

September 2, 1987

Docket Nos.: 50-369
and 50-370

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. 74 to Facility Operating License NPF-9
and Amendment No. 55 to Facility Operating License NPF-17 - McGuire
Nuclear Station, Units 1 and 2 (TACs 55361/55362)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 74 to Facility Operating License NPF-9 and Amendment No. 55 to Facility Operating License NPF-17 for the McGuire Nuclear Station, Units 1 and 2. These amendments consist of changes to the Technical Specifications in response to your application dated December 7, 1985, and supplemental letters dated March 16 and April 1, 1987.

The amendments change the Technical Specifications in accordance with NRC Generic Letter (GL) 85-09, "Technical Specifications for Generic Letter 83-28, Item 4.3." The changes add requirements for testing of the undervoltage and shunt trip attachments of reactor trip breakers and testing of reactor trip bypass breakers. The amendments are effective as of their date of issuance.

Additional requests contained in your letter of December 7, 1985 will be handled separately.

A copy of the related safety evaluation supporting Amendment No.74 to Facility Operating License NPF-9 and Amendment No.55 to Facility Operating License NPF-17 is enclosed.

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

Sincerely,

Darl Hood, Project Manager
Project Directorate II-3
Division of Reactor Projects-I/II

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Enclosures:

1. Amendment No. 74 to NPF-9
2. Amendment No. 55 to NPF-17
3. Safety Evaluation

cc w/enclosures: See next page

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See attached page

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LCrocker, Acting Director
08/31/87

Mr. H. B. Tucker
Duke Power Company

McGuire Nuclear Station

cc:

Mr. A.V. Carr, Esq.
Duke Power Company
P. O. Box 33189
422 South Church Street
Charlotte, North Carolina 28242

Dr. John M. Barry
Department of Environmental Health
Mecklenburg County
1200 Blythe Boulevard
Charlotte, North Carolina 28203

County Manager of Mecklenburg County
720 East Fourth Street
Charlotte, North Carolina 28202

Mr. Dayne H. Brown, Chief
Radiation Protection Branch
Division of Facility Services
Department of Human Resources
701 Barbour Drive
Raleigh, North Carolina 27603-2008

Mr. Robert Gill
Duke Power Company
Nuclear Production Department
P. O. Box 33189
Charlotte, North Carolina 28242

J. Michael McGarry, III, Esq.
Bishop, Liberman, Cook, Purcell
and Reynolds
1200 Seventeenth Street, N.W.
Washington, D. C. 20036

Senior Resident Inspector
c/o U.S. Nuclear Regulatory Commission
Route 4, Box 529
Huntersville, North Carolina 28078

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission,
101 Marietta Street, N.W., Suite 2900
Atlanta, Georgia 30323

L. L. Williams
Area Manager, Mid-South Area
ESSD Projects
Westinghouse Electric Corporation
MNC West Tower - Bay 239
P. O. Box 355
Pittsburgh, Pennsylvania 15230

DATED: September 2, 1987

AMENDMENT NO. 74 TO FACILITY OPERATING LICENSE NPF-9 - McGuire Nuclear Station, Unit 1
AMENDMENT NO. 55 TO FACILITY OPERATING LICENSE NPF-17 - McGuire Nuclear Station, Unit 2

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T. Barnhart (8)
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GPA/PA
ARM/LFMB
G. Lainas
S. Varga
A. Toalston



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. 74
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 December 7, 1985, and supplements filed March 16 and April 1, 1987, 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, as amended, 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-9 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 74, 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 and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

151

Lawrence P. Crokcer, Acting Director
Project Directorate II-3
Division of Reactor Projects-I/II

Attachment:
Technical Specification
Changes

Date of Issuance: September 2, 1987

PD#II-3/DRP-I/II
MDunican/mac
08/26/87

DSH
PD#II-3/DRP-I/II
DHood
08/26/87

OGC-Bethesda
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08/27/87

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PD#II-3/DRP-I/II
LCrokcer, Acting Director
08/31/87



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. 55
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 December 7, 1985, and supplements filed March 16 and April 1, 1987, 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, as amended, 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-17 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 55, 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 and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

151

Lawrence P. Crocker, Acting Director
 Project Directorate II-3
 Division of Reactor Projects-I/II

Attachment:
 Technical Specification
 Changes

Date of Issuance: September 2, 1987

PD#II-3/DRP-I/II
 MDuncan/mac
 08/26/87

DSH
 PD#II-3/DRP-I/II
 DHood
 08/24/87

OGC-Bethesda
 CWoodward
 08/27/87

LCrocker
 PD#II-3/DRP-I/II
 LCrocker, Acting Director
 08/31/87

ATTACHMENT TO LICENSE AMENDMENT NO. 74

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

AND

TO LICENSE AMENDMENT NO. 55

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. The corresponding overleaf page is also provided to maintain document completeness.

Amended
Page

Overleaf
Page

3/4 3-5

3/4 3-8

3/4 3-11

3/4 3-13

3/4 3-14

3/4 3-14a (new)

B 3/4 3-1a

3/4 3-12

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
19. Reactor Trip Breakers	2 2	1 1	2 2	1, 2 3*, 4*, 5*	9, 12 10
20. Automatic Trip and Interlock Logic	2 2	1 1	2 2	1, 2 3*, 4*, 5*	9 10

McGUIRE - UNITS 1 and 2

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Amendment No.74 (Unit 1)
Amendment No.55 (Unit 2)

TABLE 3.3-1 (Continued)

ACTION STATEMENTS (Continued)

- ACTION 9 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.
- ACTION 10 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or open the Reactor trip breakers within the next hour.
- ACTION 11 - With the number of OPERABLE channels less than the Total Number of Channels, operation may continue provided the inoperable channels are placed in the tripped condition within 6 hours.
- ACTION 12 - With one of the diverse trip features (Undervoltage or shunt trip attachment) inoperable, restore it to OPERABLE status within 48 hours or declare the breaker inoperable and apply ACTION 9. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status.

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Manual Reactor Trip	N.A.	N.A.	N.A.	R (11)	N.A.	1, 2, 3*, 4*, 5*
2. Power Range, Neutron Flux High Setpoint	S	D(2, 4), M(3, 4), Q(4, 6), R(4, 5)	M	N.A.	N.A.	1, 2
Low Setpoint	S	R(4)	M	N.A.	N.A.	1 ^{###} , 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(4)	M	N.A.	N.A.	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(4)	M	N.A.	N.A.	1, 2
5. Intermediate Range, Neutron Flux	S	R(4, 5)	S/U(1),M	N.A.	N.A.	1 ^{###} , 2
6. Source Range, Neutron Flux	S	R(4, 5)	S/U(1),M(9)	N.A.	N.A.	2 ^{##} , 3, 4, 5
7. Overtemperature ΔT	S	R	M	N.A.	N.A.	1, 2
8. Overpower ΔT	S	R	M	N.A.	N.A.	1, 2
9. Pressurizer Pressure--Low	S	R	M	N.A.	N.A.	1
10. Pressurizer Pressure--High	S	R	M	N.A.	N.A.	1, 2
11. Pressurizer Water Level--High	S	R	M	N.A.	N.A.	1
12. Low Reactor Coolant Flow	S	R	M	N.A.	N.A.	1

MCGUIRE - UNITS 1 and 2

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Amendment No.74 (Unit 1)
Amendment No.55 (Unit 2)

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
d. Low Setpoint Power Range Neutron Flux, P-10	N.A.	R(4)	M (8)	N.A.	N.A.	1, 2
e. Turbine Impulse Chamber Pressure, P-13	N.A.	R	M (8)	N.A.	N.A.	1
19. Reactor Trip Breaker	N.A.	N.A.	N.A.	M (7, 12)	N.A.	1, 2, 3*, 4*, 5*
20. Automatic Trip and Interlock Logic	N.A.	N.A.	N.A.	N.A.	M (7)	1, 2, 3*, 4*, 5*
21. Reactor Trip Bypass Breakers	N.A.	N.A.	N.A.	M (13), R (14)	N.A.	1, 2, 3*, 4*, 5*

MCGUIRE - UNITS 1 and 2

3/4 3-13

Amendment No. 74 (Unit 1)
Amendment No. 55 (Unit 2)

TABLE 4.3-1 (Continued)

TABLE NOTATION

- * - With the Reactor Trip System breakers closed and the Control Rod Drive System capable of rod withdrawal.
- ## - Below P-6 (Intermediate Range Neutron Flux Interlock) Setpoint.
- ### - Below P-10 (Low Setpoint Power Range Neutron Flux Interlock) Setpoint.
- (1) - If not performed in previous 7 days.
- (2) - Comparison of calorimetric to excore power indication above 15% of RATED THERMAL POWER. Adjust excore channel gains consistent with calorimetric power if absolute difference is greater than 2%. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.
- (3) - Single point comparison of incore to excore axial flux difference above 15% of RATED THERMAL POWER. Recalibrate if the absolute difference is greater than or equal to 3%. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.
- (4) - Neutron detectors may be excluded from CHANNEL CALIBRATION.
- (5) - Detector plateau curves shall be obtained, evaluated, and compared to manufacturer's data. For the Intermediate Range and Power Range Neutron Flux channels the provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.
- (6) - Incore - Excore Calibration, above 75% of RATED THERMAL POWER. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.
- (7) - Each train shall be tested at least every 62 days on a STAGGERED TEST BASIS.
- (8) - With power greater than or equal to the interlock Setpoint the required operational test shall consist of verifying that the interlock is in the required state by observing the permissive annunciator window.
- (9) - Monthly surveillance in MODES 3*, 4* and 5* shall also include verification that permissives P-6 and P-10 are in their required state for existing plant conditions by observation of the permissive annunciator window. Monthly surveillance shall include verification of the Boron Dilution Alarm Setpoint of less than or equal to five times background.
- (10) - Setpoint verification is not required.

TABLE 4.3-1 (Continued)

TABLE NOTATION

- (11) - The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function.
- (12) - The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.
- (13) - Prior to placing breaker in service, a local manual shunt trip shall be performed.
- (14) - The automatic undervoltage trip capability shall be verified operable.

INSTRUMENTATION

BASES

3/4.3.1 and 3/4.3.2 REACTOR TRIP AND ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION (Continued)

following actions may be initiated by the Engineered Safety Features Actuation System to mitigate the consequences of a steam line break or loss-of-coolant accident: (1) Safety Injection pumps start and automatic valves position, (2) Reactor trip, (3) feedwater isolation, (4) startup of the emergency diesel generators, (5) containment spray pumps start and automatic valves position, (6) containment isolation, (7) steam line isolation, (8) Turbine trip, (9) auxiliary feedwater pumps start and automatic valves position, and (10) nuclear service water pumps start and automatic valves position.

Technical Specifications for the Reactor Trip Breakers and the Reactor Trip Bypass Breakers are based upon NRC Generic Letter 85-09 "Technical Specifications for Generic Letter 83-28, Item 4.3," dated May 23, 1985.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 74 TO FACILITY OPERATING LICENSE NPF-9
AND AMENDMENT NO. 55 TO FACILITY OPERATING LICENSE NPF-17

DUKE POWER COMPANY

DOCKET NOS. 50-369 AND 50-370

McGUIRE NUCLEAR STATION, UNITS 1 AND 2

INTRODUCTION

By Item 4.3 of Generic Letter (GL) 83-28, "Required Actions Based on Generic Implications of Salem ATWS Events," the Commission established the requirement for the automatic actuation of the shunt trip attachment on reactor trip breakers for nuclear plants utilizing Westinghouse nuclear steam supply systems. GL 83-28 also established that licensees were to submit needed Technical Specification (TS) change requests after staff approval of the modified design. In its evaluation of the Westinghouse generic design modifications, the Commission concluded that TS changes should be proposed by licensees to explicitly require independent testing of the undervoltage and shunt trip attachments during power operation, testing of bypass breakers prior to use, and independent testing of the control room manual switch contacts and wiring during each refueling outage. Accordingly, the Commission issued GL 85-09, "Technical Specifications for Generic Letter 83-28, Item 4.3" to identify the appropriate changes to this end, to provide a model TS to use as guidance, and to request that licensees propose TS changes using this guidance.

The amendments change the McGuire TSs in accordance with GL 85-09.

EVALUATION

By letter dated December 7, 1985, Duke Power Company (the licensee) proposed changes to the TSs identified by GL 85-09. Specifically, the diverse trip features (undervoltage or shunt trip attachment) are addressed by adding Action Statement 12 to Table 3.3-1 at item 19, Reactor Trip Breakers. New Action 12 requires that:

With one of the diverse trip features (Undervoltage or shunt trip attachment) inoperable, restore it to OPERABLE status within 48 hours or declare the breaker inoperable and apply ACTION 9. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status.

Similarly, footnote 12 (previously footnote 11) for the monthly trip actuation device operational test for the breaker is added to TS Table 4.3-1 to state that:

The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.

The requirement of GL 85-09 for independent testing of the control room manual switch contacts and wiring during each refueling outage is addressed by adding footnote 11 to Table 4.3-1, Item 1 "Manual Reactor Trip." Footnote 11 states:

The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function.

By letters dated March 16 and April 1, 1987, the licensee addressed the requirement of GL 85-09 for testing of the reactor trip bypass breakers prior to placing them into service. The change adds new Item 21 "Reactor Trip Bypass Breakers" to Table 4.3-1 containing footnotes 13 and 14 for the periodic trip actuating device operational test. Footnote 13 is referenced for the monthly test and states that prior to placing the breakers in service, a local manual shunt trip shall be performed. Footnote 14 is referenced for the 18-month test and states that the automatic undervoltage trip capability shall be verified operable. Item 21 applies to modes 1 through 5; modes 3 through 5 apply with the breakers closed and the control rod drive system capable of rod withdrawal.

Additionally, the NRC has supplemented TS Bases 3/4.3.1 and 3/4.3.2 to indicate that the TSs for the Reactor Trip Breakers and the Reactor Trip Bypass Breakers are based upon GL 85-09.

We have reviewed the above TS changes proposed by the licensee and find them to be consistent with those of GL 85-09. Therefore, we conclude that these changes enhance plant reliability and safety, and that they are acceptable.

ENVIRONMENTAL CONSIDERATION

These amendments involve changes to the installation or use of facilities' 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 proposed determinations that the amendments involve no significant hazards consideration which were published in the Federal Register (51 FR 22234) on June 18, 1986, and (52 FR 13336) on April 22, 1987. The Commission consulted with the state of North Carolina. No public comments were received, and the state of North 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: Darl S. Hood, PD#II-3
A. Toalston, PAEI

Dated: September 2, 1987