



UNITED STATES **NRC PUBLIC DOCUMENT ROOM**  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

APR 12 1979

Mr. Thomas M. Anderson, Manager  
Nuclear Safety Department  
Westinghouse Electric Corporation  
P. O. Box 355  
Pittsburgh, Pennsylvania 15230

Dear Mr. Anderson:

SUBJECT: STAFF EVALUATION OF WCAP-8986

The Nuclear Regulatory Commission Staff has completed its review of WCAP-8986 (Non-proprietary) entitled "Perturbation Technique for Calculating ECCS Cooling Performance." This report describes a procedure for determining the effect of small changes in operating or design parameters on peak fuel cladding temperature following a loss of coolant accident. Parameters considered were core power peaking, upper head fluid temperature, and number of steam generator tubes removed from service by plugging. The procedure is based on the precomputed sensitivity of peak cladding temperature to single parametric variations. Our safety evaluation is enclosed.

As a result of our review of WCAP-8986 we have concluded that the principle of the perturbation technique is acceptable. However, the validity of the sensitivities presented in Table 1 and Figures 1 and 2 have not been acceptably demonstrated.

Accordingly, WCAP-8986 is acceptable for reference to support the use of the perturbation technique. However, for plant applications that use this technique, additional information as described in the enclosed safety evaluation must be provided.

In accordance with established procedure, it is requested that Westinghouse issue a revised version of this report within three months of receipt of this letter to include the NRC acceptance letter, the enclosed evaluation, and any changes resulting from the review.

We do not intend to repeat our review of this report when it is referenced in a particular license application except to assure that the material presented in these reports is applicable to the specific plant involved.

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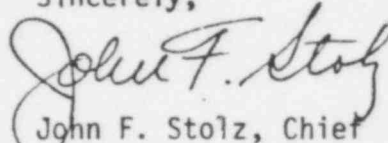
Mr. Thomas B. Anderson

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Should Nuclear Regulatory Commission criteria or regulations change, such that our conclusions concerning this report is invalidated, you will be notified and given an opportunity to revise and resubmit your topical report, should you so desire.

Sincerely,



John F. Stolz, Chief  
Light Water Reactors Branch No. 1  
Division of Project Management

Enclosure:  
Evaluation of Topical  
Report

cc: Mr. D. Rawlins  
Westinghouse Electric Corporation  
P. O. Box 355  
Pittsburgh, Pennsylvania 15230

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