



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. 88
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 February 17, 1987, as revised June 3, 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, 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-9 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 88, 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: July 5, 1988

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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. 69
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 February 17, 1987, as revised June 3, 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, 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. 69, 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

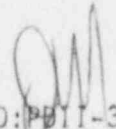
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ATTACHMENT TO LICENSE AMENDMENT NO. _____

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

AND

TO LICENSE AMENDMENT NO. _____

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 pages are also provided to maintain document completeness.

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REACTIVITY CONTROL SYSTEMS

CONTROL ROD INSERTION LIMITS

LIMITING CONDITION FOR OPERATION

3.1.3.6 The control banks shall be limited in physical insertion as shown in Figure 3.1-1.

APPLICABILITY: MODES 1* and 2*#.

ACTION:

With the control banks inserted beyond the above insertion limits, except for surveillance testing pursuant to Specification 4.1.3.1.2:

- a. Restore the control banks to within the limits within 2 hours, or
- b. Reduce THERMAL POWER within 2 hours to less than or equal to that fraction of RATED THERMAL POWER which is allowed by the bank position using the above figures, or
- c. Be in at least HOT STANDBY within 6 hours.

SURVEILLANCE REQUIREMENTS

4.1.3.6 The position of each control bank shall be determined to be within the insertion limits at least once per 12 hours except during time intervals when the Rod Insertion Limit Monitor is inoperable, then verify the individual rod positions at least once per 4 hours.

*See Special Test Exceptions 3.10.2 and 3.10.3.

#With k_{eff} greater than or equal to 1.0.

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 High Flux at Shutdown Alarm Setpoint of less than or equal to five times background.
- (10) - Setpoint verification is not required.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM, INSTRUMENTATION

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<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>
7. Auxiliary Feedwater					
a. Manual Initiation	2	1	2	1, 2, 3	22
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3	21
c. Stm. Gen. Water Level-Low-Low					
1) Start Motor-Driven Pumps	4/stm. gen.	2/stm. gen. in any operating stm gen.	3/stm. gen. in each operating stm. gen.	1, 2, 3	19
2) Start Turbine-Driven Pump	4/stm. gen.	2/stm. gen. in any 2 operating stm. gen.	3/stm. gen. in each operating stm. gen.	1, 2, 3	19
d. Auxiliary Feedwater Suction Pressure - Low (Suction Supply Automatic Realignment)	2/pump	2/pump	2/pump	1, 2, 3	24
e. Safety Injection Start Motor-Driven Pumps					
See Item 1. above for all Safety Injection initiating functions and requirements					

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
7. Auxiliary Feedwater (continued)					
f. Station Blackout Start Motor-Driven Pumps and Turbine-Driven Pump	6-3/Bus	2/Bus Either Bus	2/Bus	1, 2, 3	19*
g. Trip of All Main Feedwater Pumps Start Motor-Driven Pumps	2/pump	1/pump	1/pump	1, 2 [#]	14
8. Automatic Switchover to Recirculation					
RWST Level	3	2	2	1, 2, 3	15*
9. Loss of Power					
4 kV Emergency Bus Undervoltage-Grid Degraded Voltage	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	15*
10. Engineered Safety Features Actuation System Interlocks					
a. Pressurizer Pressure, P-11	3	2	2	1, 2, 3	20
b. Low-Low T _{avg} , P-12	4	2	3	1, 2, 3	20
c. Reactor Trip, P-4	2	2	2	1, 2, 3	22
d. Steam Generator Level, P-14	3/stm gen.	2/stm gen. in any operating stm gen.	2/stm gen. in each operating stm gen.	1, 2, 3	20

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TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
10. Engineered Safety Features Actuation System Interlocks								
a. Pressurizer Pressure, P-11	N.A.	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
b. Low, Low T_{avg} , P-12	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
c. Reactor Trip, P-4	N.A.	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
d. Steam Generator Level, P-14	S	R	M	N.A.	M(1)	M(1)	Q	1, 2, 3

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TABLE 3.3-10
ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	REQUIRED NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE
1. Containment Pressure	2	1
2. Reactor Coolant Temperature - T ^{HOT} and T ^{COLD} (Wide Range)	2	1
3. Reactor Coolant Pressure - Wide Range	2	1
4. Pressurizer Water Level	2	1
5. Steam Line Pressure	2/steam generator	1/steam generator
6. Steam Generator Water Level - Narrow Range	2/steam generator	1/steam generator
7. Refueling Water Storage Tank Water Level	2	1
8. Auxiliary Feeder Flow Rate	2/steam generator	1/steam generator
9. Reactor Coolant System Subcooling Margin Monitor	2***	1
10. PORV Position Indicator*	2/valve	1/valve
11. PORV Block Valve Position Indicator**	1/valve	1/valve
12. Safety Valve Position Indicator	2/valve	1/valve
13. Containment Water Level (Wide Range)	2	1
14. In Core Thermocouples	4/core quadrant	2/core quadrant
15. Unit Vent - High Range Noble Gas Monitor (High-High Range - EMF-36)	1	1
16. Steam Relief - High Range Monitor (Unit 1 - EMF-24, 25, 26, 27) (Unit 2 - EMF-10, 11, 12, 13)	1/steam line	1/steam line
17. Containment Atmosphere - High Range Monitor (11 F-51a or 51b)	1	1
18. Reactor Vessel Level Instrumentation****		
a. Dynamic Head (D/P) Range	2	1
b. Lower Range	2	1

*Not applicable if the associated block valve is in the closed position.

**Not applicable if the associated block valve is in the closed position and power is removed.

***Only one channel per unit is required until the end of the first refueling outage following 1/86 for each unit.

****Not applicable until the beginning of Cycle 4 for Unit 1 and Cycle 3 for Unit 2.

TABLE 4.3-7
ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Containment Pressure	M	R
2. Reactor Coolant Temperature - T _{HOT} and T _{COLD} (Wide Range)	M	R
3. Reactor Coolant Pressure - Wide Range	M	R
4. Pressurizer Water Level	M	R
5. Steam Line Pressure	M	R
6. Steam Generator Water Level - Narrow Range	M	R
7. Refueling Water Storage Tank Water Level	M	R
8. Auxiliary Feedwater Flow Rate	M	R
9. Reactor Coolant System Subcooling Margin Monitor	M	R
10. PORV Position Indicator	M	R
11. PORV Block Valve Position Indicator	M	R
12. Safety Valve Position Indicator	M	R
13. Containment Water Level (Wide Range)	M	R
14. In Core Thermocouples	M	R
15. Unit Vent - High Range Noble Gas Monitor (High-High Range - EMF-36)	M	R
16. Steam Relief - High Range Monitor (Unit 1 - EMF-24, 25, 26, 27) (Unit 2 - EMF-10, 11, 12, 13)	M	R
17. Containment Atmosphere - High Range Monitor (EMF-51a or 51b)	M	R
18. Reactor Vessel Level Instrumentation		
a. Dynamic Head (D/P) Range	M	R
b. Lower Range	M	R

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TABLE 3.6-2

CONTAINMENT ISOLATION VALVES

MCGUIRE - UNITS 1 AND 2	<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC)</u>
	1. Phase "A" Isolation		
	BB-1B#	Steam Generator A Blowdown Containment Outside Isolation	<10
	BB-2B#	Steam Generator B Blowdown Containment Outside Isolation	<10
	BB-3B#	Steam Generator C Blowdown Containment Outside Isolation	<10
	BB-4B#	Steam Generator D Blowdown Containment Outside Isolation	<10
	BB-5A#	Steam Generator A Blowdown Containment Inside Isolation	<10
	BB-6A#	Steam Generator B Blowdown Containment Inside Isolation	<10
	BB-7A#	Steam Generator C Blowdown Containment Inside Isolation	<10
	BB-8A#	Steam Generator D Blowdown Containment Inside Isolation	<10
3/4 6-24	CF-26AB#	Steam Generator D Feedwater Containment Isolation	<5
	CF-28AB#	Steam Generator C Feedwater Containment Isolation	<5
	CF-30AB#	Steam Generator B Feedwater Containment Isolation	<5
	CF-35AB#	Steam Generator A Feedwater Containment Isolation	<5
	CF-126B	Steam Generator A Main Feedwater to Auxiliary Feedwater Nozzle Isolation	<10
	CF-127B	Steam Generator B Main Feedwater to Auxiliary Feedwater Nozzle Isolation	<10
	CF-128B	Steam Generator C Main Feedwater to Auxiliary Feedwater Nozzle Isolation	<10
	CF-129B	Steam Generator D Main Feedwater to Auxiliary Feedwater Nozzle Isolation	<10
	CF-134A	Steam Generator A Feedwater Containment Isolation Bypass	<10
	CF-135A	Steam Generator B Feedwater Containment Isolation Bypass	<10
	CF-136A	Steam Generator C Feedwater Containment Isolation Bypass	<10
	CF-137A	Steam Generator D Feedwater Containment Isolation Bypass	<10
	CF-151B	Auxiliary Nozzle Temper SG A	<10

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TABLE 3.6-2 (Continued)
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (SEC)</u>
1. Phase "A" Isolation (continued)		
CF-153B	Auxiliary Nozzle Temper SG B	<10
CF-155B	Auxiliary Nozzle Temper SG C	<10
CF-157B	Auxiliary Nozzle Temper SG D	<10
KC-305B#	Excess Letdown Hx Supply Pent. Isolation Outside	<30
KC-315B#	Excess Letdown Hx Ret. Hdr. Pent. Isolation Outside	<30
KC-320A	NCDT Hx Supply Hdr. Pent. Isolation Outside	<15
KC-332B	NCDT Hx Supply Hdr. Pent. Isolation Inside	<15
KC-333A	NCDT Hx Return Hdr. Pent. Isolation Outside	<15
KC-429B	RB Drain Header Inside Containment Isolation	<15
KC-430A	RB Drain Header Outside Containment Isolation	<15
NB-260B	Reactor Makeup Water Tank to NV System	<15
NC-53B	Nitrogen to Pressurizer Relief Tank Containment Isolation Outside	<10
NC-54A	Nitrogen to Pressurizer Relief Tank Containment Isolation Inside	<10
NC-56B	PRT Makeup	<10
NC-195B	NC Pump Motor Oil Containment Isolation Outside	<15
NC-196A	NC Pump Motor Oil Containment Isolation Inside	<15
NF-228A	Air Handling Units Glycol Supply Containment Isolation Outside	<15
NF-233B	Air Handling Units Glycol Supply Containment Isolation Inside	<15
NF-234A	Air Handling Units Glycol Supply Containment Isolation Outside	<15
NI-47A	Accumulator Nitrogen Supply Outside Containment Isolation	<15
NI-95A	Test HDR Inside Containment Isolation	<10

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