



## RIC 2011 Risk-Informed Initiatives

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### Nuclear Plant Operation Today

- TS shutdowns require extended cold shutdown
- Missed surveillances result in plant shutdown...
- Plant startup delayed due to emergent equipment issues...
- Completion times are short, fixed, not commensurate with safety...
- Surveillance testing wears out safety-related equipment...
- 3.0.3 plant shutdowns/NOEDs/emergency TS changes...
- Inoperability of physical barriers or snubbers inop safety components...
- Fire protection requirements are inflexible...
- All safety-related components treated equally...
- LOCA analyses are based on theoretical double-ended guillotine break...

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### A Future of Risk-Informed Nuclear Plant Operation...

- Rare TS shutdowns terminate at hot shutdown ...
- Missed surveillances of low risk significance don't require plant shutdown...
- Plant startup is not delayed due to inoperability of equipment of low risk significance...
- Completion times are configuration-specific, risk-informed, determined by an NRC approved process...
- Surveillance intervals are risk-informed by an NRC approved process...
- Loss of risk-insignificant safety systems do not result in plant shutdown...
- Inoperability of physical barriers or snubbers do not immediately result in inoperability of supported equipment...
- Fire protection requirements are risk-informed...
- Components are maintained commensurate with their safety significance...
- LOCA analyses are based on realistic break sizes...

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**... is here TODAY!**

- RITS Initiative #1 – End States
- RITS Initiative #2 – Missed SRs
- RITS Initiative #3 – MODE Restraints
- RITS Initiative #4B – RMTS
- RITS Initiative #5B – SFCP
- RITS Initiative #6 – LCO 3.0.3 Relief
- RITS Initiative #7A/7B – Hazard Barriers/Snubbers
- 50.44c – NFPA 805
- 50.69 – Special Treatment
- 50.46a – Transition Break LOCA

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**Status of Availability**

- End States – B&W, CE, BWR TSTFs available, W TSTF-432 early summer
- Missed SRs – TSTF-358 available now, near 100% implementation
- MODE Restraints – TSTF-359 available now, 85% implementation
- RMTS (4B) – NEI 06-09 available now, TSTF-505 late summer
- SFCP (5B) – TSTF-425 available now
- LCO 3.0.3 Relief – CE TSTF-426 early summer, awaiting other TRs
- Hazard Barriers/Snubbers – TSTF-427, 372 available now
- 50.48c (NFPA 805) – available now
- 50.69 (Special Treatment) – available now
- 50.46a (Transition Break LOCA) – proposed final rule sent to Commission December 2010, awaiting final decision/issuance

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**Remaining Work for Full Availability**

- End States – Issuance of W TSTF-432
  - No technical issues remain
- RMTS (4B) – Issuance of TSTF-505
  - Resolving issues of TS structure for ease of implementation
  - Second pilot plant identified for 2011 submittal
- LCO 3.0.3 Relief – Issuance of CE TSTF-426, submittal of vendor TRs
  - Resolving issues of TS structure to preclude voluntary application
  - Schedule of BWR, other PWR vendor topicals
- 50.69 (Special Treatment)
  - Pilot plant identified for 2011 submittal
- 50.46a (Transition Break LOCA)
  - Commission action

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### Full Implementation by Utilities...

- In many cases, the travelers are implemented under CLIP without additional NRC technical staff review.
- For more substantive initiatives (4B, 50.46a, 50.48c, 50.69, NFPA 805), a rigorous and full scope PRA model is required to get full benefits.
- At the end of the day:
  - Enhanced plant safety
  - Cost savings
  - Outage time savings
  - Avoided shutdowns
  - Reduction/elimination of NOEDs, emergency TS changes, one-time TS changes, ...

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