may be performed. The Authorized Nuclear Inspector shall not sign Form NR-1 or Form NVR-1, as applicable, unless satisfied that all work carried out is in accordance with this Section. The Authorized Nuclear Inspector and Authorized Nuclear Inspector Supervisor shall have access to areas where work is being performed including subcontractors facilities in order to perform</p>

Existing	Proposed
	their required duties. The ANI shall be involved in dispositions and verification for non-conformances and corrective actions involving quality or code requirements. Additional requirements regarding Owner Interface are specified in 1.6.9.

CODE REVISIONS OR ADDITIONS

Request for code revisions or additions shall provide the following:

a) Proposed Revisions or Additions

For revisions, identify the rules of the code that require revision and submit a copy of the appropriate rules as they appear in the code, marked up with the proposed revision. For additions, provide the recommended wording referenced to the existing code rules.

b) Statement of Need

Provide a brief explanation of the need for the revision or addition.

c) Background Information

Provide background information to support the revision or addition, including any data or changes in technology that form the basis for the request that will allow the Committee to adequately evaluate the proposed revision or addition. Sketches, tables, figures, and graphs should be submitted as appropriate. When applicable, identify any pertinent paragraph in the code that would be affected by the revision or addition and identify paragraphs in the code that reference the paragraphs that are to be revised or

Record 20-47

PM Raymond Spuhl

Last Updated 4/1/21

Scope of Proposal: Definition of Authorized Nuclear Inspection Agency needs to be updated to clarify what is required in the ASME Certificate of Accreditation scope of work.

Current definition

Authorized Inspection Agency (AIA)

Inservice: An Authorized Inspection Agency is either:

- a) a Jurisdictional authority as defined in the National Board Constitution; or
- b) an entity that is accredited by the National Board meeting NB-369, *Accreditation of Authorized Inspection Agencies Performing Inservice Inspection Activities*; NB-371, *Accreditation of Owner-User Inspection Organizations (OUIO)*; or NB-390, *Accreditation of Federal Inspection Agencies (FIA)*.

New Construction: An Authorized Inspection Agency is one that is accredited by the National Board meeting the qualification and duties of NB-360, *National Board Acceptance of Authorized Inspection Agencies (AIA) Accredited by the American Society of Mechanical Engineers (ASME)*.

Authorized Nuclear Inspection Agency — An Authorized Inspection Agency intending to perform nuclear inspection activities and employing nuclear Inspectors / Supervisors.

Proposed definition

Authorized Nuclear Inspection Agency — An Authorized Inspection Agency meeting the qualification and duties of NB-360, National Board Acceptance of Authorized Inspection Agencies (AIA) Accredited by the American Society of Mechanical Engineers (ASME) and intending to perform nuclear inspection activities and employing Authorized Nuclear ~~nuclear~~ Inspectors / Supervisors. The Certificate of Accreditation from ASME must include the performance of inspection activities covering Section III and Section XI of the ASME Boiler and Pressure Vessel Code in accordance with the applicable parts of QAI-1.

The National Board should consider more specific details be listed on the Certificate of Acceptance when acceptance is based on the ASME Certificate of Accreditation.

Such as “Accreditation to provide third party inspection services for repairs and alterations, and nuclear repair/replacement in accordance with the National Board Inspection Code”.

Other definitions to be considered

Nuclear Inspector – An individual who holds a valid and current National Board AI Commission with the R, N, and I endorsements.

Repair / Replacement Activity (from Section XI)

The term *repair/replacement activity* includes those activities previously known as *repair, replacement, modification, or, alteration*. Those previous terms no longer have a unique meaning or significance and are combined in the term *repair/replacement activity*. Reasons for repair/replacement activities may include the following:

- (a) discrepancies detected during inservice inspection, maintenance, or service
- (b) regulatory requirements change
- (c) design changes to improve equipment service
- (d) changes to improve reliability
- (e) damage
- (f) failure during service
- (g) personnel exposure
- (h) economics
- (i) end of service life
- (j) addition of new items or systems

Risk-Informed Safety Class (RISC)–1 structures, systems, and components (SSCs) means safety-related SSCs that perform safety significant functions.

Risk-Informed Safety Class (RISC)–2 structures, systems and components (SSCs) means nonsafety-related SSCs that perform safety significant functions.

Risk-Informed Safety Class (RISC)–3 structures, systems and components (SSCs) means safety-related SSCs that perform low safety significant functions.

Risk-Informed Safety Class (RISC)–4 structures, systems and components (SSCs) means nonsafety-related SSCs that perform low safety significant functions.

Safety significant function means a function whose degradation or loss could result in a significant adverse effect on defense-in-depth, safety margin, or risk.

NBIC Item 20-48 – Edwards – 10/07/20
Review “NR” Program for NQA-1 – 2015 Updates

Background / Discussion

The 2015 Edition of NQA-1 is currently referenced by the 2019 Edition of ASME Section III, Table NCA-7100-2 and by the 2019 Edition of ASME Section XI, Table IWA-1600-1. NBIC Item 20-48 has been opened to review the NR Program in Part 3, Section 1.6, for update to current ASME III and XI QA Program requirements.

Category 1 applications under the NR Program are established for repair / replacement activities on any ASME Section III certified item or system prior to fuel loading, regardless of physical location or installation status. By reference to ASME III, the NBIC QA Program criteria for NR Category 1 applications need to be consistent with the 2015 Edition of NQA-1.

Category 2 applications under the NR Program are established for repair / replacement activities on items or systems under the scope of ASME Section XI, regardless of physical location. By reference to ASME XI, the NBIC QA Program criteria for NR Category 2 applications need to be consistent with the 2015 Edition of NQA-1.

Category 3 requirements under the NR Program are established for other than ASME III or ASME XI applications and are therefore not directly impacted by NQA-1 - 2015. NBIC Part 3, 1.6.8.1, does, however, permit a Category 3 NR Certificate holder to optionally include QA Program requirements from Category 1 and/or 2 applications, to allow consistency in the NR Certificate holder’s QA Program.

A copy of the NQA-1 – 2015 Summary of Changes is included for information, with review comments noted on impact to the NR Program.

Proposal

Revise Part 3, Section 1.6, as shown in the attached mark-up.

NBIC Item 20-48 - Information Only
Review of ASME NQA-1 - 2015 Summary of Changes for Impact on the NR Program

Review Item	Reference	Change	NR Category 1 Review (ASME III)	NR Category 2 Review (ASME XI)
1	Introduction	New Introduction added	No programmatic impact	No programmatic impact
2	Part I, Introduction	Updated consistent with addition of the Introduction to the Standard	No programmatic impact	No programmatic impact
3	Part I, Requirement 2, 300 Part I, Requirement 2, 301 Part I, Requirement 2, 303 Part I, Requirement 2, 400 Part I, Requirement 2, 500	300 - Separated reference to NDE, inspection, and test personnel 301 - 2 nd word revised, editorial 303 - Added reference to existing requirements in 303.5 and 303.6 400 - Clarified qualification requirements for Inspection and Test personnel (401) and Lead Auditor personnel (402) 500 - Deleted 1 st sentence, as redundant with subsequent text	300/303/400/500 - No programmatic impact 301 - N/A, per NCA-4134.2	300/301/303/400/500 - No changes necessary; NR certificate holder quality program requirements addressed via governing provision of the Owner's QA Program as referenced in 1.6.7.2 c)
4	Part I, Requirement 3, 401 Part I, Requirement 3, 800	401 - Clarified requirements for computer programs used for design analysis 800 - Clarified reference to requirements of Part II, Subpart 2.7; deleted Sections 801 and 802 as now covered by Subpart 2.7	401/800 - No changes necessary; requirements for computer programs and Subpart 2.7 addressed by reference thread to Part I, Requirement 3 in 1.6.6.2 d)	401/800 - No changes necessary; requirements for computer programs and Subpart 2.7 addressed via governing provisions of the Owner's QA Program as referenced in 1.6.7.2 d)
5	Part I, Requirement 11, 200 Part I, Requirement 11, 400 Part I, Requirement 11, 602	200 - Deleted Subparagraph (d) on test requirements and acceptance criteria for computer programs 400 / 602 - Revised to reference Subpart 2.7 for computer program test procedures and records	200/400/602 - No changes necessary; requirements for test control covered by reference to Part I, Requirement 11 in 1.6.6.2 l)	200/400/602 - No changes necessary; requirements for test control addressed via governing provisions of the Owner's test program as referenced in 1.6.7.2 l).
6	Part I, Requirement 17, 601	601 - Spelling correction in subparagraph (b)	601 - N/A, per NCA-4134.17(a)	601 - No programmatic impact
7	Part I, Requirement 18, 200	200 - Major revision to clarify Quality Program Audits	Revise 1.6.6.2 s) to recognize provisions of Part 18, 201.3 and 202	Revise 1.6.7.2 s) to recognize provisions of Part 18, 201.3 and 202
8	Part II Contents	Updated consistent with revised Subparts	No programmatic impact	Part II not referenced by ASME XI

9	Part II Introduction, 100 Part II Introduction, 200 Part II Introduction, 300	100 - Clarified Purpose of Parts I, II, III, and IV 200 - Clarified Applicability of Parts I and II 300 - Clarified Responsibility of organizations that invoke and/or implement applicable requirements of Parts I and II	Part II Introduction - Applicability of NQA-1, Part II, to the NR program established based on the associated references to Part II in ASME III, NCA-4000. See NBIC Part 3, Table 1.6.2.	Part II Introduction - Applicability of NQA-1, Part II, to the NR program established based on the associated references to Part II in ASME III, NCA-4000 and/or ASME XI, IWA-4142. See NBIC Part 3, Table 1.6.2
10	Part II, Subpart 2.1 Part II, Subpart 2.1, 100 Part II, Subpart 2.1, 101 Part II, Subpart 2.1, 302.1 Part II, Subpart 2.1, 302.2 Part II, Subpart 2.1, 302.4 Part II, Subpart 2.1, 400 Part II, Subpart 2.1, 600 Part II, Subpart 2.1, 801 Part II, Subpart 2.1, 802 Part II, Subpart 2.1, 1000	Title revised 100 - Added consideration for system sensitivity to contaminants 101 - Definitions revised 302.1 / 302.2 - ASTM designations updated 302.4 - Subparagraph (d) revised 400 - Third paragraph revised 600 - Last paragraph revised 801 - First and last paragraphs revised 802 - 802.1 and 802.2 revised 1000 - Second paragraph revised	No changes needed; ASME III does not invoke NQA-1, Subpart 2.1. Per Subpart 2.1, 100, cleaning and cleanliness controls supplement requirements of Part I when and to the extent specified by the organization invoking Subpart 2.1.	No changes needed; ASME XI does not invoke NQA-1, Subpart 2.1. Per Subpart 2.1, 100, cleaning and cleanliness controls supplement requirements of Part I when and to the extent specified by the organization invoking Subpart 2.1.
11	Part II, Subpart 2.4	Deleted	No programmatic impact; Subpart 2.4 not applicable for ASME III activities	No programmatic impact; Subpart 2.4 not applicable for ASME XI activities
12	Part II, Subpart 2.7, 100 Part II, Subpart 2.7, 102 Part II, Subpart 2.7, 201 Part II, Subpart 2.7, 202 Part II, Subpart 2.7, 203 Part II, Subpart 2.7, 302 Part II, Subpart 2.7, 400	Footnote 1 added Definition of change control added Title revised Title revised Revised in its entirety Revised Sections 400 through 404 revised	Part II, Subpart 2.7 invoked by NCA- 4134.3(d). Revise NBIC Part 3, 1.6.6.2 d) to include provisions of NCA- 4134.3(d)	No changes needed. Per IWA-4142(a)(2) requirements for the R/R Organization QA Program are addressed via the governing provision of the Owner's program. Part 3, Table 1.6.2 and 1.6.7.2(d)(4) currently compliant.
13	Part II, Subpart 2.16	2.16 Deleted	No action needed; provisions of 1.6.6.2 m) and approval of NBIC Item 19-43 cover M&TE applications for the NR Program.	No action needed; provisions of 1.6.7.2 m) and approval of NBIC Item 19-43 cover M&TE applications for the NR Program.
14	Part II, Subpart 2.18, 201	201 - Editorial correction in Subparagraph (c)	No programmatic impact	No programmatic impact
15	Part III Contents	Updated consistent with revised Subparts	No programmatic impact	Part III not referenced by ASME XI
16	Part III Introduction, 100 Part III, Introduction, 200	Revised in its entirety Subparagraph (a) and last paragraph revised	No programmatic impact; ASME III does not reference applicability of NQA-1, Part III.	No programmatic impact; ASME XI does not reference applicability of NQA-1, Part III.

17	Part III, Subpart 3.1-3.1, 100 Part III, Subpart 3.1-3.1, 200 Part III, Subpart 3.1-3.1, 300 Part III, Subpart 3.1-3.1, 400 Part III, Subpart 3.1-3.1, Table 401.4 Part III, Subpart 3.1-3.1, 600	100 - Subparagraph (g) added 200 - Subparagraph (q) revised and Subparagraph (ii) added 300 - Subparagraph (a)(II) added 400 - Revised in its entirety Table 401.4 - Added 600 - Last paragraph added	Subpart 3.1-3.1 provided for guidance. Proposed revision to Part 3, 1.6.6.2(d) covers this application; see Review Item 12. No additional action needed.	Subpart 3.1-3.1 provided for guidance. No action required, Part 3, Table 1.6.2 and 1.6.7.2(d)(4) cover these provisions.
18	Part III, Subpart 3.1-7.1, 705	705 - Subparagraph added	Subpart 3.1-7.1 provided for guidance. No action required.	Subpart 3.1-7.1 provided for guidance. No action required.
19	Part III, Subpart 3.1-18.1, 204 Part III, Subpart 3.1-18.1, 600 Part III, Subpart 3.1-18.1, 700	204 - Added to recognize shared external audits; 203.1, 203.2, and 206 deleted 600 / 700 - Revised	Subpart 3.1-18.1 is provided for guidance. Proposed revision to Part 3, 1.6.6.2(s) covers this application; see Review Item 7. No additional action needed.	Subpart 3.1-18.1 is provided for guidance. Proposed revision to Part 3, 1.6.7.2(s) covers this application; see Review Item 7. No additional action needed.
20	Part III, Subpart 3.1-18.2	New Subpart on classification and handling of audit issues	No action required; subpart provides non-mandatory guidance	No action required; subpart provides non-mandatory guidance
21	Part III, Subpart 3.2-2.7.1 Part III, Subpart 3.2-2.7.1, Introduction Part III, Subpart 3.2-2.7.2 Part III, Subpart 3.2-2.14, 300 Part III, Subpart 3.2-2.14, 900	2.7.1 - Designation revised 2.7.1 Introduction - Spelling correction 2.7.2 - New Subpart on software applications 2.14, 300 - Editorial correction in 1st paragraph 2.14, 900 - Editorial correction to EPRI report reference	2.7.1 - No impact; editorial changes 2.7.2 - No action required; subpart provides non-mandatory guidance 2.14, 300 - No action required 2.14, 900 - No action required	2.7.1 - No impact; editorial changes 2.7.2 - No action required; subpart provides non-mandatory guidance 2.14, 300 - No action required 2.14, 900 - No action required
22	Part IV, Contents	Updated consistent with revised Subparts	No programmatic impact	Part IV not referenced by ASME XI
23	Part IV, Introduction, 100	100 - Clarified Purpose of Parts I, II, III, and IV	Part IV - ASME III, Endnote 12, references NQA-1, Part IV for guidance for various applications, i.e. non-mandatory.	Part IV not referenced by ASME XI
24	Part IV, Subpart 4.1.5	4.1.5 - New Subpart on guidance for reconciling ANSI/ANS-15.8 with NQA-1	ANSI/ANS-15.8 is Not Applicable for ASME III applications	ANSI/ANS-15.8 is Not Applicable for ASME XI applications
25	Part IV, Subpart 4.2.1, 200 Part IV, Subpart 4.2.3, 404 Part IV, Subpart 4.2.4, 501 Part IV, Subpart 4.2.7	200 - Revised 404 - Last paragraph added 501 - (1) revised; (2) Sections 502 and 503 deleted 4.2.7 - Added	N/A for ASME III applications; Subpart 4.2.1 applies for Research and Development activities	N/A for ASME XI applications; Subpart 4.2.1 applies for Research and Development activities

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Proposed Revisions - NR Category 1 Applications	Comments / Discussion
<p>Part 3, 1.6.6.2 d)</p> <p>d) Design Control</p> <p>The provisions identified in ASME NQA-1, Part 1, Requirement 3, shall apply except Paragraph 601. <u>Computer programs used for design analysis shall meet the requirements of NQA-1, Part II, Subpart 2.7.</u> The following additional requirements shall be considered when applicable:</p> <ol style="list-style-type: none"> 1) The “NR” Certificate Holder shall establish measures to ensure applicable requirements of the owner’s design specifications, owner’s requirements, and code of construction requirements are correctly translated into drawings, specifications, procedures and instructions. 2) All design documents, including revisions, shall be verified by the “NR” Certificate Holder to be correct and adequate in accordance with the owners<u>owner’s</u> requirements. 3) Repair/replacement plans shall be completed prior to performing any work, inspections, examinations or testing; however repair/replacement plans are not required for the design phase of a repair/replacement activity including activities that require design only (except rerating). 4) The repair/replacement plan (see NBIC Part 3, Table 1.6.9) shall identify any applicable Code Edition/ Addenda and Code Cases, owner’s requirements and the Construction Code Edition/Addenda utilized to perform the work. 5) The repair/replacement plan shall identify expected life of the item when less than the intended life as specified in the owner’s design specification. 6) The “NR” Certificate Holder shall ensure that specifications, drawings, procedures and instructions do not conflict with the owner’s design specifications. A system must be described in the Quality Assurance Manual to resolve or eliminate such conflicts. Resolution shall consider the Design Specification Requirements, as well as, the owner requirements, Jurisdictional and Regulatory Authority Requirements as applicable. 	<p>Added text taken from ASME III, NCA-4134.3(d)</p> <p>Editorial correction</p>

Part 3, 1.6.6.2 s)

s) 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 audits of the "NR" Certificate Holder's Quality Assurance Program shall be performed. 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. This interval may be extended up to 2 years based on the results of an annual evaluation and objective evidence that the activities are being satisfactorily accomplished in accordance with the applicable Quality Assurance Program elements. When no code work has been performed, the required ~~annual~~ audit or evaluation need only include those areas of responsibility required to be continually maintained such as training, audits / evaluations, 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 for adequacy and effectiveness of the quality assurance program;
- 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; and
- 6) Audit records shall include as a minimum;
 - a. Written procedures;
 - b. Checklists;
 - c. Reports;
 - d. Written replies; and
 - e. Completion of corrective actions

External audits (e.g. supplier audits) shall be performed on a triennial basis and supplemented by annual evaluations of the supplier's performance. The audit frequency shall be adjusted, or other corrective actions taken, as necessary. Any grace periods applied to scheduled supplier audits / evaluations shall be defined in the Quality Assurance Program and be acceptable to the Jurisdictional / Regulatory Authority.

Editorial correction

Added text based on NQA-1 – 2015, Requirement 18, ¶201.3

Added text based on NQA-1 – 2015, Requirement 18, ¶200 and ¶202

Proposed Revisions – NR Category 2 Applications	Comments / Discussion
<p>Part 3, 1.6.7.2 s)</p> <p>s) Audits</p> <p>A comprehensive system of planned and periodic audits of the “NR” Certificate Holder’s Quality Assurance Program shall be performed. 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 to verify compliance with Quality Assurance Program requirements, performance criteria and to determine the effectiveness of the Quality Assurance Program. <u>This interval may be extended up to 2 years based on the results of an annual evaluation and objective evidence that the activities are being satisfactorily accomplished in accordance with the applicable Quality Assurance Program elements.</u> When no code work has been performed, the required annual <u>audit or evaluation</u> need only include those areas of responsibility required to be continually maintained such as training, audits <u>/ evaluations</u>, organizational structure, Quality Assurance Program revisions, etc. The Quality Assurance Manual shall as a minimum describe the following:</p> <ol style="list-style-type: none"> 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 NQA-1; 3) Audit results shall be documented and reviewed by responsible management for adequacy and effectiveness of the quality assurance program; 4) Requirements for follow-up actions 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: <ol style="list-style-type: none"> a. written procedures; b. checklists; c. reports; d. written replies; and e. completion of corrective actions. <p><u>External audits (e.g. supplier audits) shall be performed on a triennial basis and supplemented by annual evaluations of the supplier’s performance. The audit frequency shall be adjusted, or other corrective actions taken, as necessary. Any grace periods applied to scheduled supplier audits / evaluations shall be defined in the Quality Assurance Program and be acceptable to the Jurisdictional / Regulatory Authority.</u></p>	<p>Added text based on NQA-1 – 2015, Requirement 18, ¶201.3</p> <p>Added text based on NQA-1 – 2015, Requirement 18, ¶200 and ¶202</p>