

May 9, 1988

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. 44 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 37 TO FACILITY OPERATING LICENSE NPF-52 - CATAWBA
NUCLEAR STATION, UNITS 1 AND 2 (TACS 67338/60931)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 44 to Facility Operating License NPF-35 and Amendment No. 37 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 March 15, 1985, as supplemented August 7 and November 8, 1985, March 7, April 14, and September 18, 1986, March 16 and August 11, 1987, and April 7, 1988.

The amendments modify the Technical Specifications to increase the interval for surveillance of the ice condenser lower inlet doors. The amendments are effective as of their date of issuance.

A copy of the related safety evaluation supporting Amendment No. 44 to Facility Operating License NPF-35 and Amendment No. 37 to Facility Operating License NPF-52 is enclosed.

Notice of issuance of amendments will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,

Original signed by:

Kahtan N. Jabbour, Project Manager
Project Directorate II-3
Division of Reactor Projects I/II

Enclosures:

1. Amendment No. 44 to NPF-35
2. Amendment No. 37 to NPF-52
3. Safety Evaluation

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cc w/enclosures:
See next page

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4/12/88

DMatthews
5/4/88

Mr. H. B. Tucker
Duke Power Company

Catawba Nuclear Station

cc:

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DATED: May 9, 1988

AMENDMENT NO. TO FACILITY OPERATING LICENSE NPF-35 - Catawba Nuclear Station, Unit 1
AMENDMENT NO. TO FACILITY OPERATING LICENSE NPF-52 - Catawba Nuclear Station, Unit 2

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Catawba R/F

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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. 44
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 March 15, 1985, as supplemented August 7 and November 8, 1985, March 7, April 14, and September 18, 1986, March 16 and August 11, 1987, and April 7, 1988, 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 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

The Technical Specifications contained in Appendix A, as revised through Amendment No. 44 , are hereby incorporated into the license. The licensee 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

Original signed by:

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects-I/II

Attachment:
Technical Specification Changes


Date of Issuance: May 9, 1988

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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. 37
License No. NPR-52

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 Municipal Power Agency No. 1, and Piedmont Municipal Power Agency, (licensees) dated March 15, 1985, as supplemented August 7 and November 8, 1985, March 7, April 14, and September 18, 1986, March 16 and August 11, 1987, and April 7, 1988, 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 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

The Technical Specifications contained in Appendix A, as revised through Amendment No. 37, are hereby incorporated into the license. The licensee 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

Original signed by:

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects-I/II

Attachment:
Technical Specification Changes

Date of Issuance: May 9, 1988

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ATTACHMENT TO LICENSE AMENDMENT NO. 44

FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

AND

TO LICENSE AMENDMENT NO. 37

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. The corresponding overleaf pages are also provided to maintain document completeness.

<u>Amended Page</u>	<u>Overleaf Page</u>
3/4 6-44	3/4 6-43
3/4 6-45	3/4 6/46

CONTAINMENT SYSTEMS

ICE BED TEMPERATURE MONITORING SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.5.2 The Ice Bed Temperature Monitoring System shall be OPERABLE with at least two OPERABLE RTD channels in the ice bed at each of three basic elevations (< 11', 30'9" and 55' above the floor of the ice condenser) for each one-third of the ice condenser.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With the Ice Bed Temperature Monitoring System inoperable, POWER OPERATION may continue for up to 30 days provided:
 1. The ice compartment lower inlet doors, intermediate deck doors, and top deck doors are closed;
 2. The last recorded mean ice bed temperature was less than or equal to 20°F and steady or decreasing ; and
 3. The ice condenser cooling system is OPERABLE with at least:
 - a) Twenty-one OPERABLE air handling units,
 - b) Two OPERABLE glycol circulating pumps, and
 - c) Three OPERABLE refrigerant units.

Otherwise, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

- b. With the Ice Bed Temperature Monitoring System inoperable and with the Ice Condenser Cooling System not satisfying the minimum components OPERABILITY requirements of ACTION a.3 above, POWER OPERATION may continue for up to 6 days provided the ice compartment lower inlet doors, intermediate deck doors, and top deck doors are closed and the last recorded mean ice bed temperature was less than or equal to 15°F and steady; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.2 The Ice Bed Temperature Monitoring System shall be determined OPERABLE by performance of a CHANNEL CHECK at least once per 12 hours.

CONTAINMENT SYSTEMS

ICE CONDENSER DOORS

LIMITING CONDITION FOR OPERATION

3.6.5.3 The ice condenser inlet doors, intermediate deck doors, and top deck doors shall be closed and OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With one or more ice condenser doors open or otherwise inoperable (but capable of opening automatically), POWER OPERATION may continue for up to 14 days provided the ice bed temperature is monitored at least once per 4 hours and the maximum ice bed temperature is maintained less than or equal to 27°F; otherwise, restore the doors to their closed positions or OPERABLE status (as applicable) within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one or more ice condenser door inoperable (not capable of opening automatically), restore all doors to OPERABLE status within 1 hour or be in HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.3.1 Inlet Doors - Ice condenser inlet doors shall be:

- a. Continuously monitored and determined closed by the Inlet Door Position Monitoring System, and
- b. Demonstrated OPERABLE during shutdown at least once per 18 months by:
 - 1) Verifying that the torque required to initially open each door is less than or equal to 675 inch pounds;
 - 2) Verifying that each door is capable of opening automatically in that it is not impaired by ice, frost, debris, or other obstruction;
 - 3) Testing each one of the doors and verifying that the torque required to open each door is less than 195 inch-pounds when the door is 40 degrees open. This torque is defined as the "door opening torque" and is equal to the nominal door torque plus a frictional torque component;

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 4) Testing each one of the doors and verifying that the torque required to keep each door from closing is greater than 78 inch-pounds when the door is 40 degrees open. This torque is defined as the "door closing torque" and is equal to the nominal door torque minus a frictional torque component;
- 5) Calculation of the frictional torque of each door tested in accordance with Specification 4.6.5.3.1b.3) and 4), above. The calculated frictional torque shall be less than or equal to 40 inch-pounds.

4.6.5.3.2 Intermediate Deck Doors - Each ice condenser intermediate deck door shall be:

- a. Verified closed and free of frost accumulation by a visual inspection at least once per 7 days, and
- b. Demonstrated OPERABLE at least once per 3 months during the first year after the ice bed is initially fully-loaded and at least once per 18 months thereafter by visually verifying no structural deterioration, by verifying free movement of the vent assemblies, and by ascertaining free movement when lifted with the applicable force shown below:

<u>Door</u>	<u>Lifting Force</u>
1) Adjacent to Crane Wall	\leq 37.4 lbs,
2) Paired w/Door Adjacent to Crane Wall	\leq 33.8 lbs,
3) Adjacent to Containment Wall	\leq 31.8 lbs, and
4) Paired w/Door Adjacent to Containment Wall	\leq 31.0 lbs.

4.6.5.3.3 Top Deck Doors - Each ice condenser top deck door shall be determined closed and OPERABLE at least once per 92 days by visually verifying:

- a. That the doors are in place, and
- b. That no condensation, frost, or ice has formed on the doors or blankets which would restrict their lifting and opening if required.

CONTAINMENT SYSTEMS

INLET DOOR POSITION MONITORING SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.5.4 The Inlet Door Position Monitoring System shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With the Inlet Door Position Monitoring System inoperable, POWER OPERATION may continue for up to 14 days, provided the Ice Bed Temperature Monitoring System is OPERABLE and the maximum ice bed temperature is less than or equal to 27°F when monitored at least once per 4 hours; otherwise, restore the Inlet Door Position Monitoring System to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.4 The Inlet Door Position Monitoring System shall be determined OPERABLE by:

- a. Performing a CHANNEL CHECK at least once per 12 hours,
- b. Performing a TRIP ACTUATING DEVICE OPERATIONAL TEST at least once per 18 months, and
- c. Verifying that the Monitoring System correctly indicates the status of each inlet door as the door is opened and reclosed during its testing per Specification 4.6.5.3.1.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 44 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 37 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

INTRODUCTION

By letters dated March 15, August 7, and November 8, 1985, April 14, and September 18, 1986, March 16 and August 11, 1987, and April 7, 1988, Duke Power Company (the licensee) proposed certain changes to the Technical Specifications (TS) for Catawba, Units 1 and 2, which would increase the interval for surveillance of the ice condenser lower inlet doors. Catawba TS 4.6.5.3.1b. requires surveillance for 25% of the doors every 6 months. The doors tested at each surveillance must be chosen so that all of the doors will have been tested after 24 months at Catawba. The licensee's proposed changes would require testing/inspection of all the doors every 18 months.

The March 16 and August 11, 1987, and April 7, 1988, submittals clarified certain aspects of the original request. The substance of the changes noticed in the Federal Register and the proposed no significant hazards determination were not affected by these clarifications.

EVALUATION

The licensee's proposed changes will add conservatism to the test frequency for Catawba because testing 25% of the doors every 6 months results in a span of 24 months between tests for any one door. The proposed surveillance interval would allow a maximum of 18 months between the tests for any one door. Therefore, the proposed surveillance interval is at least as conservative as the current surveillance intervals, on an individual door basis.

The staff has also considered the overall effect of the change in surveillance interval on the assurance of continued operability of the lower inlet doors as a system as discussed below.

The primary purpose of the surveillance in question is to determine that the lower inlet doors are capable of opening properly when required during a LOCA or other high-energy line break so that steam released in the lower containment compartment may enter the ice condenser compartment and be condensed by the ice inside. The lower inlet doors are equipped with springs that keep them closed during normal operation. The spring torque is set based on this normal operation function and at this low torque the doors will open rapidly in

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response to a lower compartment pressure increase during a line break. The spring torque aids in preventing maldistribution of flow through the 24 pairs of lower inlet doors during a small line break accident when the doors would only open partially in order to assure equal flow through all door pairs. The surveillance in question requires that various measurements be made of door spring torque, in order to ensure that they can perform the above safety function.

The licensee provided the following information concerning door reliability. As of September 1986, there had been 612 individual door inspections at Catawba, Units 1 and 2. Six tests resulted in unacceptable results, although, upon retest with no modification, adjustment, or repair to the doors, each door passed. The licensee has attributed at least five of the initial failures to inexperience with the use of the test equipment by the test personnel.

From the above information, the staff finds that the doors have generally proven to be highly reliable. However, given that the licensee's proposal would lengthen the interval between the testing of any door (rather than a particular door) from 6 months to 18 months, the staff requested the licensee to address long-term performance of the door hinges and related hardware considering exposure to the ice condenser atmosphere for longer intervals between testing. By letter dated August 11, 1987, the licensee responded by indicating that corrosion has been considered in the detailed design of the ice condenser components. The low temperature (10°F-20°F) and low absolute humidity of the ice condenser atmosphere results in negligible corrosion of uncoated carbon steel. Nevertheless, protective coating (e.g., galvanization) and low corrosion materials such as stainless steel have been used in the ice condenser. The licensee concluded that the performance of the ice condenser materials of construction are not impaired by long-term exposure to the ice condenser environment.

On the basis of its review, the staff finds that the proposed surveillance interval is more conservative than the current interval. Furthermore, the intent of the surveillance for ensuring operability of the doors is not affected by the proposed changes. Therefore, the staff concludes that the proposed changes to TS 4.6.5.3.1b. for Catawba Units 1 and 2, to increase the surveillance interval to 18 months for 100% of the ice condenser doors, are acceptable.

ENVIRONMENTAL CONSIDERATION

These 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 exposure. The NRC staff has made a determination that the amendments involve no significant hazards consideration, and there has been no public comment on such finding. 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 these amendments.

CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (51 FR 36087) on October 8, 1986. 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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: K. Jabbour, PD#II-3/DRP-I/II
J. Pulsipher, PSB/DEST

Dated: May 9, 1988



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

May 9, 1988

Docket Nos. 50-413
and 50-414

MEMORANDUM FOR: Sholly Coordinator

FROM: Kahtan N. Jabbour, Project Manager
Project Directorate II-3
Division of Reactor Projects-I/II

SUBJECT: REQUEST FOR PUBLICATION IN BIWEEKLY FR NOTICE - NOTICE
OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE
(TACS 67338/60931)

Duke Power Company, et al., Docket Nos. 50-413 and 50-414, Catawba Nuclear
Station, Units 1 and 2, York County, South Carolina

Date of application for amendments: March 15, 1985, as supplemented August
7 and November 8, 1985, March 7, April 14, and September 18, 1986, March 16
and August 11, 1987, and April 7, 1988.

Brief description of amendments: The amendments modified the Technical
Specifications to increase the interval for surveillance of the ice condenser
lower inlet doors.

Date of issuance: May 9, 1988

Effective date: May 9, 1988

Amendment Nos.: 44 and 37

Facility Operating License Nos. NPF-35 and NPF-52. Amendments revised the
Technical Specifications.

Date of initial notice in FEDERAL REGISTER: October 8, 1986 (51 FR 36087)

The Commission's related evaluation of the amendments is contained in a
Safety Evaluation dated May 9, 1988.

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Sholly Coordinator

- 2 -

No significant hazards consideration comments received: No.

Local Public Document Room location: York County Library, 138 East Black
Street, Rock Hill, South Carolina 29730

Original signed by:

Kahtan N. Jabbour, Project Manager
Project Directorate II-3
Division of Reactor Projects-I/II

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