Westinghouse Electric Corporation Energy Systems

Nuclear and Advanced Technology Division

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Pittsburgh Pennsylvania 15230-0355

June 15, 1992

ET-NRC-92-3707

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Attn: Mr Leif J. Norrholm, Chief
Vendor Inspection Branch

Dear Mr. Norrholm:

The subject report identified an open item pending further review with regard to the proper determination by Westinghouse regarding reporting responsibilities pursuant to 10 CFR Part 21 requirements. The following information provides additional clarification regarding the Westinghouse actions related to this issue.

Very truly yours,

P. J. Morris/for

N. J. Liparulo, Manager
Nuclear Safety and Regulatory Activities

DSH/kp

Attachment

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WESTINGHOUSE RESPONSE TO THE NRC INSPECTION REPORT ON THE OVERTEMPERATURE K2 SCALING ISSUE

BACKGROUND

Recently, the Nuclear Regulatory Commission (NRC) conducted a review of Westinghouse's evaluation and reporting of a degraded performance condition of the Westinghouse protection system Overtemperature ΔT (OTDT) reactor trip function. The inspection was conducted by Mr. Stephen Alexander of the NRC on February 5 and 6, 1992 at the Westinghouse Energy Center in Monroeville, PA which is the headquarters for the Nuclear and Advanced Technology Division (WNATD). Areas examined included the adequacy of the Westinghouse generic evaluation, the reporting of the degraded condition, and the distribution of relevant technical information by Westinghouse to affected NRC licensees.

The NRC Inspection Report identified an unresolved item with regard to the generic safety evaluation performed by Westinghouse to address the degraded condition of the OTDT reactor trip. The report noted that it could not be determined whether the Westinghouse analysis was generically conservative and adequately accounts for potential worst case conditions of other accident severity factors that may exist at specific plants. The report stated that it therefore remains unresolved as to whether the deviation could create a substantial safety hazard, could contribute to exceeding a safety limit, or by causing violation of license technical specification setpoint limits could constitute a failure to comply, as defined in 10 CFR Part 21.

TECHNICAL EVALUATION

Westinghouse was first notified of the OTDT scaling issue by Duke Power who addressed the OTDT scaling issue for the McGuire and Catawba plants. Plant specific analyses were performed at the request of another Westinghouse customer for which Westinghouse determined that licensing basis criteria would be met. Hence, there was not a substantial safety hazard as defined in 10 CFR Part 21 based on plant specific information. Following a review of instrument scaling information sent to other utilities (i.e. scaling manuals), Westinghouse determined the potential for misinterpretation as to how the OTDT temperature function should be scaled was sufficient to warrant the issuance of a Technical Bulletin (NSD-TB-91-09-R0, attached) for clarification. The Technical Bulletin described the issue and provided information which would assure that the OTDT function would be scaled properly to ensure its availability to provide reactor trip protection for the required ranges of plant conditions.

In support of this Technical Bulletin, Westinghouse performed an evaluation of the safety significance of the OTDT scaling issue with respect to the licensing basis safety analyses performed by Westinghouse. This evaluation was based on previously documented studies described in WCAP-7306 "Reactor Protection System Diversity in Westinghouse Pressurized Water Reactors." The evaluation determined that the availability of other diverse trip functions was sufficient to conclude that the loss of the OTDT reactor trip would not constitute a substantial safety hazard although the DNBR limit may be violated for some events for which the OTDT reactor trip provides protection. It is important to note that in the case of the OTDT scaling issue the OTDT reactor trip function is operable for certain temperature/power ranges and over all pressure ranges. Also, the OTDT FΔI function is operable. Therefore, the OTDT reactor trip function would not be completely inoperable. This further substantiates Westinghouse's

determination that this scaling issue would not constitute a substantial safety hazard. With respect to individual plants, Westinghouse stated that analyses would have to be performed on a plant specific basis in order to address continued applicability of the licensing basis analyses. As noted, a plant specific evaluation was performed for one Westinghouse customer for which it was demonstrated that the licensing basis continued to be met.

CONCLUSION

With respect to the NRC findings on the Overtemperature ΔT scaling issue, Westinghouse concluded that the issue did not constitute a substantial safety hazard as defined in 10 CFR Part 21 based on the diversity of the Westinghouse protection system, as documented and described in WCAP-7306. Furthermore, Westinghouse notified its customers of the issue via a Technical Bulletin to enable them to assess the safety significance if it was determined that the OTDT scaling issue was applicable to their plants.