

to evaluate severe accident vulnerabilities) are adequate for the categorization of SSCs.

(iii) Results of the PRA review process to be conducted to meet § 50.69(c)(1)(i).

(iv) A description of, and basis for acceptability of, the evaluations to be conducted to satisfy § 50.69(c)(1)(iv). The evaluations shall include the effects of common cause interaction susceptibility, and the potential impacts from known degradation mechanisms for both active and passive functions, and address internally and externally initiated events and plant operating modes (e.g., full power and shutdown conditions).

Regarding the categorization process description, the NRC expects that most licensees and applicants will commit to draft regulatory guide DG-1121 which endorses NEI 00-04, with some conditions and exceptions. If a licensee or applicant wishes to use a different approach, the submittal would need to provide sufficient description of how the categorization would be conducted. As part of the submittal, a licensee or applicant is to describe the measures they have taken to assure that the plant-specific PRA, as well as other methods used, are adequate for application to proposed § 50.69. The measures described would include such items as any peer reviews performed, any actions taken to address peer review findings that are important to categorization, and any efforts to compare the plant-specific PRA to the ASME PRA standard. The NRC has developed reviewer guidance applicable to these submittals and this is described below in Section VI.2. The licensee/applicant would also describe what measures they have used for the methods other than a PRA to determine their adequacy for this application.

Further, the licensee (or applicant) would be required to include information about the evaluations they intend to conduct to provide reasonable confidence that the increase in risk would be small. This would include any sensitivity studies for RISC-3 SSCs, including the basis for whatever change in reliability being assumed for these analyses. A licensee would need to provide sufficient information for the NRC describing the sensitivity studies and other evaluations, and the basis for their acceptability as appropriately representing the potential increase in risk from implementation of the revised requirements in this proposed rule.

As discussed elsewhere, the RISC-3 SSCs have low safety significance under § 50.69. The Commission expects licensees and applicants to implement effective treatment processes to maintain RISC-3 functionality that

comply with § 50.69(d). Those processes do not need to be described to the NRC as part of the proposed § 50.69 submittal under § 50.69(b)(2).

V.3.3 Section 50.69(b)(3) Approval for Licensees

Section 50.69(b)(3) would further provide that the Commission will approve a licensee's implementation of this section by license amendment if it determines that the proposed process for categorization of RISC-1, RISC-2, RISC-3, and RISC-4 SSCs satisfies the requirements of § 50.69(c).

The NRC will review the description of the categorization process set forth in the application to confirm that it contains the elements required by the rule. The NRC will also review the information provided about the plant-specific PRA, including the peer review process to which it was subjected, and methods other than a PRA relied upon in the categorization process. The NRC intends to use review guidance (discussed in more detail in Section VI) for this purpose. The NRC will approve the licensee's use of § 50.69 by issuing a license amendment.

V.3.4 Section 50.69(b)(4) Process for Applicants

Section 50.69(b)(4) would require that an applicant for a license (or for a design certification) that chooses to implement proposed § 50.69 must submit the information listed in § 50.69(b)(2) as part of its application for a license. As previously discussed, the rule is structured to transition from the "safety-related" classification (and related treatment requirements) to a safety-significant classification. Thus, an applicant would first need to design the facility to meet applicable Part 50 design requirements, and then apply the requirements of § 50.69. The above-cited information must be submitted in addition to other technical information necessary to meet § 50.34. The NRC will provide its approval of implementation of § 50.69, if it concludes that the rule requirements would be met, as part of its action on the application for a license or the design certification rule. As noted in Section V.3.0, an applicant referencing a certified design that implemented § 50.69 would need to adopt the remaining provisions of § 50.69 or apply the other requirements in Part 50 to its processes.

V.4.0 Section 50.69(c) Categorization Process Requirements

Section 50.69(c) would establish the requirements for the risk-informed categorization process including requirements for the supporting PRA.

Licensees or applicants who wish to adopt the requirements of § 50.69 will need to make a submittal (per § 50.69(b)(2) or § 50.69(b)(4)) that discusses how their proposed categorization process, supporting PRA, and evaluations meet the § 50.69(c) requirements. As described above in Section III.2.0, these requirements are intended to ensure that the risk-informed § 50.69 categorization process determines the safety significance of SSCs with a high level of confidence. The introductory paragraph states that SSCs must be categorized as RISC-1, 2, 3, or 4 by a process that determines whether the SSC performs one or more safety-significant functions and identifies those functions.

V.4.1 Section 50.69(c)(1)(i) Results and Insights From a Plant-Specific Probabilistic Risk Assessment

Section 50.69(c)(1)(i) contains the requirements for the PRA itself, and how it is to be used in the categorization process. The PRA must have sufficient capability and quality to support the categorization of the SSCs. How this is to be accomplished is discussed in Section V.4.1.1. The PRA and associated sensitivity studies are used primarily in the categorization of the SSCs as to their safety significance as discussed in Section V.4.1.2, and the PRA is also used to perform evaluations to assess the potential risk impact of the proposed change in treatment of the RISC-3 SSCs as discussed in Section V.4.4.

V.4.1.1 Scope, Capability, and Quality of the PRA to Support the Categorization Process

As required in § 50.69(c)(1)(ii), initiating events from sources both internal and external to the plant, and for all modes of operation, which would include low power and shutdown modes, must be considered when performing the categorization of SSCs. It is recognized that few licensees have fully developed PRA models that cover such a scope. However, as a minimum, the PRA to be used to support categorization under § 50.69(c)(1) must model internal initiating events occurring at full power operations. The PRA will have to be able to calculate both core damage frequency and large early release frequency in order to meet the requirement in § 50.69(c)(iv). The PRA must reasonably represent the current configuration and operating practices at the plant to meet § 50.69(c)(1)(ii). The PRA model should be of sufficient technical quality and level of detail to support the categorization process. This means that