Docket Nos.: 50-413

and 50-414

September 8, 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. 9 TO FACILITY OPERATING LICENSE NPF-35

AND AMENDMENT NO. 2 TO FACILITY OPERATING LICENSE NPF-52

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

The Nuclear Regulatory Commission has issued the enclosed Amendment No.9 to Facility Operating License NPF-35 and Amendment No.2 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 July 22, 1985, and supplemented September 11, 1985, March 7, 1986, and June 12, 1986.

The amendments change the Technical Specifications to increase the allowed out-of-service times for Reactor Trip System analog channels. The amendments are effective as of their date of issuance.

The changes authorized by these amendments have been accepted on the basis of the staff's Safety Evaluation Report of February 21, 1985, regarding WCAP-10271, "Evaluation of Surveillance Frequencies and Out-of-Service Times for the Reactor Protection Instrumentation System," and Supplement 1 thereto.

A copy of the related safety evaluation supporting Amendment No. 9 to Facility Operating License NPF-35 and Amendment No. 2 to Facility Operating License NPF-52 is enclosed.

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

Sincerely,

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

Enclosures:

1. Amendment No. 9 to NPF-35

2. Amendment No. 2 to NPF-52

Safety Evaluation

cc w/enclosures: See next page/

PWR#4/DPWR-A MDùncan/rad 08/35/86 PWR#4/DPWR-A KJabbour 08/15/86 PWR#4/DPWR-A BJYoungblood 08/5/86 Mr. H. B. Tucker Duke Power Company

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Mr. Michael Hirsch Federal Emergency Management Agency Office of the General Counsel Room 840 500 C Street, S.W. Washington, D. C. 20472 AMENDMENT NO. 9 TO FACILITY OPERATING LICENSE NPF-35 - CATAWBA NUCLEAR POWER STATION, UNIT 1 AMENDMENT NO. 2 TO FACILITY OPERATING LICENSE NPF-52 -CATAWBA NUCLEAR POWER STATION, UNIT 2

## DISTRIBUTION: w/enclosures:

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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. 9 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., (the licensee) dated July 22, 1985, and supplemented September 11, 1985 and June 12, 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 amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - 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-35 is hereby amended to read as follows:

## (2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 9, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into the 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

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

Attachment: Technical Specification Changes

Date of Issuance: September 8, 1986

PWR#4/DPWR-A MDuncan 04/25/86 PWR#4/DPWR-A KJabbour/rad 02/4 4/86 PWR#4/DPWR-A BJYoungblood 09/5/86



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

#### DUKE POWER COMPANY

#### NORTH CAROLINA ELECTRIC MEMBERSHIP CORPORATION

### PIEDMONT MUNICIPAL POWER AGENCY

DOCKET NO. 50-414

## CATAWBA NUCLEAR STATION, UNIT 2

#### AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 2 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. NFP-52 filed by the Duke Power Company, acting for itself, North Carolina Electric Membership Corporation, and Piedmont Municipal Power Agency, (the licensee) dated July 22, 1985, and supplemented September 11, 1985, March 7, 1986 and June 12, 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 amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - 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-35 is hereby amended to read as follows:

## (2) <u>Technical Specifications</u>

The Technical Specifications contained in Appendix A, as revised through Amendment No. 2, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into the 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 N. Jabbour, Project Manager PWR Project Directorate #4 Division of Licensing-A

Attachment: Technical Specification Changes

Date of Issuance: September 8, 1986

PWR#4/DPWR-A MDuncan 0\$/25/86 PWR#4/DPWR-A KJabbour/rad 00/45/86

**JOHNSA** OGC-Beth O**q**/**Q**/86 PWR#4/DPWR-A BJYoungblood 09/5/86

## ATTACHMENT TO LICENSE AMENDMENT NO. 9

### FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

AND

### TO LICENSE AMENDMENT NO. 2

## 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 pages are identified by Amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

Amended	Overleaf		
Page	Page		
3/4 3-2 3/4 3-3 3/4 3-5 3/4 3-6	3/4 3-1 3/4 3-4		

## 3/4.3 INSTRUMENTATION

## 3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION .

## LIMITING CONDITION FOR OPERATION

3.3.1 As a minimum, the Reactor Trip System instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE with RESPONSE TIMES as shown in Table 3.3-2.

APPLICABILITY: As shown in Table 3.3-1.

#### ACTION:

As shown in Table 3.3-1.

## SURVEILLANCE REQUIREMENTS

- 4.3.1.1 Each Reactor Trip System instrumentation channel and interlock and the automatic trip logic shall be demonstrated OPERABLE by the performance of the Reactor Trip System Instrumentation Surveillance Requirements specified in Table 4.3-1.
- 4.3.1.2 The REACTOR TRIP SYSTEM RESPONSE TIME of each Reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one train such that both trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

	<u></u>					
FUNC	CTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1.	Manual Reactor Trip	2 2	1	<b>2</b> 2	1, 2 3*, 4*, 5*	1 10
2.	Power Range, Neutron Flux a. High Setpoint b. Low Setpoint	<b>4</b> <b>4</b>	2 2	3 3	1, 2 1###, 2	2# 2#
3.	Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	2#
4.	Power Range, Neutron Flux, High Negative Rate	4	2	` 3	1, 2	2#
5.	Intermediate Range, Neutron Flux	2	1	2	1###, 2	3
6.	Source Range, Neutron Flux a. Startup b. Shutdown	2 2	1	2 2	2## 3, 4, 5	4 5
7.	Overtemperature $\Delta T$ Four Loop Operation	4	2	3	1, 2	6#
8.	Overpower ΔT Four Loop Operation	4	2	. 3	1, 2	6#
9.	Pressurizer Pressure-Low	4	2	3	1	6#**

TABLE 3.3-1 (Continued)

## REACTOR TRIP SYSTEM INSTRUMENTATION

FUNC	CTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
10.	Pressurizer Pressure-High	4	2	3	1, 2	6#**
11.	Pressurizer Water Level-High	3	2	2	1	6#
12.	Reactor Coolant Flow-Low a. Single Loop (Above P-8)	3/1oop	2/loop in any oper- ating loop	2/loop in each oper- ating loop	1	6#
	b. Two Loops (Above P-7 and below P-8)	3/1oop	2/loop in two oper-ating loops	2/loop each oper- ating loop	1	6#
13.	Steam Generator Water LevelLow-Low	4/stm gen	2/stm gen in any operating stm gen	3/stm gen each operating stm gen	1, 2	6#**
14.	Undervoltage-Reactor Coolant Pumps (Above P-7)	4-1/bus	2	3	1	6#
15.	Underfrequency-Reactor Coolant Pumps (Above P-7)	4-1/bus	2	3	1	6#
16.	Turbine Trip a.l Low Control Valve EH Pressure - (Unit 1)	4	2	3	1###	6#
	a.2 Stop Valve EH Pressure - Low (Unit 2)	4	2	3	1###	6#
	b. Turbine Stop Valve Closure	4	4	1	1###	11#
17.	Safety Injection Input from ESF	2	1	2	1, 2	9

TABLE 3.3-1 (Continued)

## REACTOR TRIP SYSTEM INSTRUMENTATION

FU	NCTIO	NAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
18	3. Reac a.	actor Trip System Interlocks Intermediate Range Neutron Flux, P-6	2	1	2	2##	8
	b.	Low Power Reactor Trips Block, P-7 P-10 Input	4	2	3	1	8
		or P-13 Input	2	1	2	1	
	c.	Power Range Neutron Flux, P-8	4	2	`3	1	8
	d.	Power Range Neutron Flux, P-9	4	2	3	1	8
	е.	Power Range Neutron Flux, P-10	4	2	3	· 1	8
	f.	Power Range Neutron Flux, Not P-10	4	3	4	1, 2	8
	g.	Turbine Impulse Chamber Pressure, P-13	2	1	2	1	8
19.	Reac	ctor Trip Breakers	2 2	1 1	2	1, 2 3*, 4*, 5*	9 10
20.	Auto Logi	omatic Trip and Interlock c	2 2	1	2 2	1, 2 3*, 4*, 5*	9 10

## TABLE 3.3-1 (Continued)

#### TABLE NOTATIONS

\*Only if the Reactor Trip System breakers happen to be in the closed position and the Control Rod Drive System is capable of rod withdrawal.

\*\*Comply with the provisions of Specification 3.3.2, for any portion of the channel required to be OPERABLE by Specification 3.3.2.

#The provisions of Specification 3.0.4 are not applicable.
##Below the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint.
###Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) Setpoint.
####Above the P-9 (Reactor Trip on Turbine Trip Interlock) Setpoint.

#### **ACTION STATEMENTS**

- ACTION 1 With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours.
- ACTION 2 With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:
  - a. The inoperable channel is placed in the tripped condition within 6 hours,
  - b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1, and
  - c. Either, THERMAL POWER is restricted to less than or equal to 75% of RATED THERMAL POWER and the Power Range Neutron Flux trip setpoint is reduced to less than or equal to 85% of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours per Specification 4.2.4.2.
- ACTION 3 With the number of channels OPERABLE one less than the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:
  - a. Below the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 Setpoint; or
  - b. Above the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint but below 10% of RATED THERMAL POWER, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above 10% of RATED THERMAL POWER.

## TABLE 3.3-1 (Continued)

## ACTION STATEMENTS (Continued)

- ACTION 4 With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, suspend all operations involving positive reactivity changes.
- ACTION 5 With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or open the Reactor trip breakers, suspend all operations involving positive reactivity changes and verify Valves NV-231, NV-237, NV-241, and NV-244 are closed and secured in position within the next hour.
- ACTION 6 With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:
  - The inoperable channel is placed in the tripped condition within 6 hours, and
  - b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1.
- ACTION 7 Delete
- ACTION 8 With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive status light(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.
- ACTION 9 With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.
- ACTION 10 With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or open the Reactor trip breakers within the next hour.
- ACTION 11 With the number of OPERABLE channels less than the Total Number of Channels, operation may continue provided the inoperable channels are placed in the tripped condition within 6 hours.



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

# SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION RELATED TO AMENDMENT NO.9 TO FACILITY OPERATING LICENSE NPF-35

## AND AMENDMENT NO.2 TO FACILITY OPERATING LICENSE NPF-52

DUKE POWER COMPANY, et al

#### CATAWBA NUCLEAR STATION, UNITS 1 AND 2

#### INTRODUCTION

On February 21, 1985, the NRC staff issued its Safety Evaluation Report (SER) on the Westinghouse Technical Specification Optimization Program for increased surveillance intervals and out-of-service times for testing and maintenance of the Reactor Trip System (RTS). The Optimization Program proposal was set forth in WCAP-10271, "Evaluation of Surveillance Frequencies and Out-of-Service Times for Reactor Protection Instrumentation System," and Supplement 1 thereto.

By letter dated July 22, 1986, Duke Power Company, et al., (the licensee) proposed several changes to the Catawba Technical Specifications based on the Optimization Program. One of these proposed changes, which sought to allow RTS analog channel testing in a bypassed condition instead of a tripped condition, was withdrawn by a subsequent letter from the licensee, dated September 11, 1985. The remaining proposed changes have been evaluated by the NRC staff. A March 7, 1986, letter requested that the above changes also be approved for Catawba Unit 2 which received its low power license on February 24, 1986. The June 12, 1986, letter clarified the licensee's request regarding the turbine stop valve closure/turbine trip.

## **EVALUATION**

These amendments increase, from one to six hours, the time during which an inoperable RTS analog channel may be maintained in an untripped condition (See Table 3.3-1, Action Statements 2a and 6a in the revised Technical Specifications). The time an inoperable RTS analog channel may be bypassed to allow testing of another channel in the same function is increased from two to four hours (See Table 3.3-1, Action Statements 2b and 6b in the revised Technical Specifications). A cautionary note is added to the action statements referencing the more stringent requirements for Engineered Safety Feature Actuation System (ESFAS) channels for RTS analog channels common to ESFAS (See Table 3.3-1, Functional Units 9, 10, and 13 and Note \*\*). The time an inoperable turbine stop valve instrument channel (associated with the reactor trip system) may be maintained in an untripped condition is increased from one hour to six hours (See Table 3.3-1, Action Statement 11 in the revised Technical Specifications. We find these changes to be consistent with those which we reviewed and accepted for the Optimization Program proposal. Therefore, the staff finds these changes acceptable on the bases set forth in the staff's February 21, 1985, SER.

The amendments delete Action Statement 7 and substitute a reference to Action Statement 6 for those reactor trip channels which referenced Action Statement 7 (See Table 3.3-1, Functional Units 11, 12 and 16a in the revised Technical Specifications). This change is discussed in Supplement 1 to WCAP-10271 and results from the similarity and the intent of Action Statements 6 and 7. Further, the staff in a July 24, 1985, letter from Harold R. Denton to L.B. Butterfield identified this to be a specific acceptable revision in the model technical specifications provided to the Westinghouse Owner Group (WOG). On this basis, the staff finds this change acceptable as proposed by the licensee.

## 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 a change 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 exposure. 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 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 proposed determinations that the amendments involve no significant hazards consideration which were published in the Federal Register (50 FR 51620) on December 18, 1985, for Catawba Unit 1 and (51 FR 10456) on March 26, 1986, for Catawba Unit 2, 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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: Kahtan Jabbour, PD#4

Fred Burrows, EISCB Richard Emch, TOSB

Dated: September 8, 1986