

# **NRC Perspectives on Performance**

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Dana Point, CA

June 10, 2008

## **NRC Lessons Learned Panel**

- Panel Discussion
  - NSIR Perspective on ROP Performance
  - Regional Topics
- Headquarters and Regional Interface
  - Annual Meeting
  - Monthly Conference Call
  - Daily Contact
  - Inspection Support
- Initiatives

# **NRC Perspective on Industry ROP Performance**

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## **NRC Perspective on Industry ROP Performance**

- Performance Indicators
- Exercise Scenarios
- MC 0609, Appendix B, EP SDP
- Emergency Plan Changes
- Analysis of Findings
- Actual Events

# Performance Indicators

- ERO Participation Credit
- ANS Testing and Oversight
- DEP PI Temporary Instruction
- Forward Looking

## Exercise Scenarios

- Failure to Critique vs Non-Compliance
- Rulemaking Impact
- Performance Indicator Criterion vs Regulation

## MC 0609 Appendix B, EP SDP

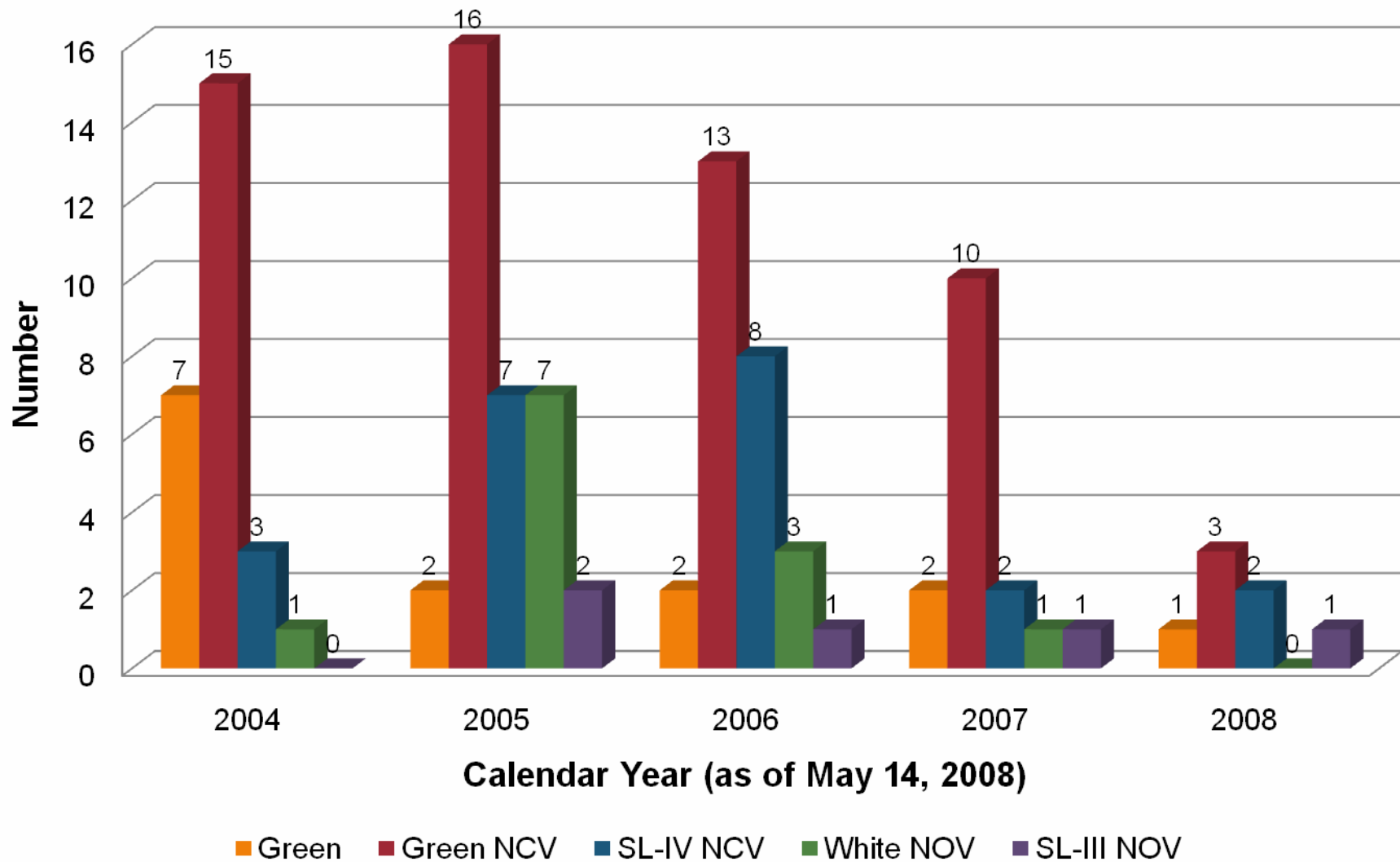
- Overclassifying
- Additional PARs
- EAL Changes

# Emergency Plan Changes

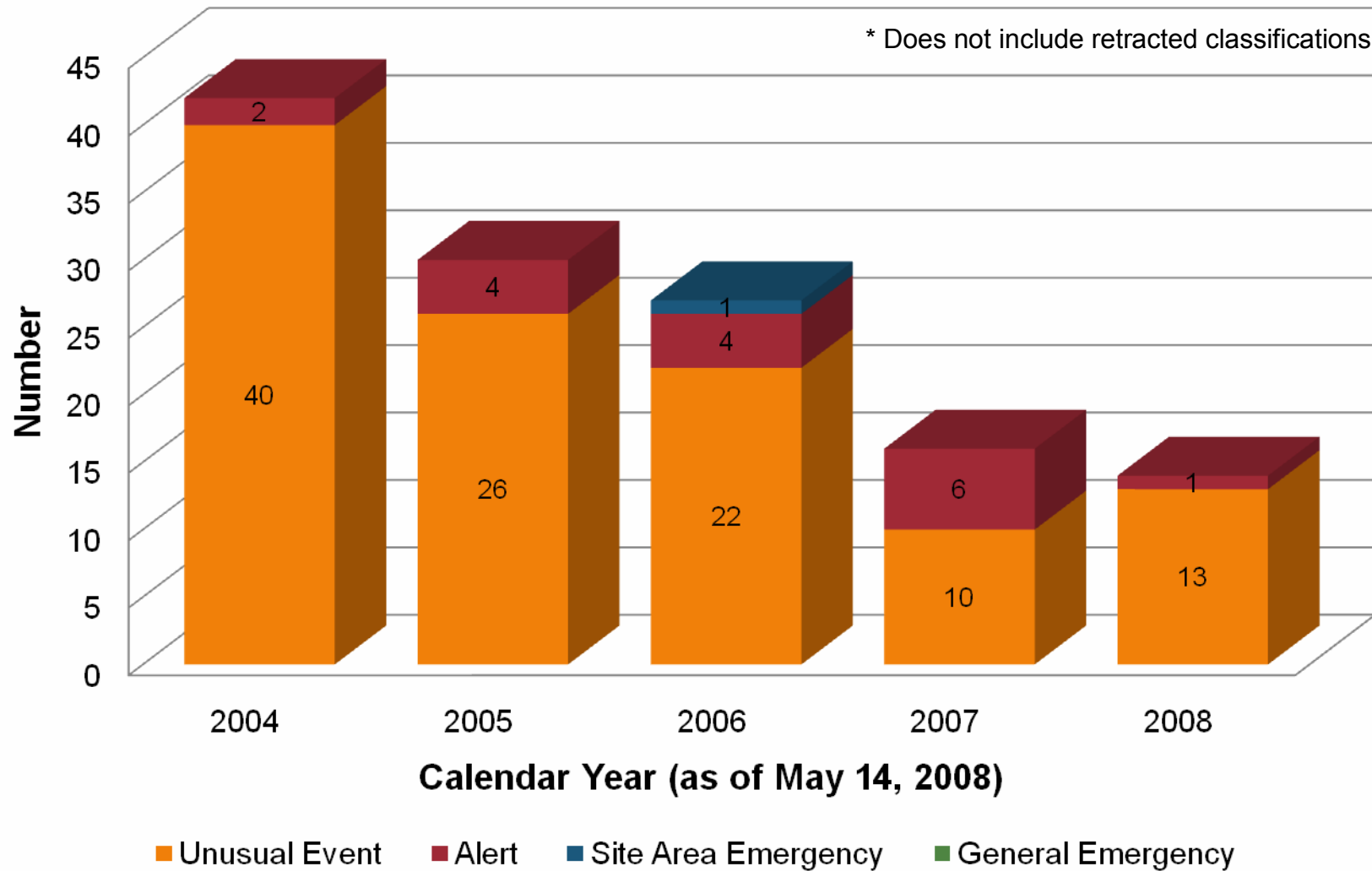
- 10 CFR 50.54(q) Violations
  - Traditional vs ROP
  - Emergency Preparedness Oversight of Site Activities
    - Equipment OOS
    - Equipment Calibration
    - Procedural Changes
    - Information Notice 05-019
- IP 71114.04 Revision
  - Security EAL changes
  - NSIR review vs licensee implementation



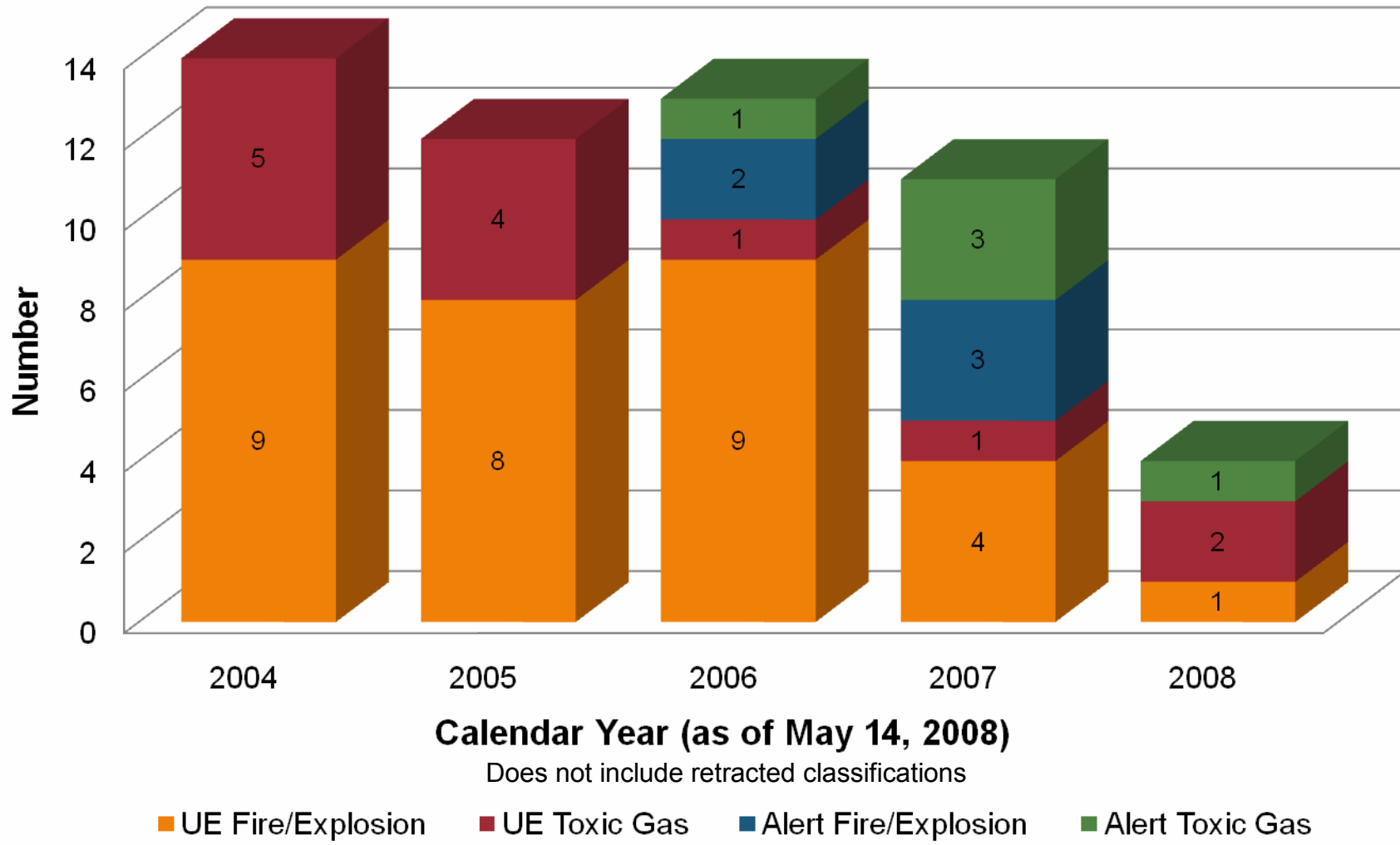
## EP Findings per Calendar Year



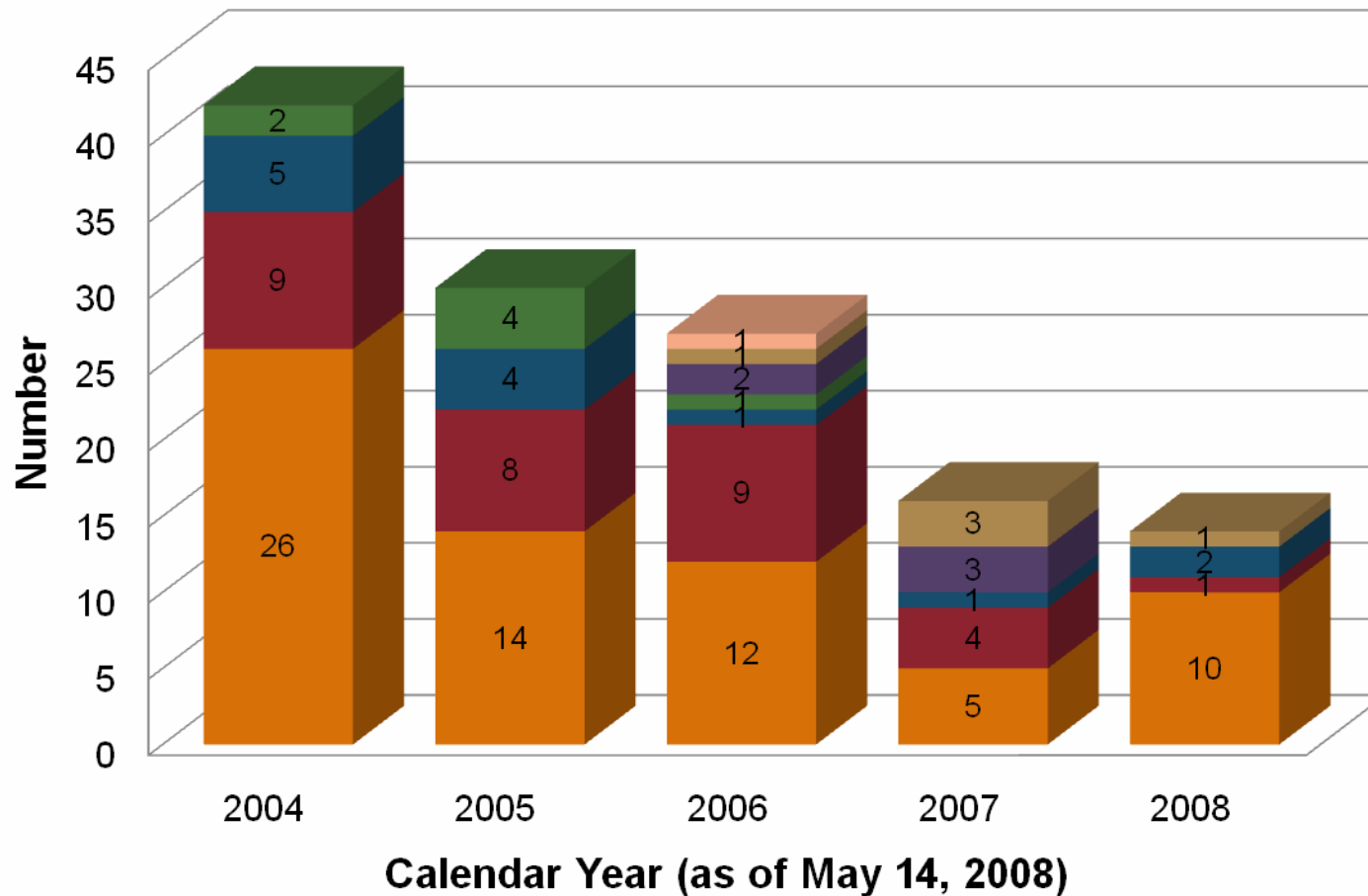
# Nuclear Power Plant Classifications



# Fire/Explosion & Toxic Gas Classifications



# Fire/Explosion, Toxic Gas & Other Events Number of Classifications



Does not include retracted classifications

- UE Other
- UE Fire/Explosion
- UE Toxic Gas
- Alert Other
- Alert Fire/Explosion
- Alert Toxic Gas
- Site Area Emergency Other

# Commercial Nuclear Power Plant Emergency Classifications<sup>1</sup>

CLASSIFICATION	DEFINITION INCLUDING SECURITY ELEMENT AND RADIOLOGICAL RELEASE IMPACT ON PUBLIC	CALENDAR YEAR			
		2004	2005	2006	2007
<b>UNUSUAL EVENT</b>	Potential degradation of the level of safety of the plant or indicate a security threat to facility protection. No release expected.	40	26	22	10
<b>ALERT</b>	Substantial degradation of the level of safety of the plant or security event that poses risk to life or damage to equipment. Any release is expected to be small fraction of federal protective action guidelines.	2	4	4	6
<b>SITE AREA EMERGENCY</b>	Major failures of plant functions needed for protection of the public or security events that result in intentional damage or malicious acts to equipment needed for public protection. Any release is not expected to exceed federal protective action guidelines at site boundary.			1 <sup>2</sup>	
<b>GENERAL EMERGENCY</b>	Substantial core degradation or melting with the potential for loss of containment integrity or security event that results in loss of physical control of facility. A release can be reasonably expected to exceed federal protective action guidelines offsite. However, this does not mean that a release is in progress.				

<sup>1</sup> Does not include retracted events

<sup>2</sup> Since 1980, a total of 5 Site Area Emergencies have been declared



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## **Region I Topics**

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## **Alert and Notification Systems (ANS)**

- Energy Policy Act of 2005
- NRC and FEMA Actions
  - FEMA Expectations
  - NRC Confirmatory Order and Deviation Memo Inspection
  - Far-field Acoustic Testing, FEMA
  - Regularly-scheduled Conference Calls and Government-to-Government Meetings

# Exercise Evaluation Inspection

- Performance vs. Program Findings
- NRC Requirements vs. NEI Guidance
- Communication and Working-Level Relationships
- NRC Actions for FEMA Deficiencies



# It's 10:00pm, Do You Know Where Your EALs Are?

- History of EAL Change Process
- 2007 RIS & EGM
- IP7111404 Inspection
- Traditional Enforcement vs. SDP
- What Can You Do?

## Supplemental Inspections

- IP95001 Performed Due To Operators' Impact on EP
- IP95001 Performed Due To Dose Assessment "Mind Set"
- IP95002 Performed Due To Yellow EP Performance Indicator

## External Stakeholder Outreach

- ANS Performance
- Strike Preparation/Plans
- Scheduling Conferences and Conflicts
- Government-To-Government Meetings



## Region II Topics

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## Post Exercise Critiques - Improved

- Last year we identified that post-exercise critiques were not consistently identifying weaknesses associated with risk significant planning standards.
- Over the last year no critique issues were identified. Observed improvement in licensee critiques.

## EP Findings

- Over the last year Region II had no emergency preparedness findings.
- Supplemental Inspections – *IP95001*
  - Follow the procedure format and organization in preparing for the supplemental inspection.

## Exercise Scenarios

- Exercise scenario to NRC 30 days prior to exercise
  - Request a copy of the scenario 30 days prior to the exercise for review/exercise evaluation (IP 71114.01).

## Inspection

- Region II has the construction inspection office. Future construction EP inspection will be conducted out of RII.
- Region II and State/local officials have good working relationships.





## **Region III Topics**

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## Region III Topics

- ANS Siren Issues
- EAL Issues
- TSC Issues

# Siren Performance Issues

- Siren Testing Success
- Siren Testing Frequency
- Siren Pre-Testing

## EAL Issues

- Offsite Release EALS
- Security EALs

## TSC Issues

- Material Condition
- Design



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## **Region IV Topics**

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## Summary of Concerns

- Protective Action Recommendations not based on Radiological Risk
- EP Scenario Quality
- EAL Implementation Issues
- EP Exercise Performance
- Other Concerns

## Protective Action Recommendations

- ‘Automatic’ Expansion Schemes are to be avoided –recommendations to offsite authorities should only be for areas evaluated as having of actual risk
- Treat wind shifts and source term changes independently of each other
- Dose-based expansions of minimum PARS must be IAW federal guidance



## Scenario Quality

- Recent (2006, 2007) Scenarios emphasize Control Room and EOF over TSC and OSC
  - Few or no OSC critical tasks (no high priorities)
  - TSC Engineering is not required to succeed
  - OSC and TSC resources are not challenged
- Worker Protection Procedures are not being exercised (dose extensions, SCBA, PPEs, KI) because teams are pulled out of the plant
- Site drills between exercises are also not challenging onsite teams

## Scenario Performance

- Developing trend (2007)
- More performance issues are being identified, both by licensees and NRC
- Not due to complex scenarios

## EAL Implementation

- Implementation Issues continue to be identified with:
  - Missing Definitions
  - Unclear Terminology
  - Inability to comply with the EAL as written under some circumstances
  - Supporting Equipment Inoperable or Missing

## Other Concerns

- Not all players in drills or exercises participate in the critiques (Fire Brigade, Rad Techs, Chem Techs, EMTs, Security)
- Not many EALs are tested by drill and exercise program (including simulator scenarios)
- Increasing number of deviations in 2007 and 2008 from Emergency Plans (usually minor significance)

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# QUESTIONS?