January 14, 2002

Mr. Biff Bradley
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Dear Mr. Bradley:

The Nuclear Regulatory Commission (NRC) has completed its review of the Nuclear Energy Institute Preliminary Description Paper of October 12, 2001, on Risk Management Technical Specifications Initiative 4b, discussing the use of Risk Informed AOTs with use of a configuration risk management program. Enclosed are staff comments on the preliminary description paper, provided in accordance with the scheduled agreed upon by Technical Specifications Section of the NRC and the Risk Informed Technical Specifications Task Force. We are prepared to meet with you to further discuss these comments and assist in making progress on Initiative 4b.

Please contact me at (301) 415-1156 or e-mail rld@nrc.gov if you have any questions or need further information.

Sincerely,

***/RA/***
Robert L. Dennig, Section Chief
Technical Specifications Section
Operating Reactor Improvements Program
Division of Regulatory Improvement Programs

Enclosure: As stated

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**RESPONSE TO PRELIMINARY DESCRIPTION PAPER OF OCTOBER 12, 2001 ON RISK MANAGEMENT TECHNICAL SPECIFICATIONS INITIATIVE 4B**

The NRC Staff has reviewed the Preliminary Description Paper on Risk Management Technical Specifications Initiative 4B, submitted on October 12, 2001. The Industry has been very responsive to the staff concerns expressed in dialog on Risk Management Technical Specifications (TS), and the Description Paper is a step forward in the development of Initiative 4B. The following comments and questions are offered in order to better understand and advance the effort.

The concept works off the existing TS structure, defining several new roles for the existing completion time (ECT), and adding two new completion times: the flexible completion time (FCT) and the backstop completion time (BCT).

1. All of these times will be used to specify a span of inoperability in which time some action must be taken. The ECT will specify either the time to restore operability to avoid entering other TS action statements, OR the time to calculate the FCT and put in place risk-management actions. It also demarcates the transition from general (a)(4) risk management to quantitative or "configuration risk" management. How is the ECT appropriate for this role, given that it may be either an engineering judgement or risk-informed via RG 1.177, and that it varies from plant to plant?

2. It is generally believed that the non-risk informed ECT is conservative (i.e., short compared to what might be justified based on risk) time to complete actions with inoperability in only one LCO. (This is in fact why (a)(4) decisions can be at odds with technical specifications). With only one LCO affected, the non-risk informed ECT might be appropriate as a planning period for a FCT. However, with more than one LCO affected, a risk analysis would likely show that the FCT is less than the ETC. . In such a case, what is the "ECT"? When multiple LCOs are affected, how is the ECT selected? Can the ECT planning period be shortened by emerging conditions? More broadly, can you describe the dynamics of the configuration management process for multiple LCOs, including emergent conditions?

3. Typical LCOs contain a variety of completion times for various degrees and sources of inoperability, and also for various compensatory actions. Which of these completion times will be subject to extension as a FCT? Will completion times that act as backstops for mode changes in Initiative 3 be subject to extension? Are any of the analyses performed for Initiatives 1 or 6 affected?

4. We agree with the need for a backstop completion time, or BCT, to restore the design basis configuration when risk analyses would support practically unlimited inoperability. The paper suggests a "hard time" limit of 30 days. While we understand that at this stage of development the time may be just a trial value, some explanation for its selection (if adopted) will be needed. More importantly, the paper discusses at some length why the risk-informed completion times that result from a RG 1.177 process, and which have been incorporated in some plant's technical specifications, are not appropriate as BCTs. The paper argues that these values would be overly restrictive

because they do not take credit for "partial functionality". This raises questions about the types of conditions for which FCTs will be sought, and about how the quantitative analyses are sufficient/appropriate for the decisions. See 5. and 6. below

5. We postulate a hierarchy of key terms applied to the condition of SSCs. In words, FUNCTIONAL is less than OPERABLE which in turn is less than QUALIFIED. We presume that "partially functional" is less than FUNCTIONAL. By QUALIFIED we mean that the SSC meets each and every requirement in the licensing basis; OPERABLE is as defined in standard technical specifications. Could you provide your understanding of FUNCTIONAL, and "PARTIALLY FUNCTIONAL"? Can you provide examples of SSCs that are: (1) FUNCTIONAL BUT NOT OPERABLE; (2) PARTIALLY FUNCTIONAL? How would the proposed risk analysis, with the proposed quantitative tools, assess these conditions to render risk management decisions? We note and support the prohibition on planned entry into configurations that result in loss of safety function, regardless of the risk analysis. (This prohibition originates from the same concern as the need for a BCT.)

6. The minimum PSA capability as described in items 1 through 6 on pages 3 and 4 of the paper seems a good proposal for further discussion within the staff. We feel it is important to understand the nexus between this capability and the risk management decisions it will support. As elaboration of the issues raised in 5 above: To what extent will the departures from operability that will be managed be modeled in the PSA prior to the need to perform the analysis? To what degree do you envision "ad hoc" analysis wherein new modeling or revised modeling is performed during the planning period afforded by the ECT? How would compensatory measures be accounted for? External events? To the extent that you envision "ad hoc" analysis, should individuals performing the analysis be qualified to some standard?

7. It is vitally important that the staff have the ability to oversee plant performance under a program that grants unprecedented discretion to licensees. We need to easily see the forest and not have to assemble it from the trees (although the need will also be there to look at the trees - i.e., the paper's proposal to have individual analysis available for review is a necessary ingredient; the staff will have to develop guidance to make review of those analyses meaningful). The complexity and dynamics of multiple equipment outages, both planned and emergent, argue strongly for metrics that monitor the plant management of risk at all times, in a quantitative way, and not just when the "configuration risk management" option is invoked. The paper proposes that licensees have the capability to "consider the instantaneous risk, the integrated risk for a given configuration, and aggregate risk." Why wouldn't these or similar metrics be used throughout operation and shared with staff on some regular basis? Are there other performance indicators already in use or under development that would aid in oversight?

8. In the same vein as 7 above, the ECT marks a transition from unrestricted (a)(4) risk management (i.e., it can be qualitative, quantitative, or a blend) to quantitative (a)(4) risk management. Wouldn't plants with the greater capability apply it across the board for all configuration/mode changes involving equipment covered by technical specifications?