



*United States*  
*Nuclear Regulatory Commission*

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ATTACHMENT 2

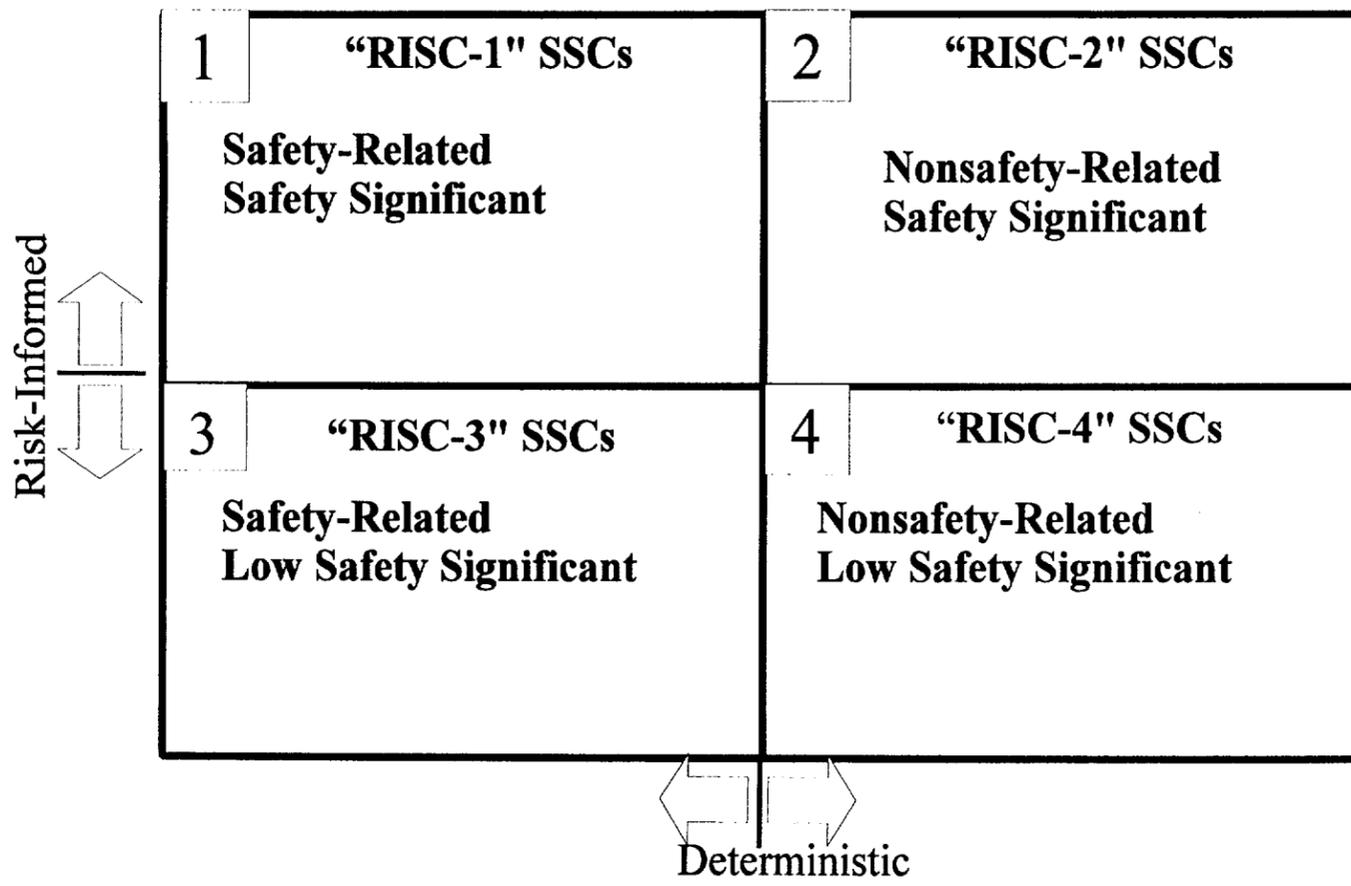
**RISK-INFORMED PART 50  
SPECIAL TREATMENT REQUIREMENTS  
RIP50 OPTION 2**

**Public Meeting  
February 21, 2002**



## **RIP50 OPTION 2 REGULATORY APPROACH**

- General Approach for Option 2:
  - Risk-informing special treatment requirements (STRs)–ONLY
  - NOT changing the design basis
  - STRs are requirements that provide assurance that SSCs will perform design basis functions
  
- Essentially a two-step process
  - Risk-informed categorization into RISC-1, RISC-2, RISC-3, RISC-4 categories (per §50.69(c) requirements)
  - Apply §50.69(d) treatment requirements for each category
  
- List of STRs removed from RISC-3 and RISC-4 SSCs is identified in 50.69 (d)





## **RIP50 OPTION 2 REGULATORY APPROACH CONT'**

- List of special treatment requirements removed from RISC-3 and RISC-4 SSCs:
  - Appendix B QA
  - Part 21
  - 50.65 MR (except a(4))
  - 50.72 and 50.73
  - 50.49 EQ
  - Part 100 seismic qualification reqts
  - Appendix J testing for small CIVs and penetrations
  - 50.55a?



## **RIP50 OPTION 2 REGULATORY APPROACH CONT'**

- RISC-3 treatment requirements from current draft of §50.69(d)(2):

**§50.69(d) Requirements for Structures, systems, and components.**

- (2) In addition to existing regulatory requirements (except as allowed by §50.69(d)(3)), the licensee or applicant shall have processes to control the design; procurement; inspection, maintenance, testing, and surveillance; and corrective action, for SSCs that perform RISC-3 functions. The pertinent requirements of the processes described below must be implemented to provide reasonable confidence in the capability of RISC-3 SSCs to perform their safety-related functions under design-basis conditions when challenged. The implementation of these processes for RISC-3 SSCs, and the assessment of their effectiveness, must be controlled and accomplished through documented procedures and guidelines (including plant configuration; and qualification, training, and certification of personnel) to support the determination that SSCs are capable of performing their safety-related functions under design-basis conditions. The controls for these processes must be identified through applicable national, local, and industry codes and standards, vendor recommendations, operational experience, or licensee documents.



(i) Design Control

Design functional requirements and bases for SSCs must be preserved and controlled, including selection of suitable materials, methods, and standards; verification of design adequacy; control of installation and post-installation testing; and control of design changes, to support the determination that RISC-3 SSCs remain capable of performing safety-related functions under design-basis conditions. As part of design control, SSCs must have a documented basis to demonstrate that they are capable of performing their safety-related functions, including design requirements for environmental (temperature and pressure, humidity, chemical effects, radiation, submergence, having addressed aging and synergistic effects) and seismic (design load combinations of normal and accident conditions with earthquake motions) conditions.

(ii) Procurement

Procured SSCs must satisfy their design requirements. Upon receipt, the licensee shall verify that the item received is the item that was ordered.

(iii) Maintenance, Inspection, Testing, and Surveillance

Periodic maintenance, inspection, testing, and surveillance activities must be established and conducted, and their results evaluated using prescribed acceptance criteria, to verify that the SSCs will perform their safety-related functions under design-basis conditions.

(iv) Corrective Action

Where the licensee determines that an SSC might not be capable of performing its safety-related functions under design-basis conditions (e.g., through operating experience or when acceptance criteria are not satisfied), the licensee must identify, document, and correct such deficiencies in a timely manner. In the case of significant conditions adverse to quality, measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition.