



**RIC 2011**  
**Regulatory Perspectives on Risk-Informed, Performance-Based Fire Protection Programs**

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**Topics for Discussion**

- NFPA 805 Pilot Program Status
- Enforcement Discretion
- NFPA 805 Infrastructure
- NFPA 805 Submittal Process
- NFPA 805 NRC Staff Review Process
- Summary

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**NFPA 805 Pilot Program Status**

- NFPA 805 Pilot Program is complete
- From the NRC Staff's perspective, the NFPA 805 pilot program has been a success!
  - The pilots have proven that the process works
  - The infrastructure has been improved using lessons learned
  - The FAQ process effectively incorporates lessons learned
  - Both pilots have made significant risk reductions during transition

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## Enforcement Discretion

### Interim Enforcement Policy

- 3 years enforcement discretion for NFPA 805 transition
- Original policy covered “existing fire protection non-compliances” if Letter of Intent (LOI) was submitted by 12/31/2005

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## Enforcement Discretion - continued

- 6 Month Extension
  - Enforcement Discretion has been tailored to provide a 6 month window to enable licensees to incorporate lessons learned from the NFPA 805 pilots
  - The window extends 6 months beyond the approval of second NFPA 805 pilot if licensee has made substantial progress
    - Second pilot approval granted on 12/29/2010
    - End of the 6 month extension window is 6/29/2011
    - Licensees have requested, and been granted, the 6 month extension for a total of 24 submittals (35 units)

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## NFPA 805 Infrastructure

- NRC Regulatory Guide 1.205, Rev.1 (Reference 1)
  - Endorses NEI 04-02, Rev. 2 (Reference 2)
    - A revised License Amendment Request Template is available for additional guidance
    - Several FAQs provide additional guidance consistent with staff positions documented in the pilot plant safety evaluations
  - Endorses NEI 00-01, Rev. 2, (Reference 3) Chapter 3

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### NFPA 805 Infrastructure - continued

- **NUREG 0800, Standard Review Plan,**
  - Chapter 9.5.1.2 (Reference 4)
    - Includes the Acceptance Review Checklist
    - A revised Safety Evaluation Template is also available for additional guidance
  - **NFPA 805 Inspection Procedure**
    - 71111.05XT (Under development)
    - Hold public meeting on triennial IP (March 2011)
    - Perform triennial inspection at Shearon Harris (September 2011)

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### NFPA 805 Infrastructure - continued

- **NUREG/CR-6850/EPRI 1011989 (Reference 5)**
  - Two additional EPRI technical reports provide enhanced methods developed through the FAQ process and the EPRI/NRC-RES Memorandum of Understanding (MOU) (references 6 & 7)

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### NFPA 805 Infrastructure - continued

- **The NFPA 805 Infrastructure has been upgraded to address lessons learned through the pilot process**
  - Lessons learned were incorporated into NRC guidance (RG 1.205 and SRP 9.5.1.2)
  - NFPA 805 FAQ process resulted in continuous update of the industry guidance document, NEI 04-02
  - Lessons learned have also been factored into the templates:
    - License Amendment Request Template
    - Safety Evaluation Template

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## NFPA 805 Submittal Process

### Licensee

- Files LOI to adopt NFPA 805
- Performs required engineering analyses
- Requests a pre-submittal meeting (Optional)
- Submits License Amendment Request (LAR)
- Supplements request if necessary
- Responds to RAIs
- Performs implementation actions

### NRC Staff

- Acknowledges LOI
- NRC holds a pre-submittal meeting with licensee (Optional)
- Performs Acceptance Review of LAR
- Once Accepted, NRC performs technical review
- Requests Additional Information (RAIs) if necessary
- Documents Review in Safety Evaluation
- Issues License Amendment

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## NRC Staff Review Process

- NRC staff is preparing for the NFPA LARs:
  - Staffing (both NRC staff and contractors)
  - Technical Reviewer Consistency Training
  - Technical Project Oversight
  - Mentoring
  - Project Management
  - Use of Technology

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## Summary

- Pilot program has been a success
- Enforcement Discretion allows pilot plant lessons learned incorporation
- NFPA 805 Infrastructure is up to date with lessons learned
- The staff is prepared to receive and review NFPA 805 LARs

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## References

1. Regulatory Guide 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants," Revision 1, U.S. Nuclear Regulatory Commission, Washington, DC, December 2009, (NRC's Agencywide Documents Access and Management System (ADAMS) Accession No. ML092730314)
2. NEI 04-02, "Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program Under 10 CFR 50.48(c)," Revision 2, Nuclear Energy Institute, Washington, DC, April 2008. (ADAMS Accession No. ML081130188)
3. NEI 00-01, "Guidance for Post-Fire Safe-Shutdown Circuit Analysis," Revision 2, Nuclear Energy Institute, Washington, DC, May 2009. (ADAMS Accession No. ML091770265)
4. NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Chapter 9.5.1.2, "Risk-Informed, Performance-Based Fire Protection Program," U.S. Nuclear Regulatory Commission, Washington, DC, December 2009 (ADAMS Accession No. ML092590527).

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## References - continued

5. NUREG/CR-6850/EPRI 1011989, "EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities," Volume 1: "Summary and Overview," Volume 2: "Detailed Methodology," U.S. Nuclear Regulatory Commission, Washington, DC, September 2005. (ADAMS Accession Nos. ML052580075 and ML052580118)
6. EPRI TR 1016735, "Fire PRA Methods Enhancements, Additions, Clarifications, and Refinements to EPRI 1011989," Electric Power Research Institute, Palo Alto, CA, December 2008, (ADAMS Accession No. ML090290195)
7. NUREG/CR-6850 Supplement 1/ EPRI 1019259, "Fire Probabilistic Risk Assessment Methods Enhancements," U.S. Nuclear Regulatory Commission, Washington, DC, September 2010. (ADAMS Accession No. ML103090242)

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