

(if any) are small. To account for each of these factors and to account for risk insights not found in the plant-specific PRA, § 50.69(c)(2) requires that the final categorization of each SSC be performed using an integrated decision-making panel (IDP). A structured and systematic process using documented criteria shall be used to guide the decision-making process. Categorization is an iterative process based on expert judgment to integrate the qualitative and quantitative elements that impact SSC safety significance. The insights and varied experience of IDP members are relied on to ensure that the final result reflects a comprehensive and justifiable judgment.

The panel must be composed of experienced personnel who possess diverse knowledge and insights in plant design and operation and who are capable in the use of deterministic knowledge and risk insights in making SSC classifications. The NRC places significant reliance on the capability of a licensee to implement a robust categorization process that relies heavily on the skills, knowledge, and experience of the people that implement the process, in particular on the qualification of members of the IDP. The IDP should be composed of a group of at least five experts who collectively have expertise in plant operation, design (mechanical and electrical) engineering, system engineering, safety analysis, and probabilistic risk assessment. At least three members of the IDP should have a minimum of five years experience at the plant, and there should be at least one member of the IDP who has worked on the modeling and updating of the plant-specific PRA for a minimum of three years.

The IDP should be trained in the specific technical aspects and requirements related to the categorization process. Training should address at a minimum the purpose of the categorization; present treatment requirements for SSCs including requirements for design basis events; PRA fundamentals; details of the plant-specific PRA including the modeling, scope, and assumptions, the interpretation of risk importance measures, and the role of sensitivity studies and the change-in-risk-evaluations; and the defense-in-depth philosophy and requirements to maintain this philosophy.

The licensee or applicant (through the IDP) shall document its decision criteria for categorizing SSCs as safety-significant or low safety-significant pursuant to § 50.69(f)(1). Decisions of the IDP should be arrived at by consensus. Differing opinions should be

documented and resolved, if possible. If a resolution cannot be achieved concerning the safety significance of an SSC, then the SSC should be classified as safety-significant. SSC categorization shall be revisited by the licensee or applicant (through the IDP) when the PRA is updated or when the other criteria used by the IDP are affected by changes in plant operational data or changes in plant design or plant procedures. Requirements for PRA updating are contained in § 50.69(e)(1).

V.5.0 Section 50.69(d) Requirements for Structures, Systems, and Components

After SSCs are categorized as either RISC-1, RISC-2, RISC-3, or RISC-4, then the § 50.69(d) requirements, which provide the treatment requirements applicable to each RISC category, are applied. Until a structure or system is categorized using this process, the existing requirements on SSCs in that structure or system are retained. Section 50.69(d) contains two sub-items. The first contains the requirements being imposed on RISC-1 and RISC-2 SSCs. The second section contains the "high-level" requirements that are being added for RISC-3 SSCs to provide necessary confidence that design basis capability will be retained for these SSCs. The list of existing special treatment requirements that are being removed through this rulemaking for RISC-3 and RISC-4 SSCs is contained in § 50.69(b)(1).

V.5.1 Section 50.69(d)(1) RISC-1 and RISC-2 Treatment

Section 50.69 (d)(1) requires that a licensee or applicant ensure that RISC-1 and RISC-2 SSCs perform their functions consistent with categorization process assumptions by evaluating treatment being applied to these SSCs to ensure that it supports the key assumptions in the categorization process that relate to their assumed performance. To meet this, a licensee should first evaluate the treatment being applied in light of the credit being taken in the categorization process, with appropriate adjustment of treatment or categorization to achieve consistency as necessary. For SSCs categorized as RISC-1 or RISC-2, all existing applicable requirements continue to apply. This includes any applicable special treatment requirements. The rule language notes that this evaluation is to focus upon those key assumptions in the PRA that relate to performance of particular SSCs. For example, if a relief valve was being credited with capability to relieve water (as opposed to its design condition of steam), such an evaluation

would look at whether the component has been designed or otherwise determined to be able to perform as assumed. Other examples might be for the failure rates used in the PRA model. As a general matter, for those SSCs modeled in the PRA, conformance with industry standards on PRAs would also result in such evaluation steps being accomplished in order to help assure the PRA represents the facility.

If a § 50.69 licensee chooses to categorize a selective set of SSCs as RISC-3, and the categorization of SSCs as RISC-3 is based on credit taken for the performance of other plant SSCs (that would be RISC-1 or RISC-2, whether or not these SSCs are within the selective implementation set), then the licensee must ensure that consistency of performance with what was credited in the categorization. As discussed in Section V.4.5, selective implementation of components within a system is not permitted. This applies to credit taken in: 1) PRA models, inputs and assumptions; 2) screening and margin analyses; and 3) IDP deliberations. This implies that the licensee must ensure that the credited (RISC-2) SSCs perform their functions per § 50.69(d)(1), and the performance of these SSCs must be monitored per § 50.69(e)(2).

V.5.2 Section 50.69(d)(2) RISC-3 Treatment

Section 50.69(d)(2) contains, as an overall requirement for the treatment of RISC-3 SSCs, that licensees shall have processes to control the design; procurement; inspection, maintenance, testing, and surveillance; and corrective action, for RISC-3 SSCs to provide reasonable confidence in the capability of RISC-3 SSCs to perform their safety-related functions under design basis conditions throughout their service life. In other words, the Commission expects licensees to have sufficient treatment controls in place to have reasonable confidence that RISC-3 SSCs will be capable of performing their safety functions if they were called upon to perform those functions. Licensees may decide to apply current practices at their facilities or may establish new practices for the treatment of RISC-3 SSCs, provided the requirements of § 50.69 are satisfied.

During its review of the South Texas exemption request, the NRC staff identified several instances where the licensee's interpretation of the extent to which treatment could be relaxed for low-risk safety-related SSCs was not consistent with the staff's expectations under Option 2 of the NRC's risk-informed rulemaking initiative (*i.e.*, that