

NRC PDR



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

OCT 5 1979

Cordell Reed, Chairman
Westinghouse Operating Plants Owner's Group
Commonwealth Edison
P. O. Box 767
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Dear Mr. Reed:

The NRC staff is reviewing the responses to bulletins 79-05C and 79-06C on the subject of the need for tripping of reactor coolant pumps for certain small break loss-of-coolant accidents. The conclusions reached by the PWR vendors in those responses vary to a considerable degree, and are highlighted in Table 1. To a degree these differences may be attributed to design differences. However, our present judgment is that the major differences are attributable to model differences, which are highlighted in Table 2. The various RCP trip criteria that have been proposed or are believed to be in place are presented in Table 3.

A variety of model features have been developed without the use of relevant experiments to support model justification, and no model has been demonstrated to be overall conservative by integral test comparison. There is apparent lack of agreement between vendors as to whether individual assumptions are conservative. Given these model variations, it is not surprising that the conclusions reached vary.

We have done some calculations with RELAP-4, Mod 7, and these are summarized in Table 4. These calculations, while useful to us, are not definitive, and cannot guide us as to what is a suitably conservative set of model assumptions.

Our concern is that during the pendency of traditional interactions between you and us (i.e., questions, positions, analyses, rebuttals, appeals, etc.) events are forcing a more prompt solution. I refer to the RCP trip at North Anna (a non-LOCA transient) the RCP trip at Prairie Island (a steam generator tube failure) and the Davis-Besse transient of September 27, 1979 which nearly set in motion the requirements of 79-05C.

The second half of the concern I have relates to HPI termination criteria. Table 5 lists several criteria proposed, in place, or thought to be in place. There is no apparent reason why the same set of safety considerations would lead us into more than one, uniform criterion for termination of HPI. Your assistance in achieving this desired state of uniformity is needed.

If the NRC were to adopt a Q&A approach to solving the problem separately, some candidate questions are enclosed in Table 6.

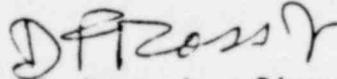
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Instead of withdrawing to the Table 6 approach, I suggest we meet soon and discuss, in an administrative sense, how the PWR regulated industry can close on these two issues. For further details regarding the issues described herein, as well as the planned meeting, Mr. Brian Sheron (301-492-7588) is available for further discussion.

Sincerely,



D. F. Ross, Jr., Director
Bulletins and Orders Task Force
Office of Nuclear Reactor Regulation

Enclosures:

- Table 1 - Conclusions Reached by PWR Vendors in Response to Bulletins 79-05C and 79-06C
- Table 2 - Differences During SBLOCA with Pumps Running
- Table 3 - RCP Criteria Proposed or In-Place at Plants
- Table 4 - Staff Calculations for PWR Vendors
- Table 5 - HPI Termination Criteria Proposed or In-Place at Plants
- Table 6 - Typical Questions on RCP Trip and HPI Termination

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