



**RIC 2008**  
**Fire Protection:**  
**Recent Achievements and**  
**Remaining Challenges**

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**Summary**

- Recent achievements
  - Transition to NFPA 805
  - ANS fire PRA standard
  - Hemyc fire barriers
  - Post fire operator manual actions
- Remaining challenges
  - Transition to NFPA 805
  - Fire induced circuit failures

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**Achievement - Transition to NFPA 805**

- 44 of 104 operating units committed to transition
  - 38 in active transition
- Staff review of Fire PRA completed at Harris pilot plant February 2008
  - Staff review at Oconee pilot begins March 17, 2008

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### Achievement - Transition to NFPA 805

- NFPA 805 Frequently Asked Question Process
  - Process provides stakeholders with NRC staff positions on proposed changes to industry guidance documents such as NEI 04-02, "Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program Under 10 CFR 50.48(c)"
    - Held 21 monthly meetings
    - 2/3 of the submitted FAQs are closed or in the closure process
    - FAQ process streamlines issuance of revision to Regulatory Guide 1.205 by close of 2008
    - FAQ process can also be used to address proposed changes to other guidance documents such as NUREG/CR-6850, EPRI 1011989, "EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities"

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### Achievement – ANS Fire PRA Standard

- Published as ANSI/ANS-58.23-2007, "Fire PRA Methodology, An American National Standard," in November 2007
  - Incorporated as Part 3, "Internal Fires," of ASME/ANS-RA-S-2008, "Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications"
  - Part 3 will be endorsed, with exceptions, in Revision 2 of RG-1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," later this year
- NRC position on ANSI/ANS-58.23-2007 is documented in internal memo, "NRC Staff Position on the Fire PRA Standard"

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### Achievement - Hemyc Fire Barriers

- Operating reactors are safe – the Hemyc fire barrier issue has been resolved or compensatory measures are in place
- The safety significance of the Hemyc issue was low
- NRC Published Generic Letter 2006-03 to help resolve the issue
  - 16 of 104 operating units affected

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### Achievement - Hemyc Fire Barriers

- All affected licensees have been identified and are addressing their Hemyc deficiencies
- To ensure continued plant safety, affected licensees have implemented corrective actions and compensatory measures
- The commitments laid out in the licensees' responses to Generic Letter 2006-03 and their licensing actions continue to be inspected

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### Achievement - Post Fire Operator Manual Actions

- Licensees have a closure path to address post-fire operator manual actions
  - NRC issued RIS 2006-10 "Regulatory Expectations with Appendix R Paragraph III.G.2 Operator Manual Actions"
  - NRC issued internal review guidance in NUREG-1852 "Demonstrating the Feasibility and Reliability of Operator Manual Actions in Response to Fire"
  - NRC issued EGM-07-004 to provide enforcement discretion until March 6, 2009

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### Challenge – Transition to NFPA 805

- Complete a timely review of a pilot plant first-of-a kind license amendment request
- Communicate clarifications to transition activities in a timely manner
- Consider NEI request to extend enforcement discretion

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### Challenge - Fire Induced Circuit Failures

- SRM/SECY-2006-196 outlines the Commission's approach
  - "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"
- Six meetings between NRC and industry in 2007
- NEI submitted an industry method for evaluating multiple spurious operations in December 2007
  - Rev 2 of NEI 00-01 "Guidance for Post-Fire Safe Shutdown Circuit Analysis"
    - industry-wide owner's group assessment
    - plant-specific review
    - "Focused-scope" fire probabilistic risk analysis

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### Challenge - Fire Induced Circuit Failures

- NRC staff view of industry proposal
  - NRC staff believes that there are positive attributes of the industry method
    - The use of the Owners Groups to determine generic lists of multiple spurious operations
    - The application of plant staff expert panels
  - However, the staff remains concerned that:
    - Utilization of the risk analysis option of the industry method may not establish compliance
    - Industry method does not address Appendix R, III.G.3 compliance
    - Industry approach may reduce number of plants that adopt 10 CFR 50.48(c), NFPA 805

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### Challenge - Fire Induced Circuit Failures

- Provide comments on the industry proposal in late March 2008
- If NRC staff cannot accept industry proposal, NRC staff plans to develop an alternative proposal
  - Conduct a public meeting to interact with stakeholders on an alternative proposal
- Respond to the Commission's staff requirements memo via SECY paper by mid-2008.

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## Conclusion

- We have achieved some successes in recent years
  - Transition program to NFPA 805
  - ANS fire PRA standard
  - Hemyc fire barriers
  - Post fire operator manual actions
- However, challenges remain
  - The NRC is committed to work with stakeholders to address implementation challenges for plants transitioning to NFPA 805
  - The NRC is committed to manage the fire induced circuit failure issue to a conclusion

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