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**Date:** Tue, Feb 28, 2006 3:11 PM  
**Subject:** Risk-Informed, Performance-Based Regulation

We are writing to request a Commission briefing on risk-informed, performance-based regulation. The industry was and has been fully supportive of the direction and objectives articulated in the Staff Requirements Memorandum to SECY 98-300, Options for Risk-Informed Revisions to 10 CFR Part 50. Since that time, two significant rulemakings were undertaken to carry out that direction and achieve the stated objectives. These efforts are now in jeopardy of not being implemented by any licensees, including pilot plants. The causes of this problem need to be addressed if these rulemakings are to succeed.

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NUCLEAR ENERGY INSTITUTE

**Marvin S. Fertel**  
SENIOR VICE PRESIDENT AND  
CHIEF NUCLEAR OFFICER

February 28, 2006

The Honorable Nils J. Diaz  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Dear Chairman Diaz:

We are writing to request a Commission briefing on risk-informed, performance-based regulation. The industry was and has been fully supportive of the direction and objectives articulated in the Staff Requirements Memorandum to SECY 98-300, Options for Risk-Informed Revisions to 10 CFR Part 50. Since that time, two significant rulemakings were undertaken to carry out that direction and achieve the stated objectives. These efforts are now in jeopardy of not being implemented by any licensees, including pilot plants. The causes of this problem need to be addressed if these rulemakings are to succeed.

The general problem involves a shift from the original concept of risk-informed, performance based regulation, which was the use of analytical insights derived from PRA, together with operating experience and engineering judgment, to focus licensee and regulatory attention and resources on issues commensurate with their importance to public health and safety<sup>1</sup>. We believe this concept should and was intended to focus more resources and attention on matters of high safety significance than on matters of low safety significance. Recent developments associated with 10 CFR 50.69 (*Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors*) and the proposed rule 10 CFR 50.46a (*Risk-Informed Changes to Loss-of-Coolant Accident Technical*

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<sup>1</sup> This, or similar definitions may be found in many NRC documents, including the SRM for SECY-98-144, *White Paper on Risk and Performance Based Regulation*; *NRC Strategic Plan, Fiscal Years 2000-2005*; NRC Public Website – *Use of risk in regulation*; *NRC Risk-informed regulation implementation plan, et al*

*Requirements*), focus more attention on matters of low safety significance and managing residual risk through programmatic requirements and expectations. We surmise that this approach is intended to ensure that any matters of low safety significance, individually or collectively, could never become safety significant. We believe this approach is fundamentally wrong from a safety perspective.

Regarding 10 CFR 50.69, the final rule was published in November 2004. The rule language itself was consistent with an increased safety focus following revisions directed by the Commission. A major purpose of this rule was to allow risk-informed, performance based approaches to identify and monitor safety related, low safety significant structures, systems and components (RISC-3 SSCs). The industry developed NEI 00-04, *10 CFR 50.69 SSC Categorization Guidance*, for endorsement by NRC as an acceptable means of implementing the final rule. Regulatory Guide 1.201 was finally made available last month, some 14 months after rule issuance. Contrary to the rule's intent, the Regulatory Guide establishes programmatic expectations akin to the license renewal rule for treatment of RISC-3 SSCs, some of which exceed current requirements for safety related SSCs, which in effect, obviates the intended exemption of certain special treatment requirements contained in the rule. The majority of the positions provided in Regulatory Guide 1.201 are focused on the treatment of RISC-3 SSCs. This appears to be based on a preoccupation with the simultaneous failure of component groups across system boundaries, a deterministic proposition that extends the single failure criterion out to unreasonable proportions. While the Commission eliminated the prescriptive nature of treatment requirements for RISC-3 SSCs in the final rule, the expectation lives in Regulatory Guide 1.201 and undermines the focus on safety.

Regarding 10 CFR 50.46a (*Risk-Informed Changes to Loss-of-Coolant Accident Technical Requirements*), we are in the process of developing industry comments on the proposed rule published in November 2005. It is our conclusion that this proposed rule bears little resemblance to the original concept of using risk insights and operational experience to refine the original deterministic loss of coolant pipe break size. This rule has become encumbered with excessive and burdensome requirements for change control and operational restrictions unnecessarily layered atop current regulatory requirements, including technical specifications and 10 CFR 50.59. Again, rather than improving the focus on safety, attention and resources would be driven to quantification and analysis of *de minimus* risk resulting from any change to the plant and new configuration controls for the old design bases events. While this rule is not yet final, we are seriously concerned that no plant would consider implementing these burdensome processes, many of which have no substantive relation to the main purpose of the rule, which is to improve the safety focus of the regulation with realistic conservatism.

The Honorable Nils J. Diaz

February 28, 2006

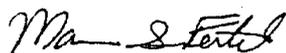
Page 3

Since their inception in the 1990s, risk-informed, performance-based regulatory approaches have resulted in benefits for nuclear power from both a safety and economic perspective, as evidenced by the sustained high safety, reliability and productivity of the current fleet of plants. The rulemakings discussed above had the promise of continuing this evolution and closing the gap between the safety focus of the regulations themselves and the risk-informed regulatory oversight process. We do not want to see these significant efforts of the NRC and industry wasted. In addition, we are seriously concerned that the efficacy of other initiatives, including risk-informed fire protection (transition to NFPA-805) and the licensing of new plants under Part 52, may be undermined by similar issues.

We believe it is time for a constructive and open discussion on the expectations, limitations, and real issues that are at the heart of the development and implementation of risk-informed performance-based regulatory approaches. If the concept has changed from what was originally intended by the Commission, the industry needs to know so that we may adjust our efforts accordingly. This is a policy issue that warrants the Commission's urgent attention.

We look forward to a Commission briefing in the near future and will work with your office to discuss any details or arrangements. If you have any questions or desire additional information, please don't hesitate to contact me.

Sincerely,



Marvin S. Fertel

- c. The Honorable Edward McGaffigan, Jr., Commissioner, NRC
- The Honorable Jeffrey S. Merrifield, Commissioner, NRC
- The Honorable Gregory B. Jaczko, Commissioner, NRC
- The Honorable Peter B. Lyons, Commissioner, NRC
- Mr. Luis Reyes, Executive Director for Operations, NRC