Alternate approach for treatment of seismic risk in 50.69

Categorization

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Key Messages

- A new approach proposed for considering risk of seismic events in 50.69.
 - three-tiered approach using NTTF 2.1 considerations
 - supports limited consideration of seismic risk in the categorization process
- Plants without SPRA or SMA can use 50.69, although consideration of seismic risk for those plants will result in conservative categorization.
- Staff has not challenged the fundamental premise of the proposed approach.



Key Messages

- Calvert Cliffs submitted a LAR utilizing Tier 1 of the approach. A productive audit resulted in substantive enhancements to the approach. Current target for review completion is the end of CY 2019.
- Future LARs that utilize Tier 1 need to incorporate supporting information and enhancements to the approach.
- McGuire was identified as the lead for Tier 2. Submittal has been delayed and is expected by September 2019.
- Additional technical issues related to Tier 2 may result in revisions to the approach.

Protecting People and the Environment

Questions?



Credit for Operator Actions in FLEX

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Credit for Operator Actions in FLEX

- The NRC has continued to provide meaningful plantspecific credit for FLEX in regulatory decisions using existing HRA methods.
- Due to limitations in the state-of-practice of existing HRA methods to adequately address actions taken outside the control room, NRR is working with RES to develop a new HRA method that will improve the ability to model operator actions associated with FLEX.
- The NRC's SPAR models are being updated to include FLEX based on the role outlined in the mitigating strategies orders, in order to facilitate crediting FLEX in regulatory decisions.

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Credit for Operator Actions in FLEX

- The new HRA method for modeling FLEX actions is based on the IDHEAS HRA methodology.
- The NRC is currently soliciting industry peers through the joint NRC/EPRI MOU to assist in evaluating the effectiveness of the new HRA method at quantifying the HEPs associated with a wide range of FLEX actions. The effort will:
 - define the FLEX scenarios that will be evaluated
 - conduct an evaluation workshop (Nov 2019)



Questions?



Acronyms

- EPRI: Electric Power Research Institute
- FLEX: Diverse and Flexible Mitigation Capability
- GMRS: Ground Motion Response Spectra
- HEP: Human Error Probabilities
- HRA: Human Reliability Analysis
- HSS: High Safety Significant
- IDHEAS: Integrated Human Event Analysis System
- LAR: License Amendment Request
- MOU: Memorandum of Understanding
- NEI: Nuclear Energy Institute
- NRR : Office of Nuclear Reactor Regulation
- NTTF: Near-Term Task Force
- PRA: Probabilistic Risk Assessment
- RES: Office of Nuclear Regulatory Research
- SPAR: Standardized Plant Analysis Risk
- SPRA: Seismic Probabilistic Risk Assessment
- SMA: Seismic Margin Analysis
- SSE: Safe Shutdown Earthquake

