December 8, 1994

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Mr. David L. Rehn
Vice President, Catawba Site
Duke Power Company
4800 Concord Road
York, SC 29745

SUBJECT: ISSUANCE OF AMENDMENTS - CATAWBA NUCLEAR STATION, UNITS 1 AND 2, AUXILIARY FEEDWATER PUMP TESTING INTERVAL, (TAC NOS. M90335 AND M90336)

Dear Mr. Rehn:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 126 to Facility Operating License NPF-35 and Amendment No. 120 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 25, 1994.

The amendments revise the testing interval for auxiliary feedwater (AFW) system pumps from monthly to quarterly on a staggered test basis. The amendments are consistent with the guidance in NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements" and Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation." In addition, a note is incorporated from NUREG-1431, "Revised Standard Technical Specifications, Westinghouse Plants" into the TS clarifying that the turbine-driven AFW pump cannot be tested until the required pressure exists in the secondary side of the steam generator.

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,

/s/
Robert E. Martin, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-413 and 50-414

Enclosures:
1. Amendment No. 126 to NPF-35
2. Amendment No. 120 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

December 8, 1994

Mr. David L. Rehn
Vice President, Catawba Site
Duke Power Company
4800 Concord Road
York, SC 29745

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3. Safety Evaluation

cc w/encl: See next page

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Catawba Nuclear Station

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

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. 126
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 August 25, 1994, 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.

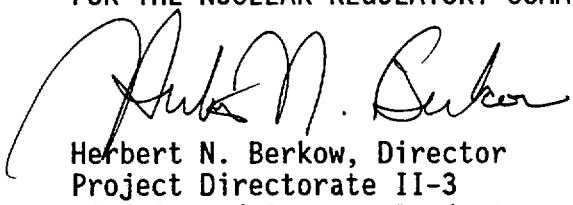
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-35 is hereby amended to read as follows:

   Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 126 , 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 and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: December 8, 1994

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

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. 120
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 August 25, 1994, 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:

   Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 120 , 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 and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Herbert N. Berkow, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: December 8, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 126

FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

AND

TO LICENSE AMENDMENT NO. 120

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.

Remove Pages	Insert Pages
3/4 7-4	3/4 7-4
3/4 7-5	3/4 7-5
B 3/4 7-2	B 3/4 7-2
*B 3/4 7-2a	B 3/4 7-2a

*Overflow page

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 At least three independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:

a. Two motor-driven auxiliary feedwater pumps, each capable of being powered from separate emergency busses, and

b. One steam turbine-driven auxiliary feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With one auxiliary feedwater pump inoperable, restore the required auxiliary feedwater pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With two auxiliary feedwater pumps inoperable, be in at least HOT STANDBY witin 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With three auxiliary feedwater pumps inoperable, immediately initiate corrective action to restore at least one auxiliary feedwater pump to OPERABLE status as soon as possible.

SURVEILLANCE REQUIREMENTS

4.7.1.2.1 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1) Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position;

2) Verifying that each automatic valve in the flow path is in the fully open position whenever the Auxiliary Feedwater System is placed in automatic control or when above 10% RATED THERMAL POWER; and

3) Verifying that the isolation valves in the auxiliary feedwater pump suction lines are open and that power is removed from the valve operators on Valves CA-2, CA-7A, CA-9B, and CA-11A and that the respective circuit breakers are padlocked.

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 92 days on a STAGGERED TEST BASIS by:

1) Verifying that each motor-driven pump develops a total dynamic head of greater than or equal to 3470 feet at a flow of greater than or equal to 400 gpm; and

2) Verifying that the steam turbine-driven pump develops a total dynamic head of greater than or equal to 3550 feet at a flow of greater than or equal to 400 gpm when the secondary steam supply pressure is greater than 600 psig** and the auxiliary feedwater pump turbine is operating at less than or equal to 3800 rpm. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.

c. At least once per 18 months during shutdown by:

1) Verifying that each automatic valve in the flow path actuates to its correct position upon receipt of an Auxiliary Feedwater Actuation test signal,

2) Verifying that each motor-driven auxiliary feedwater pump starts as designed automatically upon receipt of an Auxiliary Feedwater Actuation test signal,

3) Verifying that the turbine-driven auxiliary feedwater pump steam supply valves open upon receipt of an Auxiliary Feedwater Actuation test signal, and

4) Verifying that the valve in the suction line of each auxiliary feedwater pump from the Nuclear Service Water System automatically actuates to its full open position within less than or equal to 16 seconds* on a Loss-of-Suction test signal.

4.7.1.2.2 An auxiliary feedwater flow path to each steam generator shall be demonstrated OPERABLE following each COLD SHUTDOWN of greater than 30 days prior to entering MODE 2 by verifying normal flowpath to each steam generator.

*Includes a time delay of up to 6 seconds.
**This verification is not required to be performed until 24 hours after achieving greater than or equal to 600 psig in the secondary side of the steam generator.

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The OPERABILITY of the Auxiliary Feedwater System ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating conditions in the event of a feedwater line break accident with a worst case single active failure.

The Auxiliary Feedwater System is capable of delivering a total feedwater flow of at least 492 gpm at a pressure of 1210 psig to the entrance of at least two of the steam generators. This capacity is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F when the Residual Heat Removal System may be placed into operation.

Verification of the steam turbine-driven pump total dynamic head should be deferred until suitable test conditions are established (i.e., greater than or equal to 600 psig in the secondary side of the steam generator). This deferral is required because until 600 psig is reached, there is insufficient steam pressure to perform the test.

3/4.7.1.3 SPECIFIC ACTIVITY

The limitations on Secondary Coolant System specific activity ensure that the resultant offsite radiation dose will be limited to a small fraction of 10 CFR Part 100 dose guideline values in the event of a steam line rupture. This dose also includes the effects of a coincident 1 gpm reactor to secondary tube leak in the steam generator of the affected steam line. These values are consistent with the assumptions used in the safety analyses.

3/4.7.1.4 MAIN STEAM LINE ISOLATION VALVES

The OPERABILITY of the main steam line isolation valves ensures that no more than one steam generator will blow down in the event of a steam line rupture. This restriction is required to: (1) minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown, and (2) limit the pressure rise within containment in the event the steam line rupture occurs within containment. The OPERABILITY of the main steam isolation valves within the closure times of the Surveillance Requirements are consistent with the assumptions used in the safety analyses.

3/4.7.1.5 CONDENSATE STORAGE SYSTEM

The OPERABILITY of the Condensate Storage System with the minimum water volume ensures that sufficient water is available to maintain the Reactor Coolant system at HOT STANDBY conditions for 2 hours followed by approximately 5 hours cooldown with steam discharge to the atmosphere concurrent with total loss-of-offsight power. The contained water volume limit includes an allowance for water not usuable because of tank discharge line location or other physical characteristics.

3/4.7.1.6 STEAM GENERATOR POWER OPERATED RELIEF VALVES

The Surveillance Requirement for the Main Steam power-operated relief valves (PORVs) nitrogen supplies ensures that the PORVs will be available to mitigate the consequences of a steam generator tube rupture accident concurrent with loss of offsite power. This assumes that the PORV on the ruptured steam generator is unavailable, and that the other two are used to cool the Reactor Coolant System inventory to less than the saturation temperature of the ruptured steam generator.

Concurrent with the requirement that a specific number of PORVs be OPERABLE is the requirement that the associated PORV block valves upstream be open or OPERABLE. Should an associated PORV block valve be closed and inoperable, the PORV downstream of that block valve should also be considered inoperable and the applicable ACTION statement shall be entered until such time that the block valve is opened or returned to OPERABLE status.

Additionally, if a PORV is inoperable and open, then the requirements of Technical Specification 3.6.3, Containment Isolation Valves, would apply in addition to Technical Specification 3.7.1.6.

3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

The limitation on steam generator pressure and temperature ensures that the pressure-induced stresses in the steam generators do not exceed the maximum allowable fracture toughness stress limits. The limitations of 70°F and 200 psig are based on a steam generator RTNDT of 60°F and are sufficient to prevent brittle fracture.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 126 TO FACILITY OPERATING LICENSE NPF-35

AND AMENDMENT NO. 120 TO FACILITY OPERATING LICENSE NPF-52

DUKE POWER COMPANY, ET AL.

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-413 AND 50-414

1.0 INTRODUCTION

By letter dated August 25, 1994, Duke Power Company, et al. (the licensee), submitted a request for changes to the Catawba Nuclear Station, Units 1 and 2, Technical Specifications (TS). The requested changes would revise the testing interval for auxiliary feedwater (AFW) system pumps from monthly to quarterly on a staggered test basis. The amendments are consistent with the guidance in NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements" and Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation," dated September 27, 1993. In addition, a note is incorporated from NUREG-1431, "Revised Standard Technical Specifications, Westinghouse Plants" into the TS clarifying that the turbine-driven AFW pump cannot be tested until the required pressure exists in the secondary side of the steam generator. Changes have also been made to the Bases section 3/4.7.1.2 to reflect this note.

2.0 EVALUATION

The NRC has completed a comprehensive examination of surveillance requirements in the TS that require testing during power operation. The evaluation is documented in NUREG-1366, "Improvements to Technical Specification Surveillance Requirements," dated December 1992. The staff found that while the majority of testing at power is important, safety can be improved, equipment degradation decreased, and an unnecessary burden on personnel resources eliminated by relaxing a small fraction of the TS testing intervals. Based on the results of the evaluations documented in NUREG-1366, the NRC issued Generic Letter 93-05.

Section 9.1 of NUREG-1366 discusses the potential advantages of reduced surveillances for the auxiliary feedwater pumps. As noted in the report, although performance of surveillances is an important mechanism in the identification of problems with the auxiliary feedwater pumps, the testing also contributes to the degradation of the pump and system unavailability. The analyses used in the report found that a monthly surveillance test interval may be contributing to AFW pump unavailability through failures and equipment degradation. The report recommended a change in the testing frequency to a quarterly interval. Another advantage of the quarterly testing

is that it is consistent with the requirements of the ASME Code. As discussed in Generic Letter 93-05, the licensee has indicated that the change in surveillance frequency is compatible with observed plant operating experience and is consistent with the NRC guidance on this issue. The change in the footnote eliminates a now obsolete footnote and replaces it with a clarification of when the subject testing is required to be performed. This clarification is consistent with the NRC guidance in NUREG-1431 and is acceptable.

On the bases discussed above, the NRC staff finds the proposed changes to the Catawba TS to be acceptable. The revised Bases pages have been incorporated into the Catawba TS.

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 (59 FR 51619 dated October 12, 1994). 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: R. E. Martin, PD II-3

Date: December 8, 1994