



Watts Bar Nuclear Plant Units 1 and 2 Adoption of 10 CFR 50.69

September 6, 2018

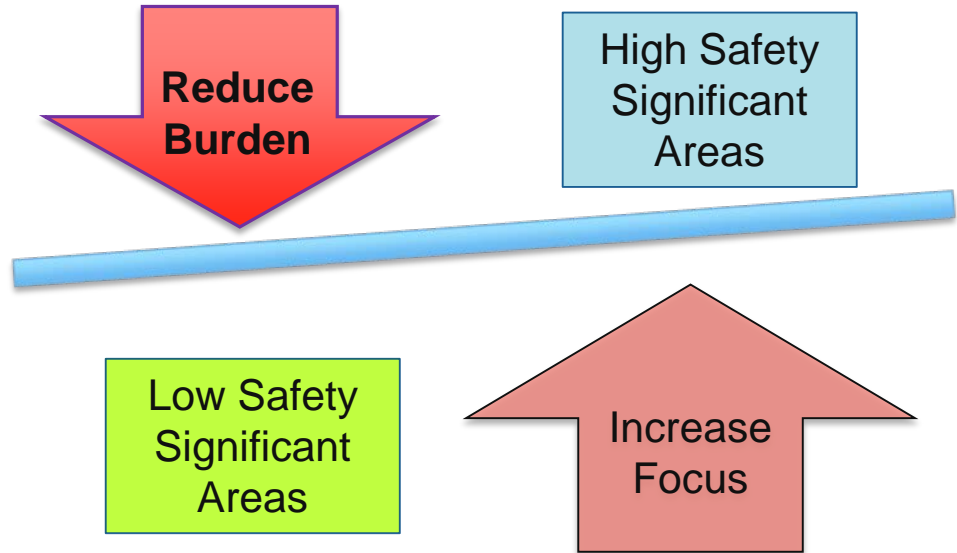
Agenda

- 10 CFR 50.69 Background
- License Amendment Background
- Operating Experience
- Watts Bar 50.69 Evaluation

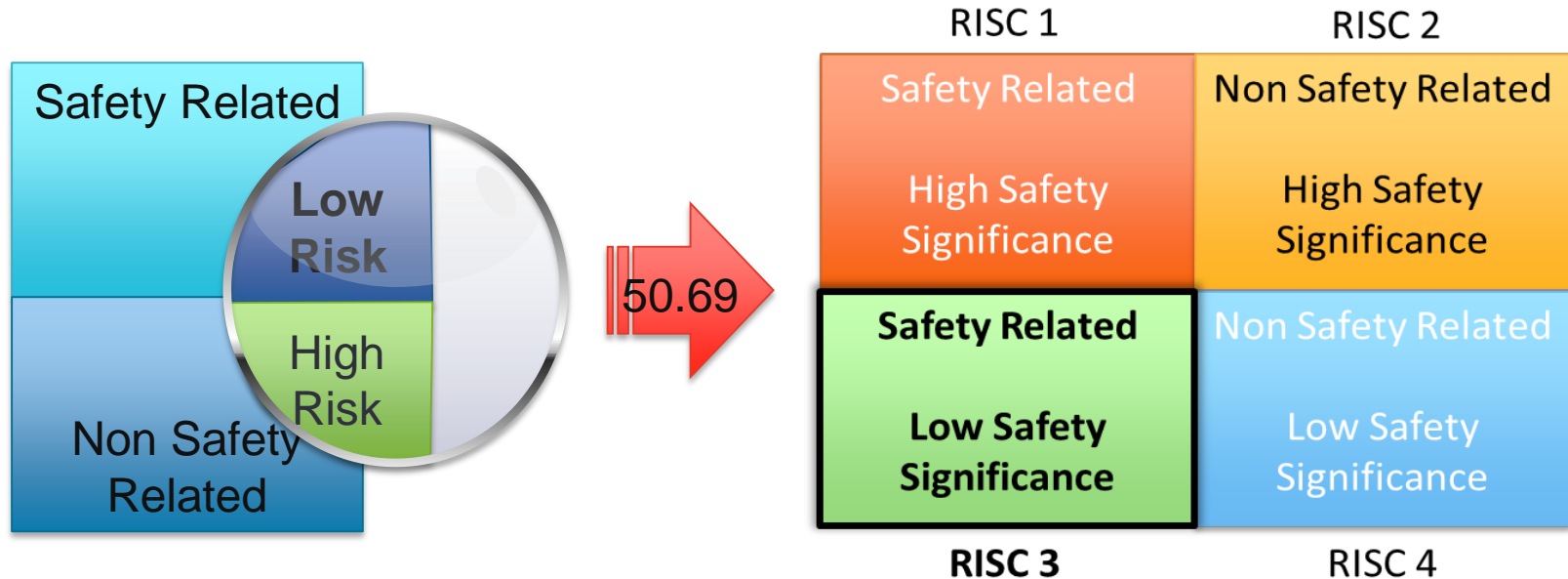
10 CFR 50.69 Overview

Provide Flexibility to Reduce Cost and Improve Plant Operations & Safety Margins

It has the potential to provide the industry substantial cost savings and drive the goals of the *Delivering the Nuclear Promise Initiative*



Overview - Categorization



RISC = Risk Informed Safety Class

Overview – Exempted Special Treatment Requirements

Low Safety Significant Components can be scoped out of these regulations

Local Leak Rate Testing [10 CFR 50 Appendix J]	Quality Requirements [10 CFR 50 Appendix B]	In-service Inspection [10 CFR 50.55a(g)]	ASME XI repair & replacements, applicable portions, with limitations [10 CFR 50.55a(g)]
Maintenance Rule [10 CFR 50.65]	In-service Testing [10 CFR 50.55a(f)]	Environmental Qualification [10 CFR 50.49]	Event Reporting [10 CFR 50.55(e)]
Seismic Qualification [Portions of Appendix A to 10 CFR Part 100]	Deficiency Reporting [10 CFR Part 21]	Applicable Portions of IEEE standards [10 CFR 50.55a(h)]	Notification Requirements [10 CFR 50.72, 50.73]

License Amendment Background

- Delivering the Nuclear Promise Efficiency Bulletins (EB)
 - EB 17-09 LAR Submittal
 - ✓ LAR Template
 - EB 17-16 Process Implementation
- LAR Coordinating Committee
 - Peer review prior to submittal
 - Comments resolved prior to submittal

License Amendment Background – cont.

- Joint Owners' Group Committee
 - Collaboration
 - Sharing Infrastructure
 - Training
 - Information Sharing

HSS Component Determination Overview

Determination of High Safety Significant (HSS) Components for Indicated Events/Hazards

- Internal Events, Risk Imp. Measures & Sensitivity Studies
- Internal Flooding, Risk Imp. Measures & Sensitivity Studies
- Seismic Events, Risk Imp. Measures & Sensitivity Studies
- Internal Fire, Fire Protection Program Safe Shutdown Equipment List (SSEL)
- Other External Hazards, any System, Structure or Component (SSC) Credited by the IPEEE to Screen the Hazard
- Shutdown Risks, Safety Function Defense-In Depth

PRA Technical Adequacy Evaluation

Internal Events & Internal Flooding PRA Model

- Peer reviewed in accordance with RG 1.200 Rev. 2 and ASME/ANS PRA Standard (2008) Addendum a
- Underwent Fact and Observation (F&O) Closure Process
- Seven Open F&Os (Finding Level) which were assessed against the 50.69 application

PRA Technical Adequacy Evaluation cont.

Seismic PRA Model

- Full Scope Peer Review against the 2008 ASME/ANS PRA Standard Addendum b Part 5 (seismic)
- Underwent F&O Closure Process
- One Open F&O (Finding Level) which was assessed against the 50.69 Application

Model Update and Maintenance

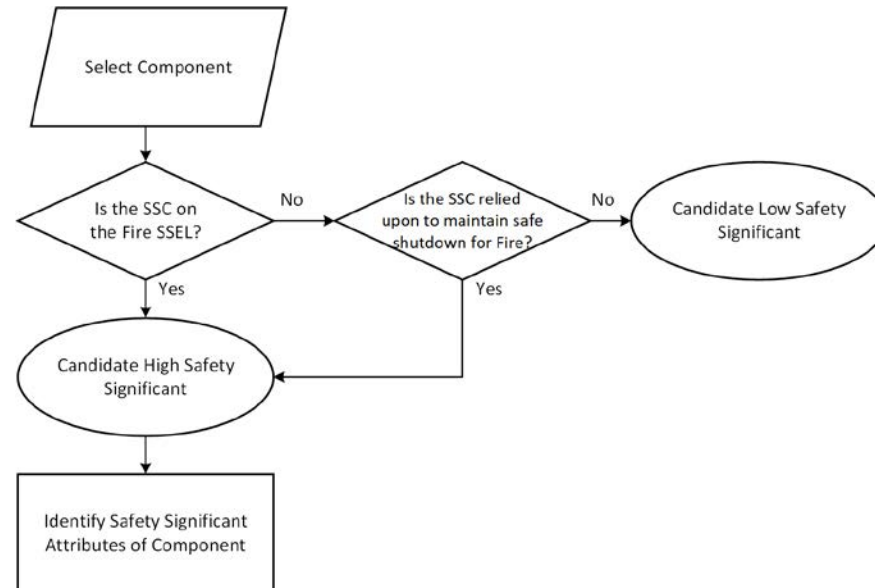
TVA procedures ensure or provide:

- Model configuration, fidelity and realism
- Periodic update requirements
- Living model requirements
- PRA model updates
 - > PRA Maintenance
 - > PRA Upgrade
- Peer Review requirements

Non-Modeled Hazards

Internal Fire Hazards

- Deviation from the NEI 00-04 approach.
- The Watts Bar 50.69 process will use the Fire Protection Program Safe-Shutdown Equipment List (SSEL)



Non-Modeled Hazards cont.

- Other External Hazards – the WBN process will use the screening results from the IPEEE for evaluation of safety significance related to:
 - High Winds
 - External Flooding
 - Transportation and Nearby Facility Accidents
 - Other External Initiating Events
- All SSCs credited in IPEEE Other External Hazards evaluation to allow the hazard to screen will be considered High Safety Significant (HSS)
- Other External Hazard screening was reviewed against the current as-built, as-operated plant

Low-Power / Shutdown

- The WBN Categorization process will use the shutdown safety management plan described in NUMARC 91-06, for evaluation of safety significance related to low power and shutdown conditions.
- TVA process assesses the potential impact on shutdown risk
 - Focus on planning, conservative decision-making and maintaining defense-in-depth
 - Assessment of plant shutdown configurations for impact on Key Safety Functions

LAR Schedule

- Week of 9/10/18-Draft 50.69 LAR to be reviewed by Industry Coordinating Committee
- Coordination with TSTF-425 Submittal
 - It is expected that there will be review efficiencies gained because of the common PRA usage
 - Both the 10 CFR 50.69 LAR and TSTF-425 LAR submittals are planned for 9/28/18
- A one-year NRC review is requested
- Upon approval, the 50.69 License Amendment will be implemented within 60 days

