



RIC 2008 Status and Challenges of Risk-Informed Initiatives

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1



Theme of Presentation

- Risk informed initiatives present a unique challenge to the processes and infrastructure needed for successful implementation.
- The transition from “theory” to the practical, when blending a deterministic framework with risk informed methods, requires more resources than first anticipated.

2



Outline

- BWROG Support of Risk Initiatives
- Risk Initiative Example
 - Implementation
 - Infrastructure
 - Organization
 - Processes
- Challenges of Implementation
- Conclusions

3



BWROG Support Initiatives

- Developed utility guidance for the application of RG 1.200.
 - Highlights salient portions of the RG
 - Provides an overview of the demonstration of PRA technical adequacy
 - Suggests methods in utilizing RG 1.200
 - Highlight strategies for compliance with RG 1.200

4



BWROG Support Initiatives (Cont.)

- Surveillance frequency control program (Initiative 5b)
 - Developed method and provided pilot to work through implementation issues
 - Implementation involved both the method of evaluation and procedural controls
- Supporting development of implementing guidance for Initiatives 4b and 5b

5



BWROG Support Initiatives (Cont.)

- Peer Reviews
 - Coordination of reviews among utilities
 - Credits and debits for utility volunteers
 - PWROG review schedule coordination
 - Calibration of peer review leads
 - Development of ground rules for the reviews
 - Findings and Suggestions relative to meeting Capability Category II

6



Industry Initiative Example – 5b Surveillance Frequency Control Program

Initial implementation considerations

- Change management plan and transition team
- PORC-approved procedures (8)
- Creation of a new Engineering program
- Training for Operations
- Certification of Independent Decision Panel (IDP) members
- Wholesale revision of Technical Specifications

7



Industry Initiative Example – 5b Surveillance Frequency Control Program (Cont.)

Ongoing implementation considerations

- Modification process checks
- Changes to Work Control templates for testing
- Dynamic changes to the PRA model (continuous vice static model updates)
 - Online maintenance model changes
- Tracking of risk changes
- Documentation of bases, support of IDP, records management
- PRA Model revisions (standby failure rates)

8



Industry Initiative Example – 5b Surveillance Frequency Control Program (Cont.)

- Organizational Interfaces
 - Engineering
 - Maintenance
 - I&C
 - Operations
 - Licensing
 - Work Control
- Coordination among organizations is required to understand priorities and impact of changed surveillances

9



Implementation Insights

- Cultural understanding of risk informed processes (measurement, decision-making, feedback, and integration) increases across the organizations as implementation progresses
- Initial implementation requires a focused effort to develop the infrastructure for such a program
 - Project orientation with a team

10



Implementation Challenges

- Work optimization or burden reduction resulting from application of Initiative 5b impacts plant organizations differently
- **Ongoing program implementation requires additional personnel (not LOE!)**
 - ½ FTE required for ongoing program support
 - 1 FTE across Engineering to support research and analysis of proposed change
- Integration of Risk Management concepts into Engineering processes

11



Implementation Challenges (Cont.)

- “Cost” to evaluate one proposed frequency change
 - System manager 160 hrs
 - PRA Engineer 70 hrs
 - Reg Assurance 25 hrs
 - IDP Coordinator 40 hrs
 - IDP 30 hrs
 - PORC 30 hrs
 - Misc 30 hrs
 - Total 385 hrs

12



Conclusions

- Additional process control and PRA program infrastructure is needed to successfully implement broad risk-informed initiatives.
- Ongoing support requires additional resources
- High level station sponsorship is required to drive implementation through all the interfacing organizations

13
