



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

July 6, 2007

MEMORANDUM TO: Thomas S. Kress, Chair
Future Plant Designs Subcommittee

FROM: David C. Fischer, Senior Staff Engineer **/RA/**

SUBJECT: ANALYSIS OF EDO RESPONSE TO ACRS LETTER ON THE
STAFF PLAN REGARDING A RISK-INFORMED AND
PERFORMANCE-BASED REVISION TO 10 CFR PART 50

Attached is a copy of the EDO's June 27, 2007, letter of response to the ACRS's May 16, 2007, letter on the staff plan regarding a risk-informed and performance-based revision to 10 CFR Part 50. In its May 16, 2007, report to the Chairman (also attached), the Committee made three recommendations:

ACRS RECOMMENDATION 1:

We concur with the staff's recommendation that the Commission defer development of a new 10 CFR Part 53 until the licensing strategy for the Next Generation Nuclear Plant (NGNP) is completed.

STAFF RESPONSE:

We appreciate your support for the staff's recommendation to defer rulemaking until the licensing strategy for the NGNP is completed. In addition to developing the licensing strategy for the NGNP, the staff is reviewing a pre-application for the Pebble Bed Modular Reactor (PBMR). The staff notes that if additional insights result from the staff's review of the PBMR pre-application, the staff will factor these insights into its recommendation for rulemaking.

ANALYSIS:

The EDO's response to this recommendation is satisfactory.

ACRS RECOMMENDATION 2:

Work on the technology-neutral regulatory framework should continue so the framework can help guide the development of the licensing strategy for the NGNP.

STAFF RESPONSE (IN PART):

We believe that the objectives of the technology-neutral framework (framework or NUREG-1860) will be accomplished with its publication, and the staff plans to publish NUREG-1860 in 2007. The staff also believes that any future work should be addressed as part of any potential future development of regulatory guidance that would be needed to implement an approach akin to the framework.

As directed by the Energy Policy Act of 2005 (EPAct), the Nuclear Regulatory Commission (NRC) and Department of Energy are working together to develop the NGNP licensing strategy. There are various licensing strategies (e.g., from a prescriptive, deterministic licensing approach to a risk-informed, performance-based licensing approach) that are being explored in developing the recommended licensing strategy to meet the Congressional mandate of August 2008.

Separately, the staff started to develop the framework in 2003, prior to passage of the EPAct. The staff notes that although the purpose of the two projects is similar (i.e., define a pathway for licensing future non-light water reactors), the two projects are not directly linked. However, the staff is using knowledge gained from development of the framework in its consideration of potential options and recommendations for the NGNP licensing strategy. In addition, we believe that the more immediate future is expected to be defined through the NGNP licensing strategy. Consequently, decisions to pursue any future work should be postponed until after the NGNP licensing strategy is defined.

ANALYSIS:

The staff's response to this recommendation is not satisfactory. The EDO's response indicates that the primary objective of the framework would be met with the publication of the framework, which they plan to do sometime in 2007. The EDO's response fails to address, or even acknowledge, the Committee's comment that the technology-neutral regulatory framework "is still incomplete and needs modification." Rather than continuing to work on the technology-neutral regulatory framework so it can help guide the development of the licensing strategy for the NGNP, the staff plans on developing the NGNP licensing strategy and then incorporate any lessons learned from that effort into future regulatory guidance that would be "akin to the framework." Apparently, the staff does not plan on addressing the Committee's high-level concerns with the framework before developing the NGNP licensing strategy. However, the staff states that it is using knowledge gained from development of the framework in its consideration of potential options and recommendations for the NGNP licensing strategy.

ACRS RECOMMENDATION 3:

There are important issues, critical to the development of the framework, that are still being debated within the ACRS. While we strongly support the continued development of the framework, NUREG-1860 should not be finalized until we reach a position on these issues and discuss our positions with the staff.

STAFF RESPONSE (IN PART):

Based on the ACRS' meeting with the NRC Commission on June 7, 2007, the staff understands that the ACRS plans to provide a report to the Commission in July 2007 on the technology neutral framework. Timely provision of the ACRS report will allow the staff the opportunity to evaluate the ACRS positions and consider their impact on the framework prior to its publication later in 2007. However, we do not view publication of NUREG-1860 to represent closure of all the issues within the framework, but rather that there is a need to document a significant piece of research that may be used in the future.

Significant progress has been made and, in a general sense, the staff believes the objectives of the framework have been completed. We recognize that there are still specific issues in the framework that are of considerable interest to the ACRS and stakeholders. The staff believes that these issues should be addressed as part of any potential future development of regulatory guidance that would be needed to implement an approach akin to the framework. The need for

development of this guidance would depend, for example, on the recommended NGNP licensing strategy or any future efforts on the new Part 53.

The staff appreciates the Committee's continued interest and collaborative efforts with staff on the Framework.

ANALYSIS:

The EDO's response to this recommendation is marginally satisfactory. The staff states that it does not view publication of NUREG-1860 to represent closure of all the issues within the framework, but rather that there is a need to document a significant piece of research that may be used in the future. The staff's response side steps the Committee's recommendation that NUREG-1860 should not be finalized until the ACRS reaches a position on certain important issues, and then discuss its positions with the staff. However, the staff did indicate that timely provision of an ACRS report that documents the Committee's position on these important issues will allow the staff the opportunity to evaluate the ACRS positions and consider their impact on the framework prior to its publication later in 2007.

The staff did express its appreciation for the Committee's continued interest and collaborative efforts with staff on the Framework.

Attachments: As stated

cc: ACRS Members
F. Gillespie
S. Duraiswamy
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