

Proposed Rule to Incorporate by Reference the 2019 and 2020 Editions of ASME Codes into 10 CFR 50.55a

May 6, 2021

Agenda



- Purpose and Overview
- ASME Section III
- ASME Section III and XI (Quality Assurance)
- ASME Section XI
- ASME OM Code
- Open Discussion

Purpose and Overview

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Office of Nuclear Material Safety and
Safeguards

Purpose of Meeting

- Brief status of the ongoing rulemaking
- NRC staff's position regarding incorporation by reference of the ASME 2019 and 2020 Code Editions
- NRC will consider information and perspectives discussed today when developing the final rule, but comments must be submitted in writing through the methods described in the *Federal Register* notice to receive formal consideration in the rulemaking

Slide 4

CS1

This should be stronger. I suggest "but comments must be submitted in writing through the methods described in the Federal Register notice to receive formal consideration in the rulemaking."

Clark, Sheldon, 4/29/2021

Submitting Comments



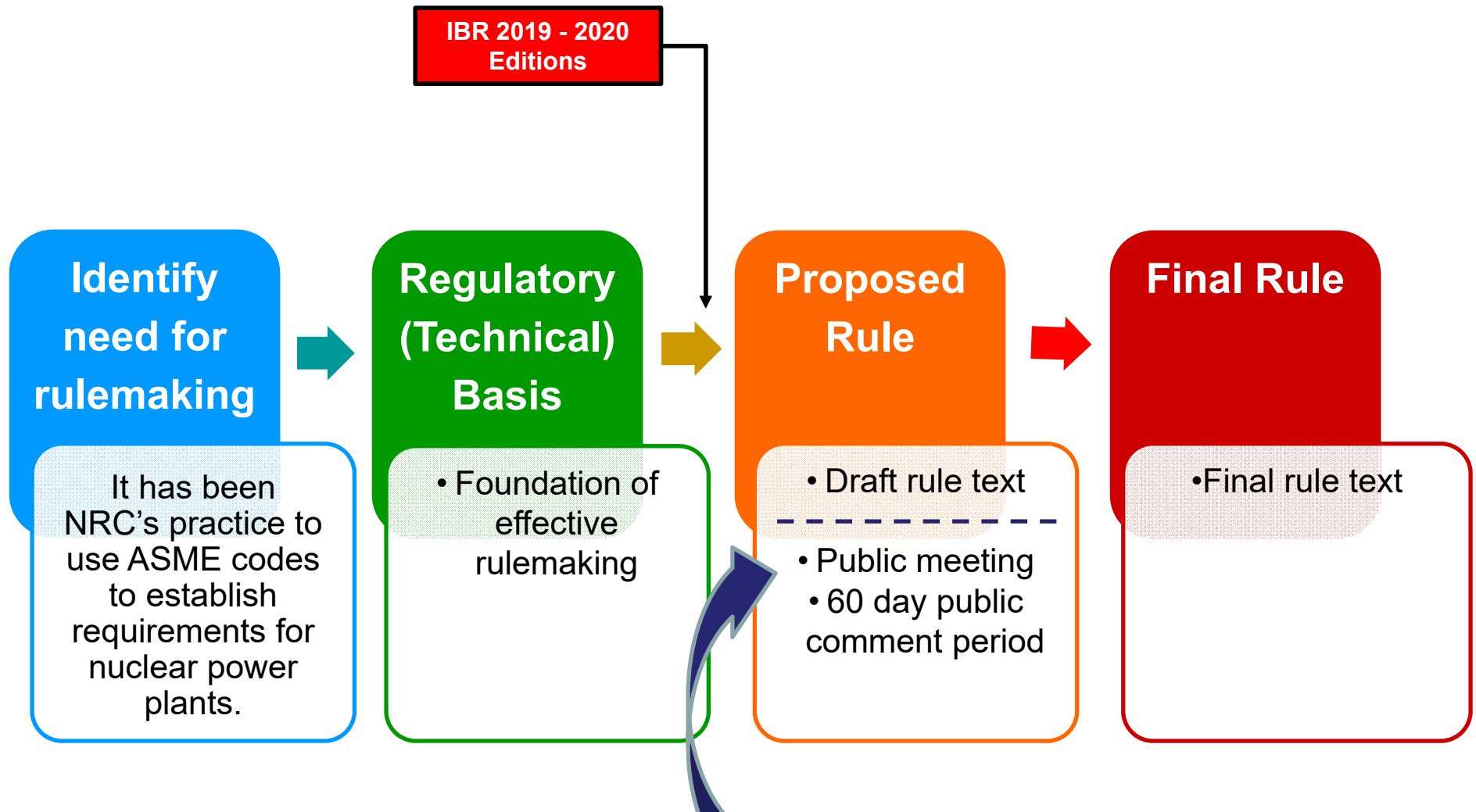
- *Federal Rulemaking Website:* Go to <https://www.regulations.gov> and search for Docket ID NRC-2018-0290.
- *Email comments to:* Rulemaking.Comments@nrc.gov. If you do not receive an automatic email reply confirming receipt, then contact us at 301-415-1677.

Current Rulemaking



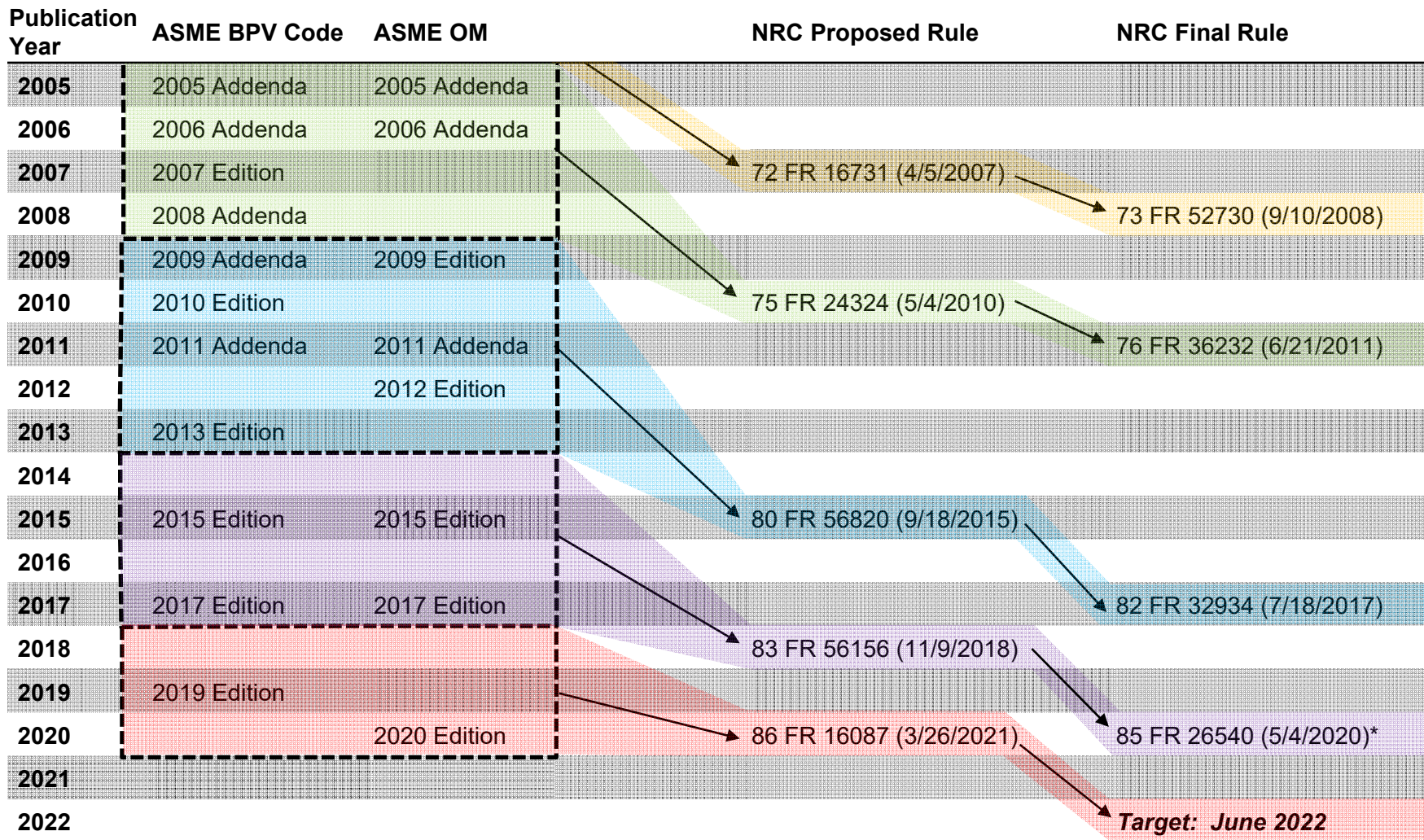
- Proposed rule to incorporate by reference the 2019 Edition of the ASME Boiler and Pressure Vessel and the 2020 Edition of the ASME OM Code was published in the *Federal Register* on March 26, 2021 (86 FR 16087)
(RIN 3150-AK22, Docket ID NRC-2018-0290)

Rulemaking Process



Opportunities for public participation

Timeline – Edition/Addenda Rulemakings



* Correction Notice was published in 85 FR 34087 (6/3/2020)

Scope of ASME 2019-2020 Editions Rulemaking



- Incorporate by reference the 2019 Edition of Section III, Division 1, of ASME BPV Code
 - One new condition being considered
 - Five* revised conditions being considered
- Incorporate by reference the 2019 Edition of Section XI, Division 1, of ASME BPV Code
 - One new condition being considered
 - Amending seven* existing conditions being considered

*Includes revisions to Quality Assurance conditions

Scope of ASME 2019-2020 Editions Rulemaking (cont'd)



- Incorporate by reference the 2020 Edition of ASME OM
 - One new condition being considered
 - Amending seven existing conditions being considered
 - One condition is being considered for removal
- Incorporate by reference the 2011 Addenda to ASME NQA-1-2008 (ASME NQA-1b-2011), and the 2012 and 2015 Editions of ASME NQA-1
 - Amending one condition on Section III rules and one condition on Section XI rules being considered

ASME 2019-2020 Editions Rulemaking—Schedule



- **Proposed rule** published in the *Federal Register* on March 26, 2021 (86 FR 16087)
 - 60-day public comment period ends on May 25, 2021
- NRC will consider public comments submitted on the docket
 - Docket ID: NRC-2018-0290
- Target date to publish **final rule** in the *Federal Register*: June 30, 2022

ASME Section III Conditions under Consideration

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Section III New Condition



- *Section III Condition: Preservice Inspection of Steam Generator Tubes.* Applicants or licensees applying the provisions of NB-5283 and NB-5360 in the 2019 Edition of Section III, must apply paragraphs (b)(1)(xiii)(A) through (B) of this section.

(A) First provision. When applying the provisions of NB-5283 in the 2019 Edition of Section III, a full-length preservice examination of 100 percent of the steam generator tubing in each newly installed steam generator must be performed prior to plant startup.

Section III New Condition (cont'd)



- *Section III Condition: Preservice Inspection of Steam Generator Tubes. (cont'd)*

(B) *Second provision.* When applying the provisions of NB-5360 in the 2019 Edition of Section III, flaws revealed during preservice examination of steam generator tubing performed in accordance with paragraphs (b)(1)(xiii)(A) must be evaluated using the criteria in the design specifications.

Section III Revised Conditions



- *Section 50.55a(b)(1)(ii): Section III Condition: Weld leg dimensions*
 - Subparagraphs NB–3683.4(c)(1) and NB–3683.4(c)(2): Condition Applicable to 1989 Addenda through the latest Edition.
 - Note 11 to Table NC–3673.2(b)–1 and Note 11 to Table ND–3673.2(b)–1: Condition Applicable to 2011 Addenda through the latest Edition.
- *Section 50.55a(b)(1)(iii): Section III, Condition: Seismic design of piping*
 - Applicable to 2006 Addenda through all Editions and addenda up to and including the latest Edition.

Section III Revised Conditions (cont'd)



- *Section 50.55a(b)(1)(vii): Section III, Condition: Capacity certification and demonstration of function of incompressible-fluid pressure-relief valves*
 - Applicable to 2006 Addenda through all Editions and addenda up to and including the latest Edition.
- *Section 50.55a(b)(1)(x): Section III Condition: Visual examination of bolts, studs, and nuts*
 - Provisions are applicable to 2017 and later Editions of Section III.

ASME Section III and XI Conditions under Consideration (Quality Assurance)

Yamir Diaz-Castillo

Division of Reactor Oversight
Office of Nuclear Reactor Regulation

Section III Revised Condition



- Revise § 50.55a(b)(1)(iv) Section III Condition: Quality Assurance
 - The NRC is proposing to revise this condition to allow use of the editions of NQA-1 that are both incorporated by reference in § 50.55a(a)(1)(v) and specified in either NCA-4000 or NCA-7000 of the 1989 or later editions of Section III. This will allow applicants and licensees to use the 2011 Addenda to ASME NQA-1-2008, "Quality Assurance Requirements for Nuclear Facility Applications (ASME NQA-1b-2011)," and the 2012 and 2015 Edition of NQA-1 when using the 2019 and later Editions of Section III, which this rule is also incorporating by reference.

Section XI Revised Condition (cont'd)



- *Revise § CFR 50.55a(b)(2)(x) Section XI condition: Quality assurance*
 - The NRC is proposing to revise this condition to allow the use of the editions of NQA-1 that are both incorporated by reference in § 50.55a(a)(1)(v) and specified in Table IWA-1600-1 of the 1989 or later Editions of Section XI. In the 2019 Edition of ASME BPV Code, Section XI, Table IWA-1600-1 was updated to specify that licensees use the 1994 Edition or 2008 Edition through 2015 Editions of NQA-1 when using the 2019 Edition of Section XI. These revisions will allow licensees to use the 2011 Addenda to ASME NQA-1-2008, and the 2012 and 2015 Edition of NQA-1 when using the 2019 and later Editions of Section XI, which this rule is also incorporating by reference.
 - The paragraph is also being revised to remove the reference to IWA-1400. This revision clarifies the condition because the editions of NQA-1 are referenced in Table IWA 1600-1 instead of IWA-1400.

ASME Section XI Conditions under Consideration

Keith Hoffman

Division of New and Renewed
Licenses

Office of Nuclear Reactor Regulation

Section XI Revised Conditions



- *Section 50.55a(b)(2)(xviii) Section XI condition: NDE personnel certification:*
 - NDE personnel certification based on results of PNNL research propose to provide options
 - Level I – 175 hours experience, 125 experience/50 lab practice
 - Level II – 720 hours experience, 400 experience/320 lab practice and successful completion of Appendix VIII, Supplement 2 detection and length sizing
- *Section 50.55a(b)(2)(xxv) Section XI condition: Mitigation of defects by modification:*
 - Mitigation of defects by modification providing options for future examinations and eliminating some timing aspects

Section XI Revised Conditions (cont'd)



- *Section 50.55a(b)(2)(xxvi) Section XI condition: Pressure testing Class 1, 2 and 3 mechanical joints:*
 - Proposing revision to Licensee defined leak check
- *Section 50.55a(b)(2)(xxix) Section XI condition: Nonmandatory Appendix R:*
 - Allow use of 2017/2019 Editions Supplement 2 without submittal of an alternative
- *Section 50.55a(b)(2)(xxxii) Section XI condition: Summary report submittal:*
 - Summary report submittal extended to 120 days

Section XI Revised Conditions (cont'd)



- *Section 50.55a(b)(2)(xi) Section XI condition:
Prohibitions on use of IWB-3510.4(b):*
 - Considering the prohibition of use of IWB-3510.4(b), IWC-3510.5(b), and Tables A-4200-1 and G-2110-1

Section XI New Condition



- *Section 50.55a(b)(2)(xliv) Section XI condition: Regulatory Submittal Requirements*
 - Requires submittal to NRC of analysis performed in accordance with IWB-3720(a), A-4200(c), and G-2110(c)

ASME OM Code Conditions under Consideration

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and External Hazards
Office of Nuclear Reactor Regulation

Specific OM Items of Interest in Proposed Rulemaking



- Remove incorporation by reference of 2011 Addenda of ASME OM Code from 10 CFR 50.55a(1)(iv)(B)(2) and consequently remove condition on use of 2011 Addenda specified in 10 CFR 50.55a(b)(3)(vii) as well as reference to 2011 Addenda in 10 CFR 50.55a(b)(3)(ix).
- Remove incorporation by reference of 2015 Edition of ASME OM Code from 10 CFR 50.55a(a)(1)(iv)(C)(2) and the reference to 2015 Edition in 10 CFR 50.55a(b)(3)(vii) and 10 CFR 50.55a(b)(3)(ix).

Specific OM Items of Interest in Proposed Rulemaking



- Incorporate by reference Subsection ISTE in 2020 Edition of ASME OM Code without conditions.
- Modify 10 CFR 50.55a(f)(4) to clarify relationship between 50.55a(f)(4) and (g)(4) regarding Inservice Testing (IST) or Inservice Inspection (ISI) programs for snubbers. Include a provision to clarify that for snubbers, inservice examination, testing and service life monitoring for IST or ISI program must meet inservice examination and testing requirements set forth in applicable ASME OM Code or ASME BPV Code, Section XI, as specified in 10 CFR 50.55a(b)(3)(v)(A) and (B).

Specific OM Items of Interest in Proposed Rulemaking



- In light of removal of IST Program Plan submittal requirement from 2020 Edition of ASME OM Code, add 10 CFR 50.55a(f)(7) to require nuclear power plant applicants and licensees to submit IST Plans and interim IST Plan updates related to pumps and valves, and IST Plans and interim Plan updates related to snubber examination and testing, to NRC.
- Consideration of proposed relaxation of the interval for position verification testing required in ISTC-3700 for valves that are not susceptible to stem-disk separation.

Specific OM Items of Interest in Proposed Rulemaking



- Amend 10 CFR 50.55a(b)(3)(iii) to change the applicability date to read "April 17, 2018" instead of "the date 12 months after April 17, 2017."

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ASME 2019-2020 rulemaking	NRC-2018-0290

How did we do?

- Link to NRC Public Meeting Feedback form:



Questions & Comments



ASME 2019-2020 Rulemaking

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Acronyms



ADAMS	Agencywide Documents Access and Management System
ASME	American Society of Mechanical Engineers
BPV	Boiler and Pressure Vessel
CFR	<i>Code of Federal Regulations</i>
FR	<i>Federal Register</i>
IBR	Incorporation by Reference
ISI	Inservice Inspection
IST	Inservice Testing
NDE	Non-destructive Evaluation
NRC	Nuclear Regulatory Commission
OM	Operation and Maintenance
RIN	Regulation Identifier Number