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August 1, 2003

The Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001
Attn: Rulemaking and Adjudications Staff

Re: Comments on Proposed Rule on Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Reactors

Dear Secretary:

On May 16, 2003, the NRC issued a proposed rule on "Risk-Informed Categorization and Treatment of Structures, Systems, and Components for Nuclear Power Reactors." The NRC is proposing to amend its regulations to provide an alternate approach for establishing the requirements for treatment of structures, systems, and components (SSCs) for nuclear power reactors using a risk-informed method of categorizing SSCs according to their safety significance. In the proposed rule, the NRC asked for public comments on the proposed rule and supporting documents and also on several related issues including (1) Probabilistic Risk Assessment (PRA) requirements, (2) NRC review of proposed treatment for low safety-significant (LSS) SSCs, and (3) the potential role of relevant operational experience in reducing uncertainties associated with reducing certain special treatment requirements. In response, we are submitting the following comments on behalf of our clients Exelon Generation LLC, South Texas Project Nuclear Operating Company, TXU Electric, and FirstEnergy Nuclear Operating Company (FENOC).

We appreciate the opportunity to submit comments on this very important rulemaking for the industry. We also commend the Commission and the NRC staff for making drafts of the proposed rule available for public comment and taking those comments into account in the proposed rule. We believe that this process has resulted in a substantial improvement in the proposed rule.

We fully support the Commission's efforts to risk-inform special treatment requirements in 10 CFR Part 50. As noted by Chairman Diaz in his comments on the proposed rulemaking, the proposed rule constitutes a significant change from the deterministic regulatory history – a change that is focused on improving safety using state-of-the-art analyses. However, we are concerned that certain provisions of the proposed rule and the supporting documentation, including the detailed NRC Staff guidance in the statement of consideration to the proposed rule and draft regulatory guidance on categorizing SSCs (DG-1121), continue to be overly restrictive and highly prescriptive. In fact, we believe that the detailed requirements currently contained in the proposed rule, along with the limited reduction in special treatment requirements for LLS SSCs, have all but rendered the rule uneconomical and will discourage many licensees from implementing the rule. Consequently, the proposed rule and associated guidance should be revised further to eliminate unnecessary regulatory burden associated with implementing the proposed rule.

In particular, we are concerned that reduction in special treatment requirements for safety-related but low safety significant SSCs (RISC-3 SSCs) is too narrow and that new programmatic requirements or restrictions imposed on RISC-1, 2, and 3 SSCs are too broad. For example, the proposed rule provides relief from seismic test requirements of Appendix A to 10 CFR Part 100. However, the NRC statement of consideration on the proposed rule specifically notes that one of the primary means for establishing seismic qualification other than by testing (*i.e.*, the earthquake experience database) is generally not sufficient to demonstrate seismic functionality and, therefore, seismic testing may, in fact, be necessary. This is just one example of several in the proposed rule where the NRC reduces some regulatory requirements, but simultaneously imposes new burdens or restrictions, resulting in minimal overall burden reduction for SSCs that have low safety significance.

Further, the proposed rule may require licensees to implement a complex and costly component reliability monitoring and feedback system for RISC 1, 2, and 3 components to ensure that the assumptions in the categorization process remain valid. For example, one element of the proposed SSC monitoring program requires tracking of all functional failures of RISC-1 and 2 SSCs, which may require significant expansion of licensee component monitoring programs. Existing monitoring programs are generally system based, not component based. Additionally, many of the monitored components are not modeled in the PRA or other risk analyses and, therefore, licensees will face significant difficulties in modeling the impact of reduced special treatment requirements on component reliability. Furthermore, for RISC-3 components, changes in reliability and availability of those components will not have a significant impact on safety and do not justify such an expansive and costly monitoring program.

We also continue to believe that the proposed mandatory license amendment process is not warranted to ensure technical adequacy of, or public confidence in, the categorization process. Such confidence could otherwise be obtained through licensee commitments to industry standards and applicable regulatory guidance, and through the NRC inspection and enforcement process. Such an approach has been followed by the NRC for other types of new rules, such as the Maintenance Rule. Moreover, the amendment process, which will involve a detailed staff review and approval of the characterization process and possibly involve adjudicatory hearings, may be viewed by licensees as too lengthy, unpredictable, and costly.

Finally, many of the provisions in the proposed rule and, in particular, in the implementing guidance were not included in the NRC-approved South Texas Project (STP) risk-informed exemption. For example, proposed § 50.69(g) adds new reporting requirements for RISC-1 and -2 SSCs. In general, these new provisions would significantly increase the burden associated with implementation of the rule and are not necessary for safety or public confidence. These new burdensome provisions should be eliminated from the rule.

Attachment A provides our detailed comments on the proposed rule. Attachment B provides comments on the associated regulatory guidance, DG-1121. Attachment C provides our comments on "Additional Potential Requirements" included in Section VI of the statement of consideration for the proposed rule.

Sincerely,

Steven P. Frantz
Paul M. Bessette

Enclosures

cc: Roger Walker (TXU)
Glen Schinzel (STP)
Terry Simpkins (Exelon)
Gary Leidich (FENOC)
Mary O'Reilly (FENOC)

ATTACHMENT A

Comments on Proposed Rule for Risk-Informing Special Treatment Requirements

We strongly support the Commission's effort to move forward on risk-informing special treatment requirements, but we encourage the Commission to give high priority to issuing a rule that is both safety-focused and cost-beneficial. The following are our principal comments on the proposed rule:

- The required treatment of RISC-3 SSCs, which is intended to ensure design basis functional capability, is too prescriptive and not appropriate for low safety significant components.
- The proposed rule contains a number of burdensome new requirements and restrictions that are not required for safety and were not included in the STP exemption.
- The NRC should establish a less burdensome implementation process that does not require a license amendment.
- The rule should include a process for making changes in a licensee's commitments for implementing the rule.
- The supporting comments and section-by-section analysis of the proposed rule contain prescriptive NRC requirements that are inconsistent with the associated regulatory guidance.
- The rule should not identify "best practices" for treatment of RISC-3 components.

Each of these concerns is discussed in more detail below.

I. The Required Treatment of RISC-3 SSCs is Too Prescriptive and Not Required for LSS SSCs

As discussed in the supporting regulatory analysis for the proposed rule, the current scope of SSCs covered by the special treatment requirements is deterministically based and stems primarily from the evaluation of design basis events. However, advances in technology, coupled with operating experience, suggest that an alternative approach that maintains safety, but eliminates or significantly reduces unnecessary regulatory burden is possible, and that such an approach would enable licensees and the NRC to focus their resources on SSCs with significant contributions to safety. Conversely, for SSCs that do not significantly contribute to plant safety, there could be a reduced level of assurance.

The proposed rule includes several changes to special treatment requirements for RISC-3 components that could significantly reduce unnecessary regulatory burden associated with these components without any significant impact on plant safety. However, in an effort to ensure that the design basis functions of RISC-3 components are maintained (once special treatment

requirements are removed), the NRC has proposed a new regulatory regime that is, in many ways, as equally burdensome as the special treatment requirements that have been eliminated. These new requirements are not justified given the low safety significance associated with RISC-3 SSCs and the conservatisms (*e.g.*, the sensitivity analysis) built into the categorization process.

The following is a description of the requirements that we believe are not required for safety and should be eliminated or substantially simplified for RISC-3 SSCs:

1. Reliability and Availability Monitoring for RISC-3 SSCs – The Commission proposes to remove RISC-3 and -4 SSCs from the scope of the Maintenance Rule due to their low safety significance. Licensees would not be required to apply maintenance rule monitoring, goal setting, corrective action, etc. to RISC-3 and -4 SSCs. However, proposed § 50.69(e)(3) would impose requirements for monitoring of RISC-3 components that are similar to, if not greater than, the requirements in the Maintenance Rule. In particular, the proposed rule would require that licensees monitor the performance and condition of RISC-3 SSCs and take action to ensure that the assumptions in the categorization process continue to be satisfied. This requirement is intended to ensure that any reduction in special treatment requirements for RISC-3 SSCs does not adversely impact the failure rate assumptions for these components in the categorization or the PRA. We do not believe this requirement is warranted given the low safety significance of RISC-3 SSCs.

   As noted by the NRC in section V.4.2 of the statement of consideration for the proposed rule, many RISC-3 SSCs will not be modeled in a licensee's PRA. This is because they generally have no or, at most, a negligible contribution to the initiation or mitigation of accidents modeled in the PRA. Therefore, at a minimum, there should be no requirement to maintain any particular quantitative availability or reliability of those SSCs because no credit is taken for reliability or availability of those SSCs in the PRA.

   For those RISC-3 SSCs modeled in the PRA, the NRC is proposing to require the licensee to perform a sensitivity analysis on failure rates to demonstrate that an increase (typically a 3 –5 fold increase) in the failure rates would not affect their categorization. Therefore, requiring a licensee to continually monitor and maintain the availability and reliability of these RISC-3 SSCs is not justified because even a substantial decrease in availability or reliability would not adversely affect public health and safety, or the categorization, of those SSCs.

   Further, the new monitoring and feedback requirements for RISC-3 SSCs may be as burdensome as the deleted Maintenance Rule monitoring requirements. Whereas Maintenance Rule monitoring is often performed at a system or train level, the proposed RISC-3 monitoring would generally occur at a component level and include a review of all periodic maintenance, testing, and surveillance activities for RISC-3 SSCs. Given the low safety significance of RISC-3 SSCs, and the negligible contribution of the failure rates of these SSCs on core damage frequency (CDF) and large early release frequency (LERF), the NRC has not justified this burdensome new monitoring requirement. We believe that the normal corrective action and commercial processes are sufficient to provide reasonable assurance that design-basis functionality of RISC-3 SSCs is maintained.

2. Maintaining Design Basis Capability of RISC-3 SSCs – Proposed 10 CFR § 50.69(d)(2) would impose several requirements on RISC-3 SSCs intended to maintain their design basis functionality, including requirements pertaining to design control, procurement, maintenance, inspection and testing, and corrective action. The NRC characterizes these as alternate treatment requirements that provide significantly greater flexibility and a lower level of assurance for RISC-3 SSCs. While the proposed requirements are admittedly less stringent than full Appendix B treatments, they will still impose a substantial administrative burden on licensees to develop, implement and maintain. This effort will significantly dilute any burden-reduction benefit gained from removing certain special treatment requirements.

   Further, several of the proposed alternative treatment requirements may not, in practice, be technically feasible. For example, licensees are expected to establish predictive, preventive, and corrective maintenance activities to ensure that RISC-3 SSCs will remain capable of performing their safety related functions under design basis conditions. As part of this, surveillance and post-maintenance testing must provide confidence that the RISC-3 SSC will operate in the future under design basis conditions. In discussing this alternate treatment, the NRC notes that licensees are to perform testing at design basis conditions or use engineering analyses to extrapolate the test data to demonstrate design basis capability. Functional testing is typically not performed under design basis conditions and extrapolation of test results can be highly complex. Thus, application of this requirement is not warranted for low safety significant components.

   Further, the scope of design, procurement, maintenance and testing controls proposed for RISC-3 SSCs (along with the clarifying Staff guidance) also appears to be as encompassing, albeit less detailed, as those required for RISC-1 and -2 SSCs. For example, the proposed procurement requirements state that licensees are expected to use established methods to develop a technical basis for the determination that the procured item can perform its safety-related function under design basis conditions including environmental conditions (temperature, pressure, humidity, chemical effects, radiation and submergence), aging and synergism effects, and seismic conditions. To meet these requirements, NRC notes that licensees could use vendor documentation, procurement specifications, engineering evaluation and analyses, and/or testing under simulated design basis conditions. Few of these options are commercially or economically viable.

   The risk-informed rule will be of little economic value if, as proposed, it merely substitutes one set of costly special treatment requirements for another set of costly special treatment requirements. In fact, the proposed rule would require a licensee to establish a special quality assurance program just for RISC-3 SSCs. This proliferation of quality assurance programs is burdensome, unnecessary, and prone to confusion and error.

   We continue to believe that commercial practices will provide the necessary reasonable assurance of functionality. The commercial practices that would be applied to RISC-3 SSCs are the same controls and practices that are applied to non-safety components at nuclear power plants. These practices include design, procurement, inspection, testing, work processes, maintenance, assessment and corrective action. Commercial practices are based

on various factors, including nationally recognized standards and vendor recommendations. More importantly, commercial practices have been proven effective in practice.

Commercial practices are sufficiently rigorous and effective to provide reasonable assurance of functionality of SSCs, commensurate with their low safety significance. As was demonstrated by the STP as part of its request for exemption from the special treatment requirements, the failure rates of commercial components is essentially the same as the failure rate for safety-related components. This information is summarized in Attachment C as part of our response to NRC Issue 4. Furthermore, a licensee's sensitivity studies will demonstrate that even a substantial increase in the failure rates of RISC-3 components will have a negligible effect on CDF and LERF. Overall, we believe that commercial practices are sufficiently robust to ensure the functionality of RISC-3 SSCs given their low safety significance and the proven effectiveness of commercial practices.

3. Evaluation of Known Degradation Mechanisms – Section 50.69(b)(2)(iv) would require licensees to evaluate "the potential from known degradation mechanisms for both active and passive components" to determine the impact of the change in treatment in RISC-3 components, and the statement of consideration (68 Fed. Reg. at 26539) states that aspects of treatment necessary to prevent degradation beyond that assumed in determining the impacts must be retained. This requirement is extremely burdensome and unnecessary, and would threaten the viability of the rule. First, the magnitude of the effort to comply with this provision is staggering – the effort would appear to be equal to or greater than that required to comply with the license renewal rule. Furthermore, as discussed in Attachment C with respect to our response to NRC Issue 4, there is no reason to expect any significant change in the reliability of RISC-3 components as a result of the change in treatment. Finally, it may be expected that most, if not all, licensees will conduct sensitivity analyses, rather than attempt to determine changes in failure rates for specific RISC-3 components. These sensitivity studies will bound any realistic impact due to the changes in treatment for RISC-3 components, and a licensee should not be required to also evaluate known degradation mechanisms for specific components. At the very least, the proposed rule should be modified to state that consideration of known degradation mechanisms is not required in cases in which a licensee elects to perform a sensitivity study to comply with Section 50.69(c)(1)(iv).

4. PRA Updates – Proposed § 50.69(e) would require the PRA and SSC categorizations to be updated at least once every 36 months to include changes to the plant, operational practices, and operational experience. No mandated period for PRA updates should be specified in the rule. PRA updates should be performed on an as-needed basis as determined by the licensee. A complete update of the PRA every 36 months would be costly and unnecessary, and inconsistent with current industry practice. NRC has provided no justification for why a mandatory 36-month complete update is necessary for safety.

II. The Proposed Rule Contains Requirements and Restrictions Not Required for Safety and Not Included in the STP Exemption

Proposed § 50.69 contains burdensome programmatic requirements that are not required for safety and were not included in the approved STP exemption request. The NRC has provided little or no safety basis for these additions. For example, proposed § 50.69(g) would require licensees to submit a License Event Report under 10 CFR § 50.73(b) for any event or condition that would have prevented a RISC-1 or 2 from performing a "safety significant function," which includes beyond design basis events. The NRC does not adequately justify this potentially significant expansion in special treatment requirements and new administrative burden.

In section III.4.1.1 of the statement of consideration for the proposed rule, the NRC notes that it does not believe that a failure or malfunction of a RISC-2 SSC could reasonably lead to a safety hazard such that immediate licensee and NRC evaluation of the situation and implementation of corrective action is necessary to ensure adequate protection. Similarly, there is no safety basis for imposing a new NRC written reporting requirement on licensees for failures of components to potentially fulfill a beyond design basis function. Appropriate information on significant failures of RISC-1 and -2 SSCs not currently required to be reported to the NRC will be captured in the site's corrective action and Maintenance Rule programs.

III. The Implementation Process for 10 CFR § 50.69 Should Be Less Burdensome and Not Require a License Amendment

Section 50.69(b)(3) would require a licensee to request a license amendment in order to implement the new rule. A regulatory approach that requires a license amendment would create undue uncertainty regarding what will be acceptable and too much unpredictability regarding the potential costs to implement the proposed rule. To mitigate this impact somewhat, the NRC proposes to require review and approval of only the categorization methodology; licensees will not have to seek review and approval of proposed changes to special treatment requirements for RISC-3 SSCs.

We believe that despite the somewhat limited scope of NRC's review, licensees may still choose not to seek a license amendment to implement the risk-informed process. Licensees are aware that the STP exemption approval process took more than 2½ years from the date of submission of the draft exemption request to issuance of the exemption. As the proposed rule includes additional and more complex categorization and process requirements than were included in the STP exemption, the amendment process will be too unpredictable, uncertain and costly. Further, as noted by the NRC in the statement of consideration for the proposed rule, the proposed review and approval process will necessarily require substantial discretion and judgement on the part of the NRC reviewers, which will only add to licensees' concerns regarding uncertainty associated with the proposed amendment process.

We continue to believe that there are several acceptable alternatives to the amendment process. As in the proposed rule, the NRC could issue a set of high-level criteria in the regulations, with detailed criteria in a guidance document on the categorization process. A licensee could, without seeking prior NRC approval, either implement the guidance document or establish alternatives

that satisfy the high-level criteria in the regulation, and document its approach in an update to the final safety analysis report (FSAR). The NRC would not be required to grant prior approval to implement the guidance, but would verify proper implementation of the rule and the commitments in the FSAR through the normal inspection and enforcement process. A focused NRC inspection of the categorization and PRA processes would enable the NRC to verify key assumptions and modeling parameters and provide public confidence that the licensee is properly implementing the rule. This process would avoid many of the uncertainties and costs associated with the license amendment process, while ensuring compliance with the rule. This process is also consistent with how the NRC and licensees have implemented the Maintenance Rule.

Alternatively, a licensee could submit a letter to the NRC committing to implement the high-level risk-informed regulations and include a general description of its program. If the licensee chooses to deviate from the regulatory guidance, the letter would include justification and any supporting analyses for such deviations. Only substantial deviations from regulatory guidance would require prior NRC approval (*i.e.*, deviations that decrease the effectiveness of the categorization process in identifying RISC-1 and -2 SSCs). The detailed program for implementing the risk-informed special treatment requirements would be maintained on-site for NRC inspection. This alternative process would provide the NRC with prior review and approval authority for substantial deviations from its regulatory guidance, while avoiding some of the burdens (on the NRC and licensees) associated with the license amendment process.

IV. The Rule Should Include a Process for Making Changes in a Licensee's Commitments for Implementing the Rule

The proposed rule does not contain a process for making changes in a licensee's commitments for implementation of the rule. In particular, the statement of consideration for the proposed rule (68 Fed. Reg. at 26545) states that "provided any revised process continues to conform with what was submitted or committed to," NRC review of changes would not be needed. This essentially would not allow a licensee to make any changes in its commitments without prior NRC approval.

This standard is unduly restrictive and burdensome. It would require a licensee to prepare, and for the NRC to review and approve, any change in a licensee's commitments for implementing the rule (including beneficial changes). This standard would essentially transform a licensee's commitments into requirements equivalent to that of technical specifications. Such a standard is not necessary to ensure safety. Furthermore, it is inconsistent with the NRC's other processes governing changes in commitments, which allow a licensee to make certain types of changes that do not reach a specified level of significance. Finally, it is inconsistent with the NRC's treatment of the STP exemption, in which the NRC explicitly approved a commitment change process.

Therefore, the NRC should include a commitment change process in the final rule. This process should either use the established process in 10 CFR § 50.59, or should establish a process similar to that approved by the NRC as part of the STP exemption. Given the fact that the NRC and licensees have little experience with implementing risk-informed changes to special treatment requirements, such a change process will be essential to ensuring that the rule will be workable and allow licensees a reasonable amount of flexibility to make changes in light of experience.

V. The Statement of Consideration for the Proposed Rule Contains Overly Restrictive and Inconsistent Requirements

As noted in Section III of the statement of consideration for the proposed rule, 10 CFR § 50.69 is intended to contain general or high-level requirements for categorization of SSCs and corresponding special treatment requirements. The more detailed programmatic requirements would be contained in published regulatory guidance including DG-1121, Guidelines for Categorizing Structures, Systems, and Components in Nuclear Plants According to Safety Significance, and (draft) NEI 00-04, 10 CFR § 50.69 SSC Categorization Guideline. Contrary to this stated intent, the section-by-section analysis and supporting NRC statements on the proposed rule contain detailed requirements, some of which are more restrictive and prescriptive than the actual proposed rule language, DG-1121, or NEI 00-04. While it is unclear why the NRC chose to include these more restrictive requirements in the statements on the proposed rule rather than the published regulatory guidance, they should be omitted from the statement of consideration for the final rule.

The following is a description of some of the requirements contained in the proposed rule that we believe should be omitted in the final rule:

1. Composition of the Integrated Decision-Making Panel -- Proposed § 50.69(c)(2) states that the Integrated Decision-Making Panel (IDP) must be staffed with expert, plant-knowledgeable members whose expertise includes PRA, safety analysis, plant operations, design engineering, and system engineering. We believe this guidance is appropriate because it provides licensees with the necessary flexibility to staff the panel with appropriate expertise. However, the section-by-section analysis of the proposed rule provides much more prescriptive requirements for the IDP. It states that the IDP should include at least five members, at least three of which should have five years of plant experience, and one member who has worked on the plant-specific PRA for a minimum of three years. The section-by-section analysis further specifies particular training requirements. This detailed guidance on the IDP in the supporting NRC statements on the proposed rule is more restrictive than the guidance contained in DG-1121 or NEI-00-04, and unnecessarily limits licensee flexibility.

2. Categorization Process Requirements – Proposed § 50.69 provides high-level requirements for the categorization process. More detailed guidance on the process is to be included in supplementary regulatory guidance including DG-1121 and NEI 00-04. However, the section-by-section analysis of the proposed rule, in several instances, provides the NRC's expectations on the results of the categorization process, rather than expectations on the process itself. For example, the NRC states in the proposed rule:

   - The reactor coolant pressure boundary should be categorized as RISC-1.
   - ASME Section III class 2 piping of the main steam and feedwater systems in a PWR should be categorized as RISC-1.
   - Fission product barriers (*e.g.*, containment shell or liner) should be categorized as RISC-1.
   - Equipment used for Station Blackout or Anticipated Transients Without Scram should be categorized as RISC-2.

The rule should not include NRC expectations on particular results of the characterization process.

VI. The Rule Should Not Identify "Best Practices" for Treatment of RISC-3 Components

The statement of consideration for the proposed rule (68 Fed. Reg. at 26541-44) identifies "best practices" for treatment of RISC-3 components. We believe that such a discussion is inappropriate for a statement of consideration of a rule. First, by including such provisions in the statement of consideration, it will have the practical effect of transforming those "best practices" into *de facto* requirements. Second, the "best practices" identified in the statement of consideration are unduly restrictive and unnecessary to ensure the safety function of RISC-3 components.

For example, NRC states that exercising a pump or valve is not sufficient because it will not provide reasonable confidence that the pump or valve will be able to perform its design function in the future. We respectfully disagree. Given the low safety significance of RISC-3 components, exercising a pump or valve gives appropriate confidence that the pump or valve is functional. A requirement for measuring, trending of performance, and extrapolation of performance to design basis conditions is an unnecessary burden given the low safety significance of these components.

NRC also designates certain issues such as fracture toughness and the number of seismic cycles as design issues and implies that existing special treatment must be retained for those issues for RISC-3 components. We believe that such statements are inconsistent with the intent of the proposed rule would essentially allow for no change in treatment for certain RISC-3 components, and should be deleted. For example, NRC states that the number of earthquakes that a component is required to withstand is a design requirement (we agree). However, the NRC goes on to state that it is not practical to use experience data to demonstrate compliance with this requirement and implies that qualification testing is the only feasible method for demonstrating compliance with this requirement (*i.e.*, no change in treatment). A licensee should be able to use a combination of experience and analysis to reach a judgment that a RISC-3 component will be able to withstand the specified number of seismic cycles. Similarly, with respect to fracture toughness, a licensee should be able to use engineering judgment to conclude that a RISC-3 component has the requisite fracture toughness without the need to perform fracture toughness tests.

In summary, NRC should delete the "best practices" from the rule.

ATTACHMENT B

Comments on DG-1121
Guidelines for Categorizing SSCs According to Their Safety Significance

We support the stated intent of the proposed rule to contain only high-level requirements in the rule itself but include more detailed implementing guidance in NRC and industry guidance documents describing the risk categorization process. The following are our principal comments on the NRC's draft Regulatory Guide DG-1121 (and associated attachment):

- In Specific Comment 11, the NRC states that all SSCs that participate in the FIVE vulnerability type evaluation, that are credited in the seismic safe shutdown path, and are identified in the plant-specific Outage Risk Management Guideline should be considered safety-significant. We believe that this requirement is too broad. We believe that the proposed NEI processes, which consider in greater detail the component's safety-significant function in these non-PRA type analyses, provides a more valid analyses of actual safety significance.

- In Specific Comment 21, the NRC provides criteria that may be used to determine whether SSCs not modeled in the PRA are safety significant. The NRC criteria are too broad and do not provide sufficient flexibility for assessing actual safety significance. For example, item (ix) states that if a SSC is depended upon in the Emergency Operating Procedures (EOPs) or the Severe Accident Management Guidelines (SAMG), the SSC should be classified as safety significant. As in the comment above, licensees should be provided some flexibility to determine whether the SSC serves a principal function in either the EOPs or SAMGs. Such flexibility is provided in implementing guidance for the Maintenance Rule.

- In Specific Comment 24, the NRC states that any proposed changes in SSC categories must be reviewed and accepted by the IDP at the same level of rigor and depth applied to their initial categorization. The NRC further rejects the concept of a multi-disciplined station management review committee to make a final determination on changes in SSC categorization. We disagree with the NRC's proposed change process. Due to the expense associated with implementing the IDP, it is not realistic to require that a licensee perpetually maintain the IDP, which is essentially what the NRC has mandated. Once the initial categorization is complete, licensees should be allowed to disband the IDP, and implement a simpler, but equally rigorous, change process using appropriate management controls.

- In Specific Comment 22, the NRC states that licensees must expand their design/configuration control program to ensure that categorized SSCs are maintained within the assumptions of the categorization process, including design basis and beyond design basis functions. This requirement is unnecessary and inconsistent with the original purpose of the rulemaking, which is to focus on reducing special treatment, not adding new design requirements for components that remain subject to special treatment. A licensee should be allowed to make design changes that are consistent with 10 CFR § 50.59 and that provide

reasonable assurance that safety-significant beyond design basis functions will be satisfied following a design change. There is no regulatory basis for freezing the assumptions in the categorization process. Additionally, there is no basis for prohibiting significant increases in risk if the risk is low to begin with.

- In Specific Comment 25, the NRC states that § 50.69 categorization documentation must be maintained for the life of the plant. The NRC does not provide an adequate basis for this lifetime retention requirement that would impose unnecessary paperwork requirements. For example, under this requirement, licensees may be required to maintain records of categorization changes to components that may have long since been replaced by other components or systems. Licensees should only be required to maintain such records as mandated by station procedures.

ATTACHMENT C

Comments on "Additional Potential Requirements" of the Proposed Rule

In Section VI of the proposed rule, the NRC stated that it was seeking public comment on several issues pertaining to additional potential requirements for proposed § 50.69. Each of those issues is discussed below:

Issue 1: The Commission is seeking comment on whether the NRC should amend the requirements in § 50.69(c) to require a level 2 internal and external initiating events, all-mode, peer-reviewed PRA that must be submitted to, and reviewed by, the NRC. The Commission is also seeking comment on whether a different set of PRA requirements should be required for this application.

Comments on Issue 1: Section 50.69(c) should not be amended to require an NRC-reviewed and -approved level 2 internal and external initiating events, all-mode, peer-reviewed PRA. Adding this requirement would not increase safety, but would add unnecessary regulatory burden and significant costs to the proposed rule.

It is unclear why the NRC is considering this additional requirement. The proposed rule already contains detailed requirements for NRC review and approval of a licensee's categorization process and supporting PRA. As proposed, § 50.69(c) requires that licensees have a PRA that adequately represents the current configuration and operating practices at the plant and be of sufficient quality and level of detail to support the categorization process. Additionally, licensees are required to submit to the NRC the results of the peer review and detailed information on sensitivity studies and other methods used to determine safety significance of SSCs. These existing requirements appear more than adequate to ensure a robust and accurate categorization process.

Further, as noted by the NRC in the proposed rule, the ability to take full advantage of the proposed rule is directly proportional to the quality of the supporting risk analyses. Licensees who wish to reduce special treatment requirements for the maximum number of components must have in place high-quality, fully-developed PRAs. Licensees with less developed PRAs will not be able to take full advantage of the benefits of the proposed rule because those licensees must make conservative assumptions to account for the lack of detailed risk data. As a result, there is little risk that licensees without a level 2 internal and external initiating events, all-mode, PRA will make non-conservative decisions with regard to categorization or special treatment. The only impact of a less-detailed PRA will be less reduction in special treatment requirements for fewer components, which will not adversely impact safety.

Issue 2: The Commission is seeking comments on whether to require NRC review and approval of a licensee's proposed treatment program for RISC-3 SSCs.

Comments on Issue 2: NRC should not require prior NRC review and approval of a licensee's proposed treatment program for RISC-3 SSCs. There appears to be no safety basis for the

proposed requirement and it would only add more uncertainty to an already unpredictable and costly NRC review and approval process.

Any licensee planning to implement the proposed rule must commit to maintain the design basis functional requirements of RISC-3 SSCs and must implement an NRC-approved categorization process. Given the low safety significance of RISC-3 components, this process, along with the normal NRC inspection and enforcement process, should be sufficient to provide the NRC with the necessary regulatory assurance.

Issue 3: The Commission is seeking public comment on whether or not changes are needed in the NRC's inspection and enforcement programs to enable the NRC to exercise the appropriate degree of regulatory oversight of facility operations encompassed by the proposed rule.

Comments on Issue 3: No new NRC inspection and enforcement programs are required for facility operations encompassed by the proposed rule. To reduce any special treatment requirements for SSCs, licensees must commit to maintain the design basis functional requirements of RISC-3 SSCs and must implement an NRC-approved categorization process. Further, licensees would be required to thoroughly document the categorization process and results, and the basis for any reduction in special treatment requirements. Given these facts, the existing NRC inspection and enforcement process, which already addresses all affected functional areas including procurement, maintenance, testing and surveillance, design bases, and corrective actions, would appear adequate to identify and address any performance deficiencies. If a substantial number of licensees choose to implement the rule and the NRC later determines that further inspection and enforcement guidance is necessary, it can seek public comment and/or make appropriate inspection and enforcement changes at that time.

However, training on 10 CFR § 50.69 is recommended for appropriate NRC inspection and enforcement personnel to ensure consistency and appropriate safety focus. This training should ensure that applicable inspections are primarily focused on RISC-1 and -2 SSCs, rather than RISC-3 SSCs.

Issue 4: The Commission is seeking public comment on the availability and role of relevant operational experience in minimizing the uncertainty associated with the effects of reducing special treatment requirements and how such operational experience could be used to support this rulemaking.

Comments on Issue 4: As discussed in detail in STP's request for an exemption from the special treatment requirements, there is already a wealth of operating experience involving commercial components. This operating experience demonstrates that the failure rates of commercial components are comparable to the failure rates of safety-related components. This experience should be used by the NRC to eliminate all special treatment requirements for RISC-3 components and to allow licensees to implement their normal commercial practices for RISC-3 components.

The following is an excerpt from the STP exemption request that demonstrates that available operating experience shows that there is little or no impact on failures rates from applying commercial practices rather than special treatment:

> Finally, to the extent that data is available, the data demonstrate that the failure frequencies for similar types of safety-related and non-safety-related components are not significantly different. STP has performed an analysis of data from the Institute of Nuclear Power Operations (INPO) Equipment Performance and Information Exchange System (EPIX). Nuclear industry data reporting to the Nuclear Plant Reliability Data System (NPRDS) spans the time period from 1977 through 1996. The EPIX Maintenance Rule and Reliability Information (MRRI) database includes component failure data since 1996. NPRDS component engineering data includes indication of safety class, thus enabling a distinction between safety-related component and non-safety-related component failure rates. While the MRRI database does not include a safety-class distinction, INPO was able to provide STP an MRRI database file for 1997-1999 data that is "back-linked" to NPRDS, thus providing indication of safety class. The NPRDS data and MRRI data were first analyzed separately then merged to provide a large-scope analysis for the purposes of this exemption. STP has developed a report, entitled "Safety-Related Versus Non-Safety-Related Equipment Failure Frequency Data Analysis for Nuclear Power Plants in the United States" dated April 6, 2000, describing this NPRDS-MRRI data analysis. This report is available upon request.
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> The scope of this merged NPRDS-MRRI analysis includes over 670,000 component records and over 166,000 component failure records. The historical data analyzed consisted of over 74 billion component-hours of experience. The Response to Request for Additional Information (RAI) 42 in Attachment 4 includes tables that provide information for all 33 component type data categories contained in the merged NPRDS-MRRI database. These tables show that the calculated safety-related failure frequencies are generally greater than or roughly equivalent to those for corresponding types of non-safety-related components, based on historical NPRDS-MRRI data. This analysis shows that, of 33 component type categories investigated, 21 had higher safety-related failure frequencies than corresponding non-safety-related failure frequencies. Non-safety-related failure frequency values were significantly higher than corresponding safety-related failure frequencies in only one of the 33 categories (the "containment penetration" component type category). The analysis shows that, for most component types, the calculated safety-related failure frequencies are generally greater than or roughly equivalent to those for corresponding types of non-safety-related components, based on historical NPRDS and MRRI data.
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> In addition to the analysis of the data contained in the EPIX database, STP has performed limited data collection in support of an on-going Balance-of-Plant (BOP) model. The data collected covers active equipment necessary to support power production (e.g., feedwater and condensate pumps). The collected data indicate no apparent difference in the failure rates for normally operating motors between safety and non-safety-related equipment. These results support the conclusions of the data analysis of the EPIX data.

Issue 5: The Commission is seeking input on the merits of including additional detail and requirements regarding the categorization process in the rule rather than in supporting guidance documents.

Comments on Issue 5: We support the stated intent of the proposed rule to contain only high-level requirements in the rule itself, but include more detailed implementing guidance in NRC and industry guidance documents describing the risk categorization process. Placing additional detail in the rule would make it unduly prescriptive and threaten the viability of the rule.

We see no benefit in including further detailed guidance in the rule. As proposed, the NRC is already required to review and approve a licensee's categorization process. Therefore, there is little to be gained in adding detail to the rule itself. Further, by maintaining the details in the implementing guidance, licensees (and the NRC) are provided with necessary flexibility in implementing this first-of-a-kind and complex, risk-based rule. Until industry and the NRC obtain greater practical experience with implementing voluntary risk-informed rules, greater flexibility is necessary to ensure greater industry participation. Finally, the level of detail that would have to be incorporated into the proposed rule would be too great and inconsistent with other sections of 10 CFR Part 50.