



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. 36
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 2, 1983, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's 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 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 license amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - 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:

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(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 36, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing

Attachment:
Technical Specification
Changes

Date of Issuance: October 5, 1984



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. 17
License No. NPF-17

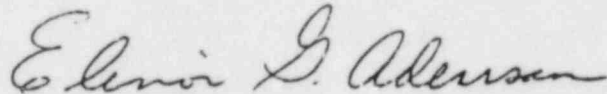
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the McGuire Nuclear Station, Unit 2 (the facility) Facility Operating License No. NPF-17 filed by the Duke Power Company (licensee) dated August 2, 1983, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's 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 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 license amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - 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.17, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing

Attachment:
Technical Specification
Changes

Date of Issuance: October 5, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 36

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

AND

TO LICENSE AMENDMENT NO. 17

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 a vertical line indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

| <u>Amended</u> <u>Page</u> | <u>Overleaf</u> <u>Page</u> |
|-------------------------------|--------------------------------|
| 3/4 6-1 | |
| 3/4 6-8 | 3/4 6-7 |
| 3/4 6-9 | |
| 3/4 6-9a | |
| 3/4 6-11 | |
| 3/4 6-33 | 3/4 6-12 |
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3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

- a. At least once per 31 days by verifying that all penetrations* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except as provided in Table 3.6-2 of Specification 3.6.3;
- b. By verifying that each containment air lock is in compliance with Specification 3.6.1.3; and
- c. After each closing of each penetration subject to Type B testing, except the containment air locks, if opened following a Type A or B test, by leak rate testing the seal with gas at P_a , 14.8 psig, and verifying that when the measured leakage rate for these seals is added to the leakage rates determined pursuant to Specification 4.6.1.2d. for all other Type B and C penetrations, the combined leakage rate is less than $0.60 L_a$.

* Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and the annulus and are locked, sealed or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

TABLE 3.6-1 (Continued)

SECONDARY CONTAINMENT BYPASS LEAKAGE PATHS

| <u>PENETRATION NUMBER</u> | <u>SERVICE</u> | <u>RELEASE LOCATION</u> | <u>TEST TYPE</u> |
|---------------------------|--|-------------------------|------------------|
| M390 | Containment Ventilation Cooling Water Out | Turbine Building | Type C |
| M279 | Containment Ventilation Cooling Water Out | Turbine Building | Type C |
| M220 | Instrument Air | Auxiliary Building | Type C |
| M219 | Station Air | Auxiliary Building | Type C |
| M215 | Breathing Air | Auxiliary Building | Type C |
| M378 | Containment Sample Out | Auxiliary Building | Type C |
| M325 | Containment Sample In | Auxiliary Building | Type C |
| M358 | Refueling Cavity to RW Pump | Auxiliary Building | Type C |
| M377 | Refueling Cavity From RW Tank | Auxiliary Building | Type C |
| M331 | Hydrogen Purge In | Atmosphere | Type C |
| M326 | RCP Motor Drain Tank Pump to Waste Oil Storage | Auxiliary Building | Type C |
| M221 | Containment Ventilation Units Condenser Drains to Condenser Drain Tank | Auxiliary Building | Type C |
| M359 | Instrument Air | Auxiliary Building | Type C |
| M386 | Instrument Air | Auxiliary Building | Type C |

McGUIRE - UNITS 1 and 2

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MCGUIRE - UNITS 1 and 2

3/4 6-8

Amendment No. 17 (Unit 2)
Amendment No. 36 (Unit 1)

TABLE 3.6-1 (Continued)

SECONDARY CONTAINMENT BYPASS LEAKAGE PATHS

| <u>PENETRATION NUMBER</u> | <u>SERVICE</u> | <u>RELEASE LOCATION</u> | <u>TEST TYPE</u> |
|---------------------------|---|--|------------------|
| M317 | Instrument Air | Auxiliary Building | Type C |
| M243 | Containment Air Release | Auxiliary Building | Type C |
| M384 | Containment Air Addition | Auxiliary Building | Type C |
| M361 | Reactor Coolant Pump Motor Oil Supply | Auxiliary Building | Type C |
| M353 | Fire Protection Header | Auxiliary Building | Type C |
| M376 | Component Cooling Water to Reactor Coolant Drain Tank Heat Exchanger | Auxiliary Building | Type C |
| M355 | Component Cooling Water from Reactor Coolant Drain Tank Heat Exchanger | Auxiliary Building | Type C |
| M327 | Component Cooling Water to Reactor Vessel Support Coolers and RCP Coolers | Auxiliary Building | Type C |
| M320 | Component Cooling Water from Reactor Vessel Support Coolers and RCP Coolers | Auxiliary Building | Type C |
| | Flued Head to Guard Pipe Welds on all Hot Penetrations | Atmosphere, or Auxiliary Building, or Turbine Building | * |
| M412 | Equipment Hatch | Atmosphere | Type C |

*Pursuant to Specification 4.6.1.2f.

MCGUIRE - UNITS 1 and 2

3/4 6-9

Amendment No. 17 (Unit 2)
Amendment No. 36 (Unit 1)

TABLE 3.6-1(Continued)

SECONDARY CONTAINMENT BYPASS LEAKAGE PATHS

| <u>PENETRATION NUMBER</u> | <u>SERVICE</u> | <u>RELEASE LOCATION</u> | <u>TEST TYPE</u> |
|---------------------------|---|-------------------------|------------------|
| M280 | Sample from Accumulator | Auxiliary Building | Type C |
| M342 | Auxiliary Seal Injection Line from Annulus to Reactor Coolant Pumps | Auxiliary Building | Type C |
| M394 | Ice from Rotary Valve Assembly to Ice Condenser Cyclone Receiver | Auxiliary Building | Type C |
| M255 | ILRT Pressure Impulse Line | Auxiliary Building | Type C |
| M323 | Cont. Rad. Monitors EMF-38, 39, 40 | Auxiliary Building | Type C |
| M118 | Cont. Press Monitors | Auxiliary Building | Type C |
| M118 | ILRT Press Impulse Line (Unit 2) | Auxiliary Building | Type C |
| M239 | Cont. Press Monitors | Auxiliary Building | Type C |
| M239 | Cont. Hydrogen Monitor "A" Train | Auxiliary Building | Type C |
| M313 | Cont. Press Monitors | Auxiliary Building | Type C |
| M402 | Cont. Press Monitors | Auxiliary Building | Type C |
| --- | Cont. Hydrogen Monitor "B" Train | Auxiliary Building | Type C |
| M392 | Air to Upper PAL Aux Bldg Side Door Seals | Auxiliary Building | Type C |
| M152 | Air to Lower PAL Aux Bldg Side Door Seals | Auxiliary Building | Type C |

TABLE 3.6-1(Continued)

SECONDARY CONTAINMENT BYPASS LEAKAGE PATHS

| <u>PENETRATION NUMBER</u> | <u>SERVICE</u> | <u>RELEASE LOCATION</u> | <u>TEST TYPE</u> |
|-------------------------------|--|-------------------------|----------------------|
| --- | Cont. Press. Monitor - Narrow Range | Auxiliary Building | Type C |
| M354 | Fuel Transfer Tube | Auxiliary Building | Type B |

McGUIRE - UNITS 1 and 2

3/4 6-9a

Amendment No. 17 (Unit 2)
Amendment No. 36 (Unit 1)

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:

- a. Within 72 hours following each closing, except when the air lock is being used for multiple entries, then at least once per 72 hours, by verifying that the seal leakage is less than 0.01 L_a as determined by precision flow measurements when measured for at least 30 seconds with the volume between the seals at a constant pressure of 14.8 psig,
- b. By conducting overall air lock leakage tests at not less than P_a, 14.8 psig, and verifying the overall air lock leakage rate is within its limit:
 - 1) At least once per 6 months, # and
 - 2) Prior to establishing CONTAINMENT INTEGRITY when maintenance has been performed on the air lock that could affect the air lock sealing capability.*
- c. At least once per 6 months by verifying that only one door in each air lock can be opened at a time, and
- d. At least once per 6 months by conducting a pressure test to verify door seal integrity, with a measured leak rate of less than 15 standard cubic centimeters per minute.

The provisions of Specification 4.0.2 are not applicable.

*This constitutes an exemption to Appendix J of 10 CFR 50.

CONTAINMENT SYSTEMS

INTERNAL PRESSURE

LIMITING CONDITION FOR OPERATION

3.6.1.4 Primary containment internal pressure shall be maintained between -0.3 and +0.3 psig.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With the containment internal pressure outside of the limits above, restore the internal pressure to within the limits within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.4 The primary containment internal pressure shall be determined to be within the limits at least once per 12 hours.

CONTAINMENT SYSTEMS

HYDROGEN CONTROL DISTRIBUTED IGNITION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.4.3 Both trains of the Hydrogen Mitigation System shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one train of the Hydrogen Mitigation System inoperable, restore the inoperable system to OPERABLE status within 7 days or increase the surveillance interval of Specification 4.6.4.3.a from 92 days to 7 days on the OPERABLE train until the inoperable train is returned to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.6.4.3 Each train of the Hydrogen Mitigation System shall be demonstrated OPERABLE:

- a. At least once per 92 days by energizing the supply breakers and verifying that at least 32 of 33 igniters are energized,* and
- b. At least once per 18 months by verifying the temperature of each igniter is a minimum of 1700°F.

* Inoperable igniters must not be on corresponding redundant circuits which provide coverage for the same region.

CONTAINMENT SYSTEMS

3/4.5.5 ICE CONDENSER

ICE BED

LIMITING CONDITION FOR OPERATION

3.6.5.1 The ice bed shall be OPERABLE with:

- a. The stored ice having a boron concentration of at least 1800 ppm boron as sodium tetraborate and a pH of 9.0 to 9.5,
- b. Flow channels through the ice condenser,
- c. A maximum ice bed temperature of less than or equal to 27°F,
- d. A total ice weight of at least 2,466,420 pounds at a 95% level of confidence, and
- e. 1944 ice baskets.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With the ice bed inoperable, restore the ice bed to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUT-DOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.1 The ice condenser shall be determined OPERABLE:

- a. At least once per 12 hours by using the Ice Bed Temperature Monitoring System to verify that the maximum ice bed temperature is less than or equal to 27°F,
- b. At least once per 9 months by:
 - 1) Chemical analyses which verify that at least nine representative samples of stored ice have a boron concentration of at least 1800 ppm as sodium tetraborate and a pH of 9.0 to 9.5 at 20°C;
 - 2) Weighing a representative sample of at least 144 ice baskets and verifying that each basket contains at least 1269 lbs of ice. The representative sample shall include 6 baskets from each of the 24 ice condenser bays and shall be constituted of

CONTAINMENT SYSTEMS

ICE CONDENSER DOORS

LIMITING CONDITION FOR OPERATION

3.6.5.3 The ice condenser inlet doors, intermediate deck doors, and top deck doors shall be closed and OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one or more ice condenser doors open or otherwise inoperable, POWER OPERATION may continue for up to 14 days provided the ice bed temperature is monitored at least once per 4 hours and the maximum ice bed temperature is maintained less than or equal to 27°F; otherwise, restore the doors to their closed positions or OPERABLE status (as applicable) within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.3.1 Inlet Doors - Ice condenser inlet doors shall be:

- a. Continuously monitored and determined closed by the inlet door position monitoring system, and
- b. Demonstrated OPERABLE during shutdown at least once per 9 months by:
 - 1) Verifying that the torque required to initially open each door is less than or equal to 675 inch pounds;
 - 2) Verifying that opening of each door is not impaired by ice, frost or debris;
 - 3) Testing a sample of at least 50% of the doors and verifying that the torque required to open each door is less than 195 inch-pounds when the door is 40 degrees open. This torque is defined as the "door opening torque" and is equal to the nominal door torque plus a frictional torque component. The doors selected for determination of the "door opening torque" shall be selected to ensure that all doors are tested at least once during two test intervals;

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 4) Testing a sample of at least 50% of the doors and verifying that the torque required to keep each door from closing is greater than 78 inch-pounds when the door is 40 degrees open. This torque is defined as the "door closing torque" and is equal to the nominal door torque minus a frictional torque component. The doors selected for determination of the "door closing torque" shall be selected to ensure that all doors are tested at least once during two test intervals; and
- 5) Calculation of the frictional torque of each door tested in accordance with 3) and 4), above. The calculated frictional torque shall be less than or equal to 40 inch-pounds.

4.6.5.3.2 Intermediate Deck Doors - Each ice condenser intermediate deck door shall be:

- a. Verified closed and free of frost accumulation by a visual inspection at least once per 7 days, and
- b. Demonstrated OPERABLE at least once per 3 months during the first year after the ice bed is fully loaded and at least once per 18 months thereafter by visually verifying no structural deterioration, by verifying free movement of the vent assemblies, and by ascertaining free movement when lifted with the applicable force shown below:

| <u>Door</u> | <u>Lifting Force</u> |
|--|-------------------------------------|
| 1) Adjacent to crane wall | Equal to or less than 37.4 lbs, |
| 2) Paired with door adjacent to crane wall | Equal to or less than 33.8 lbs, |
| 3) Adjacent to containment wall | Equal to or less than 31.8 lbs, and |
| 4) Paired with door adjacent to containment wall | Equal to or less than 31.0 lbs. |

4.6.5.3.3 Top Deck Doors - Each ice condenser top deck door shall be determined closed and OPERABLE at least once per 92 days by visually verifying:

- a. That the doors are in place, and
- b. That no condensation, frost, or ice has formed on the doors or blankets which would restrict their lifting and opening if required.

would be to require the overall airlock leakage test to be performed "... when maintenance has been performed on the airlock that could affect the airlock sealing capability." This change requires an exemption from the requirements of Appendix J, to 10 CFR 50.

The existing airlock doors are so designed that a full pressure, i.e., (14.8 psig), test of an entire airlock can only be performed after strong backs (structural bracing) have been installed on the inner door. Strong backs are needed since the pressure exerted on the inner door during the test is in a direction opposite to that of the accident pressure direction. Installing strong backs, performing the test, and removing strong backs requires at least 6 hours per airlock (there are 2 airlocks) during which access through the airlock is prohibited.

If the periodic 6-month test of paragraph III.D.2(b)(i) of Appendix J and the test required by paragraph III.D.2(b)(iii) of Appendix J are current, no maintenance has been performed on the airlock, and the airlock is properly sealed, there should be no reason to expect the airlock to leak excessively just because it has been opened in Mode 5 or Mode 6. Accordingly, the staff finds that the licensee's proposed approach of relying on the seal leakage test of paragraph III.D.2(b)(iii) of Appendix J is acceptable when no maintenance has been performed on an airlock, and will not adversely affect maintaining containment integrity. Whenever maintenance has been performed on an airlock, the test requirement of paragraph III.D.2(b)(ii) of Appendix J must still be met.

IV.

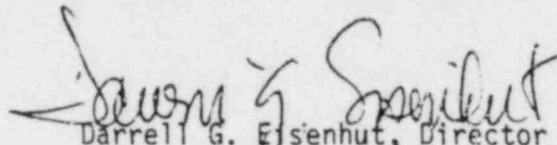
Accordingly, the Commission has determined that an exemption in accordance with 10 CFR 50.12 is authorized by law, will not endanger life or property or

the common defense and security and is otherwise in the public interest. Therefore, the requested exemption from the containment airlock test requirements of 10 CFR Part 50, Appendix J, Section III.D.2(b)(ii) is hereby granted.

Pursuant to 10 CFR 51.32, the Commission has determined that the issuance of this exemption will have no significant impact on the environment (49 FR 38425).

This exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Darrell G. Eisenhower, Director
Division of Licensing
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland
this 5th day of October 1984.