

RIC 2005

Session G4: Risk Informed

Phased Approach to PRA Quality



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PRA

- Recognized as an approach to developing risk insights for complex technological systems
- Acceptance of its increased role in regulatory decision-making challenged by:
 - Model uncertainty
 - Incompleteness of models
 - Concerns about quality
- Need for improved definition of expectations and requirements for acceptable PRA quality for regulatory applications
- Such a definition would support an increased use of risk insights, thus enhancing safety

Phased Approach to PRA Quality

- The Commission proposed a phased approach to stabilizing the PRA quality expectations and requirements
- The phased approach allows risk-informed decisions to be made until all the necessary PRA guidance, standards, methods and tools are developed and implemented
- It is expected that meeting the phased approach objective will result in the following:
 - Industry movement towards improved and more complete PRAs.
 - Increased efficiencies in the staff's review of risk-informed applications.

The Phased Approach to PRA Quality (cont'd)

- In Phase 2, for each specific application:
 - A PRA is used for each contributor that is significant to the decision
 - A PRA standard exists for each significant contributor
 - Guidance documents exist for performing the application
- In Phase 3:
 - Guidance documents exist for all current and anticipated applications
 - PRA standards exist for all significant contributors to these applications

Plan for Implementation of the Phased Approach

- A plan was submitted to the Commission as SECY-04-0118 in July 2004 and approved in an SRM dated October 6, 2004
- Addresses many ongoing activities
 - Pilot of RG 1.200
 - Support for Standards development
 - Research activities (HRA, Treatment of Uncertainty)
- Identifies revision to, or development of guidance documents
- Phase 3 documentation to be completed by December 31, 2008

Guidance Documents

- Continued participation in PRA standards development
- Revisions of RG 1.200 to include endorsement of new Standards
- Developing or revising application-specific Regulatory Guides and SRP chapters with a focus on PRA quality
- Developing guidance to address technical (HRA, uncertainty analysis)

Implementation Issues

- Prioritization of staff review of submittals
 - Development of a process that addresses submittals that:
 - have a lesser scope than that supported by standards
 - have a larger scope than that supported by standards
- Phasing in of expectations to allow for development and review of necessary PRA models

Status

- Preliminary compilation of risk-informed applications and their quality requirements
- Completion of assessment of PRA quality needs for MSPI
- RG 1.200 pilot visits completed