

November 24, 1987

Docket Nos.: 50-413
and 50-414

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. 35 to Facility Operating License NPF-35
and Amendment No. 26 to Facility Operating License NPF-52 - Catawba
Nuclear Station, Units 1 and 2 (TACS 65861/65862)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 35 to Facility Operating License NPF-35 and Amendment No. 26 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 27, 1987, and supplemented October 8, 1987.

The amendments revise the Technical Specifications to reflect a modification to the Unit 1 turbine trip circuitry. The amendments are effective as of the date of issuance.

A copy of the related safety evaluation supporting Amendment No. 35 to Facility Operating License NPF-35 and Amendment No. 26 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
Project Directorate II-3
Division of Reactor Projects I/II

Enclosures:

- 1. Amendment No. 35 to NPF-35
- 2. Amendment No. 26 to NPF-52
- 3. Safety Evaluation

cc w/encl:
See next page

DISTRIBUTION:
See attached page

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McGrover
PDII-3/DRPI/II
Acting Director
11/17/87

Mr. H. B. Tucker
Duke Power Company

Catawba Nuclear Station

cc:

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50-413

DATED November 24, 1987

AMENDMENT NO. 35 TO FACILITY OPERATING LICENSE NPF-35 -
CATAWBA NUCLEAR POWER STATION, UNIT 1
AMENDMENT NO. 26 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. 35
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 July 27, 1987, and supplemented October 8, 1987, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and 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 rules and 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-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. 35, 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

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Lawrence P. Crocker, Acting Director
Project Directorate II-3
Division of Reactor Projects I/II

Attachment:
Technical Specification Changes

Date of Issuance: November 24, 1987

MD
PDII-3/DRPI/II
MDuncan/rad
11/3/87

KNJ
PDII-3/DRPI/II
KJabbour
11/3/87

RWB
OGC-Bethesda
RBachmann
11/9/87

MB
PDII-3/DRPI/II
Acting Director
11/17/87



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. 26
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 July 27, 1987, and supplemented October 8, 1987, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and 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 rules and 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. 26, 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

(S)

Lawrence P. Crocker, Acting Director
Project Directorate II-3
Division of Reactor Projects I/II

Attachment:
Technical Specification Changes

Date of Issuance: November 24, 1987

MD
PDII-3/DRPI/II
MDuncan/rad
11/3/87

KNT
PDII-3/DRPI/II
KJabbour
11/3/87

CB
OGC-Bethesda
RBachman
11/9/87

LP Crocker
PDII-3/DRPI/II
Acting Director
11/17/87

ATTACHMENT TO LICENSE AMENDMENT NO. 35

FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

AND

TO LICENSE AMENDMENT NO. 26

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.

Amended
Page

2-5
3/4 3-3
3/4 3-8
3/4 3-10

TABLE 2.2-1 (Continued)
REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TOTAL ALLOWANCE (TA)</u>	<u>Z</u>	<u>SENSOR ERROR (S)</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
13. Steam Generator Water Level Low-Low					
a. Unit 1	17	14.2	1.5	>17% of span from 0% to 30% RTP* increasing linearly to > 40.0% of span from 30% to 100% RTP*	>15.3% of span from 0% to 30% RTP* increasing linearly to >38.3% of span from 30% to 100% RTP*
b. Unit 2	17	14.2	1.5	>17% of narrow range span	>15.3% of narrow range span
14. Undervoltage - Reactor Coolant Pumps	8.57	0	1.0	>77% of bus voltage (5082 volts) with a 0.7s response time	>76% (5016 volts)
15. Underfrequency - Reactor Coolant Pumps	4.0	0	1.0	>56.4 Hz with a 0.2s response time	>55.9 Hz
16. Turbine Trip					
a. Stop Valve EH Pressure Low	N.A.	N.A.	N.A.	>550 psig	>500 psig
b. Turbine Stop Valve Closure	N.A.	N.A.	N.A.	>1% open	>1% open
17. Safety Injection Input from ESF	N.A.	N.A.	N.A.	N.A.	N.A.

*RTP = RATED THERMAL POWER

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL 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/loop	2/loop in any operating loop	2/loop in each operating loop	1	6#
b. Two Loops (Above P-7 and below P-8)	3/loop	2/loop in two operating loops	2/loop each operating loop	1	6#
13. Steam Generator Water Level--Low-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. Stop Valve EH Pressure - Low	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

CATAWBA - UNITS 1 & 2

3/4 3-3

Amendment No. 35 (Unit 1)
Amendment No. 26 (Unit 2)

TABLE 3.3-2 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION RESPONSE TIMES

<u>FUNCTIONAL UNIT</u>	<u>RESPONSE TIME</u>
12. Low Reactor Coolant Flow	
a. Single Loop (Above P-8)	< 1 second
b. Two Loops (Above P-7 and below P-8)	≤ 1 second
13. Steam Generator Water Level-Low-Low	
a. Unit 1	< 3.5 seconds
b. Unit 2	≤ 2.0 seconds
14. Undervoltage-Reactor Coolant Pumps	≤ 1.5 seconds
15. Underfrequency-Reactor Coolant Pumps	≤ 0.6 second
16. Turbine Trip	
a. Stop Valve EH Pressure-Low	N.A.
b. Turbine Stop Valve Closure	N.A.
17. Safety Injection Input from ESF	N.A.
18. Reactor Trip System Interlocks	N.A.
19. Reactor Trip Breakers	N.A.
20. Automatic Trip and Interlock Logic	N.A.

CATAWBA - UNITS 1 & 2

3/4 3-8

Amendment No. 35 (Unit 1)
Amendment No. 26 (Unit 2)

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
13. Steam Generator Water Level-Low-Low	S	R(13)	M	N.A.	N.A.	1, 2
14. Undervoltage - Reactor Coolant Pumps	N.A.	R	N.A.	M	N.A.	1
15. Underfrequency - Reactor Coolant Pumps	N.A.	R	N.A.	M	N.A.	1
16. Turbine Trip						
a. Stop Valve EH Pressure - Low	N.A.	R	N.A.	S/U(1, 10)	N.A.	1#
b. Turbine Stop Valve Closure	N.A.	R	N.A.	S/U(1, 10)	N.A.	1#
17. Safety Injection Input from ESF	N.A.	N.A.	N.A.	R**	N.A.	1, 2
18. Reactor Trip System Interlocks						
a. Intermediate Range Neutron Flux, P-6	N.A.	R(4)	M	N.A.	N.A.	2##
b. Low Power Reactor Trips Block, P-7	N.A.	R(4)	M(8)	N.A.	N.A.	1
c. Power Range Neutron Flux, P-8	N.A.	R(4)	M(8)	N.A.	N.A.	1
d. Low Power Range Neutron Flux, P-9	N.A.	R(4)	M(8)	N.A.	N.A.	1

** This surveillance need not be performed until prior to entering STARTUP following the Unit 1 first refueling.

CATAMBA - UNITS 1 & 2

3/4 3-10

Amendment No. 35 (Unit 1)
Amendment No. 26 (Unit 2)



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 35 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 26 TO FACILITY OPERATING LICENSE NPF-52
CATAWBA NUCLEAR STATION, UNITS 1 AND 2
DUKE POWER COMPANY, ET AL.

INTRODUCTION

By letter dated July 27, 1987, Duke Power Company, et al., (the licensee) proposed amendments to revise Technical Specification (TS) 2.2.1, Table 2.2-1 and TS 3/4.3.1, Tables 3.3-1, 3.3-2 and 4.3-1 to reflect a modification to the Catawba Unit 1 turbine trip circuitry which would relocate an anticipatory reactor trip on turbine trip input pressure signal from the turbine control valves to the turbine stop valves. Catawba Unit 2 has already implemented this modification and is included only administratively because the TSs for both units are combined in one document. By letter dated October 8, 1987, the licensee clarified certain aspects of the request. However, the substance of the changes noticed in the Federal Register and the proposed no significant hazards consideration determination were not affected.

EVALUATION

The Catawba Unit 1 anticipatory reactor trip on turbine trip was previously actuated, for reactor powers greater than 70 percent, by a low pressure signal from 2 out of 4 pressure switches which sense the turbine control valve electro-hydraulic oil pressure, or by valve closed signals from 4 out of 4 turbine steam stop valve limit switches. The proposed modification would move the 4 pressure switches and associated control packs from the main control valves to the main stop valves. Thus, a main turbine power-load mismatch would still result in the closure of the control and intercept valves but an unnecessary reactor trip signal will not be generated because the main stop valves would not produce the trip signal. No credit was taken for this trip in any of the safety analyses included in Chapter 15 of the Final Safety Analysis Report.

This modification would bring Unit 1 design and TS in agreement with those for Unit 2. Also, unnecessary reactor trips and resulting challenges to the reactor protection system would be eliminated without any adverse effects on plant systems or safe shutdown of the plant.

Based on the above evaluation, the staff finds that the licensee's request is acceptable.

ENVIRONMENTAL CONSIDERATION

The amendments involve changes to the installation or 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 (52 FR 34003) on September 9, 1987. The Commission 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.

Principal Contributors: Kahtan Jabbour, PWR#4/DPWR-A
Fred H. Burrows, ICSB/DEST
Donald Katze, SRXB/DEST

Dated: November 24, 1987