

November 9, 1994

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Mr. T. C. McMeekin  
Vice President, McGuire Site  
Duke Power Company  
12700 Hagers Ferry Road  
Huntersville, NC 28078-8985

SUBJECT: ISSUANCE OF AMENDMENTS - MCGUIRE NUCLEAR STATION, UNITS 1 AND 2, AUXILIARY FEEDWATER PUMP TESTING INTERVAL, (TAC NOS. M90355 AND M90336)

Dear Mr. McMeekin:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 151 to Facility Operating License NPF-9 and Amendment No. 133 to Facility Operating License NPF-17 for the McGuire 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/

Victor Nerses, Project Manager  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

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PDR ADDCK 05000369  
P PDR

Docket Nos. 50-369 and 50-370

Enclosures:

1. Amendment No. 151 to NPF-9
2. Amendment No. 133 to NPF-17
3. Safety Evaluation

cc w/encl: See next page

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

November 9, 1994

Mr. T. C. McMeekin  
Vice President, McGuire Site  
Duke Power Company  
12700 Hagers Ferry Road  
Huntersville, NC 28078-8985

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AUXILIARY FEEDWATER PUMP TESTING INTERVAL, (TAC NOS. M90355 AND  
M90336)

Dear Mr. McMeekin:

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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,

A handwritten signature in cursive script that reads "Victor Nerses".

Victor Nerses, Project Manager  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosures:

1. Amendment No. 151 to NPF-9
2. Amendment No. 133 to NPF-17
3. Safety Evaluation

cc w/encl: See next page

Mr. T. C. McMeekin  
Duke Power Company

McGuire Nuclear Station

cc:

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

DUKE POWER COMPANY

DOCKET NO. 50-369

McGUIRE NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 151  
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 (licensee) 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.

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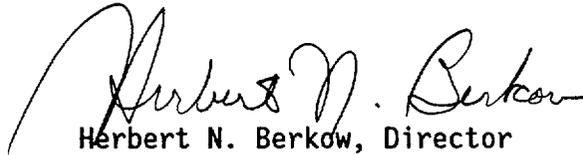
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-9 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 151, are hereby incorporated into this 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 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: November 9, 1994



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

DUKE POWER COMPANY

DOCKET NO. 50-370

McGUIRE NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 133  
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 (licensee) 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-17 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 133 , are hereby incorporated into this 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 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: November 9, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 151

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

AND

TO LICENSE AMENDMENT NO. 133

FACILITY OPERATING LICENSE NO. NPF-17

DOCKET NO. 50-370

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

3/4 7-4  
3/4 7-5  
B 3/4 7-2

Insert Pages

3/4 7-4  
3/4 7-5  
B 3/4 7-2

## PLANT SYSTEMS

### 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 within 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

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4.7.1.2 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 suction line from the upper surge tanks are open with power to the valve operators removed.

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\*Not applicable with steam pressure less than 900 psig.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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- b. At least once per 92 days on a STAGGERED BASIS by:
  - 1) Verifying that each motor-driven pump develops a discharge pressure of greater than or equal to 1210 psig at a flow of greater than or equal to 450 gpm; and
  - 2) Verifying that the steam turbine-driven pump develops a discharge pressure of greater than or equal to 1210 psig at a flow of greater than or equal to 900 gpm when the secondary steam supply pressure is greater than 900 psig\*. 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 auxiliary feedwater pump starts as designed automatically upon receipt of an Auxiliary Feedwater Actuation test signal, and
  - 3) 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 13 seconds on a Low Suction Pressure test signal.

\* This verification is not required to be performed until 24 hours after achieving greater than or equal to 900 psig in the secondary side of the steam generator.

## PLANT SYSTEMS

### BASES

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#### SAFETY VALVES (Continued)

- 109 = Power Range Neutron Flux-High Trip Setpoint for four loop operation,
- \* = Maximum percent of RATED THERMAL POWER permissible by P-8 Setpoint for three loop operation. This value left blank pending NRC approval of three loop operation,
- X = Total relieving capacity of all safety valves per steam line in lbs/hour, and
- Y = Maximum relieving capacity of any one safety valve in lbs/hour.

#### 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 total loss-of-offsite power.

Each electric motor-driven auxiliary feedwater pump is capable of delivering a total feedwater flow of 450 gpm at a pressure of 1210 psig to the entrance of the steam generators. The steam-driven auxiliary feedwater pump is capable of delivering a total feedwater flow of 900 gpm at a pressure of 1210 psig to the entrance 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 RHR System may be placed into operation.

Verification of the steam turbine-driven pump discharge pressure should be deferred until suitable test conditions are established (i.e., greater than or equal to 900 psig in the secondary side of the steam generator). This deferral is required because until 900 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 1.0 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 accident analyses.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 151 TO FACILITY OPERATING LICENSE NPF-9  
AND AMENDMENT NO. 133 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 August 25, 1994, Duke Power Company (the licensee) submitted a request for changes to the McGuire 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." 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.

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 requested changes to the testing frequency in consistent with the guidance in Generic Letter 93-05 and is therefore acceptable. The requested addition of a footnote to TS 4.7.1.2.b.2) clarifies when the subject testing is required to be performed. This clarification is consistent with the NRC guidance in NUREG-1431 and is 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 (59 FR 49426). 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: November 9, 1994