August 21, 1991

Docket Nos. 50-369
and 50-370

Distribution
See next page

Mr. M.S. Tuckman
Vice President -
Nuclear Operations
Duke Power Company
P.O. Box 1007
Charlotte, North Carolina 28201-1007

Dear Mr. Tuckman:

SUBJECT: ISSUANCE OF AMENDMENT NO. 124 TO FACILITY OPERATING LICENSE NPF-9 AND AMENDMENT NO. 106 TO FACILITY OPERATING LICENSE NPF-17 - MCGUIRE NUCLEAR STATION, UNITS 1 AND 2 (TACS 80199/80200)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 124 to Facility Operating License NPF-9 and Amendment No. 106 to Facility Operating License NPF-17 for the McGuire Nuclear Station, Units 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated April 11, 1991, as supplemented May 20, 1991.

The amendments revise TS 3.1.3.4 to change the value of the required control drop time from 3.3 seconds to 2.2 seconds.

A copy of the related Safety Evaluation is also enclosed. Notice of issuance of the amendments will be included in the Commission's biweekly Federal Register notice.

Sincerely,

/s/
Timothy A. Reed, Project Manager
Project Directorate II-3
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No.124 to NPF-9
2. Amendment No.106 to NPF-17
3. Safety Evaluation

cc w/enclosures:
See next page

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

August 21, 1991

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3. Safety Evaluation

cc w/enclosures:
See next page

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Duke Power Company

McGuire Nuclear Station

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DATED: August 21, 1991

AMENDMENT NO.124 TO FACILITY OPERATING LICENSE NPF-9 - McGuire Nuclear Station, Unit 1
AMENDMENT NO.106 TO FACILITY OPERATING LICENSE NPF-17 - McGuire Nuclear Station, Unit 2

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

DUKE POWER COMPANY

DOCKET NO. 50-369

McGUIRE NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 124
License No. NPF-9

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment to the McGuire Nuclear Station, Unit 1 (the facility) Facility Operating License No. NPF-9 filed by the Duke Power Company (the licensee) dated April 11, 1991, as supplemented May 20, 1991, 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-9 is hereby amended to read as follows:

   Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 124, 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

Robert Martin for
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: August 21, 1991

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

DUKE POWER COMPANY

DOCKET NO. 50-370

McGUIRE NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 106
License No. NPF-17

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment to the McGuire Nuclear Station, Unit 2 (the facility) Facility Operating License No. NPF-17 filed by the Duke Power Company (the licensee) dated April 11, 1991, as supplemented May 20, 1991, 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-17 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 104 , 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

Robert Martin

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: August 21, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 124

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

AND

TO LICENSE AMENDMENT NO. 106

FACILITY OPERATING LICENSE NO. NPF-17

DOCKET NO. 50-370

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.

Remove Page	Insert Page
3/4 1-19	3/4 1-19

ROD DROP TIME

LIMITING CONDITION FOR OPERATION

3.1.3.4 The individual full-length shutdown and control rod drop time from the fully withdrawn position shall be less than or equal to 2.2 seconds from beginning of decay of stationary gripper coil voltage to dashpot entry with:

a. T_{avg} greater than or equal to 551°F, and

b. All reactor coolant pumps operating.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With the drop time of any full-length rod determined to exceed the above limit, restore the rod drop time to within the above limit prior to proceeding to MODE 1 or 2.

b. With the rod drop times within limits but determined with three reactor coolant pumps operating, operation may proceed provided THERMAL POWER is restricted to less than or equal to (*) of RATED THERMAL POWER.

SURVEILLANCE REQUIREMENTS

4.1.3.4 The rod drop time of full-length rods shall be demonstrated through measurement prior to reactor criticality:

a. For all rods following each removal of the reactor vessel head,

b. For specifically affected individual rods following any maintenance on or modification to the Control Rod Drive System which could affect the drop time of those specific rods, and

c. At least once per 18 months.

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*These values left blank pending NRC approval of three loop operation.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 124 TO FACILITY OPERATING LICENSE NPF-9

AND AMENDMENT NO. 106 TO FACILITY OPERATING LICENSE NPF-17

DUKE POWER COMPANY

MCGUIRE NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-369 AND 50-370

1.0 INTRODUCTION

By letter dated April 11, 1991, as supplemented May 20, 1991, Duke Power Company (licensee) submitted a request for changes to the McGuire Nuclear Station, Units 1 and 2, Technical Specifications (TS). The requested changes would change the value of the required control rod drop time from 3.3 seconds to 2.2 seconds in TS 3.1.3.4.

McGuire Unit 1 was licensed with a 2.2 second requirement for control rod drop time. The rod drop requirement was changed to 3.3 seconds as part of the change from Westinghouse standard fuel to Westinghouse optimized fuel that began with McGuire Unit 1 Cycle 2 (Amendment 32, April 20, 1984). The 3.3 second requirement for control rod drop time has remained the TS requirement and the assumed drop time for the FSAR Chapter 15 accident analyses for McGuire Units 1 and 2 since issuance of Amendment 32.

2.0 EVALUATION

As noted above, TS Amendment 32 revised the control rod drop time from 2.2 seconds to 3.3 seconds. The NRC staff approved the increased control rod drop time because the increase had been incorporated into the scram curves used for the accident analyses with acceptable results. In the proposed TS amendment, the licensee has incorporated the 2.2 second value into the McGuire Unit 1 Cycle 8 (M1C8) analyses as an input assumption, and as stated in the basis for TS 3.1.3.4, the proposed TS change is consistent with the value used in the safety analyses. The licensee states that the safety analyses continue to meet the acceptance criteria set forth in the Standard Review Plan (NUREG-0800).

From an operational perspective, this TS change is conservative. It will contribute to better surveillance of the capability of the control rods to insert following a reactor trip. Studies conducted by the licensee indicate that the vast majority of the drop times at McGuire are less than 1.7 seconds. Furthermore, the licensee committed to implement a test evaluation criterion requiring an evaluation of the rod drop times that are greater than the design value of 1.8 seconds. The licensee provided rod drop time data from all four of the McGuire and Catawba units. Two rod drops exceeded the design drop time of 1.8 seconds, but were still within the proposed TS limit of 2.2 seconds. Further evaluation by the licensee indicated that the longer drop times were due to the presence of air in the control rod drive mechanisms.

The proposed TS amendment will not require modifications to any structures, systems, or components at the McGuire station. With regard to the procedures to operate or maintain the plant, there is no need to functionally revise any procedures except to substitute the new acceptance criteria in the appropriate rod drop timing test procedure. As such, the plant is not being modified in any way, and since the rod drop time will be more restrictive, there is no potential for a new or different kind of accident from any previously evaluated.

Transient and accident analyses conducted by the licensee in support of the upcoming Unit 1 Cycle 8 reload show that the acceptance criteria are met in all cases. The margin of safety is maintained throughout the analyses provided the actual rod drop time is not greater than that assumed in the transient and accident analyses. TS 3.1.3.4 ensures that the scram curves used in the safety analyses are validated by rod drop test results. Test results show that the design drop time of 1.8 seconds remains unaffected, and that the addition of the test review criteria provides additional assurance that anomalous drop behavior is investigated. The data and analyses provided by the licensee in support of the proposed TS amendment demonstrate that the acceptance criteria of the Standard Review Plan continue to be met.

The NRC staff has reviewed the licensee's submittal and concludes that the new value of 2.2 seconds will be more restrictive, and therefore, more conservative than the current value of 3.3 seconds. Rod drop time data indicate that the new value can be met. Based on this review, we have concluded that the requested TS changes satisfy staff positions and requirements in these areas, and are acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the North 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. 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 (56 FR 27042). 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: T. Reed, PDII-3
A. Attard, SRXB/DST

Date: August 21, 1991