

Problem Statement 2

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Digital I&C Risk Insights from Current PRAs

- Modeling digital I&C with current techniques
- Consistency with current regulatory policy
- Example applications for which existing PRAs could be used in designing and operating digital I&C systems
- Simplified/screening techniques for generating risk-insights

Digital I&C Risk Insights from Current PRAs

- Modeling digital I&C with current techniques
 - Rely heavily on white paper for problem statement 1
 - Assure digital CCF is modeled between
 - Redundant mitigating systems
 - Control systems and mitigating systems
 - Perform sensitivity studies to show whether results are sensitive to digital I&C modeling
 - Capture the risk insights

Digital I&C Risk Insights from Current PRAs

- Provide a discussion on how generation of risk-insights from existing PRAs is consistent with current regulatory policy, e.g.
 - Regulatory Guide 1.174 and 1.177
 - Regulatory Guide 1.200 and 1.206
 - PRA Policy Statement
 - National Academy of Sciences Report on digital I&C
 - Various sections of the SRP
 - SRM for SECY 93-087

Digital I&C Risk Insights from Current PRAs

- Provide a listing of example applications for which existing PRAs could be used in designing and operating digital I&C systems.
 - Optimizing the digital I&C system architecture in context with the overall plant design
 - Performance of D3 evaluations
 - Staff review of digital I&C submittals

Digital I&C Risk Insights from Current PRAs

- Provide a white paper on simplified techniques for deriving risk-insights from PRA.
 - Screening approach to identify what accident sequences and functions are most affected by digital CCF
 - Identification of key plant design features keep the risk from digital failures low
 - Identification of what digital system diversity attributes and defensive measures are most important in the maintenance of acceptable risk profile from digital I&C.