

May 19, 2000

Mr. G. R. Peterson
Site Vice President
Catawba Nuclear Station
Duke Energy Corporation
4800 Concord Road
York, South Carolina 29745-9635

SUBJECT: CATAWBA NUCLEAR STATION, UNITS 1 AND 2 RE: ISSUANCE OF
AMENDMENTS (TAC NOS. MA6259, MA6260, MA6261, MA6262, MA6263,
MA6264)

Dear Mr. Peterson:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 186 to Facility Operating License NPF-35 and Amendment No. 179 to Facility Operating License NPF-52 for the Catawba Nuclear Station, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated August 4, 1999, as supplemented by letter dated April 19, 2000.

The amendments revise the Limiting Conditions for Operation for the Reactor Coolant System (RCS) Subcooling Margin Monitor in TS Table 3.3.3-1 and revise the functions associated with surveillance requirements for RCS Loops-Test Exceptions in TS 3.4.17. Your letter dated April 19, 2000, withdrew the proposal to relocate the Auxiliary Feedwater Loss of Offsite Power function to TS 3.3.5. The other changes requested by the August 4, 1999, application were addressed under separate correspondence.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Chandu P. Patel, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414

Enclosures:

1. Amendment No. 186 to NPF-35
2. Amendment No. 179 to NPF-52
3. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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cc w/encls: See next page

Catawba Nuclear Station

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Catawba Nuclear Station

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY CORPORATION
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. 186
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 Energy Corporation, acting for itself, North Carolina Electric Membership Corporation and Saluda River Electric Cooperative, Inc. (licensees), dated August 4, 1999, as supplemented by letter dated April 19, 2000, 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, 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 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 attachment 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. 186 , which are attached hereto, are hereby incorporated into this license. Duke Energy Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard L. Emch, Jr.

Richard L. Emch, Jr., Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: May 19, 2000



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY CORPORATION

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.179
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 Energy Corporation, acting for itself, North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency (licensees), dated August 4, 1999, as supplemented by letter dated April 19, 2000, 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, 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 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 attachment 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

The Technical Specifications contained in Appendix A, as revised through Amendment No. 179 , which are attached hereto, are hereby incorporated into this license. Duke Energy Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard L. Emch, Jr.

Richard L. Emch, Jr., Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: May 19, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 186

FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

AND LICENSE AMENDMENT NO. 179

FACILITY OPERATING LICENSE NO. NPF-52

DOCKET NO. 50-414

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

Insert

3.3.3-4

3.3.3-4

3.4.17-1

3.4.17-1

B3.3.3-10

B3.3.3-10

B3.4.17-3

B3.3.17-3

Table 3.3.3-1 (page 1 of 1)
Post Accident Monitoring Instrumentation

	FUNCTION	REQUIRED CHANNELS	CONDITIONS
1.	Reactor Coolant System (RCS) Hot Leg Temperature (Wide Range)	2	B,D,F,H
2.	RCS Cold Leg Temperature (Wide Range)	2	B,D,F,H
3.	RCS Pressure (Wide Range)	2	B,D,F,H
4.	Reactor Vessel Water Level	2	B,D,F,H
5.	Containment Sump Water Level (Wide Range)	2	B,D,F,H
6.	Containment Pressure (Wide Range)	2	B,D,F,H
7.	Containment Area Radiation (High Range)	1	B,D
8.	Hydrogen Monitors	2	B,D,G,H
9.	Pressurizer Level	2	B,D,F,H
10.	Steam Generator Water Level (Narrow Range)	2 per steam generator	B,D,F,H
11.	Core Exit Temperature - Quadrant 1	2(a)	B,D,F,H
12.	Core Exit Temperature - Quadrant 2	2(a)	B,D,F,H
13.	Core Exit Temperature - Quadrant 3	2(a)	B,D,F,H
14.	Core Exit Temperature - Quadrant 4	2(a)	B,D,F,H
15.	Auxiliary Feedwater Flow	1 per steam generator	C,D,E,H
16.	RCS Radiation Level	1	B,D
17.	RCS Subcooling Margin Monitor	2	B,D,F,H
18.	Steam Line Pressure	2 per steam generator	B,D,F,H
19.	Refueling Water Storage Tank Level	2	B,D,F,H
20.	Neutron Flux (Wide Range)	2	B,D,F,H
21.	Steam Generator Water Level (Wide Range)	1 per steam generator	C,D,E,H

(a) A channel consists of two core exit thermocouples (CETs).

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.17 RCS Loops — Test Exceptions

LCO 3.4.17 The requirements of LCO 3.4.4, "RCS Loops — MODES 1 and 2," may be suspended, with THERMAL POWER < P-7.

APPLICABILITY: MODES 1 and 2 during startup and PHYSICS TESTS.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. THERMAL POWER \geq P-7.	A.1 Open reactor trip breakers.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.17.1 Verify THERMAL POWER is < P-7.	1 hour
SR 3.4.17.2 Perform a COT for each power range neutron flux-low and intermediate range neutron flux channel, P-10, and P-13.	Prior to initiation of startup and PHYSICS TESTS

BASES

LCO (continued)

One channel per SG of AFW flow is required to be OPERABLE. Diverse indication of AFW flow is provided by SG level.

16. RCS Radiation Level

The RCS radiation monitor provides indication of radiation levels within the primary coolant and alerts the operator to possible fuel clad failures.

One channel of RCS radiation level is required OPERABLE. This monitor was not installed to quantify accident conditions and cannot be assured flow following an accident. Diverse or backup information for this variable is provided by sampling and analysis of the primary coolant.

17. RCS Subcooling Margin Monitor

RCS subcooling margin monitoring indication is provided to allow unit stabilization and cooldown control. RCS subcooling margin monitoring indication will provide information to the operators to allow termination of SI, if still in progress, or reinitiation of SI if it has been stopped.

The margin to saturation is calculated from RCS pressure and temperature measurements. The average of the five highest core exit thermocouples are used to represent core conditions and the wide range hot leg RTDs are used to measure loop hot leg temperatures. The ICCM System performs the calculations and comparisons to saturation curves. A graphic display over the required range gives the operator a representation of primary system conditions compared to various curves of importance (saturation, NDT, etc.). Two trains of RCS Subcooling Margin Monitor are provided and two trains are required to be OPERABLE.

A backup program exists to ensure the capability to accurately monitor RCS subcooling. The program includes training and a procedure to manually calculate subcooling margin, using control room pressure and temperature instruments.

18. Steam Line Pressure

Steam Line Pressure is provided to monitor operation of decay heat removal via the SGs. Steam line pressure is also used to determine if a high energy secondary line rupture occurred and which SG is faulted.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.4.17.1

Verification that the power level is < the P-7 interlock setpoint (10%) will ensure that the fuel design criteria are not violated during the performance of the PHYSICS TESTS. The Frequency of once per hour is adequate to ensure that the power level does not exceed the limit. Plant operations are conducted slowly during the performance of PHYSICS TESTS and monitoring the power level once per hour is sufficient to ensure that the power level does not exceed the limit.

SR 3.4.17.2

The power range and intermediate range neutron detectors and P-10 and P-13 inputs to the P-7 interlock setpoint must be verified to be OPERABLE and adjusted to the proper value. A COT is performed prior to initiation of the PHYSICS TESTS. This will ensure that the RTS is properly aligned to provide the required degree of core protection during the performance of the PHYSICS TESTS.

REFERENCES

1. 10 CFR 50, Appendix B, Section XI.
2. 10 CFR 50, Appendix A, GDC 1, 1988.
3. 10 CFR 50.36, Technical Specifications, (c)(2)(ii).



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 186 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 179 TO FACILITY OPERATING LICENSE NPF-52
DUKE ENERGY CORPORATION, ET AL.
CATAWBA NUCLEAR STATION, UNITS 1 AND 2
DOCKET NOS. 50-413 AND 50-414

1.0 INTRODUCTION

By letter dated August 4, 1999, as supplemented by letter dated April 19, 2000, Duke Energy Corporation, et al. (DEC, the licensee), submitted a request for changes to the Catawba Nuclear Station, Units 1 and 2, Technical Specifications (TS). The requested changes would modify the TS for engineered safety feature actuation systems instrumentation, loss of power diesel generator start instrumentation, reactor coolant system (RCS) - test exceptions, post-accident monitoring instrumentation, and unit staff qualifications. This Safety Evaluation addresses the licensee's proposals to (1) relocate the Auxiliary Feedwater Loss of Offsite Power function from TS Table 3.3.2-1 to TS 3.3.5, (2) revise Limiting Conditions for Operation for RCS Subcooling Margin Monitor in TS Table 3.3.3-1, and (3) revise functions associated with surveillance requirements (SR) for RCS Loops-Test Exceptions in TS 3.4.17. Items (2) and (3) are evaluated below. By letter dated April 19, 2000, the licensee withdrew the request for Item (1). The other changes requested by the August 4, 1999, application were addressed in separate correspondence.

The April 19, 2000, letter withdrew one of the proposed changes as discussed above, and it did not change the previous no significant hazard consideration determination.

3.0 DISCUSSION AND EVALUATION

3.1 RCS Subcooling Margin Monitor- TS Table 3.3.3-1

In Supplement 5 of the Improved Standard Technical Specifications (ISTS) license amendment request dated June 24, 1998, the licensee proposed to increase the number of required channels for TS Table 3.3.3-1, function 17, RCS Subcooling Margin indication from 1 to 2. On September 30, 1998, the NRC approved the ISTS for Catawba Nuclear Station, Units 1 and 2. Changes associated with ISTS increased the number of required RCS Subcooling Margin Monitor channels from one to two without changing the corresponding conditions.

Proposed Change: Replace conditions C and E with conditions B and F for TS Table 3.3.3-1, function 17.

Evaluation: The required conditions currently specified in TS 3.3.3-1 for the RCS Subcooling Margin Monitor (C, D, E, H) correspond to functions with only one required channel. However, TS Table 3.3.3-1 specifies conditions B, D, F, H for functions with two required channels. The

completion times are the same for single and dual channel functions. The single channel functions rely on a diverse channel to provide an additional function indication, and conditions C and E address the operability status of the diverse channel. Based on the increase in required channels from 1 to 2 for TS 3.3.3-1, function 17; RCS Subcooling Margin Monitor, reference to conditions corresponding to a diverse channel is not warranted. In addition, the licensee proposed to add clarifying language to Bases Section 3.3.3, item 17, RCS Subcooling Margin Monitor, and to correct a typographical error (use of a period instead of a comma) in Table 3.3.3-1, function 2, RCS Cold Leg Temperature. The staff finds the proposed changes editorial in nature and therefore acceptable.

2.2 RCS Loops - Test Exceptions - SR 3.4.17.2

TS 3.4.17 specifies RCS Loops-Test Exceptions. SR 3.4.17.2 of the test exception requires a channel operational test (COT) for each power range neutron flux-low and intermediate range neutron flux channel and P-7. The licensee indicated that P-7 provides a logic operation for the Low Power Reactor Trips Block function, which receives inputs from function P-10, Power Range Neutron Flux, and function P-13, Turbine Impulse Pressure. Therefore, the appropriate test for P-7 would be a COT for P-10 and P-13.

Proposed Change: Modify SR 3.4.17.2 to reference P-10 and P-13 instead of P-7.

Evaluation: Verification of the P-7 interlock would require a COT for each channel of turbine impulse pressure and a COT for each channel of nuclear instrumentation system power range. Therefore, since P-7 is a logic function, reference to P-7 in SR. 3.4.17.2 is inappropriate. Instead, the COT should be performed for those functions providing input to P-7.

TS 3.3.1, Table 3.3.1-1, function 16b correctly specifies an actuation logic test for the P-7 function. In addition, Table 3.3.1-1, functions 16e and 16f, correctly specify both a channel calibration and a COT for functions P-10 and P-13, respectively. Based on the Table 3.3.1-1 functions 16b, 16e, and 16f, SR 3.4.17.2 should specify a COT for P-10 and P-13, instead of P-7.

The staff finds the proposed change clarifies and more accurately reflects the testing of P-7 and the intent of SR 3.4.17.2 and is therefore acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the South Carolina State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC 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 radiation exposure. The Commission has previously issued a proposed finding

that the amendments involve no significant hazards consideration, and there has been no public comment on such finding [64 FR 48861]. 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.

5.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) 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 Contributor: A. L. Bryant

Date: May 19, 2000