



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20555

March 19, 1984

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. 30 to Facility Operating License
NPF-9 and Amendment No. 11 to Facility Operating License
NPF-17 - McGuire Nuclear Station, Units 1 and 2

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 30 to Facility Operating License NPF-9 and Amendment No. 11 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 August 2, 1983.

The amendments change the Technical Specifications to permit changing between modes 5 (cold shutdown) and 6 (refueling) with the Control Area Ventilation Systems inoperable.

A copy of the related safety evaluation supporting Amendment No. 30 to Facility Operating License NPF-9 and Amendment No. 11 to Facility Operating License NPF-17 is enclosed.

Sincerely,

A handwritten signature in cursive script that reads "Elinor G. Adensam".

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

Enclosures:

1. Amendment No. 30 to NPF-9
2. Amendment No. 11 to NPF-17
3. Safety Evaluation

cc w/encl:
See next page

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McGuire

Mr. H. B. Tucker, Vice President
Nuclear Production Department
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

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

Mr. F. J. Twogood
Power Systems Division
Westinghouse Electric Corp.
P.O. Box 355
Pittsburgh, Pennsylvania 15230

Mr. G. A. Copp
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

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

James P. O'Reilly, Regional Admin.
U.S. Nuclear Regulatory Commission,
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

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

Attorney General
Department of Justice
Justice Building
Raleigh, North Carolina 27602

Office of Intergovernmental Relations
116 West Jones Street
Raleigh, North Carolina 27603

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

Mr. Bruce Blanchard
Environmental Projects Review
Department of the Interior
Room 4256
18th and C Street, N.W.
Washington, D. C. 20240

EIS Coordinator
U.S. Environmental Protection Agency
Region IV Office
345 Courtland Street, N.E.
Atlanta, Georgia 30308

Chairman, North Carolina
Utilities Commission
430 North Salisbury Street
Dobbs Building
Raleigh, North Carolina 27602

R. S. Howard
Operating Plants Projects
Regional Manager
Westinghouse Electric Corporation -
R&D 701
P.O. Box 2728
Pittsburgh, Pennsylvania 15230

Mr. Dayne H. Brown, Chief
Radiation Protection Branch
Division of Facility Services
Department of Human Resources
P.O. Box 12200
Raleigh, North Carolina 27605



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. 30
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:

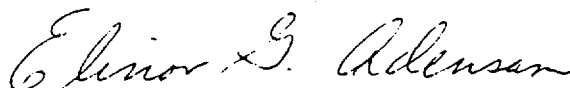
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(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 30, 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: March 19, 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. 11
License No. NPF-17

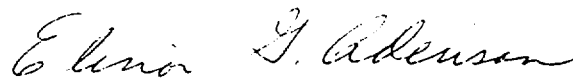
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the McGuire Nuclear Station, Unit 2 (the facility) Facility Operating License No. NPF-17 filed by the Duke Power Company (licensee) dated August 2, 1983, complies with the standards and requirements 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.11, 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: March 19, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 30

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

AND

TO LICENSE AMENDMENT NO. 11

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.

Amended
Page

3/4 7-13

Overleaf
Page

3/4 7-14

PLANT SYSTEMS

3/4.7.6 CONTROL AREA VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.6 Two independent Control Area Ventilation Systems shall be OPERABLE.

APPLICABILITY: ALL MODES

ACTION: (Units 1 and 2)

MODES 1, 2, 3 and 4:

With one Control Area Ventilation System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6:

- a. With one Control Area Ventilation System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Area Ventilation System in the recirculation mode; and
- b. With both Control Area Ventilation Systems inoperable, or with the OPERABLE Control Area Ventilation System, required to be in the recirculation mode by ACTION a., not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.
- c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.6 Each Control Area Ventilation System shall be demonstrated OPERABLE:

- a. At least once per 12 hours, by verifying that the control room air temperature is less than or equal to 120°F;
- b. At least once per 31 days on a STAGGERED TEST BASIS, by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 hours with the heaters operating;

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months, or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system, by:
- 1) Verifying that the system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% and uses the test procedure guidance of Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 2000 cfm \pm 10%;
 - 2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1%; and
 - 3) Verifying a system flow rate of 2000 cfm \pm 10% during system operation when tested in accordance with ANSI N510-1975.
- d. After every 720 hours of charcoal adsorber operation, by verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1%;
- e. At least once per 18 months, by:
- 1) Verifying that the pressure drop across the combined pre-filters, HEPA filters and charcoal adsorber banks is less than 5 inches Water Gauge while operating the system at a flow rate of 2000 cfm \pm 10%;
 - 2) Verifying that upon actuation of a diesel generator sequencer the system automatically switches into a mode of operation with flow through the HEPA filters and charcoal adsorber banks;
 - 3) Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/8 inch W.G. relative to the outside atmosphere during system operation; and
 - 4) Verifying that the heaters dissipate 10 \pm 1.0 kW when tested in accordance with ANSI N510-1975.



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

SAFETY EVALUATION REPORT

RELATED TO AMENDMENT NO. 30 TO FACILITY OPERATING LICENSE NPF-9

AND TO AMENDMENT NO. 11 TO FACILITY OPERATING LICENSE NPF-17

DUKE POWER COMPANY

INTRODUCTION

In a letter dated August 2, 1983, the Duke Power Company (licensee) requested amendments to Appendix A of Operating Licenses NPF-9 and NPF-17. The proposed changes involve Technical Specification 3.7.6 Control Area Ventilation System. The amendment would change Technical Specification 3.7.6 to permit changing between modes 5 (cold shutdown) and 6 (refueling) with the Control Area Ventilation Systems inoperable. These systems assure that the control room remains habitable after postulated accidents. Operation in either mode 5 or mode 6 is already permitted with these systems inoperable. Due to the general provisions of Technical Specification 3.0.4, however, operability of the Control Area Ventilation Systems is required during the transition between mode 5 and mode 6.

EVALUATION

The current technical specification allows both control room habitability systems to be inoperable in either mode 5 (cold shutdown) or 6 (refueling). With both systems inoperable, however, restrictions (i.e., no core alterations or reactivity changes) are invoked by the same technical specification. Even though both systems are allowed to be inoperable in either mode 5 or mode 6 (under the restrictions noted above), the specification prohibits mode changes. The requested change would allow the licensee to change modes between modes 5 and 6, but would not expand or change the scope of allowed operations in either mode and, consequently, would not result in any significant change in the risk to the public.

CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (48 FR 55649) on December 14, 1983, and consulted with the state of North Carolina. No public comments were received, and the state of North Carolina did not have any comments.

In conclusion the staff finds the proposed changes to the plant technical specifications to be acceptable and based on the considerations discussed

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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 to the health and safety of the public.

ENVIRONMENTAL CONSIDERATION

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

Principal Contributors: K. Dempsey, Accident Evaluation Branch, DSI
R. Birkel, Licensing Branch No. 4, DL

Dated: March 19, 1984

PLANT SYSTEMS

3/4.7.6 CONTROL AREA VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.6 Two independent Control Area Ventilation Systems shall be OPERABLE.

APPLICABILITY: ALL MODES

ACTION: (Units 1 and 2)

MODES 1, 2, 3 and 4:

With one Control Area Ventilation System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6:

- a. With one Control Area Ventilation System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Area Ventilation System in the recirculation mode; and
- b. With both Control Area Ventilation Systems inoperable, or with the OPERABLE Control Area Ventilation System, required to be in the recirculation mode by ACTION a., not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.
- c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.6 Each Control Area Ventilation System shall be demonstrated OPERABLE:

- a. At least once per 12 hours, by verifying that the control room air temperature is less than or equal to 120°F;
- b. At least once per 31 days on a STAGGERED TEST BASIS, by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 hours with the heaters operating;

PLANT SYSTEMS

3/4.7.6 CONTROL AREA VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.6 Two independent Control Area Ventilation Systems shall be OPERABLE.

APPLICABILITY: ALL MODES

ACTION: (Units 1 and 2)

MODES 1, 2, 3 and 4:

With one Control Area Ventilation System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6:

- a. With one Control Area Ventilation System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Area Ventilation System in the recirculation mode; and
- b. With both Control Area Ventilation Systems inoperable, or with the OPERABLE Control Area Ventilation System, required to be in the recirculation mode by ACTION a., not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.
- c. The provisions of Specification 3.0.4 are not applicable. ← added

Increase the risk to operators of higher prob. of fuel handling accid. w/ system out. 11/1/83

SURVEILLANCE REQUIREMENTS

4.7.6 Each Control Area Ventilation System shall be demonstrated OPERABLE:

- a. At least once per 12 hours, by verifying that the control room air temperature is less than or equal to 120°F;
- b. At least once per 31 days on a STAGGERED TEST BASIS, by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 hours with the heaters operating;

requirements, the action may be taken in accordance with the specified time

Justification and Safety Analysis

The proposed amendments would make specification 3.0.4 not applicable in modes 5 (cold shutdown) and 6 (refueling) for the Control Area Ventilation Systems. This would allow changing between modes 5 and 6 with the systems inoperable.

The Control Area Ventilation Systems ensure that the control room remains habitable after postulated accidents. Changing between modes 5 and 6 with the system(s) inoperable is acceptable for the following reasons:

- (1) Whether in mode 5 or 6, there is no significant difference in the probability of a reactor accident occurring for which the system would be required to function. In either case, the reactor is substantially subcooled and subcritical.
- (2) The fact that mode 5 is acceptably safe is clear because the ACTION section requires proceeding to mode 5 from higher modes but does not require proceeding to mode 6. Per the ACTION section, the remaining operable system would be placed in the recirculation mode. The ACTION section also restricts positive reactivity changes with both systems inoperable and with emergency power unavailable; however, changing from mode 6 to mode 5 does not necessarily involve positive reactivity changes. Therefore, passage from mode 6 to mode 5 is acceptable.
- (3) Because the reactivity and temperature limits for mode 6 are lower than for mode 5, passage into mode 6 does not place the unit in a more degraded condition. Therefore, passage from mode 5 to mode 6 is acceptable.

Analysis of Significant Hazards Consideration

This analysis is provided in accordance with 10 CFR 50.91 and is performed according to the standards of 10 CFR 50.92.

The proposed amendments would not involve a significant increase in the probability of an accident previously evaluated because the Control Area Ventilation System is designed to mitigate the consequences of accidents and can have no effect on cause mechanisms. The consequences of accidents previously evaluated would not be significantly increased because accidents which might occur in modes 5 or 6 would be much less severe than the design basis accidents. Further the ACTION requirements provide for appropriate measures to compensate for the system inoperability (such as placing the remaining operable system in recirculation and suspending core alterations and positive reactivity changes).

The proposed amendments would not create the possibility of a new or different kind of accident than previously evaluated. The Control Area Ventilation System cannot cause an accident to occur. Safety margins are not significantly

Attachment 2, page 3

reduced by the proposed amendments because the design basis accidents involve initial conditions more severe than those conditions (modes 5 and 6) for which the proposed amendments would apply.

Based on the above analysis, it is concluded that the proposed amendments do not involve significant hazards considerations.

PLANT SYSTEMS

3/4.7.6 CONTROL AREA VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.6 Two independent Control Area Ventilation Systems shall be OPERABLE.

APPLICABILITY: ALL MODES

ACTION: (Units 1 and 2)

MODES 1, 2, 3 and 4:

With one Control Area Ventilation System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6:

- a. With one Control Area Ventilation System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Area Ventilation System in the recirculation mode; and
- b. With both Control Area Ventilation Systems inoperable, or with the OPERABLE Control Area Ventilation System, required to be in the recirculation mode by ACTION a., not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.
- c. The provisions of Specification 3.0.4 are not applicable. ← *added*

SURVEILLANCE REQUIREMENTS

4.7.6 Each Control Area Ventilation System shall be demonstrated OPERABLE:

- a. At least once per 12 hours, by verifying that the control room air temperature is less than or equal to 120°F;
- b. At least once per 31 days on a STAGGERED TEST BASIS, by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 hours with the heaters operating;

requirements, the action may be taken in accordance with the specified time

Justification and Safety Analysis

The proposed amendments would make specification 3.0.4 not applicable in modes 5 (cold shutdown) and 6 (refueling) for the Control Area Ventilation Systems. This would allow changing between modes 5 and 6 with the systems inoperable.

The Control Area Ventilation Systems ensure that the control room remains habitable after postulated accidents. Changing between modes 5 and 6 with the system(s) inoperable is acceptable for the following reasons:

- (1) Whether in mode 5 or 6, there is no significant difference in the probability of a reactor accident occurring for which the system would be required to function. In either case, the reactor is substantially subcooled and subcritical.
- (2) The fact that mode 5 is acceptably safe is clear because the ACTION section requires proceeding to mode 5 from higher modes but does not require proceeding to mode 6. Per the ACTION section, the remaining operable system would be placed in the recirculation mode. The ACTION section also restricts positive reactivity changes with both systems inoperable and with emergency power unavailable; however, changing from mode 6 to mode 5 does not necessarily involve positive reactivity changes. Therefore, passage from mode 6 to mode 5 is acceptable.
- (3) Because the reactivity and temperature limits for mode 6 are lower than for mode 5, passage into mode 6 does not place the unit in a more degraded condition. Therefore, passage from mode 5 to mode 6 is acceptable.

Analysis of Significant Hazards Consideration

This analysis is provided in accordance with 10 CFR 50.91 and is performed according to the standards of 10 CFR 50.92.

The proposed amendments would not involve a significant increase in the probability of an accident previously evaluated because the Control Area Ventilation System is designed to mitigate the consequences of accidents and can have no effect on cause mechanisms. The consequences of accidents previously evaluated would not be significantly increased because accidents which might occur in modes 5 or 6 would be much less severe than the design basis accidents. Further the ACTION requirements provide for appropriate measures to compensate for the system inoperability (such as placing the remaining operable system in recirculation and suspending core alterations and positive reactivity changes).

The proposed amendments would not create the possibility of a new or different kind of accident than previously evaluated. The Control Area Ventilation System cannot cause an accident to occur. Safety margins are not significantly

Attachment 2, page 3

reduced by the proposed amendments because the design basis accidents involve initial conditions more severe than those conditions (modes 5 and 6) for which the proposed amendments would apply.

Based on the above analysis, it is concluded that the proposed amendments do not involve significant hazards considerations.

March 19, 1984

AMENDMENT NO. 30 TO FACILITY OPERATING LICENSE NPF-9 - McGUIRE NUCLEAR STATION, UNIT 1
AMENDMENT NO. 11 TO FACILITY OPERATING LICENSE NPF-17 - McGUIRE NUCLEAR STATION, UNIT 2

DISTRIBUTION:

Docket Nos. 50-369/370
NRC PDR
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NSIC
LB #4 r/f
E. Adensam
R. Birkel
M. Duncan
Attorney, OELD
R. Diggs, ADM
T. Barnhart (8)
ACRS (16)
E. L. Jordan, DEQA:I&E
J. N. Grace, DRP:I&E
L. J. Harmon, I&E File (2)
D. Brinkman