

Docket No.: 50-413

September 18, 1986

Mr. H. B. Tucker, Vice President
Nuclear Production Department
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

Subject: Issuance of Amendment No. 12 to Facility Operating License NPF-35
Catawba Nuclear Station, Unit 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 12 to Facility Operating License NPF-35 for the Catawba Nuclear Station, Unit 1. This amendment is in response to your letter dated June 6, 1986.

The amendment changes a license condition to permit an extension of time for the submittal of the steam generator tube rupture analysis. The amendment is effective as of its date of issuance.

A copy of the related safety evaluation supporting Amendment No. 12 to Facility Operating License NPF-35 is enclosed.

Notice of issuance will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,

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Kahtan Jabbour, Project Manager
PWR Project Directorate #4
Division of PWR Licensing-A

Enclosures:

- 1. Amendment No. 12 to NPF-35
- 2. Safety Evaluation

cc w/encl:
See next page

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PDR ADOCK 05000413
PDR

Mr. H. B. Tucker
Duke Power Company

Catawba Nuclear Station

cc:

William L. Porter, Esq.
Duke Power Company
P.O. Box 33189
Charlotte, North Carolina 28242

North Carolina Electric Membership
Corp.
3333 North Boulevard
P.O. Box 27306
Raleigh, North Carolina 27611

J. Michael McGarry, III, Esq.
Bishop, Liberman, Cook, Purcell
and Reynolds
1200 Seventeenth Street, N.W.
Washington, D. C. 20036

Saluda River Electric Cooperative,
Inc.
P.O. Box 929
Laurens, South Carolina 29360

North Carolina MPA-1
Suite 600
3100 Smoketree Ct.
P.O. Box 29513
Raleigh, North Carolina 27626-0513

Senior Resident Inspector
Route 2, Box 179N
York, South Carolina 29745

Mr. C. D. Markham
Power Systems Division
Westinghouse Electric Corp.
P.O. Box 355
Pittsburgh, Pennsylvania 15230

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission,
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

NUS Corporation
2536 Countryside Boulevard
Clearwater, Florida 33515

Mr. Heyward G. Shealy, Chief
Bureau of Radiological Health
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

County Manager of York County
York County Courthouse
York South Carolina 29745

Karen E. Long
Assistant Attorney General
N.C. Department of Justice
P.O. Box 629
Raleigh, North Carolina 27602

Richard P. Wilson, Esq.
Assistant Attorney General
S.C. Attorney General's Office
P.O. Box 11549
Columbia, South Carolina 29211

Spence Perry, Esquire
Associate General Counsel
Federal Emergency Management Agency
Room 840
500 C Street
Washington, D. C. 20472

Piedmont Municipal Power Agency
100 Memorial Drive
Greer, South Carolina 29651

Mark S. Calvert, Esq.
Bishop, Liberman, Cook,
Purcell & Reynolds
1200 17th Street, N.W.
Washington, D. C. 20036

Mr. Michael Hirsch
Federal Emergency Management Agency
Office of the General Counsel
Room 840
500 C Street, S.W.
Washington, D. C. 20472

Brian P. Cassidy, Regional Counsel
Federal Emergency Management Agency,
Region I
J. W. McCormach POCH
Boston, Massachusetts 02109

September 18, 1986

AMENDMENT NO. 12 TO FACILITY OPERATING LICENSE NPF-35 -
CATAWBA NUCLEAR POWER STATION, UNIT 1

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

DUKE POWER COMPANY

NORTH CAROLINA ELECTRIC MEMBERSHIP CORPORATION

SALUDA RIVER ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-413

CATAWBA NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 12
License No. NPF-35

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Catawba Nuclear Station, Unit 1 (the facility) Facility Operating License No. NPF-35 filed by the Duke Power Company acting for itself, North Carolina Electric Membership Corporation and Saluda River Electric Cooperative, Inc., (licensees) dated June 6, 1986, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, Facility Operating License No. NPF-35 is hereby changed as follows:

A. Change paragraph 2.C.(16) to read as follows:

Steam Generator Tube Rupture (Section 15.4.4, SER, SSER #2)

Prior to startup following the second refueling outage, Duke Power Company shall submit for NRC staff review and approval an analysis which demonstrates that the steam generator single-tube rupture analysis presented in the FSAR is the most severe case with respect to the release of fission products and calculated doses. Consistent with the analytical assumptions, Duke Power Company shall propose any necessary changes to Appendix A to this license.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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Kahtan Jabbour, Project Manager
PWR Project Directorate No. 4
Division of PWR Licensing-A

Date of Issuance: September 18, 1986

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO.12 TO FACILITY OPERATING LICENSE NPF-35

CATAWBA NUCLEAR STATION, UNIT 1

DUKE POWER COMPANY, ET AL.

INTRODUCTION

By letter dated June 6, 1986, Duke Power Company, et al., (the licensee) proposed that License Condition 2.C.(16) of Facility Operating License NPF-35 be amended to allow an extension of time for the submittal of the licensee's steam generator tube rupture (SGTR) analysis. The extension would be for one complete cycle of operation.

EVALUATION

In NPF-35 issued on January 17, 1985, license condition 2.C.(16) regarding SGTR analysis stated that: "Prior to startup following the first refueling outage, Duke Power Company shall submit for NRC staff review and approval an analysis which demonstrates that the steam generator single-tube rupture analysis presented in the FSAR is the most severe case with respect to the release of fission products and calculated doses. Consistent with the analytical assumptions, Duke Power Company shall propose any necessary changes to Appendix A to this license."

The amendment to the above license condition would be accomplished by replacing "first" by "second." Thus, the first part will then read: "Prior to startup following the second refueling outage, Duke Power Company shall submit...." The balance of the condition remains the same.

The following paragraphs provide the justification for the change.

As a result of the Ginna SGTR event, the staff has questioned the assumptions used in the SGTR analysis presented in the Catawba and other Westinghouse plant FSARs, including the capability of plant operators to terminate the event in 30 minutes, and whether systems and components credited to mitigate the accident consequences are safety grade. In response to these concerns, a subgroup of utilities in the Westinghouse Owners Group (WOG), of which Duke Power Company is a member, was formed to address the licensing issues associated with the SGTR event on a generic basis. The subgroup submitted: (1) WCAP-10698, "SGTR Analysis Methodology to Determine Margin to Steam Generator Overfill" in December 1984; (2) Supplement 1 to WCAP-10698, "Evaluation of Offsite Radiation Doses for SGTR Accident" in May 1985; (3) WCAP-11002, "Evaluation of Steam Generator Overfill due to SGTR Accident" in February 1986. The staff has completed its review of Supplement 1 to WCAP-10698 and concluded that plant specific radiological consequence analyses would still be required.

The staff will prepare a generic SER which will include evaluation of the SGTR systems analyses and assumed operator action times in WCAP-10698 and WCAP-11002. The staff will also require plant specific information including radiological consequences analyses, analyses of steam line static load in the event of overfill and justification that systems and components credited in the analyses to mitigate accident consequences are safety grade. The staff recommends that the licensee submit all plant specific information at least six months prior to the second refueling shutdown, in order to enable the staff to review it in a timely manner.

The staff concludes that there is reasonable assurance that Catawba Unit 1 can operate for the first two fuel cycles before this issue is resolved, because: (1) the probability of a design basis SGTR during the first two fuel cycles is low; (2) in the event of the design basis SGTR, the offsite consequences can be expected to be within 10 CFR Part 100 guidelines, particularly if no liquid release occurs; (3) the core melt probability from a single tube rupture is very low (Reference 1); (4) systems and components utilized for accident mitigation are generally safety grade. With regard to Item (4), the licensee plans to upgrade the pressurizer and steam generator PORVs to safety grade, by the end of the current first refueling outage for Unit 1. In Supplements 2 and 5 to Catawba SER, the staff found that this upgrade was acceptable. The upgrade of the PORVs to safety grade provides additional assurance that the PORVs will operate as intended if called upon to depressurize the RCS in the event of a design basis SGTR accident. Thus, the staff finds that the time extension to allow submittal of SGTR analysis prior to startup of Catawba Unit 1 following the second refueling outage is acceptable.

ENVIRONMENTAL CONSIDERATION

The amendment involves a change in use of facility components located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there have been no public comments on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (51 FR 28996) on August 13, 1986, and consulted with the state of South Carolina. No public comments were received, and the state of South Carolina did not have any comments.

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Reference

(1) NUREG-0844, "NRC Integrated Program for the Resolution of Unresolved Safety Issues A-3, A-4 & A-5 Regarding Steam Generator Tube Integrity," Draft Report for Comment, April 1985

Principal Contributors: Kahtan Jabbour, PWR#4/DPWR-A
Bernard Mann, RSB/DPWR-A

Dated: September 18, 1986