

*Tia*



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

AUG 5 1980

Docket Nos.: 50-369  
and 50-370

Mr. William O. Parker, Jr.  
Vice President - Steam Production  
Duke Power Company  
Post Office Box 33189  
422 South Church Street  
Charlotte, North Carolina 28242

Dear Mr. Parker:

Subject: Cladding Swelling & Rupture Models for LOCA Analyses  
(McGuire Nuclear Station, Units No. 1 & 2)

As a result of our review of your application for an operating license, we find that we are in need of some additional information regarding your LOCA analyses. This information is described in the enclosure and has previously been provided to your staff.

We request that you provide this information by August 15, 1980.

Sincerely,

Robert L. Tedesco, Assistant Director  
for Licensing  
Division of Licensing

Enclosure:  
Request for Additional  
Information

cc w/encl:  
See next page

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ENCLOSURE

The NRC staff has been generically evaluating three materials models that are used in ECCS evaluations. Those models predict cladding rupture temperature, cladding burst strain, and fuel assembly flow blockage. We have (a) discussed our evaluation with vendors and other industry representatives (Reference 1), (b) published NUREG-0630, "Cladding Swelling and Rupture Models for LOCA Analysis" (Reference 2), and (c) required licensees to confirm that their operating reactors would continue to be in conformance with 10 CFR 50.46 if the NUREG-0630 models were substituted for the present materials models in their ECCS evaluations and certain other compensatory model changes were allowed (References 3 and 4).

Until we have completed our generic review and implemented new acceptance criteria for cladding models, we will require that the ECCS analyses in your FSAR be accompanied by supplemental calculations to be performed with the materials models of NUREG-0630. For these supplemental calculations only, we will accept other compensatory model changes that may not yet be approved by the NRC, but are consistent with the changes allowed for the confirmatory operating reactor calculations mentioned above.

Please provide the supplemental calculations described above.

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