



Conceptual Performance Based EP Regulatory Regimen

Randy Sullivan

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- Review of NRC emergency preparedness (EP) regulations
- Identified areas for improvement
- Explore a performance based regulatory regimen
 - Develop recommendation for Commission by late 2008

Performance Based Regulation

- Defines objectives and focuses on results
- Prescriptive regulations provide direction on how results are to be obtained

Proposed Goals

- The licensee can eliminate or substantially reduce public radiation exposure during a nuclear accident through protective measures
- The licensee can mitigate accidents to prevent or reduce radiological releases
- The licensee can immediately notify State and local officials of emergency conditions

Proposed Goals

- State/local officials can make and implement protective action decisions
- The public can be rapidly alerted and informed in a manner which supports State/local implementation of protective action decisions
- Licensee and State/local officials can ensure emergency worker safety while responding to a radiological emergency

Design Considerations

- Parallel to current regulatory regimen and voluntary
- Focus on licensee performance demonstrated during drills and exercises
- Specific competencies demonstrated

Design Considerations

- Standards to judge success
- Expanded performance indicator set
- Replace the 16 planning standards and most of Appendix E to 10 CFR Part 50

Design Considerations

- Emergency plans, implementing procedures, facilities, organization, training, activation processes, duty roster qualifications, shift staffing, response organization, communications systems, facility location and emergency equipment would become licensee response band issues
- Technical Support Center hardening remains

Design Considerations

- Program changes would be acceptable as long as performance remained at high level
- Drill/exercise plan approved by NRC
- Scenario content approved by NRC
- Emergency action levels, protective actions, the emergency planning zone and notification requirements would not change

Design Considerations

- Biennial exercises and selected drills/exercises inspected
- Enhance regulatory oversight
- No increase in NRC inspection resources
- Performance demonstrations specified
- Inspect critiques and correction of weaknesses

Design Considerations

- Licensees must maintain the organization used in demonstrations
- Vary response teams across evaluated exercises and drills
- Vary scenarios across evaluated exercises and drills
- Scenario confidentiality
- Develop consensus performance standards (American Nuclear Society?)
- Minimal impact on offsite agency programs

Design Considerations

- Increased oversight from crossing PI thresholds, corrective action failures, PI data problems and failure in actual events
- Increased inspection of drills/exercises, scenarios, input data, corrective action program and/or require remedial drills
- Allow licensee flexibility for innovative solutions that maintain a high level of EP

Design Considerations

- Maintain performance level equal to or higher than it is today
- NRC must be able to ensure a high level of emergency preparedness that protects public health and safety

Performance Demonstrations

- Shift Emergency Response Org
 - Operations
 - Notifications/communications
 - Radiological protection
 - Repair and corrective actions
 - Personnel protection
 - Security interface functions
- Scenarios specified

Performance Demonstrations

- Augmenting Emergency Response Org
 - Technical Support Center
 - Emergency Operations Center
 - Operations Support Center
 - The Joint Information Center
- Scenarios specified

Performance Indicators

- Drill and Exercise Performance
- Team Performance
- ERO Participation
- Alert and Notification System
- Facility and Equipment Availability
- Corrective Action Efficiency

Reasonable Assurance

- The NRC has “reasonable assurance” because this site demonstrated a high level of emergency preparedness
 - In response to simulated severe reactor accidents (that reflect X% of core damage frequency)
 - That was measured against NRC endorsed performance standards

Further Development

- New performance indicators
- Scenario specifics
- Performance standards
- Pilot program with industry volunteers
- Inspection procedures
- Significance determination process for noncompliance issues
- Radiological performance standards for the TSC

Overarching Issue

- The effort will only be successful if licensees implement new regimen
- More importantly, NRC will implement only if it can verify reasonable assurance for public health and safety
- These two perspectives are not necessarily opposed, but reconciling them is a challenge

Report to Commission

- SECY paper with staff recommendations
 - Merits of performance based regulatory regimen
 - Industry support (pilot and implementation)
 - Stakeholder feedback
 - Resource needs and schedule if rulemaking is directed

Questions and Comments

- Stakeholder input
- Industry views
- Everyone present is welcome to comment

Randy Sullivan
301 415 1123
randy.sullivan@nrc.gov