



NUCLEAR ENERGY INSTITUTE

5/13/05

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40FR 25622

Chief, Rules and Directives Branch  
Division of Administrative Services  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Mail Stop T6-D59  
Washington, DC 20555-0001

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RULES AND DIRECTIVES  
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USNRC

**SUBJECT:** "Proposed Generic Communication; Clarification of Post-Fire Safe-Shutdown Circuit Regulatory Requirements,"  
(70 Fed Reg. 25622, May 13, 2005)

**PROJECT:** 689

The Nuclear Energy Institute (NEI)<sup>1</sup> submits the following comments on the Nuclear Regulatory Commission's proposed generic communication that is intended to clarify issues associated with post-fire safe-shutdown circuit analyses and protection. We offer the following comments:

1. The industry developed NEI 00-01, Revision 1, "Guidance for Post-Fire Safe Shutdown Circuit Analysis," to provide utility licensees deterministic and risk-informed methods for resolution of circuit failure issues. In keeping with the principles of the Reactor Oversight Process, the NRC staff and industry should focus on those plant inspection issues that are clearly risk significant. We recognize that compliance with current regulations is necessary. Therefore, we continue to believe that the two methods described in NEI 00-01 will need to be used by licensees to evaluate the overall safety significance of inspection findings. The risk significance analysis method in Section 4 of NEI 00-01 is based on NRC significance evaluation methods in the current fire protection SDP. Therefore, we request NRC acknowledgement that NEI 00-01 provides an acceptable approach of deterministic and risk-informed methods. We offer the following matrix regarding resolution of possible inspection findings for consideration:

<sup>1</sup> NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

SISF Report Complete

E-RTDS = ADM-03  
Add = A. Markley (AWM)

Template = ADM-013



Type of Issue	Action to Address Issue	
	Risk Significant	Not Risk Significant
Finding (issue outside CLB)	Address in CAP	Green finding; action at licensee's discretion
Violation of CLB	Address in CAP	Address in CAP or request exemption/deviation
Compliance status/CLB not clear	Address in CAP	Address in CAP or request exemption/deviation

(CLB – Current Licensing Bases, CAP – Corrective Action Program)

2. We believe that a large majority of circuit failure inspection findings will not be risk significant. Inspections may result in numerous violations that are of low safety significance or findings where the compliance may not be clear. Licensees are likely to address many of these cases through exemption requests, using the determination of low significance to support the acceptability of the existing configuration. Thus, mandatory “any-and-all” inspections would result in a large and inappropriate expenditure of industry and NRC resources just to deal with exemption requests on low significance circuit failure issues. We have previously identified this issue to NRC staff and continue to recommend that methods to avoid this unnecessary expenditure of staff and licensee resources be explored within the context of regulatory requirements.
  
3. Most plant licensing bases include a “one-at-a-time” consideration of spurious actuations, consistent with guidance in Generic Letter 86-10. This consideration has been a point of disagreement between industry and NRC for several years, and remains so today. It is further complicated by the fact that NRC generally approved safe shutdown programs that included this assumption in Safety Evaluation Reports (SERs) related to plant safe shutdown programs, but did not specifically approve or identify this assumption in the SER. The lack of specific approval leads to the expressed NRC view that plants using this “one-at-a-time” spurious actuation assumption are in violation of the regulations. This evolution of NRC staff expectations, new terminology, and “implicit” requirements promulgated via the generic communications process presents a continuing challenge to a coherent, stable, and predictable regulatory process.
  
4. The staff position with respect to the term “any-and-all” is not consistent with NEI 00-01, because the staff chooses to treat it separately from the “one-at-a-time” consideration for spurious actuations applied in circuit failure analyses. Under the concept of “any-and-all, one-at-a-time,” the industry methodology traditionally evaluates fire damage to all cables in a particular fire area that may affect the ability to achieve safe-shutdown, but (in keeping with consistent

interpretations of existing regulatory guidance) only "one-at-a-time" of two redundant unprotected circuits is considered to be damaged. Each conductor of cables impacting safe-shutdown not protected from fire damage is evaluated for failures involving hot shorts, open circuits and shorts-to-ground. According to the guidance of NEI 00-01, potential combinations of spurious actuations due to these failure modes that affect the safe-shutdown capability should now be further evaluated for risk significance. The NRC staff position on "any-and-all" is a new regulatory position that has significant impacts on the comprehensive safe-shutdown analyses that licensees are crediting.

5. It is inappropriate for NRC to declare a position and take a conservative position on the use of operator manual actions in this proposed Regulatory Information Summary (RIS) since there is a proposed rulemaking on this topic that has not yet been issued as final. This proposed rulemaking is intended to provide a more risk-informed approach than does the RIS, and the two are essentially incompatible. In addition, the use of operator manual actions remains as an area of contention between the NRC and industry. We recommend that the RIS remain silent on the use of operator manual actions.
6. The section of the proposed generic communication addressing "emergency control station" discusses internal NRC memoranda and use of operator manual action. This section provides new regulatory positions that need to be addressed through the public comment and rulemaking processes.

In conclusion, we believe the generic communication contains new NRC interpretations that take the form of new regulatory positions. We recommend this communication not be issued until the NRC staff completes the appropriate regulatory analysis required by 10 CFR 50.109, Backfitting.

We would appreciate the opportunity to discuss these comments, specifically these new interpretations and positions, with the NRC at a public meeting. If you have any questions, please contact me at 202.739.8080, [am@nei.org](mailto:am@nei.org).

Sincerely,



Alexander Marion

c: Mr. Robert F. Radlinski  
Mr. Chandu Patel  
Mr. Sunil Weerakkody