

## Develop an Alternative Risk-Informed Approach to Special Treatment Requirements in 10 CFR Part 50

Lead Office/Division: NRR/DRA

### Description

The Commission decided in 1998 to consider promulgating new regulations that would provide an alternative risk-informed approach for special treatment requirements in the current regulations for power reactors. Special treatment requirements for structures, systems, and components go beyond industry-established requirements for equipment classified as “commercial grade.” Special treatment requirements provide additional confidence that the equipment is capable of meeting its functional requirements under design basis conditions. These special treatment requirements include additional design considerations, qualification, change control, documentation, reporting, maintenance, testing, surveillance, and quality assurance requirements.

The Commission approved the final rule, with some modifications, in an affirmation session on October 7, 2004. The final rule was published in the *Federal Register* on November 22, 2004 (69 FR 68008). The NRC staff issued Regulatory Guide (RG) 1.201, “Guidelines for Categorizing Structures, Systems, and Components in Nuclear Power Plants According to Their Safety Significance,” Revision 1, on April 28, 2006.

On September 25, 2006, the Nuclear Energy Institute submitted Westinghouse Topical Report WCAP-16308-NP (Revision 0, July 2006), “Pressurized Water Reactor Owners Groups 10 CFR 50.69 Pilot Program – Categorization Process – Wolf Creek Generating Station,” for NRC review. The topical report proposed a categorization process used by Wolf Creek Nuclear Operating Corporation in support of a future licensee submittal requesting approval to implement 10 CFR 50.69, “Risk-informed categorization and treatment of structures, systems and components [SSCs] for nuclear power reactors,” at the Wolf Creek Generating Station. The staff completed its review of the topical report and issued its final safety evaluation on March 26, 2009 (ADAMS Accession No. ML090260674). The staff found the categorization process described in the topical report to be acceptable, but did not approve nor endorse any specific treatment process. Treatment programs being implemented under 10 CFR 50.69 do not require prior approval from the NRC as part of the license amendment review process.

The staff plans to develop guidance for sample inspections to be conducted at plants voluntarily choosing to implement 10 CFR 50.69. The performance of sample inspections is consistent with the statement of considerations accompanying the final 10 CFR 50.69 rule. The staff plans to **issue draft guidance to obtain stakeholder input and issue final** guidance by the summer 2011. Inspection efforts will be focused on the most risk significant aspects related to implementation of 10 CFR 50.69 (i.e., proper categorization of SSCs and treatment of RISC-1 and RISC-2 SSCs). Additionally, the inspections are expected to be performance based, with lower safety significant function SSCs, such as those classified RISC-3, not receiving a major portion of inspection focus unless adverse performance trends are observed.

The staff recognizes the need for an effective, stable and predictable regulatory climate for the implementation of 10 CFR 50.69. Inspection guidance developed with industry stakeholder input is viewed as an efficient vehicle for reaching a common understanding of what constitutes an acceptable treatment program for SSCs since specific treatment plans are not reviewed as part of a licensee’s application to implement 10 CFR 50.69.