Downcomer Boiling in Appendix K ECCS Analyses

Westinghouse Electric Company

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Agenda

- Introduction - Jim Gresham
- Appendix K models - Rich Schoff
  - Treatment of downcomer boiling in Westinghouse Appendix K model
  - Application to McGuire 1 & 2 and Catawba 1
  - Sensitivity to key parameters
- Comparison to BELOCA - Mitch Nissley
  - Explanation of timing differences
  - WCOBRA/TRAC Validation
- Conclusions - Jim Gresham

Meeting Objectives

- Provide additional information on downcomer boiling effects in Appendix K model calculations
- Compare to realistic prediction of phenomena

Desired Outcome

- Common understanding of context for addressing concerns in evaluation models
- Agreement that issue will not affect plant operation or startup

Conclusions

- The effects of downcomer boiling should be addressed in ECCS models.
- Must be addressed within the framework of approved models.
  - Appendix K biases and conservatism delay the calculated time of DC boiling
- Appendix K analyses are conservative compared to best estimate predictions