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NUCLEAR FLEET

The Promises and Perils of Risk Informed Decision Making

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Nuclear Excellence Model

Vision	We are a team that delivers consistent excellent performance
Mission	We will produce energy in a safe, reliable, cost effective way, while caring for our employees, communities and the environment
Values	Conduct all activities to demonstrate a deep respect for Nuclear Safety · Live the Safety Guiding Principles · Be a Self-Improving Culture & Learning Organization · Maximize the time spent on Prevention and Detection to minimize / eliminate Correction activities · Foster a work environment where we are the employer of choice
Core Principles	Operationally Focused · Passion for Excellence · Engaged Leaders · Standardized Processes · Responsive to Stakeholders · Effective Workforce Planning · Engaged Employees · Effective Long-Range Planning · Strong Teamwork · Strong Ownership & Accountability · Effective Supervisors · Work/life Balance
Strategic Focus Areas	Operational Excellence · Organizational Effectiveness · Generation Reliability · Effective Business & Financial Performance

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PDC

Prevention
Detection
Correction

"Do the job right the first time"

Value
Maximize the time spent on Prevention and Detection to minimize / eliminate Correction activities

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SIC/LO

Work hard, do the right thing (take action)
Implement corrective actions in a timely manner
Effectively evaluate consequences of events
Effective structures and processes for change management
Attributes of a self-improving culture and learning organization
Sustain performance, knowledge and skills
Look outward and forward
Objectively identify problems
Prevent recurrence of industry events

Value
Be a Self-Improving Culture & Learning Organization

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This Conference is a great opportunity!

A conference where the regulator and the licensees can meet to share experiences and discuss issues to make better risk-informed decisions

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Agenda

- **Key Message**
- **Background**
- **Discussion Points**
- **Recommendation**

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Key Message

USE OF LICENSEE PRA MODELS IN THE SIGNIFICANCE DETERMINATION PROCESS

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Background

- **Risk informed approach using plant specific PRA has been successfully used in several applications: examples include but not limited to**
  - Mitigating Systems Performance Index (MSPI)
  - Maintenance Rule
  - Risk informed fire protection (NFPA 805)
  - RITS 5b
  - RITS 4b
  - 50.69
- **Online Risk Monitor guides control room in decision making and work scheduling to minimize risk**
- **All the above applications use plant specific PRA**

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Background Cont'd

- **Plant PRAs are high quality plant specific models that have been substantially scrutinized by the industry and the NRC**
  - *An effective plant Risk Informed Process requires that the Plant Specific PRA models comply with NRC quality requirements in RG 1.200. Compliance is verified by industry peers as well as by the NRC during License Amendment reviews*
  - Updates at regular intervals
  - Used as a guide for future modifications and plant operating priorities/strategies
  - Industry peer reviews
  - NRC reviews through risk informed license amendments

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Discussion Points

SPAR

- **Developed to provide a rough order of magnitude assessment tool**
- **Demonstrates good agreement with site specific PRA for base level**
- **Generic nature of model results in conservative (deterministic) conclusions**
- **Models are based on generic data**
- **External events are bounding and conservative**
- **Significant resources are needed to review**

SPAR is a good tool for confirming licensee plant specific results

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Recommendations

- **Plant Specific PRA Models should be used for enforcement action as they are already being used in other regulatory activities**
- **SPAR should continue to be used as a confirmatory tool**
- **Differences in results should be focus of discussion during the confirmatory review process**
- **Need to gain back confidence in the results so they are realistic**
- **Ensure resources are spent on improving safety**

> Regulatory processes should use consistent tool to assure stable predictable outcome

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Conclusion

- **Goal of NRC and Licensees is safe operation of the nuclear plants**

- **Plant specific models have been refined to reflect the as-built, as-operated plant**
  - **Used for all risk informed applications**
  - **Used to drive right behavior at the sites**

> Plant specific models are deemed appropriate for regulatory applications and should be used across the full spectrum of decision making including enforcement actions

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