



FIRE PRA NRC PERSPECTIVES

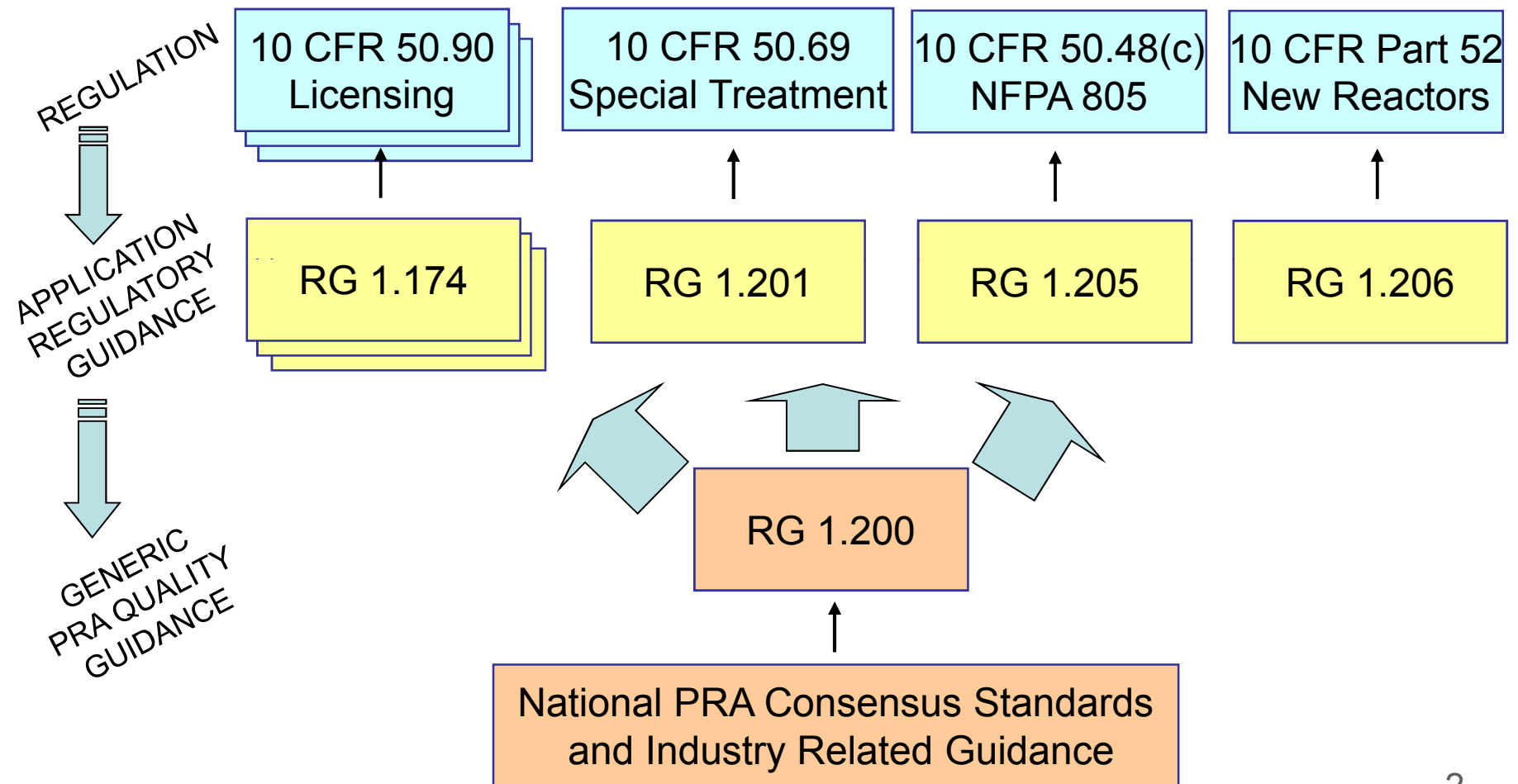
September 22, 2009

NEI Fire Protection Information Forum, Plenary 5

Donnie Harrison

*Branch Chief
PRA Licensing Branch
Division of Risk Assessment
Nuclear Regulatory Commission*

Relationship of Risk-Informed Guidance



Fire PRA Scope/Level of Detail

- Scope and Level of Detail of PRA is Determined by its Intended Use
 - Application-Specific Guidance/Acceptance Guidelines
 - Significance of Hazard Groups to Decisions
- Broad-Scope Applications May Require More Detail to Gain Maximum Benefits
 - NFPA 805
 - TS Initiative 4B, Risk-Informed TS Completion Times
 - TS Initiative 5B, Risk-Informed Surveillances
 - 10 CFR 50.69, Risk-Informed Special Treatment

PRA Quality

- ASME/ANS RA-Sa-2009
- RG 1.200, Revision 2, Issued March 2009

- Numerous How-To Guidance Documents
 - NUREG/CR-1792, Good Practices for Implementing HRA
 - NUREG/CR-6823, Handbook of Parameter Estimation for PRA
 - NUREG/CR-6850/EPRI-1011989, Fire PRA Methodology
 - NUREG-1855, Guidance on Treatment of Uncertainties Associated with PRAs in Risk-Informed Decision Making

RG 1.200 Implementation

- On a Supporting Requirement (SR) Basis:
 - Default Expectation is to be Capability Category II
 - For SRs that are Capability Category I, Licensee Needs to Assure This is Appropriate for the Specific Application
 - Licensee Needs to Determine if Capability Category III is Needed for any SRs for the Specific Application
- Consistent with Commission Approach to Improving PRA Quality and RIS 2007-06:
 - Implementation of RG 1.200, Revision 2, for all Applications Starts April 2010
 - Broad-Scope Applications Need to Meet RG 1.200, Revision 2, when Submitted

Peer Reviews

- Industry Guidance for Conducting PRA Peer Reviews
 - NEI 00-02, PRA Peer Review Process Guidance
 - NEI 05-04, Process for Follow-on PRA Peer Reviews Using the ASME Standard
 - NEI 07-12, Fire PRA Peer Review Process Guidelines
- Staff relies on Industry Peer Reviews to Establish Acceptable Quality of Baseline PRA
 - Obviates Need for Detailed Staff Review of Baseline PRA
 - Allows Staff to Focus on Impacts of the Specific Application
 - Need Robust Peer Reviews
- Peer Reviewers Should Use their Expertise in Determining if Licensee's PRA meets the PRA Standard Supporting Requirements, as Endorsed by RG 1.200
- Peer Reviews Should Identify and Evaluate the Appropriateness of PRA Assumptions

Peer Review Follow-up

- Staff will be Coordinating with Industry to Support Observations of Fire PRA Peer Reviews
- Staff will Focus on the Use of the PRA, on Key Assumptions, and on the Impact of Associated Sources of Model Uncertainty
 - Considerable Reliance on Applicable Results from Peer Review, Especially Findings
- Expect Licensees to Address Peer Review Findings (Even Documentation Issues)

Summary

- The Scope and Level of Detail of the Licensee PRA Needs to be Adequate for the Applications for which it is being Applied
- There is Considerable Guidance Available for Performing PRAs, Including Fire PRAs
- The Industry Peer Review Process Needs to Ensure High-Quality Baseline PRAs
- Licensees Need to Fully Address Peer Review Findings
- NRC Will Continue to Work to Improve Guidance, Methods, etc. (Living Process)