

PROPRIETARY INFORMATION

October 15, 2009

Mr. Robert Sisk, Manager  
AP1000 Licensing and Customer Interface  
Nuclear Power Plants  
Westinghouse Electric Company  
P.O. Box 355  
Pittsburgh, PA 15230-0355

Dear Mr. Sisk:

By letter dated August 31, 2009, Westinghouse submitted its design methodology report for the AP1000 shield building. The U.S. Nuclear Regulatory Commission (NRC) has completed its review of that report. Based on that report and the body of technical information reviewed to date, the NRC has determined that the proposed design of the shield building will require modifications in some specific areas to ensure its ability to perform its safety function under design basis loading conditions and to support a finding that it will meet applicable regulations (i.e., 10 CFR 50.55a and 10 CFR Part 50, Appendix A (GDC 1 and 2)).

Specifically, the design of the steel and concrete composite structural module (SC module) must demonstrate the ability to function as a unit during design basis events; the design of the connection of the SC module to the reinforced concrete wall sections of the shield building must demonstrate the ability to function during design basis events; the design of the shield building tension ring girder, which anchors the shield building roof to the wall, must be supported by either a confirmation test or a validated (or benchmarked) analysis method.

Progress on the NRC staff's review of the shield building will require that Westinghouse provide modifications to the design and testing that demonstrate the capability of the building to perform its intended safety function under design basis loads. In addition to the issues described above, the NRC staff identified several other issues that need to be addressed; these issues are discussed in the enclosure to this letter.

Based on the above, the NRC considers its review of the shield building, as proposed, to be complete. The NRC will continue to support the resolution of the remaining issues on the AP1000 amendment application while the issues associated with the shield building are being addressed. The impact on the review schedule for the design certification amendment will be established after discussion with Westinghouse about its plans to address NRC's determination.

Pursuant to 10 CFR 2.390, the NRC has determined that the enclosure may contain proprietary information or other categories of information that should be withheld from public disclosure. The NRC will delay placing this document in the public document room for a period of 30 days from the date of this letter to provide Westinghouse with the opportunity to comment on information in the enclosure that should be withheld from public disclosure. If Westinghouse believes that any information in the enclosure should be withheld from public disclosure, please

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R. Sisk

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identify such information line by line and define the basis pursuant to the criteria of 10 CFR 2.390. Based on Westinghouse's response, sensitive information will be redacted from the version that will be made publically available.

Schedule impacts to the review schedules for the Combined License applications that reference the AP1000 amendment application will be addressed once the schedule for the design certification amendment is better understood.

Please note that the letter and the attached enclosure are proprietary. When the letter is detached from the enclosure, the letter becomes non-proprietary.

Sincerely,

*/RA/*

David B. Matthews, Director  
Division of New Reactor Licensing  
Office of New Reactors

Enclosure: As stated.  
Docket No. 52-006

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(Revised 10/01/2009)

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