



*United States
Nuclear Regulatory Commission*

Nuclear Power Plant Fire Risk Analysis R&D: Overview

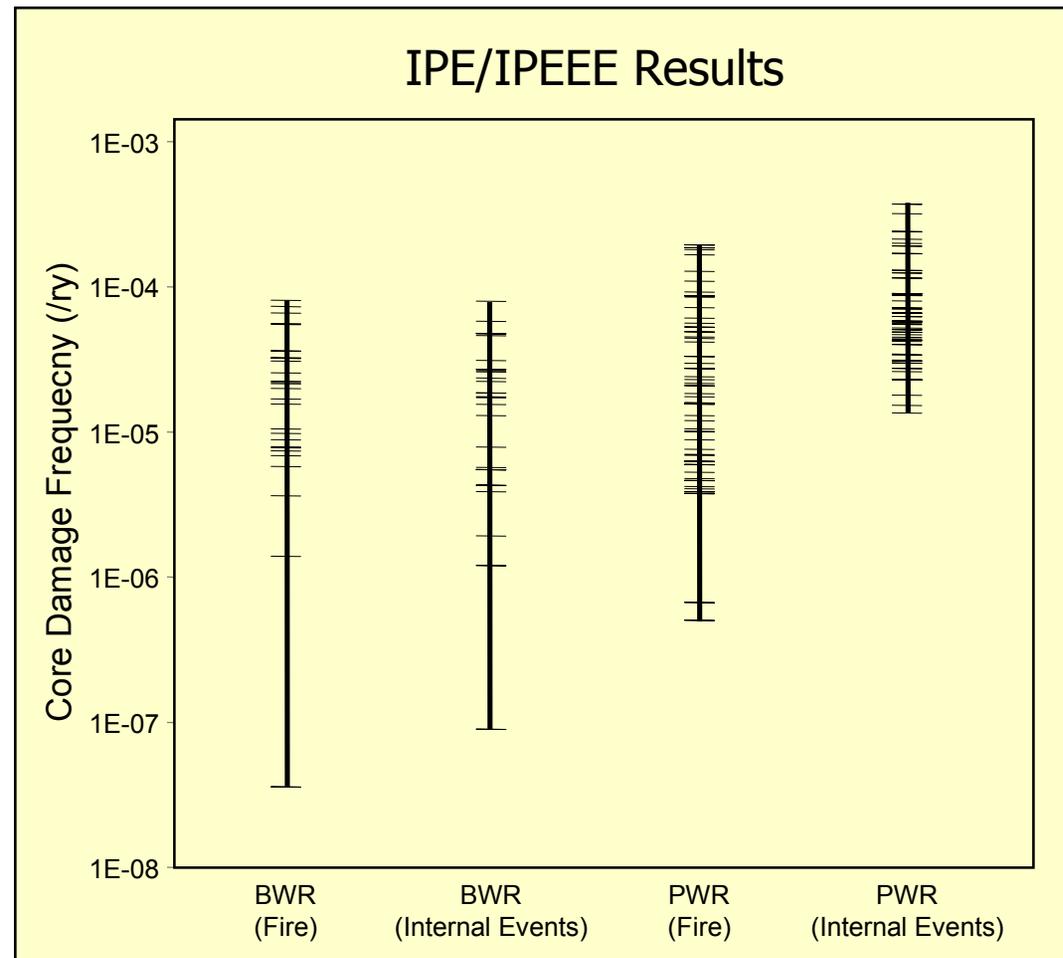
N. Siu

*Office of Nuclear Regulatory Research
Division of Risk Analysis and Applications
Probabilistic Risk Analysis Branch*

NRC/GRS Information Exchange Meeting
Köln, Germany
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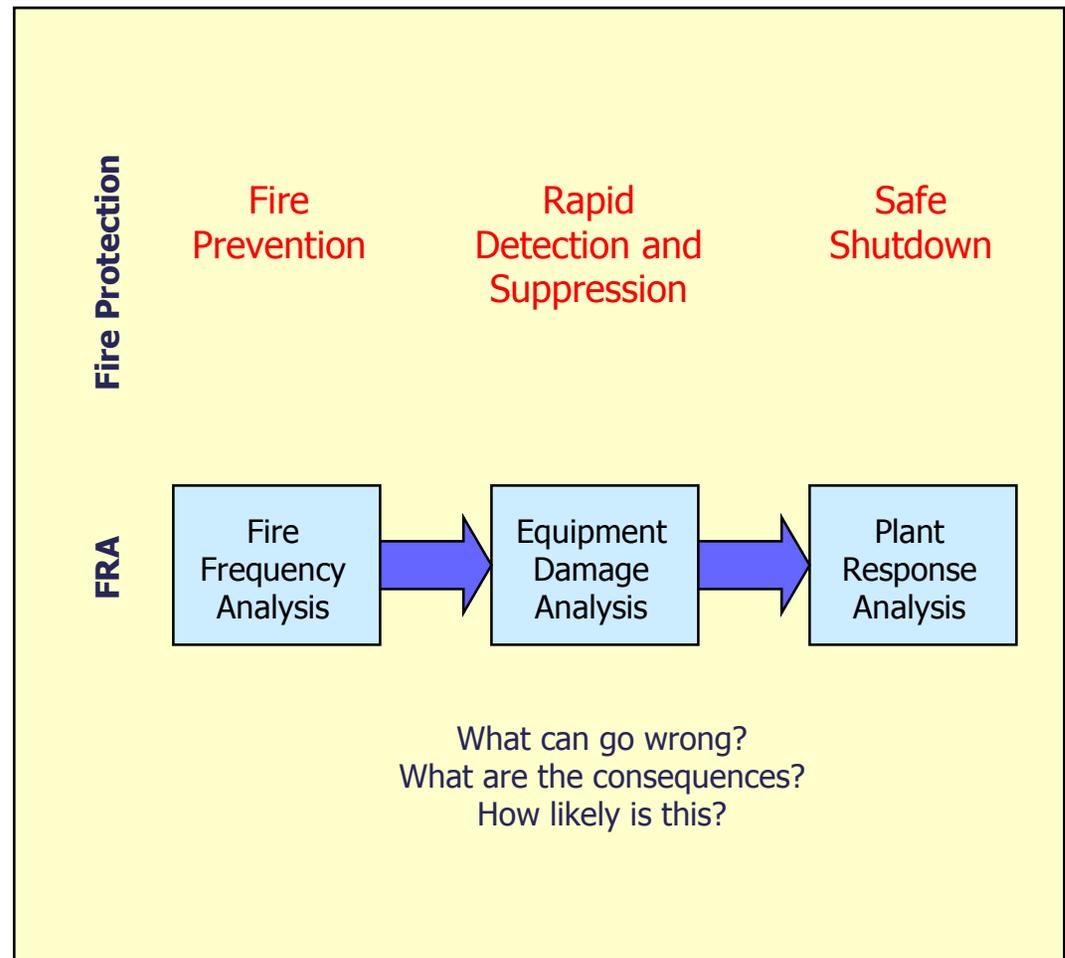
Fire can be an important contributor to risk.

- Previous analyses
 - Full-scope PRAs
 - IPEEEs
- Past events
- Changes over time
 - Plant
 - State of knowledge



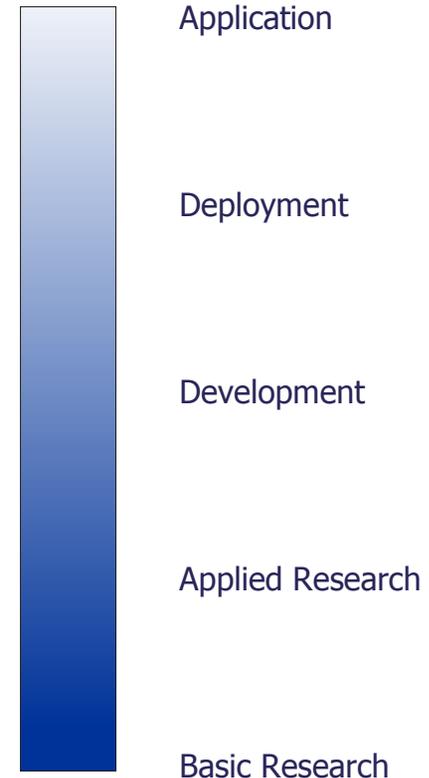
Uncertainties in current FRA predictions stem from programmatic as well as technical sources.

- Basic FRA approach (which mirrors fire protection defense-in-depth) is widely accepted
- Variations in study objectives affect analysis depth
 - Identify potential vulnerabilities
 - Quantify fire risk
- Uncertainties in technical "details" can significantly affect study results and findings

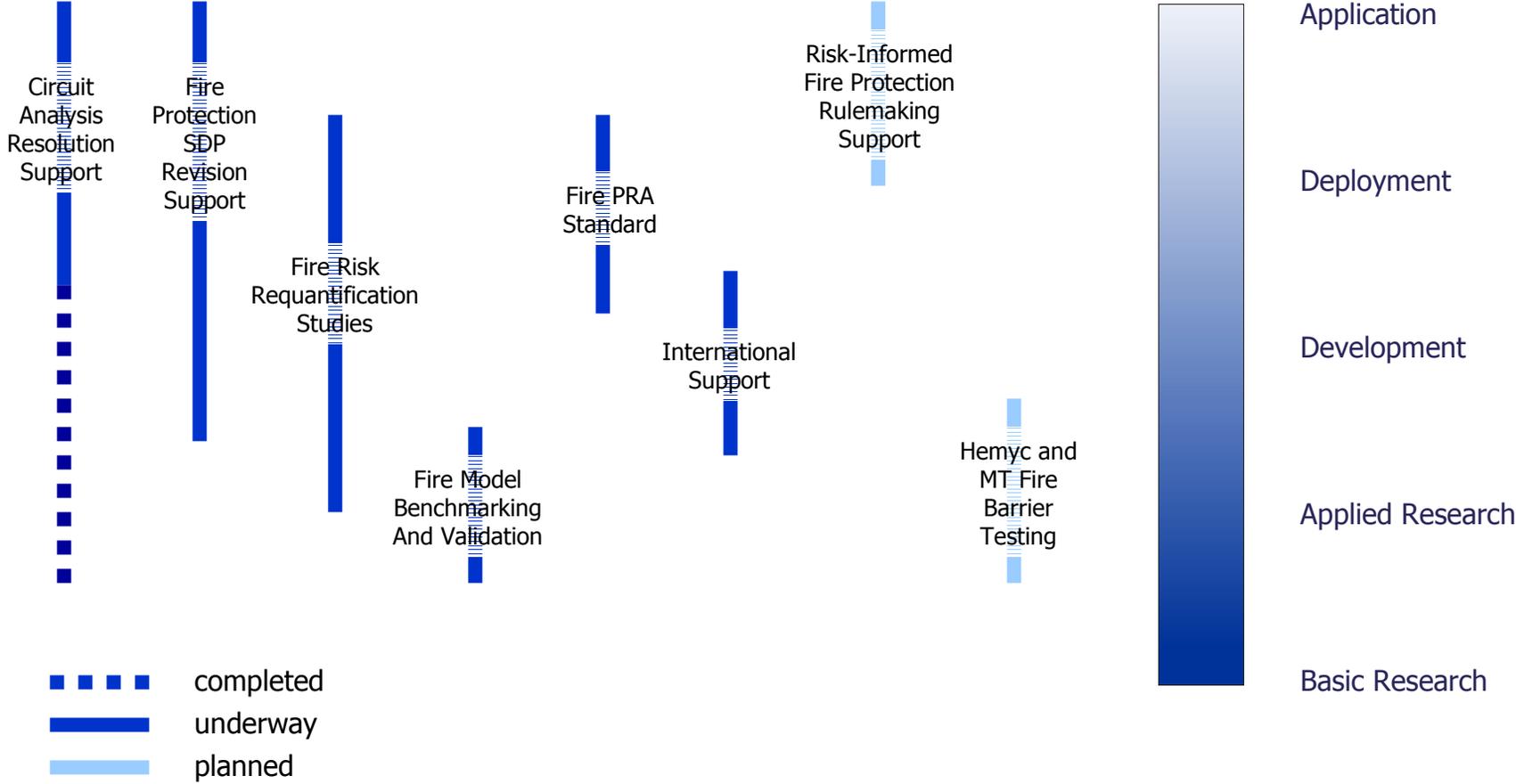


FRA R&D Program Objectives

- 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)



FRA R&D Current and Upcoming Activities



Concluding Remarks

- FRA R&D program provides critical support to regulatory activities for nuclear power plants
 - Focus inspections of associated circuits
 - Improved methods for assessing significance of fire protection inspection findings
 - Use of risk information in fire protection rulemaking
- Anticipatory research provides foundation
 - Joint NRC/EPRI fire risk requantification program
 - Fire modeling benchmarking/validation
 - Fire-induced failures of electrical cables and circuits
- International cooperation is important for progress