

Docket Nos. 50-269
50-270 ✓
and 50-287

JUL 15 1970

Duke Power Company
Power Building
422 South Church Street
Charlotte, North Carolina 28201

Attention: Mr. Austin C. Thies
Vice President
Production & Operation

Gentlemen:

We have completed our review of the material that you have filed on the loss-of-coolant accident (LOCA) analysis in connection with your application for operating licenses for the Oconee Nuclear Units.

On the basis of our evaluation of the information you have provided, and our evaluations of the LOCA for other PWR designs, we cannot establish reasonable assurance that your methods of analyses are conservative. We are enclosing a list of questions which, if answered satisfactorily, should permit us to conclude that your ECCS design and analyses are acceptable.

Your response to the enclosure should be expedited so that we may complete our review of your ECCS design.

Sincerely,

Original Signed by
Peter A. Morris

Peter A. Morris, Director
Division of Reactor Licensing

Enclosure:
Additional Information
Request

Distribution:

Docket (3) ✓
AEC PDR (3)
DR Reading
DRL Reading
PWR-2 Reading

C. K. Beck
M. M. Mann
S. Hanauer
F. Schroeder
R. S. Boyd
R. C. DeYoung
D. Ekovholt
T. R. Wilson
E. G. Case
R. R. Maccary
R. W. Klecker
DRS/DRL Br. Chiefs
Licensing Assistant
Attorney, OGC

ACRS (18)
W. Nyer (2)
SD Consult.
DFRoss (3)
ASchwencer

OFFICE ▶	PWR-2/DRL	PWR-2/DRL	PWRs/DRL	DRL	DRL	
SURNAME ▶	DFRoss:pt	CGLong	RCDeYoung	FSchroeder	PAMorris	
DATE ▶	7/16/70	7/17/70	7/17/70	7/17/70	7/16/70	

July 15, 1970

ADDITIONAL INFORMATION REQUEST

1. Provide the results of your evaluation of the LOCA using a multinode analysis (such as your FLASH-2.5 code) for a 28-inch ID, double-ended, cold-leg pipe rupture. In addition to providing information on clad temperature, system pressure, etc, also provide the core and hot channel flow rate in detail sufficient to fully characterize the thermal and hydraulic performance during blowdown. These details should include:
 - a. core pressure drop, quality, mass velocity;
 - b. hot channel pressure drop, quality, mass velocity;
 - c. heat flux distribution in hot channel;
 - d. flow rates in upper and lower plenums;
 - e. flow rate in broken and intact cold-leg and hot-leg piping; and
 - f. flow rate out the break.

Identify the heat transfer correlations used for the various phases of the blowdown and refill period and relate these correlations to the most recent experimental data available.

2. With the same degree of detail, provide the results of your evaluation of a 36-inch ID, double-ended hot-leg pipe rupture.
3. Provide a summary discussion regarding your acceptance criteria for ECCS functional performance. Your discussions should include an identification of any supporting information which has become available as a result of the Commission-sponsored emergency core cooling test programs.