



RIC 2005
Session W-A3
Risk-Informing Special Treatment
Requirements 10 CFR 50.69 --
Application Content Expectations

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Rule Requirement 10 CFR 50.69(b)(2)



- An application for license amendment under §50.90
 - Description of categorization process
 - Description of measures taken to assure quality and level of detail for the processes that evaluate the plant for internal and external events during normal operation, low power, and shutdown (including plant-specific PRA and margins-type approaches, etc.) are adequate for categorization of SSCs
 - Results of the PRA review process conducted to meet §50.69(c)(1)(i)
 - Description of, and basis for acceptability of, evaluations to be conducted to satisfy §50.69(c)(1)(iv). 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 addresses internally and externally initiated events and plant operating modes



10 CFR 50.69(b)(2)(i)



- Description of categorization process
 - NEI 00-04, as endorsed by NRC, provides an acceptable categorization process
 - Will need to identify and address deviations in plant-specific processes from those identified in NEI 00-04
 - Use of a different process must provide a complete description of the categorization process
 - Level of detail should be similar to that of NEI 00-04
 - Will require more staff effort and an extended review schedule



10 CFR 50.69(b)(2)(ii)



- Description of measures taken to assure quality and level of detail for the processes that evaluate the plant for internal and external events during normal operation, low power, and shutdown (including plant-specific PRA and margins-type approaches, etc.) are adequate for categorization of SSCs
 - Description of quality of plant-specific PRA
 - Typical of any risk-informed licensing action
 - Also must address quality of non-PRA approaches
 - Scope, level of detail, and technical acceptability
 - Realistically reflect the actual design, construction, operational practices, and operational experience of the plant



10 CFR 50.69(b)(2)(iii)



- Results of the PRA review process conducted to meet §50.69(c)(1)(i)
 - Summarize results/impacts of PRA peer review and self assessment findings per RG 1.200
 - If a licensee uses an external events or shutdown PRA, for which no standards are currently endorsed, a peer review should be performed (similar to what was done for internal events PRAs prior to the ASME Standard) and the results/impacts summarized
 - In NEI 00-04 process, the findings from the peer reviews and self assessments (e.g., key uncertainties that could impact categorization and those supporting level requirements that are not Capability Category II for internal events PRA) are to be addressed in the individual sensitivity studies



10 CFR 50.69(b)(2)(iv)



- Description of, and basis for acceptability of, evaluations to be conducted to satisfy §50.69(c)(1)(iv). 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 addresses internally and externally initiated events and plant operating modes
 - Intent is to ensure that the categorization process results (i.e., small risk increase) are maintained throughout implementation of the rule
 - PRA used to perform these evaluations (i.e., Δ CDF and Δ LERF)
 - NEI 00-04 addresses non-PRA approaches by limiting the SSCs that can be made LSS
 - To invalidate the categorization process results would require the creation of intersystem CCFs and/or degradation mechanisms resulting from reductions in treatment
 - These types of impacts are typically not modeled in PRAs and are not understood well enough to establish a factor of reduction in reliability for the change in risk calculations
 - It is expected that licensees will rely on other aspects of their implementation of the rule to control these impacts (e.g., inspection, testing, feedback, corrective action)
 - Licensees will need to state this is how they are addressing intersystem CCF and degradation mechanisms (so they do not have to be quantitatively considered in the change in risk evaluations)



IMPLEMENTATION SCHEDULE



- Expect interactions on NEI 00-04 implementation guidance to continue in 2005
- Pilots from Wolf Creek and Surry may support determination of details needed to support any future §50.69 submittals
- Submittal pilots may be useful in developing a submittal template that could be included in a revision to NEI 00-04 as Appendix C



CONCLUDING THOUGHTS



- The staff will perform a *process* review to ensure that all the required elements of the process are in place and that the licensee's analysis capability is adequate for this process (i.e., quality of PRA and non-PRA methods used in evaluations)
- The submittal does not need to include any specific categorization results or implementation schedule, but will need to identify the evaluation methods (e.g., fire PRA versus FIVE) that will be used
- NEI 00-04 approach is consistent with the PRA quality phases action plan and may be qualified as a Phase 2 application