Risk-Informed, Performance-Based Fire Protection: A U.S. Regulatory Perspective

11th International Seminar on
FIRE SAFETY IN NUCLEAR POWER PLANTS AND INSTALLATIONS

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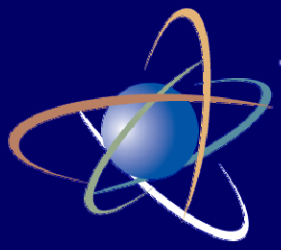

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BACKGROUND

- Fire Protection Regulations
  - Title 10 of the Code of Federal Regulations (CFR) Section 50.48, “Fire protection”
  - General Design Criterion (GDC) 3, “Fire protection”
  - Appendix R, “Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979”
  - 10 CFR 50.48(c) “National Fire Protection Association Standard NFPA 805”

REGULATORY INFRASTRUCTURE

- Regulatory Guide (RG) 1.205, “Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants”
  - NEI 04-02, “Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program Under 10 CFR 50.48(c)”
- NUREG-0800, “Standard Review Plan”
  - SRP Section 9.5.1.1
  - new SRP Section 9.5.1.2 (draft)
- Triennial fire protection inspection procedures

PILOT PLANTS

- Shearon Harris Nuclear Power Plant
- Oconee Nuclear Power Plant (Units 1, 2, 3)
- Pilot Plant Process
  - status
- NFPA 805 Frequently Asked Question (FAQ) Process

LESSONS LEARNED

- What are some of the initial lessons learned from the pilot plants?
  - License Amendment Request
  - Review of engineering evaluations
  - Treatment of the risk of prior approved recovery actions
  - Interface between RG 1.205 and RG 1.200

LEVERAGING NFPA 805 TOOLS

- Reduce regulatory burden
- Address emergent issues
- Improve fire risk management
- Use in non-fire protection areas

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PATH FORWARD

- Update regulatory guidance
- Develop inspection procedures
- Complete the pilot plant process
- Communicate lessons learned
- Prepare for license amendment requests

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QUESTIONS