

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-0000-0034-6043, "TECHNICAL JUSTIFICATION TO SUPPORT
RISK-INFORMED COMPLETION TIME EXTENSIONS FOR THE STANDBY
GAS TREATMENT (SGT) SYSTEM AND MAIN CONTROL ROOM
ENVIRONMENTAL CONTROL (MCREC) SYSTEM FOR BWR PLANTS"
(TAC NO. MD2837)

Dear Mr. Bunt:

By letter dated July 26, 2006, the BWROG submitted topical report (TR)
NEDC-0000-0034-6043, "Technical Justification to Support Risk-Informed Completion Time
Extensions for the Standby Gas Treatment (SGT) System and Main Control Room
Environmental Control (MCREC) System for BWR Plants," to the U.S. Nuclear Regulatory
Commission (NRC) 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-0000-0034-6043 was submitted in connection with the Risk-Informed Technical
Specification Task Force Initiative 4a. TR NEDC-0000-0034-6043 provided the results of the
application of a risk-informed analysis to identify improvements in completion times (CTs)
specified for the SGT and MCREC Systems in the BWR Technical Specifications (TSs).

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-0000-0034-6043 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 TR identifies that the function of the systems are not relevant to severe

accidents, and, therefore, are not significant risk contributors. Therefore, the TR 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 additional items would not prevent the 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.

- TR NEDC-0000-0034-6043 applies the same risk metrics for radiological releases as were used in a cited precedent for conditions involving a loss of function due to emergent failures. As stated in the precedent, these metrics cannot be generalized and used for other applications, such as for routine maintenance activities under the TSs and extending the CT.
- TR NEDC-0000-0034-6043 identifies an assumption that the purpose of the action is to complete short duration repairs, but the proposed changes involve a 30-day allowed outage time (AOT). Beyond a survey of plant owners, no basis is provided which justifies the need for this extended AOT.
- The MCREC System is 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 the system is identified but not further discussed.
- TR NEDC-0000-0034-6043 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 plant-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.
- The risk calculations do not distinguish between planned and unplanned maintenance as recommended in RG 1.177.

R. C. Bunt

-3-

Your request for the review of TR NEDC-0000-0034-6043, "Technical Justification to Support Risk-Informed Completion Time Extensions for the Standby Gas Treatment (SGT) System and Main Control Room Environmental Control (MCREC) System for BWR Plants" is denied, because it inadequately addressed defense-in-depth and safety margins. This does not preclude you 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

cc: See next page

R. C. Bunt

-3-

Your request for the review of TR NEDC-0000-0034-6043, "Technical Justification to Support Risk-Informed Completion Time Extensions for the Standby Gas Treatment (SGT) System and Main Control Room Environmental Control (MCREC) System for BWR Plants," is denied, because it inadequately addressed defense-in-depth and safety margins. This does not preclude you from addressing the deficiencies discussed above and resubmitting the TR at a future date.

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*No substantive changes

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BWR Owners' Group

Project No. 691

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