



**NRC Initiatives on Risk-Informed Activities
Presentation to EPRI CRMF**

**Juno Beach, Florida
January 14, 2015**

**Jeff Mitman
Division of Risk Assessment
Office of Nuclear Reactor Regulation**

OUTLINE

- Cumulative Effects of Regulation (CER) / Risk Prioritization Initiative (RPI)
- Risk Informed Steering Committee
 - Working Group 1: PRA Technical Adequacy
 - Working Group 2: Treatment of Uncertainty in Decision Making
- NFPA 805
- Crediting FLEX equipment in PRA applications

Cumulative Effects of Regulation (CER) / Risk Prioritization Initiative (RPI)

- A Commission initiative that directed the staff to explore options on ways to use risk insights to allow licensees to prioritize regulatory actions
- Framed around 3 areas:
 - Executing existing processes
 - Enhancing existing processes
 - Developing new processes

CER/RPI (Cont'd)

- **Public/Industry Interactions:**
 - Draft guidance developed by NEI – not yet endorsed
 - Generic and Plant-specific Tabletops
 - March 2014 RIC Technical Session
 - Second RIC session planned for March 2015
- **COMSECY sent to the Commission to merge CER & RPI – Commission has approved**
- **Demonstration pilots – conducted in 2014**

CER/RPI – Next Steps

- Currently drafting SECY to be sent to Commission – Scheduled for March 2015
- Briefing ACRS Sub Committee February 20th
- Briefing Full ACRS March 6th



Risk Informed Steering Committee – Working Group 1

- Working Group 1 – PRA Technical Adequacy

Risk Informed Steering Committee – Working Group 2

- Working Group – Treatment of Uncertainty in Decision Making
- Working group objectives
 1. Identify problem causes
 - review current applications: license applications, SDP
 - inconsistencies in treatment
 - focus on mean
 - aggregation issue
 - communication problems
 2. Evaluate current approaches
 - review current guidance
 - identify current good practices
 - define needs

Working Group 2 (cont.)

Objectives Continued

3. Enhancements

- Characterize causes of uncertainty & related issues
- Identify reasons some uncertainties have not been addressed
- Identify areas for enhanced and/or new guidance
- Propose plan (including options) for development of enhanced and/or new guidance, as appropriate

4. Training & Communication

- Review existing educational tools
- Identify areas for improvement and options



Working Group Progress

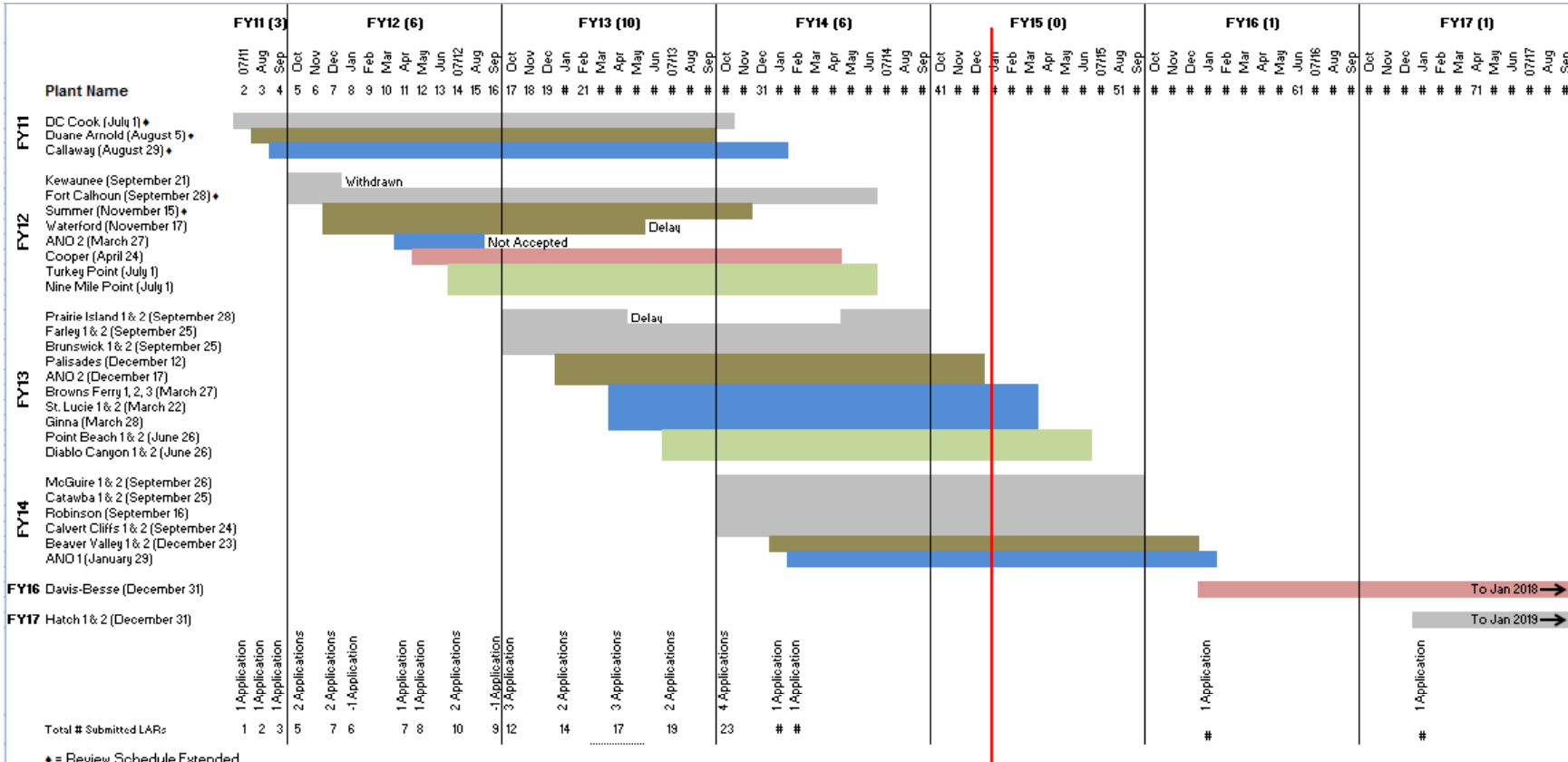
- Held public meeting on August 6th, 2014 between NRC and NEI [ML14247A433]
 - Discussed aspects of Objective 1
 - Reached alignment on general issues/scope
 - Discussed specific product to be accomplished
 - Initiated discussions on other Objectives
 - Identified specific follow-up actions
- Revised schedule for action plan [ML14224A357]
- Planning a RIC 2015 session
- ACRS is interested



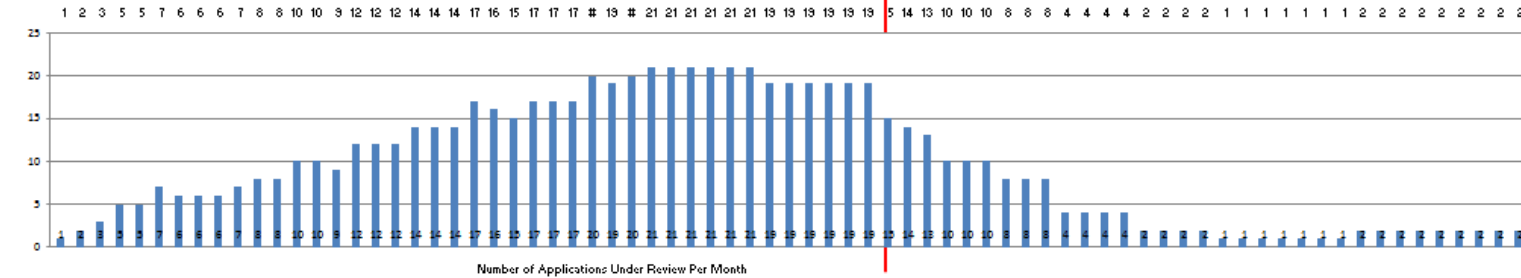
Status of NFPA 805 License Amendment Request Reviews

- 8 license amendment requests approved
 - 2 Pilot Plants: Shearon Harris, Oconee
 - 6 Non-Pilot Plants: DC Cook, Duane Arnold, Callaway, Fort Calhoun, Cooper, Nine Mile Point
- 19 license amendment requests under active review
- 2 additional license amendment requests expected in FY16/FY17

NFPA 805 Amendment Review Status



NOTE: LAR submittal dates are subject to change pending Staff's response to licensee's request for extended deadline per revised Enforcement Policy in SRM-SECY-11-0061



Crediting FLEX Equipment Issue in PRA Applications

- FLEX is industry's response to NRC order EA-12-049 – Requirements for Mitigating Strategies for Beyond Design Basis External Events, (ML12054A736)
 - Industry guidance supplied by NEI 12-06
 - Initially cope by relying on installed plant equipment
 - Transition from installed plant equipment to on-site FLEX equipment
 - Obtain additional capability and redundancy from off-site equipment

Current NRC Guidance on Crediting Mitigating Strategies

- Current NRC position explained in Regulatory Issue Summary (RIS) 2008-15, Crediting Mitigating Strategies in Risk-Informed Licensing Actions and in SDP, June 2008, ML080630025.
- RIS 2008-15 stipulations:
 - Licensees shall incorporate such measures into baseline PRA model, which must meet requirements of ASME PRA standard as endorsed by RG 1.200
 - Manual actions must be proceduralized
 - Manual actions must be trained upon
 - Manual actions be capable of being performed

Issues with FLEX Meeting Current NRC Requirements

- FLEX Phase 3 equipment will not be owner controlled
- FLEX procedures may not be as detailed as typical nuclear operational procedures
- FLEX training may not be as rigorous as typical nuclear training
- Performing human reliability assessment (HRA) of outside of control room human actions “difficult” using current HRA methods
 - HRA methods were initially intended for in control room operator actions

Current NRC FLEX Activities

- NRC currently reviewing PRA requirements issue to see if they can/should be changed
- Other NRC FLEX related activities
 - Reviewing Maintenance Rule (10CFR50.65) applicability to FLEX
 - Drafting reactor oversight process (ROP) Inspection Manual Chapter (IMC) 0609 appendix for FLEX compliance – public meeting scheduled for 1/29/2015