

Industry Priorities for Improving Risk Informed Regulation

NRC Public Meeting

April 3, 2014

Overview

- Industry has identified three key focus areas for improving risk informed regulation
 - Supporting realism in PRA
 - Achieving integrated decision making
 - Addressing seismic, flooding and other external events
- Composing draft action plans for each priority

Ensuring lessons learned from Fire PRA realism and the NFPA 805 transition process are applied moving forward is critical and necessary to supporting improvement in risk informed regulation

Realism in PRA

- Lack of realism can mask key insights
- Necessary to realize benefits of PRA
- Objectives
 - Applying conservative RG 1.174 decision criteria with realistic models and results
 - Comparison with operating experience
 - Identification of key model and method improvements
 - Develop process for implementing method improvements

Achieving Integrated Decision Making

- Effective and predictable integrated decision making process vital to success
 - Valid insights are more durable than numbers
 - Actions and decisions should be rooted in insights
- Objectives
 - Use concepts from Regulatory Guide 1.174
 - Guidance on integrating inputs to the decision making process
 - Guidance on defense in depth & safety margins
 - Training for decision makers

RISC Priorities – Seismic, Flooding, and Other External Events

- Lessons from Fire PRA experience must be considered moving forward
- Objectives
 - Realistic treatment of uncertainties in modeling and decision-making
 - Appropriate characterization of overall plant risk
 - Methods and models comport with operating experience prior to regulatory application
 - Continuous and reasonable treatment of new information

Experience with Implementing Regulatory Guide 1.200

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Role of RG 1.200

- Stated purpose
 - Obviate the need for an in-depth review of the base PRA by NRC reviewers
 - Allowing [NRC] to focus their review on key assumptions and areas identified by peer reviewers as being of concern and relevant to the application
- Based on peer reviews conducted against the ASME/ANS PRA Standard

Overview of Issue

- Issue: Regulatory departures from process outlined in RG 1.200
 - NUREG/CR-6850 and supporting documents treated as only acceptable approach
 - Has encumbered development of new methods
 - Extensive staff re-conduct of peer review work
 - Most notable in Fire PRAs supporting NFPA 805
 - Has also become an issue for other risk-informed applications
- Result
 - Inefficient use of staff and industry resources
 - Disincentive to work on method improvements

Path Forward

- NRC and industry cooperatively work towards better implementation of RG 1.200
- Key points
 - Streamline process while maintaining technical adequacy
 - Focused RALs that make good use of licensee and NRC resources to best support licensing decisions
 - Return to focus on ASME/ANS Standard for reviews and methods
 - Improve process to close F&Os