

February 5, 2003

Mr. Michael M. Corletti  
Passive Plant Projects & Development  
AP600 & AP1000 Projects  
Westinghouse Electric Company  
Post Office Box 355  
Pittsburgh, Pennsylvania 15230-0355

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION - AP1000 DESIGN  
CERTIFICATION REVIEW (TAC NO. MB5491)

Dear Mr. Corletti:

By letter dated March 28, 2002, Westinghouse Electric Company (Westinghouse) submitted its application for final design approval and standard design certification for the AP1000.

The Nuclear Regulatory Commission (NRC) staff is performing a detailed review of your design certification application to ensure that the information is sufficiently complete to enable the NRC staff to reach a final conclusion on all safety questions associated with the design before the certification is granted.

The NRC staff has determined that additional information is necessary to continue the review. The requests for additional information (RAIs) are included in the enclosure. The topics covered in these RAIs include the area of reactor systems. These RAIs were sent to you via electronic mail on January 28 and 29, 2003, and were discussed with your staff on January 29, 2003. You agreed to provide your responses to these RAIs by February 21, 2003.

If you have any questions or comments concerning this matter, you may contact me at (301) 415-3053 or [ljb@nrc.gov](mailto:ljb@nrc.gov).

Sincerely,

*/RA/*

Lawrence J. Burkhart, AP1000 Project Manager  
New Reactor Licensing Project Office  
Office of Nuclear Reactor Regulation

Docket No. 52-006

Enclosure: As stated

cc: See next page

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ACCESSION NO. ML030340065 \*See previous concurrence

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DATE	2/4/03	2/4/03	2/4/03

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Requests for Additional Information (RAIs)  
AP1000 Standard Design Certification  
Series 440 - Reactor Systems

RAI 440.183

In Section 4.3.2.7.3, "Prediction of the Core Stability," the first paragraph makes reference to the fact that the AP1000's 14-foot core is slightly less stable with respect to axial xenon oscillations than the 12-foot cores. The same paragraph points to supporting information provided in subsequent Section 4.3.2.7.4 for explaining this increase in instability. But this section only provides information regarding 12-foot cores. No data is provided in support of a 14-foot core such as that from South Texas Plant, Units 1 and 2. Please provide additional technical justification in support of the 14-foot core regarding the axial xenon stability.

RAI 440.184

New Generic Issue 163, "Multiple Steam Generator [SG] Tube Leakage," in NUREG-0933, "A Prioritization of Generic Safety Issues," identifies a safety concern associated with potential multiple steam generator (SG) tube leaks triggered by a main steam line break (MSLB) outside containment that cannot be isolated. This sequence of events could lead to core damage due to the loss of all primary system coolant and safety injection fluid in the refueling water storage tank. The Nuclear Regulatory Commission (NRC) has given this issue HIGH priority ranking, and is working toward a resolution of the issue. The AP1000 design control document (DCD) Section 1.9, "Compliance with Regulatory Criteria," does not address this issue, except that Table 1.9-2 indicates that Generic Issue 163 is unresolved pending generic resolution.

- (A) Please provide an evaluation of the AP1000 design with respect to coping with the safety concern of Issue 163 regarding multiple SG tube leakage resulting from an MSLB outside containment.
- (B) Please discuss how any subsequent requirements that may be imposed by the NRC as a resolution of this issue will be identified to a prospective combined license (COL) applicant that references the AP1000 design, i.e., how are we given assurance that a COL applicant will commit to complying with any requirements that may be imposed by the NRC as a resolution of Issue 163.

AP 1000

cc:

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