

Circuits Resolution

Fire Protection Steering Committee Meeting

December 5, 2007

Topics

- SRM/SECY 2006-196
- NRC Regulatory Views Regarding the Draft NEI Method
- NRC Policy Considerations
- Compliance Under 10 CFR 50.48(b)
- An Approach to Achieve Compliance Under 10 CFR 50.48(b)
- Conclusion

SRM/SECY-2006-196

- “Technically sound and regulatory traceable footprint”
- “Permanent closure for this issue”
- “Examine licensee analysis methods”

SRM/SECY-2006-196 (continued)

- “Method of compliance for licensees who do not choose to utilize the risk-informed approach contained in 10 CFR 50.48(c)”
- “Continue to encourage licensees to transition to 10 CFR 50.48(c) and NFPA 805”

NRC Regulatory Views Regarding the Draft NEI Method

- Does not achieve compliance with 50.48(b) or III.G.2
 - Compliance must be met through a redundant train being free of fire damage in accordance with the three options under III.G.2, which include barriers, fire protection systems and separation
- Does not achieve compliance with III.G.3 of 10 CFR 50, Appendix R
 - For example, control room scenarios are not addressed

NRC Policy Considerations

- NRC staff has been directed to encourage licensees to adopt 50.48(c), NFPA 805.
 - 50.48(c) provides a more consistent licensing basis
 - NRC is working with industry to clarify expectation, publish those expectations in a timely manner, and to keep a line of communication open with pilots and early adopters of 50.48(c).
 - If additional plants choose to adopt 10 CFR 50.48(c) the NRC will ensure that adequate review resources are available for timely transition
- Draft NEI method is inconsistent with NRC staff understanding of Commission direction, since the method uses risk information outside of 10 CFR 50.48(c)

Compliance Under 10 CFR 50.48(b)

- Licensees must protect a train of safe shutdown equipment in each fire area in accordance with 10 CFR 50, Appendix R, Section III.G.2 or III.G.3 (the “Protected Train”)
- Fire modeling and probabilistic risk assessments have been used to support exemptions, but can not establish compliance

An Approach to Achieve Compliance Under 10 CFR 50.48(b)

- Develop system and functional scenario listing for safe shutdown systems without relying on risk information
 - NEI, industry representatives and owners groups are developing this key piece as part of a proposed revision to NEI 00-01
- As a minimum, protect the equipment identified in this list in accordance with III.G.2 without relying on risk information

An Approach to Achieve Compliance Under 10 CFR 50.48(b) (continued)

- NRC staff believes we can support the position that plant equipment and systems in the unprotected train that could affect the protected train's capability could be mitigated through the use of manual actions
 - NRC and industry agreement on the system and functional scenario listing is a key component in this position

An Approach to Achieve Compliance Under 10 CFR 50.48(b) (continued)

- In addition, the NRC staff believes we can support the position that fire modeling could be used to show that the fire effects on the unprotected train could not affect the protected train's capability to achieve and maintain hot shutdown conditions
 - Note that mitigation on the unprotected train does not need to be in accordance with III.G.2

An Approach to Achieve Compliance Under 10 CFR 50.48(b) (continued)

- Plant modifications may be needed to assure safety if:
 - No feasible and reliable manual actions are capable of mitigating the fire effects, and
 - Fire modeling cannot show that the fire effects on the unprotected train will not affect the protected train's capability
- Licensees continue to be responsible for maintaining the requirements of their fire protection program in accordance with their plant specific license condition and commitments

An Approach to Achieve Compliance Under 10 CFR 50.48(b) (continued)

- Credible fires affecting the unprotected train that could cause circuit failures that are adverse to safety and can not be feasibly and reliably mitigated by manual actions may not be violations of Appendix R.
 - the reactor oversight process (ROP) may identify the lack of protection as a greater than green finding.
 - protection may still be required by the plant's license condition or commitments.
- The NRC staff understands, based on the original version of NEI 00-01, that it is industry practice to fix safety significant issues when identified, regardless of regulatory requirements or commitments

Conclusion

- The NRC staff sees success as achievable by using portions of the draft NEI method, but not the proposed risk-informed portion
- Current NRC guidance can be used to support a success path (RIS 2006-10, manual action and fire modeling guidance)
- An NRC supported risk-informed approach is available under 10 CFR 50.48(c)

NFPA 805 Transition

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NFPA 805 (10CFR50.48(c))

- 42 Units Committed to NFPA 805 Transition
- Pilots: Oconee & Shearon Harris NPP
 - Completed 9 Pilot Observation Visits
 - Harris FPRA Staff Review - February 2008
 - Oconee FPRA Staff Review – March 2008
 - 10th Observation Visit – April 2008
 - LAR Submittals to NRC – May 2008
- FAQ Process
 - 18 Public Meetings w/ NEI Task Force
 - 14 FAQs Closed
 - 6 FAQs in Concurrence
 - 12 FAQs Open

NRC Staff Actions

- NRC staff continues to work with industry to:
 - clarify expectations
 - publish those expectations in a timely manner
 - keep a line of communication open with pilots and early adopters of 50.48(c).
- If additional plants choose to adopt 10 CFR 50.48(c) the NRC will ensure that adequate review resources are available for timely transition reviews

NRC Staff Actions (continued)

- *American Nuclear Society Fire PRA Methodology, an American National Standard, ANSI/ANS-58.23-2007*
 - Published November 20, 2007
 - NRC plans to issue preliminary expectations

- ASME/ANS Combined PRA Standard
 - ASME plans to incorporate the ANS Fire PRA Standard as Part 3, *Level 1 - Fire PRA at Power*.
 - NRC plans to endorse the ASME/ANS Combined PRA Standard, including Part 3, through a revision to RG-1.200

NFPA 805 Enforcement Discretion

- NEI requested an extension to the current 3 year discretion policy for transitioning NFPA-805 sites with the following bases:
 - Availability of Pilot Information to the Non-Pilots
 - Parallel Implementation instead of Series Implementation
 - Pilot's LAR Safety Evaluation availability prior to LAR submittal
 - Published ANS Fire PRA Standard with NRC Endorsement
 - Availability of Industry Fire PRA Practitioners
 - To develop Site Fire PRAs
 - To perform Fire PRA Peer Reviews
 - License Amendment Review Timing
 - Timely NRC Staff review of multiple LAR submittals