

January 24, 2007

Mr. Randy C. Bunt
Chair, BWR Owners' Group
Southern Nuclear Operating Company
40 Inverness Center Parkway/Bin B057
Birmingham, AL 35242

SUBJECT: REQUEST FOR THE REVIEW OF THE BOILING WATER REACTOR (BWR) OWNERS' GROUP (BWROG) TOPICAL REPORT (TR) NEDC-0000-0032-9578, "TECHNICAL JUSTIFICATION TO SUPPORT RISK-INFORMED MODIFICATIONS TO SELECTED TECHNICAL SPECIFICATIONS FOR CONDITIONS LEADING TO EXIGENT PLANT SHUTDOWN FOR BWR PLANTS" (TAC NO. MD2836)

Dear Mr. Bunt:

By letter dated July 26, 2006, the BWROG submitted TR NEDC-0000-0032-9578, "Technical Justification to Support Risk-Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown for BWR Plants," to the U.S. Nuclear Regulatory Commission staff for review.

As we notified you on November 21, 2006, we have completed our acceptance review of your application and all of the supporting information in accordance with the TR Program criteria and have concluded that the TR is not acceptable for review for the reasons discussed below.

TR NEDC-0000-0032-9578 provided the results of the application of a risk-informed analysis to identify improvement to selected BWR Technical Specifications (TSs) for conditions leading to exigent plant shutdown due to loss of system function requiring entry into Limiting Condition for Operation (LCO) 3.0.3. The analysis provided a basis for replacing LCO 3.0.3 entry with a risk-informed action based on the system's risk significance.

Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," and RG 1.177, "An Approach for Plant-Specific Risk-Informed Decisionmaking: Technical Specifications," provide applicable guidance for risk-informed submittals for proposed changes to TSs. RG 1.174 identifies five key principles which proposed changes are expected to meet and RG 1.177 provides additional guidance for these key principles applicable to proposed changes to TSs. Two of the five key principles are consistency with the defense-in-depth philosophy and maintenance of sufficient safety margins. These deterministic principles are intended to be supplemented with risk insights, which is a separate key principle of RG 1.174.

Our review of TR NEDC-0000-0032-9578 found that it inadequately addressed defense-in-depth and safety margins. Regarding safety margins, a single sentence is provided which states that these margins are not reduced, with no basis provided to justify the statement other than reiterating the risk benefit of avoiding a plant shutdown. Regarding defense-in-depth, the report addresses maintaining public safety by having acceptably low risk and avoiding transition risk of a plant shutdown. Individual assessments of defense-in-depth provided for each individual specification also use similar arguments regarding low risk.

Therefore, TR NEDC-0000-0032-9578 attempts to satisfy these two key deterministic principles based on having acceptably low risk. As noted above, such risk insights are part of a separate key principle and cannot be applied as a basis for satisfying the separate deterministic principles.

The NRC staff also noted additional items which need to be addressed should the BWROG choose to submit a revised TR. Although these items would not prevent NRC staff from accepting the TR for review, the NRC staff would issue them as requests for additional information, should the TR be accepted for review.

- A seven-day allowed outage time is proposed for conditions involving a loss-of-function of a TS system. This is greater than the previously approved 24 hours for similar systems in the precedent cited in the TR.
- The main control room environmental control systems are evaluated solely in terms of the systems' potential to cause a radiological release; however, the safety function of maintaining a habitable environment for the control room operators during design-basis accident conditions is not evaluated. Similarly, the equipment cooling function of portions of these systems is identified but not further discussed.
- The report assumes two separate values of a plant core damage frequency (CDF) as its input and calculates the applicable risk metrics. There is no discussion of external events or internal fires risk, which the NRC staff infers are assumed to be included in the CDF. Each plant would need to determine which CDF value was applicable using its plant-specific probabilistic risk assessment (PRA). There is no discussion as to licensee-specific PRA quality, scope, or technical adequacy requirements for a licensee implementing the proposed TS changes which would justify that the plant-specific PRA is acceptable to justify that the calculated CDF is bounded by the TR. Since many BWRs do not have full scope PRAs, each individual licensee would be required to justify the out of scope elements which are not addressed by the TR. These plant-specific issues of PRA scope and quality reduce the regulatory efficiency basis for reviewing and approving generic TRs.

Your request for the review of TR NEDC-0000-0032-9578, "Technical Justification to Support Risk-Informed Modifications to Selected Technical Specifications for Conditions Leading to Exigent Plant Shutdown for BWR Plants," is denied, because it inadequately addressed defense-in-depth and safety margins. This does not preclude the BWROG from addressing the deficiencies discussed above and resubmitting the TR at a future date.

Sincerely,

/RA/

Ho K. Nieh, Deputy Director
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Project No. 691

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ADAMS ACCESSION NO.: ML070080192 **NRR-106** *No substantive changes

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NAME	MHoncharik	DBaxley	LMrowca*	SRosenberg	HNieh
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Project No. 691

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