

TENNESSEE VALLEY AUTHORITY

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OCT 17 1986

Director of Nuclear Reactor Regulation
Attention: Mr. B. Youngblood, Project Director ✓
PWR Project Directorate No. 4
Division of Pressurized Water
Reactor (PWR) Licensing A
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Youngblood:

In the Matter of the Application of) Docket Nos. 50-390
Tennessee Valley Authority) 50-391

The subject of this letter is the Watts Bar response to the Three Mile Island (TMI) action item II.K.3.31. Please reference NRC Generic Letter 83-35 from D. G. Eisenhut, "Clarification of TMI Action Plan Item II.K.3.31," dated November 2, 1983, and the letter from L. D. Butterfield to J. Lyons, "Westinghouse Owners Group Transmittal of WCAP-11145," OG-190, dated June 11, 1986.

In the first reference, the NRC staff indicated that the resolution of TMI action plan item II.K.3.31 may be accomplished by generic analyses to demonstrate that the previous NRC approved WFLASH SBLOCA EM results were conservative when compared with the new NOTRUMP SBLOCA EM. Such generic studies were undertaken by the Westinghouse Owners Group (WOG) of which TVA is a participating member. The WOG has completed these generic studies and has submitted the results of the analyses to NRC in the Topical Report WCAP-11145 (second reference). The purpose of this letter is to inform you that TVA is referencing Topical Report WCAP-11145 in order to satisfy the requirements of TMI action item II.K.3.31 for Watts Bar in generic fashion in accordance with the first reference.

Topical Report WCAP-11145 documents the results of a series of SBLOCA analyses performed with the NRC approved NOTRUMP SBLOCA evaluation model. Cold leg break spectrum analyses were performed for the limiting SBLOCA plant from each of the Westinghouse 4-loop, 4-loop upper head injection (UHI), 3-loop and 2-loop plant categories. The limiting SBLOCA plant in each category was defined on the basis of previous SBLOCA analyses which were performed with the NRC approved WFLASH SBLOCA EM. In addition to the cold leg break spectrums, a hot leg and pump suction break were performed as part of the 4-loop plant analyses confirming that the cold leg was still the worst break location. Comparison of the NOTRUMP cold leg break spectrum results with the previously generated WFLASH results showed that the WFLASH results were conservative for all plant categories. In particular, the 4-loop UHI plant category results showed that the NOTRUMP SBLOCA EM calculated no core uncover for any of

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the SBLOCA transients analyzed, whereas the previous WFLASH analysis calculated partial core uncoverly with a limiting peak clad temperature of 1499°F.

The generic results documented in WCAP-11145 demonstrate that a plant specific reanalysis of the 4-loop Watts Bar plant with the NOTRUMP SBLOCA EM would result in the calculation of a limiting peak clad temperature (PCT) which would be significantly lower than the 1434.8°F PCT currently calculated with the WFLASH SBLOCA EM. Hence, the WFLASH SBLOCA EM results which currently form the licensing basis for Watts Bar are conservative and still valid for demonstrating the adequacy of the emergency core cooling system to mitigate the consequences of an SBLOCA as required by 10 CFR 50.46. It is therefore concluded that a plant specific analysis is not needed in order for Watts Bar to comply with TMI action item II.K.3.31. Rather, TVA references WCAP-11145 in order to comply with TMI action item II.K.3.31 on a generic basis in accordance with reference 2.

In addition, Watts Bar intends to delete UHI as stated in my letter to you dated September 17, 1986. As part of the justification for removal of UHI, TVA will provide the results of a Watts Bar plant specific SBLOCA NOTRUMP analysis. This will be provided as part of the FSAR changes to be made supporting deletion of UHI.

If you have any questions on this topic, please get in touch with Martin Bryan at (615) 365-8819.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



R. Gridley, Director
Nuclear Safety and Licensing

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