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NUCLEAR ENERGY INSTITUTE

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②

March 24, 2000

Mr. David L. Meyer  
Chief, Rules and Directives Branch  
U.S. Nuclear Regulatory Commission  
Mail Stop T-6D59  
Washington, DC 20555-0001

**SUBJECT:** NEI Comments on Proposed Guidelines for Performance-Based Activities (*Federal Register* of January 24, 2000, 65 FR 3615, as revised February 17, 2000, 65 FR 8072)

Dear Mr. Meyer:

The NRC has published proposed high-level guidelines for performance-based activities and conducted a public meeting on March 1 to solicit stakeholder input in this regard. The Nuclear Energy Institute<sup>1</sup> offers the following comments regarding the proposed guidelines. In addition, NEI and industry personnel participated in the March 1 public meeting, and the transcript reflects additional detailed comments with regard to many aspects of performance-based approaches.

The industry strongly supports the use of performance-based regulatory approaches where they are warranted and capable of meeting the regulatory intent. When properly implemented, performance-based methods provide for objective measures of safety while maintaining licensee flexibility for implementation methods, including innovative approaches and new technologies. The revised reactor oversight process uses performance-based methods, and a consistent treatment of regulatory methods should enhance public understanding and confidence in NRC.

We are in general agreement with the high-level guidelines proposed by NRC. We believe the guidelines should be applied to current and future regulatory initiatives, and to petitions for rulemaking. We suggest that the guidelines would be more effective if they formed the basis for a Commission policy statement, similar to the PRA policy statement. We would note the following with respect to use of the guidelines:

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<sup>1</sup>NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including regulatory aspects of generic operational and technical issues. NEI 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.

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While the guidelines are intended to apply to future activities, performance-based approaches are already being used in existing regulations (e.g., the maintenance rule) and proposed regulations (e.g., option 2 of the Part 50 reform effort). One lesson from maintenance rule implementation is that a prescriptive regulatory environment can evolve from a performance-based rule, relative to detailed expectations of how performance data are collected and treated. While consistency of data collection and treatment is important, excessive prescriptiveness in this regard, or evolving regulatory expectations during implementation, will diminish the advantages of performance-based methods.

NRC's option 2 regulatory reform initiative provides the opportunity to balance prescriptive methods (e.g., quality assurance requirements) with performance-based methods (e.g., maintenance rule monitoring). For cases where performance monitoring can demonstrate achievement of safety function, application of both types of requirements to a single plant structure, system, or component is redundant. Much of the potential burden reduction envisioned for Part 50 reform can be achieved through balancing of prescriptive and performance-based elements. Use of risk insights can complement this approach, but significant benefit could be derived through the performance-based elements alone.

We provide the following additional comments in response to the specific questions included in the *Federal Register* notice:

#### Clarity and Specificity of the Guidelines

The general nature of the proposed guidelines is appropriate considering their high-level nature. The principal viability criterion should be determining whether an acceptable outcome that is measurable or calculable can be defined. If so, the benefit of a performance-based approach should be presumed, and any drawbacks must be clear and convincing to overturn this presumption.

#### Applicability of Backfit Rule

Applicability of the backfit rule to performance-based initiatives or regulation would not appear to involve unique considerations. Therefore, if a performance-based approach is offered for voluntary adoption (as in the case of option 2 of the Part 50 rulemaking plan), the backfit rule is moot. If a performance-based approach is considered for mandatory adoption, then the backfit rule would apply in the usual manner.

#### Establishment of Objective Performance Criteria

Performance criteria should be set at the level commensurate with the function being performed, which is typically at the system level for safety functions. This provides the most clear and objective indication of safety function performance. Performance criteria set below the system level involve additional complications

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relative to redundancy or diversity of the components or trains within the system. Determination of the degree of conservatism in the performance criteria is a function of the degree of defense-in-depth, and the state of knowledge for a particular application. Consideration should be included in either the performance criteria, or in the models, techniques, or procedures used to meet the required outcome, but not in both.

Pilot projects

The existing Part 50 option 2 rulemaking plan will include pilot plants to test performance-based regulatory treatment of structures, systems or components. Also, much can be learned from review of maintenance rule implementation, which has already essentially piloted many of the performance-based concepts discussed in the guidelines. The need for additional, specific pilots is not clear at this time.

In conclusion, we support the NRC's efforts to establish the guidelines and to use performance-based concepts in regulatory initiatives. Thank you for your consideration of these comments. Please contact me if you have any questions.

Sincerely,



Stephen D. Floyd