

Proposed Rule to Incorporate by Reference the 2015 Editions of ASME Codes into 10 CFR 50.55a

August 22, 2016

Agenda

- Purpose and Overview
- ASME Section III
- ASME Section XI
- ASME OM Code
- Open Discussion

Purpose and Overview

Daniel Doyle
Division of Policy & Rulemaking
Office of Nuclear Reactor Regulation

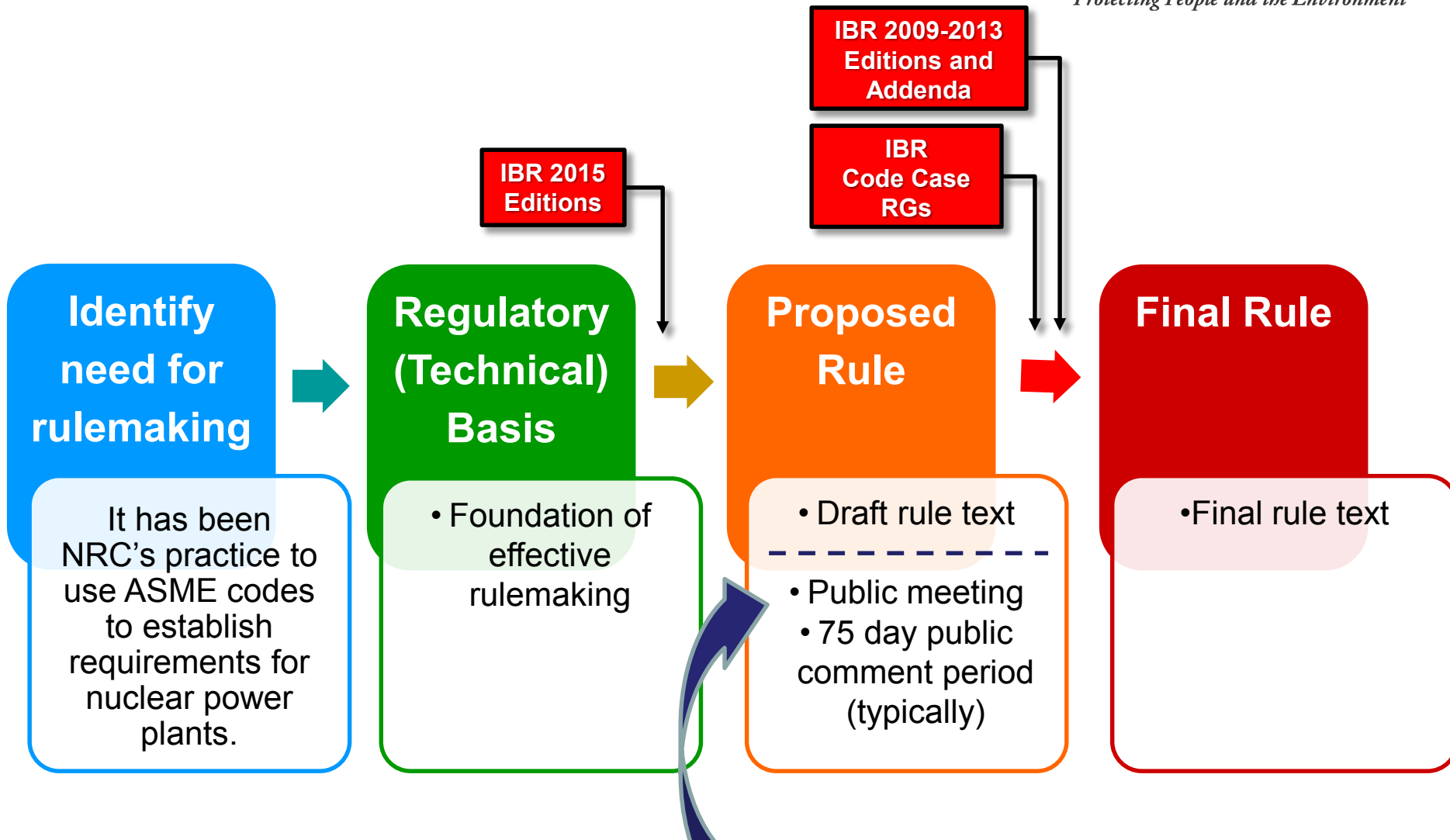
Purpose of Meeting

- Brief status of the ongoing 10 CFR 50.55a rulemakings
- Preliminary NRC views regarding rulemaking to incorporate by reference ASME 2015 editions.
- NRC will consider information and perspectives discussed today when developing the proposed rule, but the NRC will not prepare detailed written responses.

Three Ongoing Rulemakings

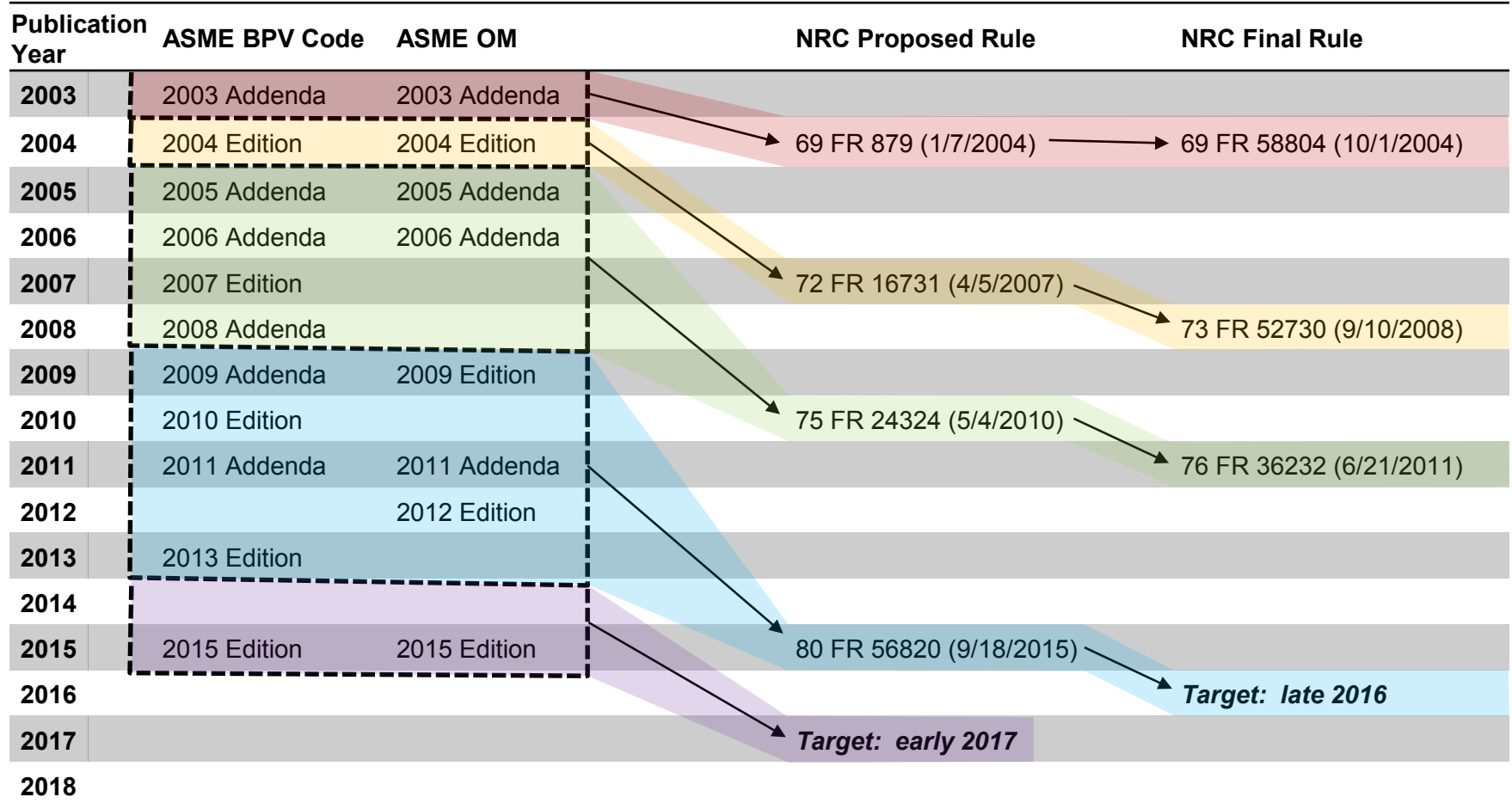
1. Final Rule: Incorporate by reference
ASME BPV/OM 2009 – 2013
Editions/Addenda
(RIN 3150-AI97, Docket ID NRC-2011-0088)
2. Final Rule: Incorporate by reference
ASME Code Case RGs (RG 1.84, Rev.
37; RG 1.147, Rev. 18; RG 1.192, Rev 2)
(RIN 3150-AJ13, Docket ID NRC-2012-0059)
3. Proposed Rule: Incorporate by reference
ASME 2015 Editions
(RIN 3150-AJ74, Docket ID NRC-2016-0082)

Rulemaking Process



Opportunities for public participation

Timeline – Edition/Addenda Rulemakings



Timeline – Code Case RG Rulemakings

Publication Year	ASME BPV Code Case Supplements	NRC Proposed Rule	NRC Final Rule	RG 1.84	RG 1.147	RG 1.192*
2003	7 8 9 10 11		68 FR 40469 (7/8/2003)	Rev. 32	Rev. 13	Rev. 0
2004	12 1 2 3	69 FR 46452 (8/3/2004)				
2005	4 5 6 7		70 FR 56809 (9/29/2005)	Rev. 33	Rev. 14	
2006	8 9 10 11	71 FR 62942 (10/27/2006)				
2007	0 1 2 3		72 FR 71750 (12/19/2007)	Rev. 34	Rev. 15	
2008	4 5 6 7					
2009	8 9 10 11 0	74 FR 26303 (6/2/2009)				
2010	1 2 3 4		75 FR 61321 (10/5/2010)	Rev. 35	Rev. 16	
2011	5 6 7 8					
2012	9 10 11					
2013	0 1 2 3	78 FR 37886 (6/24/2013)				
2014	4 5 6 7		79 FR 65776 (11/5/2014)	Rev. 36	Rev. 17	Rev. 1
2015	0 1 2 3 4					
2016	5	81 FR 10780 (3/2/2016)				
2017			Target: early 2017	Rev. 37	Rev. 18	Rev. 2
2018						

* Scope of RG 1.192 Revisions (OM Code Editions/Addenda)
 Rev. 1: 2004 Edition, 2006 Addenda
 Rev. 2: 2009 Edition, 2011 Addenda, 2012 Edition

Scope of ASME 2015 Editions Rulemaking



- Incorporate by reference the 2015 Edition of Section III, Division 1, of ASME BPV Code
 - One new condition with several parts being considered
- Incorporate by reference the 2015 Edition of Section XI, Division 1, of ASME BPV Code
 - Four new and four revised conditions being considered
- Incorporate by reference the 2015 Edition of ASME OM
 - One new condition, two other items being considered

Scope of ASME 2015 Editions Rulemaking (cont'd)



- Remove four outdated conditions
- Revise four existing conditions

Scope of ASME 2015 Editions Rulemaking (cont'd)

- Propose to add new conditions:
 - One condition on Section III rules
 - Four new conditions on Section XI rules
 - One new condition on OM Code rules
- The NRC staff will discuss the proposed conditions on Section XI in more detail later in this presentation.

ASME 2015 Editions Rulemaking—Schedule

- Publish proposed rulemaking in the *Federal Register* in early 2017
- 75 days to submit public comments
- NRC will provide detailed written responses to written public comments
- Target date to publish final rule in the *Federal Register* is early 2018

ASME Section III Conditions under Consideration

Dr. Chakrapani Basavaraju
Division of Engineering
Office of Nuclear Reactor Regulation

Section III New Condition

- Section III, Appendix XXVI, High-Density Polyethylene (HDPE) Piping
- Five parts to condition:
 - A. Provides essential variables for joining qualification
 - B. Requires both bend tests and High Speed Tensile Impact Testing for joining qualification
 - C. Prohibits any voids or windows in the polyethylene pipe
 - D. Requires licensee to submit for approval techniques used to embed flaws for NDE qualification
 - E. Requires periodic pressure tests

ASME Section XI Conditions under Consideration

Keith Hoffman

Division of Engineering
Office of Nuclear Reactor Regulation

Section XI New Conditions

- Section XI, Containment leak-chase channel inspections
- Section XI, Appendix A, addresses calculation error
- Section XI, IWB-3514.8 or IWC-3514.6
- Section XI, Appendix III, Supplement 2

Leak-Chase Channel Inspections

- Ensure steel containment shells and liners receive appropriate inspection
- Consistent with IN 2014-07, “Degradation of Leak-Chase Channel Systems for Floor Welds of Metal Containment Shell and Concrete Containment Metallic Liner”

Appendix A

- A-4200(c) was added in the 2015 Edition to provide an alternate method to establish a fracture-toughness-based reference temperature
- Equation (a) which was converted to U.S Customary units contains an error made in the conversion which makes equation (a) erroneous

IWB-3514.8 or IWC-3514.6

- Require additional examinations for surface-connected flaws in contact with the reactor coolant environment that are detected by preservice examination
- Bare Metal Visual every refueling outage
- Ultrasonic examination every other outage
- Until weld is mitigated or repair/replaced

Appendix III, Supplement 2

- Incorporation of Code Case N-824 for ultrasonic testing examination of Cast Austenitic Stainless Steel
- Applies the conditions that were imposed on N-824 in the 2009 – 2013 Editions/Addenda Rulemaking

Section XI Revised Conditions

- § 50.55a(b)(2)(xx)(B) *System leakage tests: Second provision.*
- § 50.55a(b)(2)(xxvi) *Pressure testing Class 1, 2 and 3 mechanical joints.*
- § 50.55a(b)(2)(xxxii) *Summary report submittal.*
- § 50.55a(b)(2)(xxxvi) *Fracture toughness of irradiated materials.*

Section XI Removing Conditions

- § 50.55a(b)(2)(vi) *Effective edition and addenda of Subsection IWE and Subsection IWL.*
- § 50.55a(b)(2)(vii) *Section XI references to OM Part 4, OM Part 6, and OM Part 10 (Table IWA–1600–1).*
- § 50.55a(b)(2)(xvii) *Reconciliation of quality requirements.*
- § 50.55a(b)(2)(xxi)(A) *Table IWB-2500-1 examination requirements: First provision. Nozzle Inner Radii Exams*

Other Revisions

10 CFR 50.55a(g)(4)(i) and (ii) considering relaxation of the time schedule for complying with the latest edition and addenda of the ASME BPV Codes for ISI programs, from 12 months to 18 months before the applicable milestones in these paragraphs.

Seeking Specific Comments

§ 50.55a(g)(6)(ii)(F)

- Based on recent operating experience, NRC staff is considering the adequacy of the basis behind the 25% ISI sample for nickel-alloy welds mitigated using MSIP™ under N-770-1.
- The NRC staff is also considering the need for re-establishing the baseline examinations for welds mitigated with MSIP™ which have not been examined for greater than ten years.

ASME OM Code

Thomas Scarbrough
Division of Engineering, Infrastructure,
and Advanced Reactors
Office of New Reactors

Specific OM Items of Interest in Proposed Rulemaking

- Add condition to ISTC-3500 for periodic verification of design-basis capability of high safety significant air-operated valves and hydraulic-operated valves.
- Add NRC IST Plan submittal and reporting requirements consistent with current edition of OM Code.
- Revise 10 CFR 50.55a(f)(4)(i) and (ii) to relax time schedule for complying with latest edition of ASME OM Code for IST programs from 12 months to 18 months before applicable milestones.

How to get involved?



regulations.gov
Your Voice in Federal Decision-Making

Home Help Resources Contact Us

Search Browse Learn

Make a difference. Submit your comments and let your voice be heard.

SEARCH for: Rules, Comments, Adjudications or Supporting Documents:

NRC-2016-0082 Search

» Advanced Search

To find information about...	Search for docket ID...
ASME 2009 – 2013 rulemaking	NRC-2011-0088
ASME 2015 rulemaking	NRC-2016-0082
ASME Code Case RGs rulemaking	NRC-2012-0059

Questions & Comments



Daniel Doyle, Project Manager
Division of Policy & Rulemaking
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Email: Daniel.Doyle@nrc.gov
Phone: 301-415-3748

How did we do?

- Link to NRC Public Meeting Feedback form:



Acronyms

ADAMS	Agencywide Documents Access and Management System
ASME	American Society of Mechanical Engineers
CFR	<i>Code of Federal Regulations</i>
FR	<i>Federal Register</i>
HDPE	High-density polyethylene
IBR	Incorporation by Reference
ISI	Inservice Inspection
IST	Inservice Testing
MSIP™	Mechanical Stress Improvement Process
NRC	Nuclear Regulatory Commission
RG	Regulatory Guide
RIN	Regulation Identifier Number