SOUTHERN COMPANY

PRA Technical Adequacy
vs.
Requirements of Risk-Informed Programs

October 25, 2013

Improving Predictability for Transition to NFPA-805

Focus Area – PRA Model Stability

- Goals of the proposals
  - Provide predictable transition to risk-informed program as work continues on methods & state-of-knowledge improvements
  - Predictable process for model and application improvements & state-of-knowledge changes
  - Facilitate Continued Improvement vs. Stagnation
  - Predictability incentivizes transition to safer program

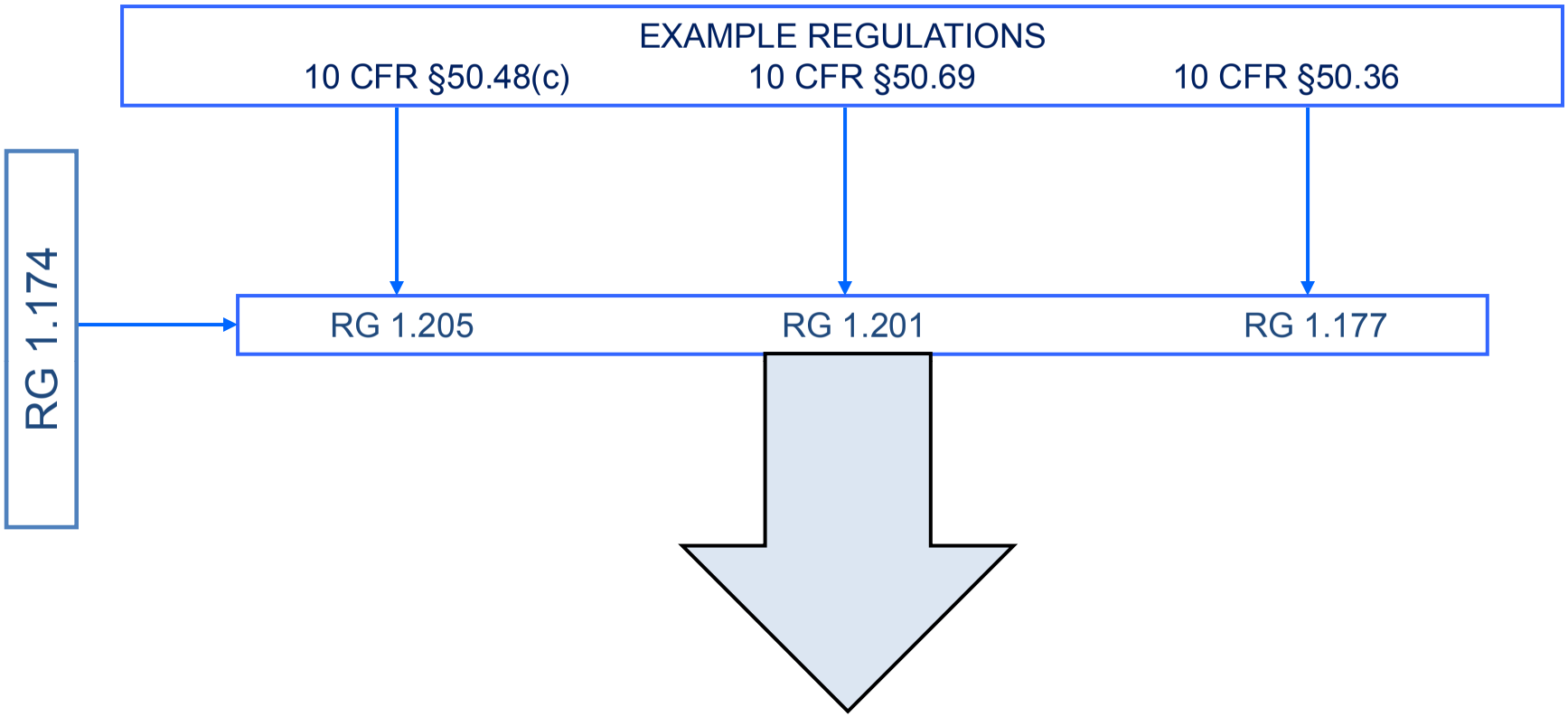
Safety improvement as well as model and application maturity is gained through usage

Improving Predictability for Transition to NFPA-805

- Proposal:
  - Focus NRC review of PRA model on confirming RG 1.200 elements are met and Licensee has or plans to perform what (not how) it has stated in its LAR (consistent with intent of NRC audits)
- Core Belief:
  - Peer review is adequate to establish PRA technical adequacy (consistent with RG 1.200)
- Advantages:
  - Predictability- peer review results can be depended on for application
  - Consistency – RG 1.200 approach

Audit of a peer review model should be complementary to the peer review process not additive

Overall Relationship Between Regulation and RG 1.200



RG 1.200

"... describes one acceptable approach for determining whether the technical adequacy of the PRA, in total or the parts that are used to support an application, is sufficient to provide confidence in the results, such that the PRA can be used in regulatory decision-making for light-water reactors."

RG 1.200 Described Process

RG 1.200

"(a) … guidance to licensees for use in determining the technical adequacy of the base PRA used in a risk-informed regulatory activity"

"b) to endorse standards and industry peer review guidance"

"WHAT TO"

Possible **"HOW TO"** (RG 1.200 Section 3.3)

Recommended **"Verification of How to"**

PRA Standard
(ASME/ANS RA-Sa-20xx)

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"current good practices*" such as EPRI, NRC, Owner groups guidance documents

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Peer Review
(NEI-07-12)
". . . If the peer review in NEI 00-02 . . . . is used . . ., then it is considered adequate to support the risk-informed application under consideration" (RG 1.200, rev. 2, App B)

NRC PRA review focus should be RG 1.200 process has been followed

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PRA Technical Acceptability

(* "Current good practices are those practices that are generally accepted throughout the industry and have shown to be technically acceptable in documented analyses or engineering assessments" (1.200, section1.3 foot note)

Improving Predictability for Transition to NFPA-805

- Proposal:
  - Use current available processes (e.g., model update requirements) to deal with new information

    Examples: MSPI, Maintenance Rule, part 52 update and upgrade requirements
- Advantages
  - Predictability- use of familiar process
  - Consistency – required by the current PRA standards
  - Verifiable during inspections
  - More predictable transition to risk-informed program as work continues on methods & state-of-knowledge improvements
  - Improved assurance in the PRA/risk-informed update process

Conclusions

- Improve Transition Predictability through PRA Model Stability
  - Use current available processes (e.g., model update requirements) to deal with new information.
  - Focus Audit on RG 1.200 verification vs. re-review
- Predicted Benefits:
  - Improved staff assurance in the peer review process and results
  - Improved assurance in the PRA/risk-informed update process
  - Improved Predictability for Transition to NFPA-805

Focus: Predictability
Results: Holistic Progress