

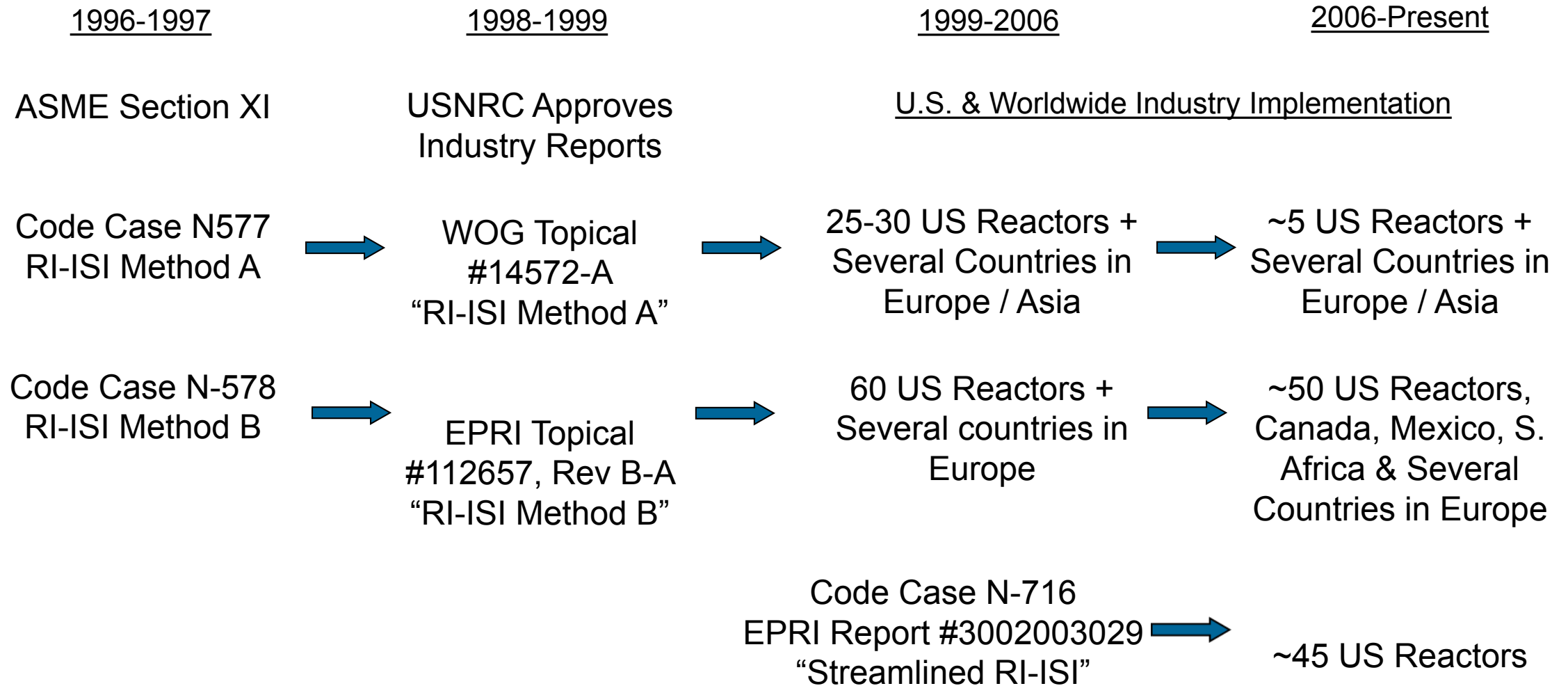
ASME Section XI NONMANDATORY APPENDIX R

Risk-informed Inspection Requirements for Piping



April 17th, 2018

RI-ISI Timeline



Initial Approval Process

- Pilot Plant Process

- Topical Reports
- Plant-specific evaluations provided to NRC
- Substantial interactions

- Follow-on Process

- Plant-specific relief request following industry/NRC agreed upon Template

Initial Approval Process

Nondestructive Evaluation: Probabilistic Risk
Assessment Technical Adequacy Guidance for Risk-
Informed In-Service Inspection Programs

1021467-A

- Significant industry / NRC interactions
 - 50 plant-specific approvals
 - Updates to code cases and creation of Appendix R

- PRA Technical Adequacy identified as generic issue
 - Regulatory Guide 1.200, rev 2 03/2009
 - *An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessments Results for Risk-Informed Activities*
 - EPRI Topical Report #1021467-A approved by NRC
 - *Probabilistic Risk Assessment Technical Adequacy Guidance for Risk-Informed In-Service Inspection Programs*
 - Applies to both the EPRI Traditional (ASME Appendix R) and EPRI Streamlined RI-ISI (Code Case N716) Methodologies

Current Status

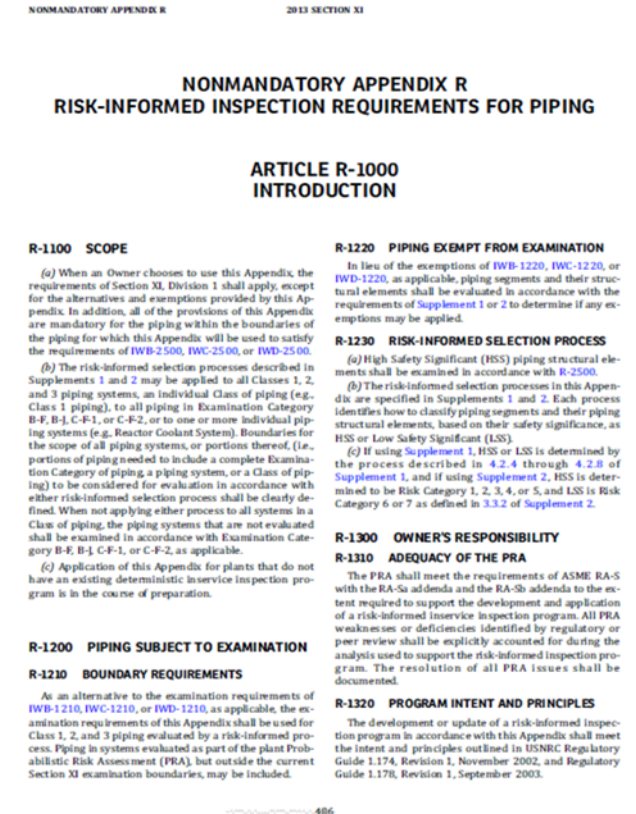
- EPRI Streamlined RI-ISI Methodology
 - ASME Code Case N716-1
 - Endorsed in Regulatory Guide 1.1467, revision 14
 - Relief request / Request for alternative no longer required
 - Focuses limited NRC / industry resources on more important issues / components
- EPRI Traditional RI-ISI Methodology
 - Latest version of 10CFR50.55a still requires plant-specific submittals as well as NRC review and approval

Code Case Number	Table 1 Acceptable Section XI Code Cases	Date
N-666	<i>Weld Overlay of Class 1, 2, and 3 Socket Welded Connections, Section XI, Division 1</i>	4/18/06
N-683	<i>Method for Determining Maximum Allowable False Calls When Performing Single-Sided Access Performance Demonstration in Accordance with Appendix VIII, Supplements 4 and 6, Section XI, Division 1</i>	2/28/03
N-685	<i>Lighting Requirements for Surface Examination, Section XI, Division 1</i>	2/28/03
N-686-1	<i>Alternative Requirements for Visual Examinations, VT-1, VT-2, and VT-3, Section XI, Division 1</i>	1/10/07
N-695	<i>Qualification Requirements for Dissimilar Metal Piping Welds, Section XI Division 1</i>	5/21/03
N-696	<i>Qualification Requirements for Appendix VIII Piping Examinations Conducted from the Inside Surface, Section XI, Division 1</i>	5/21/03
N-697	<i>Pressurized Water Reactor (PWR) Examination and Alternative Examination Requirements for Pressure Retaining Welds in Control Rod Drive and Instrument Nozzle Housings, Section XI, Division 1</i>	11/18/03
N-700	<i>Alternative Rules for Selection of Classes 1, 2, and 3 Vessel Welded Attachments for Examination, Section XI, Division 1</i>	11/18/03
N-705	<i>Evaluation Criteria for Temporary Acceptance of Degradation in Moderate Energy Class 2 or 3 Vessels and Tanks, Section XI, Division 1</i>	10/12/06
N-706-1	<i>Alternative Examination Requirements of Table IWB-2500-1 and Table IWC-2500-1 for PWR Stainless Steel Residual and Regenerative Heat Exchangers, Section XI, Division 1</i>	1/10/07
N-712	<i>Class 1 Socket Weld Examinations, Section XI, Division 1</i>	5/12/04
N-716-1	<i>Alternative Piping Classification and Examination Requirements, Section XI, Division 1</i>	1/27/13
N-730	<i>Roll Expansion of Class 1 Control Rod Drive Bottom Head Penetrations in BWRs, Section XI, Division 1</i>	10/04/06
N-731	<i>Alternative Class 1 System Leakage Test Pressure Requirements, Section XI, Division 1</i>	2/22/05
N-733	<i>Mitigation of Flaws in NPS 2 (DN 50) and Smaller Nozzles and Nozzle Partial Penetration Welds in Vessels and Piping by Use of a Mechanical Connection Modification, Section XI, Division 1</i>	7/01/05
N-735	<i>Successive Inspection of Class 1 and 2 Piping Welds, Section XI, Division 1</i>	10/12/06

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ASME Section XI - Appendix R

- What steps are needed to get Appendix R endorsed in 10CFR50.55a?
 - Reflect guidance in EPRI Topical Report #1021467-A as approved by NRC?
 - And?
- What is the best process for assuring timely changes are made to Appendix R to allow efficient endorsement by NRC in 10CFR50.55a?





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