SMiRT LBB Workshop

Industry Initiative to Redefine Large Break Loss-Of-Coolant Accident (LBLOCA)

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LBLOCA Redefinition

• Utilize Risk Informed Rule-Making to Change 10 CFR Part 50
  – 50.46 Acceptance Criteria for ECCS
  – Appendix A GDC (LOCA definition)
  – Appendix K
• New Rule with Option of Retaining Current Licensing Basis
• Redefine the Design Basis LOCA
• Maintain an Acceptable Margin of Safety
• Maintain Some Mitigative Capability for LOCA
• Technical Justification
  – Use Risk-Informed Technology to Show Low Risk of LBLOCA
    • Utilize the Criteria in Regulatory Guide 1.174
    – Use Leak Before Break Analysis to Support Choice of Maximum Size
• Define New Maximum Break Size and Obtain Benefits
• The new maximum break size will replace the existing requirement to consider break sizes up and including double ended breaks of the largest primary system piping
Potential Safety Benefits of LBLOCA Redefinition

An Example of Potential Safety Benefits

- Tech Specs Require 4 Accumulators to be Operable for a 4-Loop Plant
- Revised LBLOCA Break Size Could Potentially Provide the Following Benefits
  - Only Require 3 Accumulators to be Operable
  - Relax Boron Concentration and Volume Requirements
  - Relax Completion Times when not Meeting the LCO