



U.S. NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Crediting Mitigating Strategies in Regulatory Applications

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OBJECTIVE

- Brief Project History
- Completed Tasks
- Ongoing Tasks
- Examples
- Communications
- RISC Project Support
- Questions

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Project History

- NRC Risk-Informed Steering Committee (RISC) directed effort to evaluate and provide appropriate credit for uses of FLEX in key risk-informed decision making (RIDM) programs
- FLEX can provide safety enhancements
 - The NRC encourages safety enhancements
 - Need to provide proper regulatory footprint
- Overall Approaches
 - Industry - Developed tiered approach to crediting portable equipment
 - NRC - Identified areas of application (11 potential areas)

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Completed Tasks



- Review of Tier 1 and Tier 2 of NEI 16-06
 - NRR Office Director memo to NEI (ML16167A034) (August, 2016)
- Review of Tier 3 of NEI 16-06
 - Internal memo to NRR/DRA Office Director (ML17031A269) (June 2017)
- Update to Volume 1, Section 6 of the RASP Handbook
 - Guidance on modeling FLEX in recovery events
- Pilot SPAR model update
 - Using the Vogtle SPAR-AHZ model
 - Total plant CDF reduced by ~25%(Plant specific)
 - SDPs and NOEDs could see substantial reductions
- SPAR model makers guide

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Ongoing Tasks



- WG for Crediting FLEX in Deterministic Reviews
 - Efforts across multiple Offices and Divisions
- WG for Changes to Inspection Program
- RES Support
 - HRA method support for FLEX actions
 - Updating the SPAR models
- Revision to NUMARC 93-01 (Maintenance Rule scoping criteria)
 - Endorsement in RG 1.160
- Engaging Regional Staff
 - SDPs, NOEDs, and MD8.3
- FLEX Equipment Data Collection
 - Data is collected through EPRI
 - Different from standard INPO process that we use
- Continue to Monitor RIDM areas

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Examples



- License Amendment Requests (LARs)
 - Palo Verde EDG AOT extensions
 - Watts Bar EDG AOT extension
 - Shearon Harris ESW AOT extension
 - NFPA-805
 - 50.69
- Significance Determination Process (SDP)
 - St. Lucie
 - Arkansas Nuclear One
 - Pilgrim
- Notices of Enforcement Discretion (NOED)
 - Brunswick

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Communications



- Internal NRC SharePoint Site
- NEI Licensing Forum – August 2017
- NEI Risk and Fire Forum – June 2017
- SRA Counterpart meetings – October 2016, May 2017, and October 2017
- Inspector Newsletter articles – October 2016 and April 2017
- Deputy EDO and Regional Administrator briefing – April 2017
- NRC Reporter article – April 2017
- RIC Sessions – March 2016, March 2017, and March 2018
- Internal RISC updates – February 2017, August 2017
- Public RISC updates – February 2017, October 2017
- Division Director counterpart meeting – November 2016
- JNRA Bilateral meeting – November 2016
- Executive Team Significant Topic briefing – November 2016
- IAEA Technical meeting – November 2016
- ACRS- Reliability and PRA Subcommittee – September 2016

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Ongoing Challenges



- Collecting FLEX data
 - EPRI instead of INPO
 - Raw data vs post-processed
- HRA methods for FLEX
 - Working with RES (IDHEAS ECA, Expert Elicitation, Pilot Plant)
 - EPRI Workshop in February 2018

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Questions?



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