

July 22, 2004

Mr. Gordon Bischoff, Manager  
Owners Group Program Management Office  
Westinghouse Electric Company  
P.O. Box 355  
Pittsburgh, PA 15230-0355

SUBJECT: REQUEST FOR THE STAFF REVIEW OF TOPICAL REPORT  
WCAP-15957, "RISK-INFORMED EVALUATION OF EXTENSIONS TO FLUID  
SAFETY SYSTEM COMPLETION TIMES" (TAC NO. MC2764)

Dear Mr. Bischoff:

On April 22, 2004, the Westinghouse Owners Group (WOG) submitted Topical Report (TR) WCAP-15957, "Risk-Informed Evaluation of Extensions to Fluid Safety System Completion Times," to the staff for review. The purpose of this letter is to document our denial of your request for review of this TR.

In a meeting on June 24, 2004, we informed the WOG that we have completed our acceptance review of this TR and have concluded that it is not acceptable for review at this time for the reasons stated below.

- Inadequate Consideration of External Events

WCAP-15957 does not provide adequate consideration of the potential risk impacts of external events (e.g., fires). The risk metrics presented in WCAP-15957 are based upon the internal event risk contributions; the external event risk contributions have not been included. WCAP-15957 claims there is sufficient margin between the calculated risk metrics and the risk acceptance guidelines in Regulatory Guide (RG) 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," and RG 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," to account for the external event risk contributions. The staff does not agree with this claim.

RG 1.177 and RG 1.174, provide relevant guidance concerning the scope of the probabilistic risk assessment (PRA) needed to support risk-informed decisionmaking. Specific regulatory guidance that leads to identification of this deficiency in WCAP-15957 is contained in:

- RG 1.177, Section 2.3.2, third paragraph, which states, "For changes to TS requirements defined for the power operation mode, the scope of the analysis should include internal fires and flooding if appropriate (e.g., when the subject TS equipment is located in areas identified as vulnerable to fires or floods)."
- RG 1.174, Section 2.2.3.1, which provides risk acceptance guidelines. Specifically, "These guidelines are intended for comparison with a full-scope (including internal events, external events, full power, low power, and shutdown) assessment of the change in risk metric...".

- RG 1.174, Section 2.2.5.5, which provides guidance to licensees for addressing completeness uncertainty. When a PRA is not full scope (e.g., it lacks consideration of external events), it is necessary for a licensee to address the significance of the out-of-scope items. The contribution of the out-of-scope portions of the PRA model may be addressed by bounding analyses, detailed analyses, or by demonstrating that the proposed technical specification (TS) changes have no impact on the unmodeled contributors to risk. A qualitative argument may be sufficient if there is significant margin between the risk metrics computed for the in-scope risk contributors and the risk acceptance guidelines.

WCAP-15957 should provide a methodology for satisfactorily addressing the external event risk contributions. If a "margins approach" is adopted by the WOG, the methodology should indicate how much margin should exist between the risk metrics, based only on the internal events risk contributors, and the risk acceptance guidelines in order to exclude the external events risk contributions. In addition, the methodology should describe the approach for demonstrating the acceptability of the proposed TS changes if a sufficient margin does not exist. Adequate technical justifications must be provided for the methodology.

- Simultaneous Inoperability of Multiple Components not Considered

WCAP-15957 does not address plant risks during simultaneous inoperability of multiple components. Section 8.9 of WCAP-15957 states that the Tier 2 analysis will be addressed on a utility specific basis when the TS changes addressed by the WCAP are implemented at each nuclear power plant.

Specific regulatory guidance that lead to identification of this deficiency in WCAP-15957 is contained in:

- RG 1.177, Section 2.3, Tier 2, which states, "The licensee should also provide reasonable assurance that risk-significant equipment outage configurations will not occur when specific plant equipment is out of service consistent with the proposed TS change."
- RG 1.177, Appendix A, Section A.1.2, which states, "When multiple technical specification (TS) changes are being considered, the combined impact of the changes should be considered in addition to the individual impacts."

The objective of the Tier 2 analysis is to ensure that appropriate restrictions on risk-significant configurations associated with proposed TS changes are in place. As a result of the Tier 2 analysis, a licensee may need to enhance procedures, commit to compensatory measures, modify the plant design, and/or revise plant operating practices (e.g., required backup equipment, increased surveillance frequency, or training required before certain plant system configurations can be entered) in order to minimize risk. The staff recognizes that specific restrictions should be proposed by each licensee who references WCAP-15957, but expects WCAP-15957 to provide a technically defensible approach for conducting the Tier 2 analysis that will be followed by all licensees who reference it.

It should be noted that the Tier 2 analysis is different than the Tier 3 analysis, which addresses the licensee's capability to detect risk-significant plant equipment outage configurations in a timely manner during normal plant operations (consideration of the risks associated with emergent conditions). In accordance with 10 CFR 50.65(a)(4) (the Maintenance Rule), each licensee is required to assess and manage the increase in risk that may result from proposed maintenance activities (including but not limited to surveillance, post-maintenance testing, and corrective and preventive maintenance) before initiating them. The staff has previously accepted licensees' Maintenance Rule programs as adequate for meeting the intent of the Tier 3 analysis. However, the requirement in 10 CFR 50.65(a)(4) to assess and manage plant risks during maintenance has never been accepted by the staff as an alternative to TS provisions. In light of the sweeping TS changes proposed in WCAP-15957, the staff needs assurance that adherence to the requirements of 10 CFR 50.65(a)(4) will provide reasonable assurance that plant risks are being monitored and controlled to an acceptable level.

- Coordination with the Established Industry Efforts not Considered

WCAP-15957 has not been coordinated with the established industry/Nuclear Energy Institute (NEI)/NRC efforts on the Risk Management Technical Specification (RMTS) initiatives. Review of this TR would require significant NRC/industry PRA resources, and the best way to use these resources should be determined through the industry efforts coordinated by NEI.

- Conclusion and Recommendation

Staff acceptance of WCAP-15957 in its current form will not substantially improve the efficiency of the licensing process since each licensee who references it must develop and apply its own approach to address the above mentioned deficiencies, which also will require additional staff review. Therefore, WCAP-15957 does not satisfy the fourth criterion set forth in NRR Office Instruction LIC-500, "Processing Requests for Reviews of Topical Reports," concerning the acceptance of TRs for technical review.

Therefore, it is recommended that the WOG revise WCAP-15957 to address the above mentioned deficiencies, and then resubmit it for staff review through NEI as part of the industry RMTS initiatives.

If you have any questions, please contact me at 301-415-1395.

Sincerely,

**/RA/**

Herbert N. Berkow, Director  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Project No. 694

cc: See next page

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Herbert N. Berkow, Director

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Westinghouse Owners Group

Project No. 694

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