



CONNECTICUT YANKEE ATOMIC POWER COMPANY

BERLIN, CONNECTICUT

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August 29, 1979

Docket No. 50-213

Mr. Boyce H. Grier, Director  
Region I  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19106

Reference: (1) B. H. Grier letter to W. G. Council dated July 26, 1979.

Gentlemen:

Haddam Neck Plant  
l&E Bulletin #79-06C

In Reference (1), Connecticut Yankee Atomic Power Company (CYAPCO) was requested to provide additional information relating to reactor coolant pump (RCP) operation under various transient conditions. In response to that request, the following information is provided:

- (1) Applicable plant procedures have been revised to instruct plant operators to immediately trip all operating RCP's upon reactor trip and initiation of HPSI caused by low RCS pressure. Two licensed operators are in the control room at all times during operation to accomplish these actions as required.
- (2) A series of Loss of Coolant Accident (LOCA) analyses for a range of break sizes and a range of time lapses between initiation of break and pump trip, applicable to the 2, 3, and 4 loop plants has been performed by the Westinghouse Owners' Group. A report summarizing the results of the analysis of delayed Reactor Coolant Pump trip will be submitted to Dr. D. F. Ross (Chairman - Bulletins and Orders Task Force) by Mr. Cordell Reed (Chairman of the Westinghouse Owners' Group) on August 31, 1979. In the report, maximum PCT's for each break size and pump trip delay considered have been provided. The report concludes that if the reactor coolant pumps are tripped prior to the reactor coolant system pressure reaching 1250 psia, the resulting peak clad temperatures are no worse than those resulting from an immediate reactor coolant pump trip. In addition, it is shown that there is a finite range of break sizes and RCP trip times in all cases 10 minutes or later, which will result in PCT's in excess of 2200°F as calculated with conservative Appendix K models. The operator in any event would have at least 10 minutes to trip the RCP's following a small break LOCA, especially in light of the conservatism in the calculations. This is appropriate for manual rather than automatic action, based on the guidelines for termination of RCP operation presented in WCAP-9600.

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- (3) The Westinghouse Owners' Group has developed guidelines which were submitted to the NRC Staff in Section 6 and Appendix A of WCAP-9600. The analyses provided in the response to Item 2 are consistent with the guidelines in WCAP-9600. No changes to these guidelines are needed for both LOCA and non-LOCA transients.
- (4) The Owners' Group effort to revise emergency procedures covers many issues, including operation of the Reactor Coolant Pumps. The action taken in response to Item 1 is sufficient as an interim measure and no immediate need exists for changing emergency procedures to include the tripping of the Reactor Coolant Pumps. The expected schedule for revising the LOCA, steamline break and steam generator tube rupture emergency procedures is as follows:

Mid-October: Guidelines which have been reviewed by the NRC will be provided to each utility. Appropriate utility personnel associated with writing procedures will meet with the Owners' Group Subcommittee on Procedures and Westinghouse to provide the background for revising their emergency procedures.

1 to 2 months  
from Mid-October Plant specific procedures will be revised.

3 to 4 months  
from Mid-October Revised procedures will be implemented and operators trained.

- (5) Analyses related to inadequate core cooling and definition of conditions under which a restart of the RCP's should be attempted will be performed. Resolution of the requirements for the analyses and an acceptable schedule for providing the analyses and guidelines and procedures resulting from the analyses will be arrived at between the Westinghouse Owners' Group and the NRC Staff.

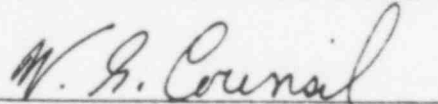
Long Term

- (1) As discussed in the response to Item 2, CYAPCO has concluded that automatic tripping of the RCP's is not a required function based on the analyses that have been performed and the guidelines that have been developed for manual RCP tripping. CYAPCO proposes that this item be discussed with the NRC Staff following their review of the Owners' Group submittal.

We trust you find the above information, coupled with the report which will be forwarded on August 31, 1979, responsive to your concerns.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY

A handwritten signature in cursive script, reading "W. G. Council", written over a horizontal line.

W. G. Council  
Vice President