

August 25, 1998

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

SUBJECT: ISSUANCE OF AMENDMENTS - CATAWBA NUCLEAR STATION, UNITS 1
AND 2 (TAC NOS. MA0357 AND MA0358)

Dear Mr. Peterson:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 169 to Facility Operating License NPF-35 and Amendment No. 161 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 December 11, 1997.

The amendments revise TS Table 3.3-4, Engineered Safety Feature Actuation System Instrumentation Trip Setpoints, to require that suction of the Nuclear Service Water System be swapped from Lake Wylie to the Standby Nuclear Service Water Pond at a higher minimum water level of Lake Wylie. Specifically, the amendments change the swap setpoint from ≥ 554.4 feet to ≥ 557.5 feet, and the allowable value from ≥ 552.9 feet to ≥ 555.4 feet. In the December 11, 1997, submittal you indicated that the more conservative setpoint has been implemented in the plant's Instrument Data Sheets, calculations, and procedures. The early implementation (i.e., before the TS is revised) of the new values reflects your proactive application of conservatism to safety.

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,
ORIGINAL SIGNED BY:

Peter S. Tam, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414

Enclosures:

1. Amendment No. 169 to NPF-35
2. Amendment No. 161 to NPF-52
3. Safety Evaluation

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OFFICE	PDII-2/PM	PDII-2/LA	SPLB	SPLB/SC	OGC	PDII-2
NAME	P.Tam	L.Berry	C.Gratton	G.Hubbard	R.Buchmann	H.Berkow
DATE	7/30/98	7/22/98	7/13/98	7/14/98	8/11/98	8/25/98
COPY	YES NO	YES	YES NO	YES NO	YES NO	YES NO

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

August 25, 1998

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Site Vice President
Catawba Nuclear Station
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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,

A handwritten signature in black ink that reads "Peter S. Tam".

Peter S. Tam, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414

Enclosures:

1. Amendment No. 169 to NPF-35
2. Amendment No. 161 to NPF-52
3. Safety Evaluation

cc w/encls: See next page

Catawba Nuclear Station

cc:

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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. 169
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 December 11, 1997, 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. 169 , 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 from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: August 25, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 169

FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains a vertical line indicating the areas of change.

Remove

3/4 3-35

Insert

3/4 3-35

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
13. Annulus Ventilation Operation		
a. Manual Initiation	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
c. Safety Injection	See Item 1. above for all Safety Injection Setpoints and Allowable Values.	
14. Nuclear Service Water Operation		
a. Manual Initiation	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
c. Loss-of-Offsite Power	≥ 3500 V	≥ 3242 V
d. Containment Spray	See Item 2. above for all Containment Spray Setpoints and Allowable Values.	
e. Phase "B" Isolation	See Item 3.b. above for all Phase "B" Isolation Setpoints and Allowable Values.	
f. Safety Injection	See Item 1. above for all Safety Injection Setpoints and Allowable Values.	
g. Suction Transfer-Low Pit Level	≥ El. 557.5 ft.	≥ El. 555.4 ft.



**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. 161
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 December 11, 1997, 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. 161, 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 from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: August 25, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 161

FACILITY OPERATING LICENSE NO. NPF-52

DOCKET NO. 50-414

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains a vertical line indicating the areas of change.

Remove

3/4 3-35

Insert

3/4 3-35

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
13. Annulus Ventilation Operation		
a. Manual Initiation	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
c. Safety Injection	See Item 1. above for all Safety Injection Setpoints and Allowable Values.	
14. Nuclear Service Water Operation		
a. Manual Initiation	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.
c. Loss-of-Offsite Power	≥ 3500 V	≥ 3242 V
d. Containment Spray	See Item 2. above for all Containment Spray Setpoints and Allowable Values.	
e. Phase "B" Isolation	See Item 3.b. above for all Phase "B" Isolation Setpoints and Allowable Values.	
f. Safety Injection	See Item 1. above for all Safety Injection Setpoints and Allowable Values.	
g. Suction Transfer-Low Pit Level	≥ El. 557.5 ft.	≥ El. 555.4 ft.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 169 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 161 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 December 11, 1997, Duke Energy Corporation, et al. (the licensee), submitted a request for changes to the Catawba Nuclear Station, Units 1 and 2, Technical Specifications (TS). The requested change would revise TS Table 3.3-4, Engineered Safety Feature Actuation System Instrumentation Trip Setpoints, to require that suction of the Nuclear Service Water System (designated as RN) be swapped from Lake Wylie to the Standby Nuclear Service Water Pond (SNSWP) at a higher water level of Lake Wylie.

2.0 DISCUSSION AND EVALUATION

The RN design and performance analyses are described in Section 9.2.1 of the Catawba Final Safety Analysis Report and Updated Final Safety Analysis Report, and was evaluated by the staff in Section 9.2.1 of the staff's Catawba Safety Evaluation Report (NUREG-0954). The primary function of the RN system is to supply cooling water to various heat loads in both the safety and nonsafety portions of each unit. Two bodies of water serve as the ultimate heat sink for the components cooled by the RN system. Lake Wylie is the normal water source, while the SNSWP, formed by a Class 1 seismically designed dam, is the alternate source if the water level of Lake Wylie becomes too low.

RN pump intake pit level transmitters, safety-graded instruments, alert the operators that a low level condition exists in the pumphouse pits and initiate a swap of the pit suction source from Lake Wylie to the SNSWP. Currently, TS Table 3.3-4, Item 14.g, specifies the swap to occur at a nominal setpoint at elevation (Lake Wylie water level) ≥ 554.4 feet, with an allowed minimum value of ≥ 552.9 feet to accommodate the instrument drift assumed to occur between operational tests and the accuracy to which setpoints can be measure and calibrated.

The licensee proposed to revise the nominal swap setpoint to ≥ 557.5 feet and the allowable value to ≥ 555.4 feet, i.e., increasing the specified values in a conservative direction. The licensee stated that subsequent to the time of initial plant licensing, and as part of the licensee's self-improvement process, the methodology for calculating instrument loop uncertainty was revised to use a more conservative technique. The new method identifies more possible error

terms and therefore, yields more conservative numbers. Based on the licensee's revised calculations, the instrument loop error for the RN pump intake pit level transmitters was increased to 1.8 feet from the 1 foot used in the original calculations.

During the same review, the licensee also identified that the setpoint and allowable value currently specified in the TS may not ensure adequate net positive suction head (NPSH) to the RN pumps. The licensee's revised calculations determined that there would be adequate NPSH if the minimum RN pump intake pit level is maintained above the ≥ 555.4 feet elevation. Therefore, the licensee proposed to revise the RN suction swap setpoint to ≥ 557.5 feet to provide for adequate margin.

In the December 11, 1997, submittal, the licensee indicated that the values for the swapover trip setpoint and the minimum allowable lake level had already been incorporated in the plant's Instrument Data Sheets, calculations, and procedures. Incorporation of the revised values into plant procedures and calculations does not contradict the current TS and reflects the licensee's proactive application of conservatism to safety.

The staff has reviewed the licensee's proposed amendment to increase the current setpoint and allowable minimum values for lake level as recorded by the Nuclear Service Water Pump Intake Pit Level Transmitters. The higher trip setpoint and minimum allowable values are based on an updated, more conservative methodology and provide added assurance that sufficient NPSH will be available to the RN system pumps under normal and accident conditions. Therefore, the staff finds the proposed changes acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the South Carolina State official, Mr. Virgil Autrey, 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, 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 (63 FR 6983 dated February 11, 1998). 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 Contributors: Christopher Gratton
Peter Tam

Date: August 25, 1998