



Westinghouse Non-Proprietary



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## **Expanding RIPE Concept to Deal with Generic Issues**

ACRS Meeting

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# Introduction

- **Current Risk Informed Process for Evaluations (RIPE) is a significant step forward in risk informed decision making**
  - Focus industry and NRC resources on safety significant issues
- **Expansion of current process supports further reduction of resources on low risk significant issues**

# Expanding RIPE Concept to Deal with Generic Issues

- Leverage RIPE concept of expedited review for low-risk significance
- Maximized applicability to generic evaluations
- Using bounding risk calculations for demonstrably low safety significant issues to support expedited NRC review and focus effort.
  - MSLB asymmetric cooling issue (dose timeline)
  - Looking for additional suitable examples
- PRA technical adequacy for some issues can be addressed via bounding assumptions and assessed via GAET (Generic Assessment Expert Team) and confirmed for plant specific applicability

# Example of Low Safety Significance Issue

- **Asymmetric Natural Cooldown**
  - For low risk conditions, current cooldown practices may challenge offsite dose limits using current methodology/assumptions
- **Specific conditions**
  - Main Steamline Break (MSLB), faulted Steam Generator (SG), cooldown with 1 SG isolated
  - Offsite doses can be challenged if concurrent conditions occur (Design Basis)
  - EOP changes needed to address the condition focus on rapidly cooling down the plant to limit the calculated doses (success path)
    - More rapid cooldown imposes additional operator challenges
    - Increase error potential (more complicated cooldown strategies, including RCS opening) → increase frequency of failure path.
- **Non risk significant scenario**

# Specific Conditions for Generic Risk Calculation

- **Boundary Conditions**
  - Faulted/un-isolated SG
  - Concurrent Loss of Offsite Power
  - Maximum allowable fuel leakage
  - Maximum allowable primary to secondary leakage
- **Assumptions**
  - Faulted SG/un-isolated SG with concurrent loss of offsite power = core damage
  - Conservative
    - Plant can be safe/stable with normal cooldown
    - Rapid asymmetrical cooldown limits total offsite dose

# Generic assessment and Evaluation Team (IDP/GAET) Considerations

- **Generic Initiating Events (i.e., entry condition) frequency**
- **Fuel damage not allowed by the event**
- **Bounding Single Failure**
- **Fuel Leakage history**
- **Primary to secondary leakage history**
- **Conservatism in offsite dose analysis**
- **Plant-specific applicability**



# Potential RIPE Enhancement

- **Some issues of generic very low safety significance**
    - Use generic bounding analysis (e.g., topical report) to determine safety significance
    - GAET may be able to replace plant specific IDP requirements
    - Streamlined NRC review of topical report
  - **Submittal process (topical)**
    - Risk-informed review of a topical report
      - Implement via 50.59
- Or
- Alternatively enabling simplified plant-specific submittal



Questions?