



Westinghouse Electric Corporation

Power Systems

PWR Systems Division

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NS-TMA-2247

May 15, 1980

Mr. Harold Denton, Director  
Office of Nuclear Regulation  
U.S. Nuclear Regulatory Commission  
Phillips Building  
7920 Norfolk Avenue  
Bethesda, Maryland 20014

Dear Mr. Denton:

Westinghouse has reviewed the latest NRC Staff report on the ATWS issue, NUREG-0460 Volume 4, March 1980 as requested at Fed. Reg. 20259. The Staff position in this report represents a significant change in the ATWS position. The Staff is seeking to require that major hardware modifications be installed without the necessary justification. In addition, they would require that even more conservative input assumptions be superimposed on the already conservative analysis, again without the necessary justification. Finally, the Staff would implement these requirements via orders rather than the appropriate method of rulemaking.

The hardware changes recommended by the Staff go beyond the requirements of 10CFR50 as they relate to single failure criteria. As such, any proposed changes are subject to the requirements of 10CFR2.8, Subpart H - Rulemaking, promulgated to meet the requirements of Section 553 of Title 5 of the United States Code. We believe implementation of these new requirements by order is an improper denial of due process.

To the extent that nuclear plants already licensed are involved, a finding by the Commission that the action will provide substantial additional protection which is required for public health and safety or the common defense and security is required by 10CFR50.109. In spite of the extensive record which has been established on this matter, we know of no basis for such a finding and no proper proceeding has been held from which such a finding would be derived.

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The NRC has stated in Volume 4 that the industry failed to provide the "early verification" as defined in Volume 3 of NUREG-0460 and, hence, the need for issuing orders to resolve ATWS. Westinghouse believes that we have provided the essential information in our report, NS-TMA-2182, dated December, 1979. This report provided:

1. The results of the limiting ATWS transients for both peak pressure and fuel damage with numerous sensitivity studies. These results were for limiting Westinghouse NSSS design.
2. The bases for selection of key input parameters for the transient analysis.
3. A description and results of the radiological analysis required by the Staff.
4. A description and results of the stress evaluation for all major components of the Westinghouse NSSS. These results form the basis of the selection of the peak pressure in the RCS that corresponds to the level C stress limit required by the Staff.
5. An evaluation of the proposed AMSAC mitigation systems capabilities and the requirements found in the industry Standard IEEE-279.
6. The computer models used were described in detail with regards to how they were used in the analysis.

The conclusion of this report again showed, as numerous previous submittals have, that the peak pressure obtained during an ATWS are below 3200 psi and calculated DNB ratios do not indicate fuel damage. The only items not provided in our latest report were either related to certain non-limiting events or were sensitivity studies that would have little to do with the conclusion that the Westinghouse NSSS can tolerate the postulated ATWS events.

Volume 4 states that the Staff agrees with the ability of our codes to correctly predict the pressure and coolant temperature transients which defines the acceptability or unacceptability of the systems to withstand an ATWS. The staff has now indicated that due to a lack of explicit treatment of steam voids in the primary loop the code cannot be used to analyze cases where additional equipment failures, e.g. RCP trip, are postulated by the staff to occur. We view any requirement that additional failures be analyzed over and above the already multiple failures caused by the assumed ATWS to be inappropriate. Hence, we believe our models to be acceptable for analyzing the ATWS events.

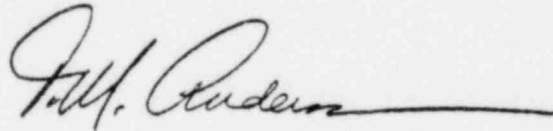
The reactor protection system of the Westinghouse NSSS is a very reliable system. Reliability analysis performed by Westinghouse as well as by others such as EPRI have demonstrated this. Nevertheless, Volume 4 proposes that a

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Modified Scram System (MSS) be installed on all Westinghouse NSSS units. The purpose of this MSS would be to reduce the already low probability of the postulated common mode failure (CMF). Recent reports such as the Rogovin report and earlier reports such as WASH-1400 have shown that the major contributor to overall risk is the prospect of human error. The proposed MSS would increase the possibility of human error due to the fact that two diverse sets of equipment must be maintained and calibrated instead of one set. The staff has given inadequate attention to this aspect of risk. There is a real likelihood that the proposed mandated modifications (which were developed by the staff with apparent interest only in reducing the already low probability of a CMF) may increase the probability of human error. We concur with the ACRS letter of April 16, 1980 where it is stated "In consideration of the pressure relieving capability of the existing Westinghouse systems, and the possibility for installation errors and unexpected system interaction that can occur in backfitting, the Committee does not recommend changes in the scram system circuitry or in the scram breakers for these plants".

We appreciate the opportunity to provide our comments in these areas which are of considerable concern to us. We request your careful review of this matter and would welcome a meeting with you to further amplify our concerns.

Very truly yours,



T. M. Anderson, Manager  
Nuclear Safety

kk:RWS

cc: A. Thandani