



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

AUG 10 1971

Docket Nos. 50-390
and 50-391

Tennessee Valley Authority
ATTN: Mr. James E. Watson
Manager of Power
818 Power Building
Chattanooga, Tennessee 37401

Gentlemen:

On June 19, 1971 the AEC adopted interim acceptance criteria for the performance of emergency core cooling systems (ECCS) in light-water nuclear power plants. A copy of the Commission's interim policy statement on this matter is enclosed for your information. In accordance with Section IV.B. of the interim policy statement, before we can complete our evaluation of the ECCS for the Watts Bar Nuclear Plant Units 1 and 2 we will need information to show that the system meets the general criteria of Section IV.A. using a suitable evaluation model. Appendix A, Part 3 of the interim policy statement describes an evaluation model acceptable to the Commission for plants incorporating a nuclear steam supply system designed by the Westinghouse Electric Corporation. We have discussed this request with representatives of the Westinghouse Electric Corporation and we understand that appropriate analyses have been or are being performed for your plants.

The information that we need regarding these analyses is:

- (1) For the break size range, location and type mentioned in Appendix A, Part 3, of the interim policy statement, provide information pertaining to (a) the system pressure, (b) the hot-spot clad temperature, local mass velocity, fluid temperature, and heat transfer coefficient, (c) the core pressure drop, quality, and mass velocity, (d) the heat flux distribution in the hot channel, (e) the flow rates in the upper and lower plenums, (f) the flow rates in the broken and intact cold-leg and hot-leg piping, (g) the flow rate out of the break, and (h) percent clad metal-water reaction.
- (2) Provide a detailed discussion of the calculation used to predict heat transfer during the reflood portion of the transient.

- (3) Discuss in detail any deviations in the evaluation model used in the foregoing studies from that described in Appendix A, Part 3 of the interim policy statement.

In addition, you should submit for our review any changes to the Technical Specifications for the plant that may be required on the basis of the results of your analyses.

When this information has been prepared, please submit it as an amendment to your application.

Sincerely,

Original Signed by
Peter A. Morris

Peter A. Morris, Director
Division of Reactor Licensing

Enclosure:
AEC Interim Policy Statement

cc: w/encl.
Robert H. Marquis, General Counsel
629 New Sprankie Building
Knoxville, Tennessee 37919

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