

Integrated Risk-Informed Regulation Committee Update

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BWR Expertise – Proven Solutions

Topics to be Discussed - Recent Successes



Topic 1: New Methods and use of Peer Reviews for adoption in PRA

Topic 2: Agreement on Update verse Upgrade definitions and treatment

Topic 3: Facts and Observations Closure

Topic 4: Use of FLEX portable equipment as a one component of risk mitigation

New PRA Methods Adoption



NRC and Industry agreed to the use of the Peer Review process to determine the acceptability for use of a PRA method not previously reviewed in any US PRA model (Newly Developed Method)

- Peer Review Team has to be technically qualified
- May be part of a peer review of a PRA model or done independent of a PRA model
 - Later use in a PRA model will require a peer review as a PRA Upgrade
- Technical review requirements developed

New PRA Methods Adoption



- Technical Elements include
 - Uncertainties and assumptions
 - Comparison to sound engineering principles
 - Data used
 - Consistency of results
 - Documentation
- Three Pilot efforts complete
 - Some process improvements identified
- Comment resolution on technical requirements in progress
- Potential joint BWR/PWR product will be used to publish method and any limitations

PRA Model Update vs Upgrade



- Upgrades require a peer review
- Upgrades are to be defined a few ways
 - Change in PRA Model Capability
 - New hazard PRA model
 - Incorporation of previous Supporting Requirements (SRs) not evaluated
 - New Method in PRA model
 - A method that is available and but not previously used in the plant PRA model
 - Change HRAs from SPAR-H to different method
 - Adoption of a Newly Developed Method

PRA Model Update vs Upgrade



- Working with ANS/ASME PRA Standard committee to incorporate Update and Upgrade into PRA Standard Section 1
- Definitions of undefined terms being agreed to
 - Define the term “model” is one example
 - NRC staff is strong supporter of this effort

Facts and Observation Closure



Adoption of F&O closure process is now a widespread activity

- BWROG IRIR has completed approximately 6 individual plant F&O closure Independent Reviews
 - Internal Events PRA
 - Internal Flooding PRA
- Some utilities have contracted out to independent vendors for the independent closure review
- Inspection of F&O closures for Upgrades is strong part of the process
 - In some cases F&O not closed due to questions of Upgrade

Use of FLEX portable equipment as one component of risk mitigation



Adoption of FLEX equipment in risk mitigation is gaining support

- Outage Risk Reduction
 - Spent Fuel Pool Cooling
 - RCS inventory control
 - AC power support
- Some use to support high risk situations during on-line maintenance
- BWROG IRIR developed lessons learned in FLEX modeling
- The development of FLEX deployment actions HRA methods are in progress

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QUESTIONS