

January 14, 1999

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. MA4135 AND MA4136)

Dear Mr. Peterson:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 174 to Facility Operating License NPF-35 and Amendment No. 166 to Facility Operating License NPF-52 for the Catawba Nuclear Station, Units 1 and 2, in response to your application dated November 11, 1998.

The amendments revise Surveillance Requirements (SRs) 3.6.11.6 and 3.6.11.7, regarding the Containment Pressure Control System (CPCS), of the units' joint Technical Specifications. The revision brings the SRs into conformity with the current design of the CPCS.

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. 174 to NPF-35
2. Amendment No. 166 to NPF-52
3. Safety Evaluation

cc w/encl: See next page

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

January 14, 1999

Mr. G. R. Peterson  
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Sincerely,

A handwritten signature in black ink, reading "Peter S. Tam". The signature is stylized with a large, sweeping "P" and "T".

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:

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3. Safety Evaluation

cc w/encl: See next page

Catawba Nuclear Station

cc:

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Catawba Nuclear Station

cc:

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North Carolina Department of  
Environment, Health, and  
Natural Resources  
3825 Barrett Drive  
Raleigh, North Carolina 27609-7721



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. 174  
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 November 11, 1998, 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.

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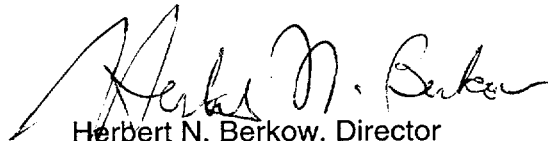
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-35 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 174 , 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, to be implemented concurrently with implementation of Amendment No. 173.

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: January 14, 1999



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. 166  
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 November 11, 1998, 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.

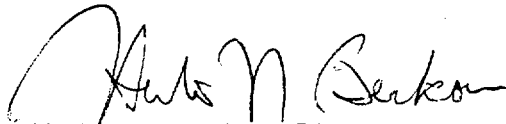
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-52 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 166, 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, to be implemented concurrently with implementation of Amendment No. 165.

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: January 14, 1999



ATTACHMENT TO LICENSE AMENDMENT NOS. 174 AND 166

FACILITY OPERATING LICENSE NOS NPF-35 AND NPF-52

DOCKET NOS. 50-413 AND 50-414

Replace the following page of the joint Technical Specifications (Appendix A of the Operating Licenses) with the enclosed page. The revised page is identified by amendment number and contains vertical lines indicating the areas of change.

Remove

Insert

3.6.11-2

3.6.11-2

Replace the following page of the Technical Specifications Bases with the enclosed page. The revised page is identified by amendment number and contains vertical lines indicating the areas of change.

Remove

Insert

B 3.6.11-5

B 3.6.11-5

## SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.11.2 Verify, with the ARS air return fan damper closed and with the bypass dampers open, each ARS fan motor current is $\leq 59.0$ amps when the fan speed is $\geq 1174$ rpm and $\leq 1200$ rpm.	92 days
SR 3.6.11.3 Verify, with the ARS fan not operating, each ARS motor operated damper opens automatically on an actual or simulated actuation signal after a delay of $\geq 9$ seconds and $\leq 11$ seconds.	92 days
SR 3.6.11.4 Verify the check damper is open with the ARS fan operating.	92 days
SR 3.6.11.5 Verify the check damper is closed with the ARS fan not operating.	92 days
SR 3.6.11.6 Verify that each ARS fan is de-energized or is prevented from starting upon receipt of a terminate signal from the Containment Pressure Control System (CPCS) and is allowed to start upon receipt of a start permissive from the CPCS.	18 months
SR 3.6.11.7 Verify that each ARS fan motor-operated damper is prevented from opening in the absence of a start permissive from the Containment Pressure Control System (CPCS) and is allowed to open upon receipt of a start permissive from the CPCS.	18 months

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BASES

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## SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.11.3

Verifying the OPERABILITY of the return air damper provides assurance that the proper flow path will exist when the fan is started. This Surveillance also tests the circuitry, including time delays to ensure the system operates properly. The Frequency of 92 days was developed considering the importance of the dampers, their location, physical environment, and probability of failure. Operating experience has also shown this Frequency to be acceptable.

SR 3.6.11.4 and SR 3.6.11.5

Verifying the OPERABILITY of the check damper in the air return fan discharge line to the containment lower compartment provides assurance that the proper flow path will exist when the fan is started and that reverse flow can not occur when the fan is not operating. The Frequency of 92 days was developed considering the importance of the dampers, their location, physical environment, and probability of failure. Operating experience has also shown this Frequency to be acceptable.

SR 3.6.11.6 and SR 3.6.11.7

These SRs require verification that each ARS motor operated damper is allowed to open or is prevented from opening and each ARS fan is allowed to start or is de-energized or prevented from starting based on the presence or absence of Containment Pressure Control System start permissive and terminate signals. The CPCS is described in the Bases for LCO 3.3.2, "ESFAS." The 18 month Frequency is based on operating experience which has shown it to be acceptable.

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REFERENCES

1. UFSAR, Section 6.2.
2. 10 CFR 50, Appendix K.
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. 174 TO FACILITY OPERATING LICENSE NPF-35

AND AMENDMENT NO. 166 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

On November 11, 1998, Duke Energy Corporation (DEC, the licensee) requested that Surveillance Requirements (SRs) 3.6.11.6 and 3.6.11.7 be revised. DEC has determined that these SRs, as they currently stand, are not in agreement with the existing design. The staff's review of DEC's proposed revision is set forth below.

2.0 DISCUSSION AND EVALUATION

As stated in the Catawba Final Safety Analysis Report (FSAR) Section 7.6.5 and the Catawba Updated Final Safety Analysis Report (UFSAR), Section 7.6.4, the function of the Containment Pressure Control System (CPCS) is to protect the containment building from excessive depressurization by preventing inadvertent actuation or continuous operation of the Containment Spray System (CSS) and Air Return System (ARS) when containment pressure is at or less than the CPCS permissive setpoint. Details of the design of the CPCS are discussed in the cited sections of the FSAR or UFSAR. The staff approved the CPCS design in Section 7.3.2.10 of the Catawba Safety Evaluation Report (NUREG-0954, dated February 1983).

The control scheme of the CPCS is comprised of eight independent control circuits (four per train), each having a separate and independent pressure transmitter and current alarm module. Each pressure transmitter monitors the containment pressure and provides input to its respective current alarm. The current alarms are set to inhibit or terminate the CSS and the ARS when containment pressure falls to or below 0.25 psig. The alarm modules switch back to the permissive state (i.e., allow the CSS and ARS to operate) when the containment pressure is greater than or equal to 0.45 psig.

2.1 SR 3.6.11.6

This SR currently requires DEC, every 18 months, to "Verify that each ARS fan is de-energized or is prevented from starting upon receipt of a terminate signal from the containment Pressure Control System (CPCS)."

DEC proposed to add a phrase at the end of this requirement "and is allowed to start upon receipt of a start permissive from the CPCS." The revised SR would require testing of all relevant CPCS functions associated with allowing the fans to start and deenergizing or

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preventing them from starting. Currently, in the absence of this phrase in SR 3.6.11.6, the licensee has imposed such requirement by plant procedures.

Figure 7-14 of the UFSAR shows that the ARS fan receives both a start permissive and a stop or terminate signal from the CPCS. The licensee's proposed phrase would, therefore, accurately reflect the current design of the CPCS. Furthermore, the proposed phrase does not involve any change to the current design of the CPCS. The proposed phrase is an additional requirement to verify the operability of the system, and the staff finds it acceptable.

## 2.2 SR 3.6.11.7

This SR currently requires DEC, every 18 months, to "Verify that ARS fan motor-operated damper closes or is prevented from opening upon receipt of a terminate signal and is allowed to open upon receipt of a start permissive from the Containment Pressure Control System (CPCS)."

A design change was made in 1994 under 10 CFR 50.59, in accordance with DEC's Nuclear Station Modification CN-11321. A summary of CN-11321 is found in DEC's submittal, W. R. McCollum to NRC, March 27, 199[6], NRC Accession 9604010373. After the 1994 design modification, the ARS fan motor-operated damper does not receive a close or terminate signal from the CPCS. Therefore, DEC proposed to delete that portion of the SR pertaining to verification of damper closing, and to replace the reference to receipt of a terminate signal with a reference to the absence of a start permissive signal. The current SR 3.6.11.7 does not fully reflect the current CPCS design. The proposed change would bring this SR to conformity with the current design of the CPCS: the UFSAR, and specifically Figure 7-14 show that the ARS fan motor-operated damper receives an open permissive from the CPCS, but not a close or terminate signal. DEC stated that the ARS design does not require motor-operated damper closure due to the fact that the fan will stop when required and the check damper is closed when the fan is not operating.

The staff reviewed DEC's proposed surveillance requirement against the design described in the UFSAR, and reviewed DEC's CN-11321. The staff agrees that the proposed SR would reflect the current design of the CPCS, and is, therefore, 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 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 staff 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 66591 published December 2, 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 staff 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: H. Li  
P. Tam

Date: January 14, 1999