

Docket Nos.: 50-413  
and 50-414

October 28, 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. 18 to Facility Operating License  
NPF-35 and Amendment No. 8 to Facility Operating License  
NPF-52 - Catawba Nuclear Station, Units 1 and 2

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 18 to Facility Operating License NPF-35 and Amendment No. 8 to Facility Operating License NPF-52 for the Catawba Nuclear Station, Units 1 and 2. These amendments consist of changes to the Technical Specifications in response to your application dated August 4, 1986, and supplemented August 22, September 17, October 6, 1986.

These amendments modify Technical Specifications Table 3.7-1 related to the maximum allowable power range neutron flux high setpoint with inoperable steam line safety valves during four loop operation. The amendments are effective as of their date of issuance. A copy of the related safety evaluation supporting Amendment No. 18 to Facility Operating License NPF-35 and Amendment No. 8 to Facility Operating License NPF-52 is enclosed.

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

Sincerely,

*KS*

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

Enclosures:

1. Amendment No. 18 to NPF-35
2. Amendment No. 8 to NPF-52
3. Safety Evaluation

cc w/encl:  
See next page

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PDR ADDCK 05000413  
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Mr. H. B. Tucker  
Duke Power Company

Catawba Nuclear Station

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October 28, 1986

AMENDMENT NO. 18 TO FACILITY OPERATING LICENSE NPF-35 -  
CATAWBA NUCLEAR POWER STATION, UNIT 1  
AMENDMENT NO. 8 TO FACILITY OPERATING LICENSE NPF-52 -  
CATAWBA NUCLEAR POWER STATION, UNIT 2

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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. 18  
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 August 4, 1986, and supplemented August 22, September 17, and October 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.

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PDR ADOCK 05000413  
P PDR

2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-35 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 18, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. Duke Power Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

151

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

Attachment:  
Technical Specification Changes

Date of Issuance: October 28, 1986

PWR#4/DPWR-A  
MDuncan/mac  
09/24/86

*KNJ*  
PWR#4/DPWR-A  
KJabbour  
09/22/86

OGC-Beth  
*JOHNSON*  
09/18/86  
10/15/86  
~~10/15/86~~

*Stm*  
PWR#4/DPWR-A  
BJYoungblood  
09/28/86  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

DUKE POWER COMPANY

NORTH CAROLINA MUNICIPAL POWER AGENCY NO. 1

PIEDMONT MUNICIPAL POWER AGENCY

DOCKET NO. 50-414

CATAWBA NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 8  
License No. NPF-52

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Catawba Nuclear Station, Unit 2 (the facility) Facility Operating License No. NPF-52 filed by the Duke Power Company acting for itself, North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency (licensees) dated August 4, 1986, and supplemented August 22, September 17, and October 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, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-52 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 8, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. Duke Power Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

151

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

Attachment:  
Technical Specification Changes

Date of Issuance: October 28, 1986

PWR#4/DPWR-A  
MDuncan/mac  
09/24/86

*KJS*  
PWR#4/DPWR-A  
KJabbour  
09/22/86

OGC-Beth  
*J. Johnson*  
09/23/86  
*10/13/86*  
*as reviewed*  
*10/13/86*

*D. St. for*  
PWR#4/DPWR-A  
BJYoungblood  
09/24/86  
*10*

ATTACHMENT TO LICENSE AMENDMENT NO. 18

FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

AND TO

LICENSE AMENDMENT NO. 8

FACILITY OPERATING LICENSE NO. NPF-52

DOCKET NO. 50-414

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised page is identified by Amendment number and contains vertical lines indicating the areas of change. The corresponding overleaf page is also provided to maintain document completeness.

Amended  
Page

3/4 7-2

Overleaf  
Page

3/4 7-1



### 3/4.7 PLANT SYSTEMS

#### 3/4.7.1 TURBINE CYCLE

##### SAFETY VALVES

#### LIMITING CONDITION FOR OPERATION

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3.7.1.1 All main steam line Code safety valves associated with each steam generator shall be OPERABLE with lift settings as specified in Table 3.7-2.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With four reactor coolant loops and associated steam generators in operation and with one or more main steam line Code safety valves inoperable, operation in MODES 1, 2, and 3 may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or the Power Range Neutron Flux High Trip Setpoint is reduced per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.7.1.1 No additional requirements other than those required by Specification 4.0.5.

TABLE 3.7-1

MAXIMUM ALLOWABLE POWER RANGE NEUTRON FLUX HIGH SETPOINT WITH  
INOPERABLE STEAM LINE SAFETY VALVES DURING FOUR LOOP OPERATION

<u>MAXIMUM NUMBER OF INOPERABLE SAFETY VALVES ON ANY OPERATING STEAM GENERATOR</u>	<u>MAXIMUM ALLOWABLE POWER RANGE NEUTRON FLUX HIGH SETPOINT (PERCENT OF RATED THERMAL POWER)</u>
1	87
2	65
3	43
4 or 5	2*

\*Unit operation shall be restricted to no greater than Mode 3. This is applicable for one time, prior to entering Mode 2 following the first refueling outage.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 18 TO FACILITY OPERATING LICENSE NPF-35  
AND AMENDMENT NO. 8 TO FACILITY OPERATING LICENSE NPF-52  
CATAWBA NUCLEAR STATION, UNITS 1 AND 2  
DUKE POWER COMPANY, ET AL.

INTRODUCTION

By letter dated August 4, 1986, Duke Power Company, et al., (the licensee) proposed changes to Technical Specifications (TS) Tables 3.6-1, 3.6-2a and 3.7-1 for Catawba Nuclear Station, Units 1 and 2. The changes to Tables 3.6-1 and 3.6-2a were necessary to include the addition of a containment penetration and a containment isolation valve which was planned during the current Unit 1 refueling outage. In the August 22, 1986, letter, the licensee stated that due to scheduler constraints the penetration and valve will not be added during this refueling outage. Thus, the following evaluation only addresses the change to TS Table 3.7-1 which is necessary in order to allow setpoint testing of the main steam relief valves that were all termed "inoperable" due to the replacement of the springs. Furthermore, the September 17 and October 6, 1986, letters clarified the TS change request and proposed to: (1) restrict the reactor operation to no greater than Mode 3 (i.e., reactor subcritical, Hot Standby), (2) to make the change applicable for one time only for each Unit, prior to entering Mode 2 (Startup) following the first refueling outage, and (3) to reduce the high trip setpoint of the power range neutron flux monitor from 109% to 2% of rated thermal power to provide further protection in addition to item (1) above that restricts reactor operation to no greater than Mode 3 (i.e., reactor subcritical).

EVALUATION

TS Table 3.7-1 specifies the maximum allowable power range neutron flux high setpoint (percent of rated thermal power) for inoperable safety valves on any operating steam generator. Previously, the lowest setpoint was 43 percent rated thermal power for three inoperable safety valves. During the current refueling outage the licensee (at the manufacturer's recommendation) is planning to replace the springs in all of the safety valves in Unit 1 making all of them technically "inoperable." In order for the valves to be declared operable, they must be tested for proper setpoint while at operating temperature and pressure. The previous specification did not allow entering Mode 3 and remaining in Mode 3 long enough to successfully test all of the valves. The proposed change to Table 3.7-1 would allow up to five main steam line safety valves to be inoperable if the reactor is restricted to no greater than Mode 3. In Mode 3 the reactor may attain operating temperature and pressure but must be subcritical.

The "operability" of the main steam line safety valves ensures that the secondary system pressure will be limited to within 110% (1304 psig) of its design pressure of 1185 psig during the most severe anticipated system operational transient. Since all the safety valves are considered inoperable before they are properly set, other means of secondary system overpressure protection have been provided while the reactor is in Mode 3. The normal means of heat removal and pressure regulation is the steam dump to the condenser. The steam dump is backed up by the automatic opening of the steam line PORVs on high pressure. The automatic controls for the PORVs are not safety grade however the operators were instructed to manually open them if necessary to prevent secondary system overpressure. The manual controls for the PORVs are safety grade and are located in the control room. Because of the low rate of heat addition, ample time would be available to the operator to open the PORVs if required to prevent the maximum allowable secondary system pressure of 1304 psig from being exceeded. In addition, the licensee will reduce the power range monitor neutron flux high setpoint trip to 2% of rated thermal power. This provides diversity to the source range monitor trip. Although as originally requested, the high setpoint would have been zero, as opposed to 2%, this change was necessitated in order to allow withdrawal of some of the control rods (part of Mode 3-i.e., subcritical-operation). Thus, this change does not affect the requirement for Mode 3 that the reactor must remain subcritical. The 2% trip setpoint is adequate because it is well below the 25% trip setpoint of the intermediate range neutron flux monitor and well above the 0% trip setpoint to avoid instrument drift. This is consistent with the restriction that the reactor must remain subcritical.

Based on the above discussion, the staff concludes that the proposed change to Table 3.7-1 is not detrimental to the health and safety of the public and is, therefore, acceptable.

#### ENVIRONMENTAL CONSIDERATION

The amendments involve 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 amendments involve 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 exposures. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there have been no public comments on such finding. Accordingly, the amendments meet 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 amendments.

#### CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (51 FR 32266) on September 10, 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: Kahtan Jabbour, PWR#4/DPWR-A  
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Dated: October 28, 1986