

October 16, 2006

Ms. Andrea Sterdis, Manager  
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Westinghouse Electric Company  
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P.O. Box 355  
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SUBJECT: WESTINGHOUSE AP1000 COMBINED LICENSE PRE-APPLICATION  
TECHNICAL REPORT 36 - REQUEST FOR ADDITIONAL INFORMATION (TAC  
NO. MD2109)

Dear Ms. Sterdis:

By letter dated June 5, 2006 (DCP/NRC1749), you submitted AP1000 Technical Report 36, "AP1000 Pressurizer Design," which summarized the design changes for the AP1000 pressurizer. In response to requests for additional information (RAI), you submitted letter dated September 22, 2006 (DCP/NRC1779). The U.S. Nuclear Regulatory Commission staff has reviewed the application, along with your RAI responses, and has determined that additional information is required. Our question are provided in the Enclosure. We discussed these issues with your staff on October 11, 2006. Your staff indicated that you would attempt to provide your response by December 18, 2006.

Please contact me at (301) 415-1313, if you have any other questions on these issues.

Sincerely,

**/RA/**

Steven D. Bloom, Senior Project Manager  
AP1000/EPR Projects Branch  
Division of New Reactor Licensing  
Office of Nuclear Reactor Regulation

Project No. 740

Enclosure: Request for Additional Information

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION

WESTINGHOUSE AP1000 DOCUMENT NO. APP-GW-GLR-016, Rev 0

TECHNICAL REPORT 36 - AP1000 PRESSURIZER DESIGN

PROJECT NUMBER 740

TR36-11

In the request for additional information (RAI) response in the Enclosure 1 to September 22, 2006, letter, Westinghouse qualitatively discussed the effects of the pressurizer design changes on the depressurization and Automatic Depressurization System (ADS) flow rates, and categorically stated that the chapter 15 analysis remains valid and bounding.

The pressurizer design changes affects many parameters such as the cross-section area of the pressurizer, pressurizer vessel height, initial pressurizer water level, pressurizer setpoints, ADS stages 1, 2 and 3 elevation and pressurizer heater length. We are concerned about the combined effects of the values changed for the about parameters on the thermal hydraulic response during transient and accident conditions. We determined that the qualitative statement in the RAI response is not sufficient to resolve the RAI issue. We request Westinghouse perform quantitative analyses for the limiting event for each of the following Standard Review Plan chapter 15 event categories:

- (1) increased heat removal from the primary system
- (2) decreased heat removal by the secondary system
- (3) decrease reactor coolant system flow
- (4) reactivity and power distribution anomalies
- (5) increase in reactor coolant inventory
- (6) decrease in reactor coolant inventory including loss-of-coolant accidents
- (7) anticipated transients without scram

and demonstrate that the applicable acceptance criteria for each limiting event are met or the existing analysis is bounding.

Enclosure

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