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Your ref: Docket No. 52-006
Our ref: DCP_NRC_003195

November 17, 2011

SUBJECT: REPLY TO NOTICE OF VIOLATION cited in NRC INSPECTION REPORT NO.:
05200006/2011-202 dated October 3, 2011

Westinghouse received the NRC Inspection Report Number 05200006/2011-202 dated October 3, 2010 and the Notice of Violation: 05200006/2011-202-01. Westinghouse views any notice of violation it receives as serious and is committed to be in compliance with the provisions of Title 10, the *Code of Federal Regulations* (CFR), Section 50, Appendix B "Quality Assurance for Nuclear Power Plants and Fuel Reprocessing Plants".

Westinghouse also values the results from the NRC's review of the shield building calculations and WEC's corrective actions for closure of the initial aircraft impact assessment (AIA) inspection issues, as it validates our overall implementation of applicable industry guidelines and regulations to ensure the robustness of the AP1000 design. In consideration of NRC comments made during the inspection, Westinghouse immediately initiated actions to resolve the specific issue raised by the inspection team prior to completion of the inspection.

As requested, details of actions associated with the NRC's issue are described below and demonstrate the use of realistic analyses in the AIA.

Summary of Issues Identified and Actions Taken During the Inspection

During the inspection, the inspection team noted its belief that WEC failed to effectively implement corrective actions to verify convergence of the LS-DYNA computer model and to correlate the results to the calculation of record consistent with the requirements of Criterion XVI, "Corrective Actions," to Appendix B, of (10 CFR) Part 50. Specifically, the concern was that WEC failed to assure that the LS-DYNA code modeling techniques used in the AIA including the mesh densities and the calculated solution time steps were appropriate and sufficient to achieve solution convergence. This involved a sensitivity study performed by Westinghouse that showed that certain analysis assumptions could lead to divergent (or unstable) solution causing erroneous results. The inspection team's conclusion was that the analysis performed by WEC was insufficient (i.e., comparatively small range of time steps assessed) to address the full range of sensitivities relating to the model mesh density and solution time-step, and could not be directly correlated to the calculations of record to demonstrate that the shield building will withstand an aircraft impact.

Westinghouse addressed the original AIA inspection open item and closed the open item based on the recommendations from an independent peer review panel and documented the sensitivity studies it performed in a calculation. Those sensitivity studies verified that the initial assumptions used in the AIA analysis remained valid. Westinghouse came to the conclusion that the sensitivity studies were adequate and appropriate in establishing a reasonable assurance that the analysis remained valid. During the inspection, Westinghouse performed additional analysis with more time steps and mesh densities and provided the results of this further analysis to the NRC inspection team prior to closure of the inspection. The additional analysis verified that the original sensitivity studies and the initial assumptions in the AIA were still valid and that Westinghouse's AIA conclusions remained valid. In addition, no design changes were required as a result of the additional analysis that was used by Westinghouse to address the NRCs concern during the inspection and confirm closure of the open item raised by the original AIA calculation.

Basis for the NOV

A concern was identified and documented in the Westinghouse Corrective Action System regarding the need for further LS-DYNA analysis based on sensitivity studies that adjusted mesh and time step selections from the original AIA calculation. Westinghouse closed that corrective action based on recommendations of an independent peer review panel and sensitivity studies that were performed to address the concern. The NRC inspection team determined that the sensitivity studies did not cover a broad enough range of mesh densities and solution time steps to effectively confirm the adequacy of the true structural response of the shield building credited in the AIA and documented their determination in the subject NOV.

Need for Future Corrective Actions

As part of the WEC corrective action process, immediate action was taken during the course of the inspection to ensure the specific issue raised by the NRC inspection team was addressed. As discussed above, Westinghouse has completed all actions to resolve the specific issue identified in the NOV.

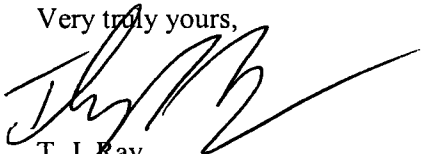
Future Action: Westinghouse considers that all needed corrective actions have been taken to resolve the issues identified by the subject NRC NOV. There were no programmatic issues identified with Westinghouse's corrective action process that would require broader corrections. Westinghouse's corrective action process is in compliance with Criterion XVI of Appendix B to 10 CFR Part 50, as is documented in the inspection report.

Conclusion

Westinghouse considers this response as sufficient information regarding the corrective actions to satisfactorily resolve the issue identified by the subject NOV. Given the extensive reviews prior to the subject NRC inspection and the inspection itself with resulting corrective actions, Westinghouse considers the AIA demonstrates, using realistic analyses, the robustness of the AP1000 design, properly implements NEI 07-13 guidance and complies with 10 CFR 50.150(a)(1).

Any additional questions related to this response should be addressed to T. J. Ray, COL Licensing Support Manager, U.S. Licensing, Westinghouse Electric Company LLC, 1000 Westinghouse Dr. Suite 115, Cranberry Township, Pennsylvania 16066.

Very truly yours,



T. J. Ray
Manager
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