

Westinghouse Electric Company **Nuclear Services** P.O. Box 355 Pittsburgh, Pennsylvania 15230-0355 USA

U.S. Nuclear Regulatory Commission **Document Control Desk** Washington, DC 20555-0001

Direct tel: (412) 374-4419 Direct fax: (412) 374-4011

e-mail: maurebf@westinghouse.com

Attention: F. M. Akstulewicz, Chief

Our ref: LTR-NRC-06-1

Nuclear Performance & Code Review Branch

Division of Safety Systems

January 4, 2006

- References: 1. Letter H. N. Berkow (NRC) to J. A. Gresham (Westinghouse), FINAL SAFETY EVALUATION FOR TOPICAL REPORT WCAP-16078-P, "Westinghouse BWR ECCS Evaluation Model: Supplement 3 to Code Description, Qualification and Application to SVEA-96 Optima2 Fuel" (TAC NO. MB8908)," October 21, 2004.
 - 2. Letter H. N. Berkow (NRC) to J. A. Gresham (Westinghouse), "FINAL SAFETY EVALUATION FOR WESTINGHOUSE TOPICAL REPORT WCAP-15836-P, "Fuel Rod Design Methods for Boiling Water Reactors - Supplement 1" (TAC NO. MB5740)," September 28, 2005

Subject:

Westinghouse response to Condition 1 in the FINAL SAFETY EVALUATION FOR TOPICAL REPORT WCAP-16078-P, "Westinghouse BWR ECCS Evaluation Model: Supplement 3 to Code Description, Qualification and Application to SVEA-96 Optima2 Fuel" (TAC NO. MB8908)," October 21, 2004

Dear Mr. Akstulewicz:

This letter is in response to Condition 1 of Reference 1 regarding the use of the STAV7.2 code features in the Westinghouse BWR ECCS methods. Specifically, Condition 1 states:

All of the STAV7.2 features cannot be used pending completion of the staff review and approval of the STAV7.2 code. The previously approved STAV6.2 model in the CHACHA-3D code can continue to be used for LOCA analysis. Upon receipt of staff approval of STAV7.2, Westinghouse shall provide written notification that STAV7.2 models are now being used in their ECCS methods and shall submit a revision to WCAP-16078-P, if it is determined necessary by the NRC staff, to document an changes in the STAV7.2 models, methods, or implementation currently described in this TR.

Reference 2 provides staff approval of the STAV7.2 code. Further, the necessary features of the STAV7.2 code have been implemented in the CHACHA-3D code. The only difference between the STAV7.2 models and comparable models implemented in CHACHA-3D is that the CHACHA-3D model does not include the effect of pellet – cladding contact pressure on the effective surface roughness. However, this difference leads to slightly higher conservative value of pellet stored energy before the LOCA transient. The fuel centerline and average temperatures predicted by STAV7.2 and CHACHA-3D have been compared over a wide range of



linear heat generation rates and burnups and are in excellent agreement. These comparisons confirm that the implementation of the STAV7.2 features in CHACHA-3D is correct and slightly conservative resulting from neglecting the influence of contact pressure.

Sincerely,

B. F. Maurer, Acting Manager

Regulatory Compliance and Plant Licensing

cc: G. S. Shukla, NRR P. M. Clifford, NRR