



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

February 15, 1990

Dockets Nos.: 50-413
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. 70 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 64 TO FACILITY OPERATING LICENSE NPF-52 - CATAWBA
NUCLEAR STATION, UNITS 1 AND 2 (TACS 75884/75885)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 70 to Facility Operating License NPF-35 and Amendment No. 64 to Facility Operating License NPF-52 for the Catawba Nuclear Station, Units 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated February 5, 1990.

The amendments revise the allowable Lift Setting tolerance from $\pm 1\%$ to $\pm 1.5\%$ in TS Table 3.7-2 for the Steam Line Safety Valves of Catawba Unit 2 until the first forced outage, reactor trip, or refueling outage. The requested revision resulted from the development of a new equipment constant by the valve vendor, Dresser Industries. Lift settings for Catawba Unit 1 safety valves were established using the new equipment constant during the refueling outage that began on January 26, 1990. Thus, Unit 1 is in compliance with the current TS requirements and is affected only administratively because it shares a common TS document with Unit 2.

Your application requested that these amendments be treated as an emergency because insufficient time exists for the Commission's usual 30-day notice without resulting in a forced power reduction of Catawba Unit 2. A temporary waiver of compliance from the requirements of TS 3/4.7.1 and its associated Table 3.7-2 for Catawba Unit 2 only was issued on February 6, 1990, while the amendments were being processed.

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A copy of the related Safety Evaluation is also enclosed. Notice of issuance of amendments and final determination of no significant hazards consideration and opportunity for hearing will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original Signed By:

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

Enclosures:

- 1. Amendment No. 70 to NPF-35
- 2. Amendment No. 64 to NPF-52
- 3. Safety Evaluation

cc w/enclosures:
See next page

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 BC:DREP/PRPB
 for L Cunningham
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DATED: February 15, 1990

AMENDMENT NO. 70 TO FACILITY OPERATING LICENSE NPF-35 - Catawba Nuclear Station, Unit 1
AMENDMENT NO. 64 TO FACILITY OPERATING LICENSE NPF-52 - Catawba Nuclear Station, Unit 2

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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. 70
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 February 5, 1990, 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:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 70, 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



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

Attachment:
Technical Specification Changes

Date of Issuance: February 15, 1990



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. 64
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 February 5, 1990, 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 1;
 - 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. 64 , 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



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

Attachment:
Technical Specification Changes

Date of Issuance: February 15, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 70

FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

AND

TO LICENSE AMEIDMENT NO. 64

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 vertical lines indicating the areas of change.

Amended Page

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TABLE 3.7-2
STEAM LINE SAFETY VALVES PER LOOP

| | <u>VALVE NUMBER</u> | | | | <u>LIFT SETTING*</u> $\left(\begin{smallmatrix} + \\ - \end{smallmatrix} 1\% \right)$ $\left(\begin{smallmatrix} + \\ - \end{smallmatrix} 1.5\% \right)**$ | <u>ORIFICE SIZE</u> |
|----|---------------------|---------------|---------------|---------------|--|------------------------|
| | <u>Loop A</u> | <u>Loop B</u> | <u>Loop C</u> | <u>Loop D</u> | | |
| 1. | SV-20 | SV-14 | SV-8 | SV-2 | 1175 psig | 14.18 in. ² |
| 2. | SV-21 | SV-15 | SV-9 | SV-3 | 1190 psig | 14.18 in. ² |
| 3. | SV-22 | SV-16 | SV-10 | SV-4 | 1205 psig | 14.18 in. ² |
| 4. | SV-23 | SV-17 | SV-11 | SV-5 | 1220 psig | 14.18 in. ² |
| 5. | SV-24 | SV-18 | SV-12 | SV-6 | 1230 psig | 14.18 in. ² |

*The lift setting pressure shall correspond to ambient conditions of the valve at nominal operating temperature and pressure.

**Change applies to Unit 2 only. Change only applies until first forced outage, reactor trip, or refueling outage.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 70 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 64 TO FACILITY OPERATING LICENSE NPF-52

DUKE POWER COMPANY, ET AL.

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

DOCKETS NOS. 50-413 AND 50-414

1.0 INTRODUCTION

By letter dated February 5, 1990, Duke Power Company, et al. (the licensee), requested an emergency Technical Specification (TS) amendment and a temporary waiver of compliance for Catawba Unit 2 only. The amendment would revise the allowable Lift Setting tolerance from $\pm 1\%$ to $\pm 1.5\%$ in TS Table 3.7-2 for the Steam Line Safety Valves of Catawba Unit 2 until the first forced outage, reactor trip, or refueling outage. The requested revision resulted from the development of a new equipment constant by the valve vendor, Dresser Industries.

Lift settings for Catawba Unit 1 safety valves were established using the new equipment constant during the refueling outage that began on January 26, 1990. Thus, Unit 1 is in compliance with the current TS requirements and is affected only administratively because it shares a common TS document with Unit 2.

2.0 EVALUATION

On January 26, 1990, during a Dresser Industries review of the procedures used to adjust the Catawba steam line safety valves, the vendor representative mentioned that Dresser Industries had revised the model 1566 hydroset correction factor from 0.339 to 0.352 in August 1989. This model is used at Catawba to calibrate the main steam safety valves. The licensee's recalculation of the set pressures for all safety valves, using the new correction factor, revealed that four (out of 20) Unit 2 valves will have set pressures greater than allowed by Table 3.7-2 of TS 3/4.7.1.

The licensee stated that the most limiting scenario for the main steam safety valves is a turbine trip from full power. The reactor will trip due to loss of secondary heat sink, and the time to trip is relatively insensitive to the safety valve set pressure differences.

The licensee also stated that a design study, MGDS-0176, regarding setpoint drift for McGuire safety valves is also applicable to Catawba after allowances are made for design differences. The major differences are: (1) a higher T-ave for Catawba, and (2) two of Catawba's valves have a setpoint 5 psi greater than corresponding valves at McGuire. While these differences result

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in a higher steam generator pressure for Catawba, it is still within the 110% design basis. It should be noted that the above design study utilized a 3% setpoint drift, whereas the proposed TS change requests 1.5% allowable tolerance for Catawba Unit 2.

The most conservative accident for radiological releases is the steam generator tube rupture. The licensee stated in the February 5, 1989, submittal that the change in safety valve setpoints will not increase the calculated duration of atmospheric releases through the valves. Thus, the dose consequence analysis presented in the licensee's letter dated December 8, 1989, regarding steam generator tube rupture analysis, remains bounding.

The change of the safety valves' setpoint produces a minimal impact on primary side temperature and pressure and on the capability of the valves to perform their design function. Therefore, the consequences of design basis accidents addressed in the Final Safety Analysis Report and the probability of valve failures are not adversely affected.

Based on its review, the NRC staff agrees with the licensee's assessment and finds that the revision for Catawba Unit 2 to the allowable value of lift setting of main steam safety valves from $\pm 1\%$ to $\pm 1.5\%$ is acceptable until the first forced outage, reactor trip, or refueling outage.

3.0 EMERGENCY CIRCUMSTANCES

The licensee's application for the TS change has been timely. On January 26, 1990, a Dresser Industries review of the procedures used to adjust the Catawba steam line safety valves revealed that a new equipment constant should be used. On the same day, Catawba Unit 1 entered a refueling outage which enabled the licensee's personnel to set the pressure for its safety valves using the new constant. Therefore, the unit was in compliance with the TSs.

However, on the same day, Catawba Unit 2 was operating at full power when the licensee's maintenance personnel were informed of this change by the vendor field service representative. As a result, the responsible maintenance engineer requested an operability evaluation from the licensee's Design Engineering personnel. On February 2, 1990, the evaluation revealed that four valves (out of 20) must be treated as inoperable because they do not meet the TS allowable tolerance. Therefore, TS 3/4.7.1 action statement was entered and power reduction commenced. Following the operability determination, the licensee promptly contacted the NRC to request enforcement discretion which would allow Unit 2 to operate at full power until the next forced outage, reactor trip, or refueling outage. The request was supported by the licensee's Design Engineering analysis which demonstrated that the small increase in the lift setting of the safety valves has no nuclear safety significance. However, after discussion with the NRC, it was determined that a TS change would be more appropriate for this situation. The licensee immediately requested the change by telephone and submitted the TS amendment on February 5, 1990.

The NRC staff agrees with the licensee's evaluation that the small increase in lift setting has an insignificant impact on safety. Furthermore, the NRC staff finds that failure to grant the proposed changes in a timely manner would result in derating Catawba Unit 2. We also find that the licensee could not reasonably have avoided this situation, that the licensee has responded in a timely manner, and has not delayed its application to take advantage of the Emergency License Amendment provisions of 10 CFR 50.91. Accordingly, the NRC staff concludes that the licensee has satisfied the requirements of 10 CFR 50.91(a)(5), and that a valid emergency exists.

4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The amendment request would revise, on an emergency basis, the existing TS Table 3.7-2 lift setting of the steam line safety valves for Catawba Unit 2. The revision resulted from the development of a new equipment constant by the valve vendor. The change in the lift setting is from $\pm 1\%$ to $\pm 1.5\%$ and would remain in effect until the first forced outage, reactor trip, or refueling outage.

Lift settings for Catawba Unit 1 safety valves were established using the new equipment constant during the refueling outage that began January 26, 1990. Thus, Unit 1 is already in compliance with the current TS requirements and is included administratively because it shares a common TS document with Unit 2.

The Commission's regulations in 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards consideration, if operation of the facility, in accordance with the amendment would not:

- (1) Involve a significant increase in the probability or consequences of any accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) Involve a significant reduction in a margin of safety.

The proposed amendments would not involve a significant increase in the probability or consequences of an accident previously evaluated. The secondary side pressure will be maintained within its design basis limits and the impact on the primary side will be minimal. The requested change in the valve lift setting tolerance is less than 0.5 of 1%. This small change does not prevent the valves from performing their design function and will not significantly increase the probability of failure. The most conservative accident for radiological releases is the steam generator tube rupture. The change in safety valve setpoints will not increase the calculated duration of atmospheric releases through the valves. Thus, the dose consequence analysis presented in the licensee's letter dated December 8, 1989, regarding steam generator tube rupture analysis, remains bounding.

The proposed amendments would not create the possibility of a new or different kind of accident from any accident previously evaluated because the design and modes of operation of the main steam safety valves and Catawba station will not be affected. As such, no new or different kind of accident would be possible.

The proposed amendments would not involve a significant reduction in a margin of safety. The requested change from $\pm 1\%$ to $\pm 1.5\%$ for the lift setting tolerance of safety valves is small. A design study using a 3% setpoint drift concluded that the steam generator pressure remains within its design limits. The impact on the primary side is minimal. As such, no significant reduction in a margin of safety would result from the above change.

Accordingly, the Commission finds that the requested amendments involve no significant hazards consideration.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of South Carolina was contacted on February 6, 1989. The state representative had no comments.

6.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes in requirements with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. 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 radiation exposure. The NRC staff has made a final determination that the amendments involve no significant hazards consideration. 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.

7.0 CONCLUSION

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 Contributor: K. Jabbour, PDII-3/DRP-I/II

Dated: February 15, 1990