



Risk-Informing Fire Protection in Nuclear Power Plants

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Risk-informed Fire Protection

Move to RI fire protection

- Rulemaking and NFPA 805 implementing guide
- Reactor oversight and SDP
- Circuit Analysis & NEI-00-01

Activities to develop methods/tools is rising

- NEI-00-01 [NEI, method]
- Revised SDP [NRC, method]
- Fire risk management software [First energy, software]
- RI fire protection impairments [WOG, method]

Risk-informing fire protection requires

- Definition of the role of risk in support of plant fire protection activities AND
- Development of simple and reliable methods & tools for effective use of risk information



Risk-informing Fire Protection Impairments

Fire protection SDP/Risk-informing inspection findings

- Phase 1 & 2
 - Simplified method to screen findings
 - Some conservatism and limitation on application

WOG/Risk-informing fire protection impairments

- Improve the ability to deal with FP impairments
 - Strategy to minimize the risk-impact of the impaired condition
- Risk impact of impairments & benefit of compensatory measures
- Best-estimate method based on state-of-the-art in fire PRA; SDP phase 2.5 or 3



EPRI Fire Workstation

Objective

- Simple & reliable methods and tools (incl. software) to help use of risk information in NPP fire protection

Feasibility (Phase I)

- Defining the role of risk in NPP fire protection
 - Applications;
 - Survey industry (TAG)
 - Work with other industry activities such as WOG and First Energy/DB
 - Functional specifications
- Methods & data
 - Evaluation and use of existing methods/data such as SDP
 - Need for additional methods/data
- Plan

