



# **Briefing on Results of the Agency Action Review Meeting**

**Mark Satorius**  
**Executive Director for Operations**  
**May 21, 2015**

# Speakers

- **Laura Dudes, Director, Division of Materials Safety, State, Tribal, and Rulemaking Programs**
  - Nuclear materials and waste program performance
- **Scott Morris, Director, Division of Inspection and Regional Support**
  - Reactor program performance
- **Marc Dapas, Regional Administrator, Region IV**
  - Fort Calhoun and Arkansas Nuclear One

# **Agency Action Review Meeting Objectives**

- **Nuclear materials and waste program performance**
- **Reactor program performance**
- **Reactor construction program performance**
- **Discussion of Browns Ferry, Fort Calhoun, and Arkansas Nuclear One**

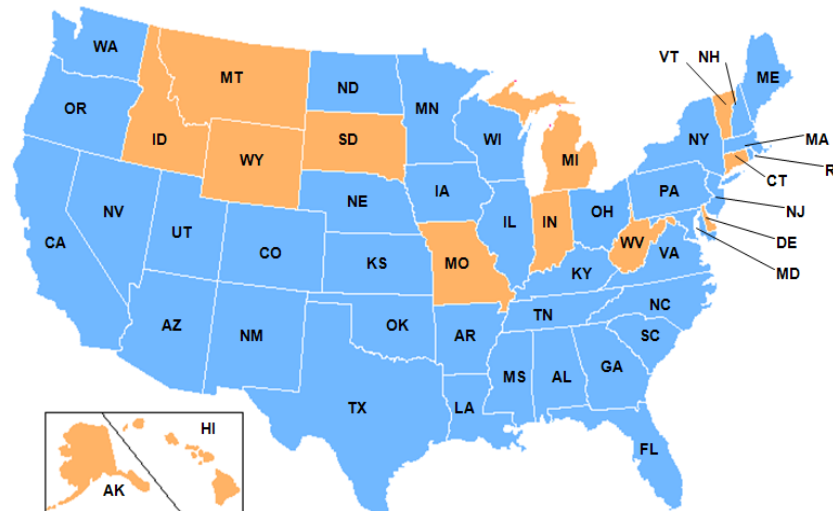
# **Nuclear Materials and Waste Program Performance**

**Laura Dudes, Director  
Division of Materials Safety, State, Tribal,  
and Rulemaking Programs  
Office of Nuclear Material Safety and  
Safeguards**

# Nuclear Materials Program- Protecting Public Health & Safety



Source Security



■ Agreement States (37)  
■ NRC States (13)



Medical Uses



Industrial Uses

# **Performance Evaluation Process**

- **Systematic review to identify significant:**
  - **Operational performance trends**
  - **Licensee performance issues**
  - **NRC program issues/gaps**

# **Use Predefined Performance Criteria**

- **Strategic Goals and Performance Measures**
- **Trending review of performance data**
- **Abnormal Occurrences**
- **Significant enforcement actions**
- **Agency Action Review Meeting**

# Results: No Significant Performance Trends Identified

- **524 events**
- **13 AOs**
- **Event numbers small compared to the millions of uses**

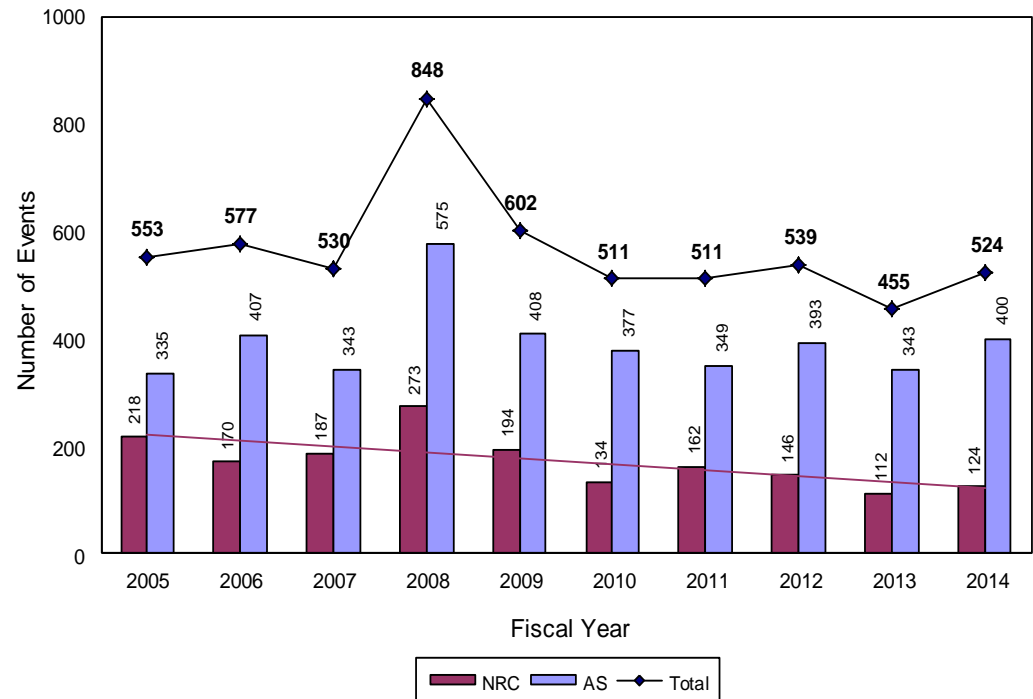


Figure 1. All NMED Events (5,650 total) from SECY 15-0058, "Annual Report to the Commission on Licensee Performance in the Materials and Waste Programs Fiscal Year 2014"



# **Met Strategic Goals**

- **No nuclear materials licensees met the AARM discussion criteria**
- **Materials program met safety and security performance metrics**
- **No significant trending issues**
- **No significant NRC program issues**

# **Reactor Program Performance**

**Scott Morris, Director  
Division of Inspection and  
Regional Support  
Office of Nuclear Reactor Regulation**

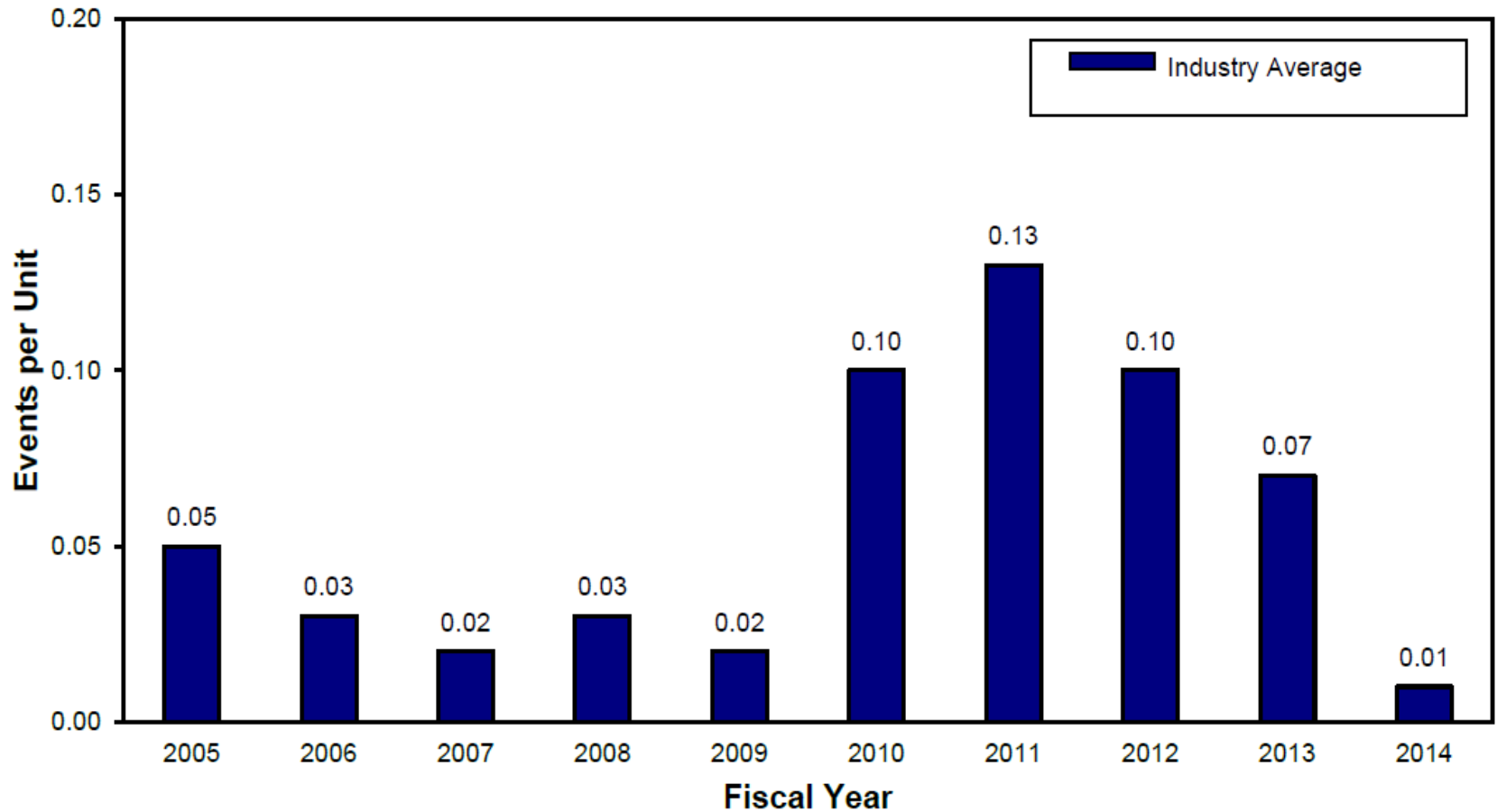
# **Program Overview Topics**

- **Industry Trends Program Results**
- **ROP Enhancement Activities**
- **ROP Self-Assessment Revisions**

# **No Adverse Industry Trends**

- **ITP complements licensee-specific ROP**
  - **Assesses industry-wide performance**
- **FY 2014 results**
  - **No short-term indicator prediction limits exceeded**
  - **No long-term statistically significant adverse trends**

# Significant Events 2005 - 2014



# **Considering Changes to Industry Trends Program**

- **ITP results provide confidence in overall industry safety performance**
- **Planning to implement several program enhancements to:**
  - **Assess all ROP cornerstones**
  - **Reduce time delays**
  - **Realize substantial resource savings**

# **Reactor Oversight Process Enhancements Underway**

- **ROP remains effective overall**
- **Numerous updates completed or in progress**
  - **130+ inputs from multiple sources**
  - **Grouped and prioritized for action**
  - **Working most substantive issues first**

# **Baseline Inspection Procedures Being Updated**

- **Baseline Inspection Procedure Improvement Project**
- **Key activities:**
  - **Performance “Issue Screening”**
  - **Problem Identification and Resolution Inspection**
  - **Component Design Basis Inspection**
  - **Independent Spent Fuel Storage Installations**



# **Progress Made on Assessment Program Changes**

- **Completed major revision to “substantive cross-cutting issue” process**
- **Proposing revision to definition of “degraded cornerstone”**

# **Streamlining the Significance Determination Process**

- **Phase 1 – Completed “Business Process Improvement” effort on existing process to:**
  - **Improve coordination between regional and headquarters staff**
  - **Reinforce management expectations for timeliness of risk analyses**
  - **Focus on impacts of modeling uncertainties and assumptions**

# **Streamlining the Significance Determination Process (cont.)**

- **Phase 2 – Longer-term effort to:**
  - **Ensure optimal use of integrated risk-informed decision-making**
  - **Simplify analyses to improve timeliness and minimize resources**
  - **Seek input from key internal and external stakeholders**

# **Enhancing ROP Communications using Plain Language**

- **Employing several new and revised tools**
- **ROP external webpage redesign**
- **ROP internal webpage redesign**
- **Obtaining stakeholder feedback**

# **No 2014 ROP Self-Assessment Performed**

- **Commission approved request to forgo 2014 self-assessment to:**
  - **Develop new self-assessment process**
  - **Implement ROP enhancements**
- **Plan to implement new process in CY 2015**

# **Revised Self-Assessment Approach Adds Accountability**

- **Three major elements**
  - **Use metrics to assess “compliance” with ROP governance**
  - **Evaluate effectiveness of recent program changes**
  - **Perform targeted, in-depth assessment(s)**

# **Request to Eliminate Reporting Requirements**

- **Three extensive annual evaluations conducted as part of existing self-assessment process**
  - **Regulatory impact summary**
  - **ROP resource expenditures**
  - **Resident Inspector demographic**
- **Minimal decision-making insights**
- **All require Commission approval to discontinue**

# **Fort Calhoun Station – Return to Normal NRC Oversight**

**Marc Dapas  
Regional Administrator  
Region IV**



# **Increased Regulatory Oversight**

- **Transition to IMC 0350 process (December 2011)**
- **Comprehensive corrective actions independently verified via extensive NRC inspection**
- **CAL closed and post-restart CAL issued (December 2013)**
- **Plant startup (December 2013)**

# **Increased Regulatory Oversight (cont.)**

- **IMC 0350 process termination criteria**
  - **Effective long-range improvement program**
  - **Sufficiently implementing the CAP**
  - **Demonstrated safe plant performance**
  - **Adequately addressed issues leading to invoking IMC 0350**

# **Increased Regulatory Oversight (cont.)**

- **13-person NRC team inspection in July 2014**
- **Concerns identified with implementation of CAP**
- **NRC follow up team inspection conducted in January 2015**
  - **Significant CAP improvements**

# **Return to Normal NRC Oversight**

- **NRC concluded IMC 0350 process termination criteria satisfied**
  - **Transition of station to Column I of the Reactor Oversight Process**
  - **All performance indicators in effect**
- **Post-restart CAL follow up inspections**
  - **Containment internal structure**
  - **Design-Basis Reconstitution initiative**

# **Return to Normal NRC Oversight (cont.)**

- **NRC staff effort since entry into IMC 0350**
  - **Approximately 61,000 hours total**
  - **45,000 inspection hours**
  - **16,000 hours associated with licensing and assessment activities**

# **Arkansas Nuclear One – Increased NRC Oversight**

**Marc Dapas  
Regional Administrator  
Region IV**

# **Safety Significant Performance Issues**

- **Yellow finding – Stator drop**
  - **Finding issued June 2014**
  - **Inadequate oversight of contractor activities**
  - **Failure to load-test lift rig**
  - **Event exposed latent conditions (degraded flood barriers)**
  - **Narrow scope of initial Root Cause Evaluation**

# **Safety Significant Performance Issues (cont.)**

- **Yellow finding – Flood protection**
  - **Finding issued January 2015**
  - **Inadequate design and maintenance of flood barrier seals**
  - **Issues not treated commensurate with safety significance**
  - **Minimal oversight of contractor-conducted post-Fukushima flooding walkdowns**
  - **Incomplete analysis of mitigating strategies**



# **Safety Significant Performance Issues (cont.)**

- **White PI (Unit 2 unplanned scrams)**
  - **White 2Q14 – 3Q14**
  - **Auxiliary transformer explosion (4Q13)**
  - **Lightning strike (2Q14)**
  - **Axial shape index automatic trip during power reduction (2Q14)**
  - **White PI reported in 1Q15 following NRC involvement**

# **NRC Driving Licensee Actions**

- **Problem evaluation weaknesses**
  - **Root cause evaluation quality**
  - **Extent of condition reviews narrow**
- **Unit 1 auxiliary feedwater pump**
- **Latent Equipment Issues**
  - **Alternate AC diesel generator failure (February 2013)**
  - **Unit 1 decay heat removal pump failure (March 2013)**

# Performance Assessment

- **Column 4 oversight actions are appropriate**
  - **Performance deficiencies associated with Yellow findings are potentially broader**
- **Safe to continue power operation**
  - **Strong operator performance**
  - **Good equipment reliability**

# **Regulatory Oversight Steps**

- **ROP End-Of-Cycle Assessment Meeting**
- **Augmented Problem Identification & Resolution Inspection**
- **Supplemental inspections**
  - **IP 95001 for White PI**
  - **IP 95003 for multiple degraded cornerstones**
  - **Component Design Basis Inspection**

# **Regulatory Oversight Steps (cont.)**

- **Augmented NRC staffing and assigned oversight manager**
- **Increased public outreach/external stakeholder communication**

# Conclusion

- **Senior NRC managers affirmed the appropriateness of agency actions**

# List of Acronyms

- **AARM – Agency Action Review Meeting**
- **AC – Alternating Current**
- **AO – Abnormal Occurrence**
- **AS – Agreement States**
- **CY – Calendar Year**
- **CAL – Confirmatory Action Letter**
- **CAP – Corrective Action Program**
- **EDO – Executive Director for Operations**

# **List of Acronyms (cont.)**

- **FY – Fiscal Year**
- **IMC – Inspection Manual Chapter**
- **IP – Inspection Procedure**
- **ITP – Industry Trends Program**
- **NMED – Nuclear Materials Event Database**
- **NRC – U.S. Nuclear Regulatory Commission**
- **PI – Performance Indicator**
- **ROP – Reactor Oversight Process**