October 18, 2005

Mr. James A. Gresham, Manager
Regulatory and Licensing Engineering
Westinghouse Electric Company
P.O. Box 355
Pittsburgh, PA 15230-0355

SUBJECT: ACCEPTANCE OF CLARIFICATIONS OF TOPICAL REPORT WCAP-10325-P-A, "WESTINGHOUSE LOCA MASS AND ENERGY RELEASE MODEL FOR CONTAINMENT DESIGN - MARCH 1979 VERSION" (TAC NO. MC7980)

Dear Mr. Gresham:

The Nuclear Regulatory Commission (NRC) staff has completed its review of the clarifications of the subject topical report (TR) submitted by Westinghouse Electric Company, LLC (Westinghouse), by letter dated June 22, 2005. On the basis of our review, the staff finds the clarifications to be acceptable for referencing in the approved TR to the extent specified, and under the limitations delineated in the safety evaluation (SE). The SE approving the TR in February 1987, defines the basis for NRC acceptance of the report.

By letter dated June 22, 2005, Westinghouse provided clarification of two model features in its loss-of-coolant accident (LOCA) mass and energy (M&E) release model. As a result of an internal compliance review, Westinghouse discovered that these two model features are applied differently than discussed in the TR. These two model features include the assumption used for the steam generator exit enthalpy during the post-reflood period and the assumed power level used in the LOCA M&E analysis. These areas were discussed during a telephone conference held between Westinghouse and the NRC staff on May 26, 2005. Subsequently, an attachment to the June 22, 2005, letter provided more details including two examples of submittals that discuss superheat and power relative to LOCA M&E calculations with WCAP-10325-P-A.

The NRC staff found that the assumption used for the steam generator exit enthalpy during the post-reflood period associated with the application of the LOCA M&E release model remains conservative based on the overall release rate of the steam generator(s)' energy. The impact of this assumption on the peak containment pressure is small with the superheat condition at the steam generator exit resulting in 0.08 psi lower pressure than at saturated conditions.

The NRC staff has also found that Westinghouse's understanding that performing analyses at the licensed core power, regardless of power level, is an acceptable method, as long as the plant-specific calorimetric uncertainty is considered. The staff may accept a lower power level value, less than 102 percent of licensed power, if the assumed power level specified (but not less than the licensed power level) has been demonstrated to account for uncertainties due to power level instrumentation error.

This is consistent with the revised Emergency Core Cooling System guidance in Appendix K to Section 50 of Title 10 of the *Code of Federal Regulations*, "A. Sources of heat during the LOCA," effective date: July 31, 2000, Federal Register: June 1, 2000 (Volume 65, Number 106).

The NRC staff concludes that the new features are acceptable for use in licensing analyses.

With the support of two approved licensee submittals, which were attached to the June 22, 2005 letter, the NRC staff has found that the licensees, as well as the staff, were cognizant of the difference in application and thus accounted for it during the review of these submittals. Upon review of the clarification of the documentation in the TR, compared to its application, the staff has found that this approach is acceptable.

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

Project No. 700

cc:
Mr. Gordon Bischoff, Manager
Owners Group Program Management Office
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