

Docket

Docket No. 50-313

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AUG 11 1971

Arkansas Power & Light Company  
ATTN: Mr. J. D. Phillips  
Vice President and Chief Engineer  
Sixth & Pine Streets  
Pine Bluff, Arkansas 71601

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 Arkansas Nuclear One, Unit No. 1, we need information to show that the system meets the general criteria of Section IV.A. using a suitable evaluation model. We are continuing discussions with representatives of the Babcock & Wilcox Company (B&W) that are directed toward establishing a suitable evaluation model using B&W computer codes for evaluation of plants incorporating a nuclear steam supply system designed by B&W.

The information that we need regarding these analyses is:

- (1) For the break size range, location and type mentioned in Appendix A, Part 1, 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 1 of the interim policy statement, if that model is used.

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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 you have obtained the required information, 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: Horace Jewell, Esq.  
House, Holms, & Jewell  
1550 Tower Building  
Little Rock, Arkansas 72201

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