FIRE RISK RESEARCH PROGRAM:
ONGOING AND FUTURE ACTIVITIES

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PROGRAM OBJECTIVES

• Improve qualitative and quantitative understanding of risk due to fire
• Support ongoing or anticipated fire protection regulatory activities
• Evaluate current fire risk assessment methods, tools, and data; and develop improvements (as needed)
RECENTLY COMPLETED ACTIVITIES

• Fire Protection SDP revision
  – Developed technical framework
  – Lead task group activities, support as needed
  – Principal author in revision (including bases)
• Technical basis for RIS 2004-03 on associated circuits inspections
  – Basis: industry/RES testing; multi-year RES program
  – Provide continuing support (e.g. public meeting)
• NRC/EPRI Fire Risk Requantification Study (FRRS)
  – Draft joint technical report on FRA methods
• Draft report on turbine hall fires
ONGOING ACTIVITIES

- Risk-informed, performance-based FP Rule (NFPA 805)
  - Fire model Verification and Validation
    - V&V: FIVE Rev 1, FDTs, MAGIC, CFAST, FDS
    - Utilize ASTM standard 1355 - 04
    - Basis: fire tests/benchmarking & validation
  - Final product: NUREG and EPRI documents on fire model
    V&V; joint EPRI-NUREG/CR on FRA methods
  - Reviews of Regulatory Guide and NEI 04-02
- FRA review guidance for NRR for change analyses (beyond FRRS scope)
ONGOING ACTIVITIES

• Hemyc and MT fire barrier testing
  – Status: planning for tests
  – Schedule accelerated, test plan modified
• ANS full power fire standard
  – 4 persons writing; 1 person reviewing
• International programs: fire modeling, fire event data
  – International benchmarking and validation
  – OECD: international fire events data base
FUTURE ACTIVITIES

• Associated circuits testing (bin 2 of RIS 2004-03)
  – Address bin 2 issues by Dec 06
  – Involve public
  – Benefits for issues beyond bin 2
• Inter-compartment testing at DIVA (IRSN)
• Potential
  – Low power & shutdown FRA methods (FRRS)
  – Human reliability analysis methods
  – Automated circuit tools
USES OF FIRE RISK REQUANTIFICATION STUDY

- Assisted fire protection SDP revision
- Assisted manual actions rulemaking
- Assisting ANS fire risk standard
- Assisting risk informed, fire protection rule endorsing NFPA 805
**FINAL REMARKS**

- Program continuing to provide critical support to regulatory activities for NPPs
- High priority program in RES