July 18, 2007

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RE: WESTINGHOUSE ELECTRIC COMPANY (WESTINGHOUSE) TOPICAL REPORT (TR) WCAP-14565-P-A, ADDENDUM 2, "ADDENDUM 2 TO WCAP-14565-P-A, EXTENDED APPLICATION OF ABB-NV CORRELATION AND MODIFIED ABB-NV CORRELATION WLOP [WESTINGHOUSE LOW PRESSURE] FOR PWR [PRESSURIZED WATER REACTOR] LOW PRESSURE APPLICATIONS" (TAC NO. MD3184)

Dear Mr. Gresham:

By letter dated September 20, 2006 (Agencywide Documents Access and Management System, Accession No. ML062780169), Westinghouse submitted for U.S. Nuclear Regulatory Commission (NRC) staff review TR WCAP-14565-P-A, Addendum 2, "Addendum 2 to WCAP-14565-P-A, Extended Application of ABB-NV Correlation and Modified ABB-NV Correlation WLOP for PWR Low Pressure Applications." Upon review of the information provided, the NRC staff has determined that additional information is needed to complete the review. On July 11, 2007, William Slagle, Senior Fuel Licensing Engineer and I agreed that the NRC staff will receive your response to the enclosed Request for Additional Information (RAI) questions by August 3, 2007. If you have any questions regarding the enclosed RAI questions, please contact me at 301-415-1119.

Sincerely,

/RA/

Jon H. Thompson, Project Manager
Special Projects Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Project No. 700

Enclosure: RAI

cc w/encl: See next page

cc:
Mr. Gordon Bischoff, Manager
Owners Group Program Management Office
Westinghouse Electric Company
P.O. Box 355
Pittsburgh, PA 15230-0355
gordon.c.bischoff@us.westinghouse.com

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Enclosure: RAI
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ADAMS ACCESSION NO.:ML071940068 **NRR-106**

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NAME	JThompson	CHawes for DBaxley	SRosenberg
DATE	7/ 17 /07	7/ 17 /07	7/ 18 /07

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REQUEST FOR ADDITIONAL INFORMATION

BY THE OFFICE OF NUCLEAR REACTOR REGULATION

WCAP-14565-P-A, ADDENDUM 2, "ADDENDUM 2 TO WCAP-14565-P-A, EXTENDED APPLICATION OF ABB-NV CORRELATION AND MODIFIED ABB-NV CORRELATION WLOP [WESTINGHOUSE LOW PRESSURE] FOR PWR [PRESSURIZED WATER REACTOR] LOW PRESSURE APPLICATIONS"

WESTINGHOUSE ELECTRIC COMPANY

PROJECT NO. 700

1. Please define the 're-evaluation' referred to in Section 2.0 (page 3 of 118) of the WCAP. Specifically what criteria were used to evaluate which CHF data would and would not be used for development of the WLOP correlation?

2. Tests 190 and 175 were examined to provide a data base for the ABB-NV with rods of diameters not originally considered in the ABB-NV correlation. The database for WLOP (Table 2-2 on page 6 of 118) contains no test points with rod diameters of 0.360 inches. Will the WLOP correlation be used for Westinghouse fuel of this size? If so please justify the use of the WLOP correlation.

3. Section 4.2 describes the ABB-NV correlation (page 31 of 118). Some of the inputs to this correlation are based on the location of CHF, while it is the equation itself which outputs the CHF. How do you know the location of CHF before you solve for it?

4. Please describe the phenomena behind Figure 4-1. In other words, why is pressure responding the way it is?

5. On page 38 of the 118 pages of the submittal, Section 4.6, Demonstration Test Results, a justification is provided for applying the WLOP correlation to MV fuel. It is not clear to the NRC staff the range of applicability of the correlation. The last paragraph on the same page, suggests that the correlation is conservative for grid spacing less that 20 inches. And that for grid spacing greater than 20 inches, the correlation predictions approach those of predictions for fuel with NV. Does this mean that the correlation will be used for any grid spacing? Please provide addition clarification as to the intended range off applicability of the WLOP for MV fuel.

6. Also, Figures 4-2 through 4-5, do not include M/P behavior for 17X17 fuel. Does that mean that the WLOP correlation will not be used for this fuel type?

ENCLOSURE

7. Figure 4-4 shows the effect of pressure on M/P ratio for MV data on the WLOP correlation. The lowest pressure for which data has been taken is much higher than requested range of the correlation. Also, there appears to be a trend which suggest that the M/P ratio will continue dropping off at the lower pressures between the low end of the correlation and the lower pressure data points (assuming this trend holds, which may not be). Please provide additional information justifying the use of the WLOP correlation in this region.

8. In Table 5.2-5, the standard deviation from subset 1 does not agree with the standard deviation from subset 1 given in Section 5.2. Also using the equation given in 5.1.4.1 to calculate DNBR95 results in a different answer than that given in Table 5.2-5. Please provide an explanation.