

SECRET FILE

DEC 10 1976

Docket No. 50-29

Yankee Atomic Electric Company  
ATTN: Mr. Robert H. Groce  
Licensing Engineer  
20 Turnpike Road  
Westboro, Massachusetts 01581

Gentlemen:

RE: YANKEE NUCLEAR POWER STATION (YANKEE-ROWE)

During the course of our review of emergency core cooling system (ECCS) evaluation models, it has come to our attention that the Exxon Nuclear Company (ENC) ECCS evaluation model, which was used for your facility, uses a nucleate boiling heat transfer correlation during blowdown after critical heat flux (CHF) is first predicted. This may not conform to the requirements of Appendix K to 10 CFR 50. The criteria for compliance with Appendix K have been established by the NRC staff and discussed with ENC representatives. Enclosed is a copy of our letter dated December 2, 1976, to ENC requesting that a corrected ECCS model be submitted for our evaluation as soon as possible.

This matter is similar to one identified with respect to another nuclear steam system supplier's evaluation model; and, based on our experience in connection with developing a correction for that model, we have concluded that there are acceptable correlations which can be used and which have a small effect on the calculated peak clad temperature. It is expected that the effect on calculated peak clad temperature would be small enough so that modification of your Technical Specifications will not be required; however, this must be verified for your facility by reevaluation of the ECCS cooling performance using a corrected model.

Accordingly, submit as soon as possible, a reevaluation of your ECCS cooling performance using an NRC staff approved model that does not use a nucleate boiling heat transfer correlation during blowdown after CHF has been predicted by the approved CHF correlation.

Sincerely,

Original signed by

A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

ECCS  
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Yankee Atomic Electric Company

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Enclosure:  
NRC ltr dtd 12/02/76

cc w/encl:  
Mr. Donald G. Allen, President  
Yankee Atomic Electric Company  
20 Turnpike Road  
Westboro, Massachusetts 01581

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