



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

October 31, 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. 37 to Facility Operating License
NPF-9 and Amendment No. 18 to Facility Operating License
NPF-17 - McGuire Nuclear Station, Units 1 and 2

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 37 to Facility Operating License NPF-9 and Amendment No. 18 to Facility Operating License NPF-17 for the McGuire Nuclear Station, Units 1 and 2. These amendments are in response to your application dated August 2, 1983.

The amendments change the Technical Specifications to permit unit operation at less than or equal to 46% rated thermal power with the Upper Head Injection Accumulator System inoperable.

A copy of the related safety evaluation supporting Amendment No. 37 to Facility Operating License NPF-9 and Amendment No. 18 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. 37 to NPF-9
2. Amendment No. 18 to NPF-17
3. Safety Evaluation

cc w/encl:
See next page

DESIGNATED ORIGINAL

Certified By

A handwritten signature in cursive script, likely of the same person as the signature above, used to certify the document.

8411210220 841031
PDR ADOCK 05000369
P PDR

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

October 31, 1984

AMENDMENT NO. 37 TO FACILITY OPERATING LICENSE NPF-9 - MCGUIRE NUCLEAR STATION, UNIT 1
AMENDMENT NO. 18 TO FACILITY OPERATING LICENSE NPF-17 - MCGUIRE NUCLEAR STATION, UNIT 2

DISTRIBUTION:

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

DESIGNATED ORIGINAL
Certified By *J. M. Taylor*



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. 37
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:

8411210231 841031
PDR ADOCK 05000369
PDR

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 37, 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 31, 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. 18
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. 18, 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 31, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 37

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

AND

TO LICENSE AMENDMENT NO.18

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 page is also provided to maintain document completeness.

<u>Amended</u> <u>Page</u>	<u>Overleaf</u> <u>Page</u>
3/4 5-3	3/4 5-4

EMERGENCY CORE COOLING SYSTEMS

UPPER HEAD INJECTION

LIMITING CONDITION FOR OPERATION

- 3.5.1.2 Each Upper Head Injection Accumulator System shall be OPERABLE with:
- a. The isolation valves open,
 - b. The water-filled accumulator containing a minimum of 1850 cubic feet of borated water having a concentration of between 1900 and 2100 ppm of boron, and
 - c. The nitrogen bearing accumulator pressurized to between 1206 and 1264 psig.

APPLICABILITY: MODES 1, 2 and 3.*

ACTION:

Above 46% RATED THERMAL POWER:

- a. With the Upper Head Injection Accumulator System inoperable, except as a result of a closed isolation valve(s), restore the Upper Head Injection Accumulator System to OPERABLE status within 1 hour or be at less than or equal to 46% RATED THERMAL POWER and close the isolation valves within the next 6 hours.
- b. With the Upper Head Injection Accumulator System inoperable due to the isolation valve(s) being closed, either immediately open the isolation valve(s) or be at less than or equal to 46% RATED THERMAL POWER and close the remaining isolation valves within 1 hour.

Less than or equal to 46% RATED THERMAL POWER:

- a. With the Upper Head Injection Accumulator System inoperable, POWER OPERATION may continue provided the isolation valves are closed within 6 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.5.1.2 Each Upper Head Injection Accumulator System shall be demonstrated OPERABLE:

- a. At least once per 12 hours by:
 - 1) Verifying the contained borated water volume and nitrogen pressure in the accumulators, and
 - 2) Verifying that each accumulator isolation valve is open.

*Pressurizer Pressure above 1900 psig.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 31 days and within 6 hours after each solution volume increase of greater than or equal to 1% of tank volume by verifying the boron concentration of the solution in the water-filled accumulator;
- c. At least once per 18 months by:
 - 1) Verifying that each accumulator isolation valve closes automatically when the water level is 76.25 ± 3.3 inches above the bottom inside edge of the water-filled accumulator with atmospheric pressure in the accumulator, and
 - 2) Verifying that the total dissolved nitrogen and air in the water-filled accumulator is less than 80 scf per 1800 cubic feet of water (equivalent to 5×10^{-5} pounds nitrogen per pounds water).
- d. At least once per 5 years by replacing the membrane installed between the water-filled and nitrogen bearing accumulators and verifying that the removed membrane burst at a differential pressure of 40 ± 10 psi.



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

SAFETY EVALUATION REPORT

RELATED TO AMENDMENT NO. 37 TO FACILITY OPERATING LICENSE NPF-9

AND TO AMENDMENT NO. 18 TO FACILITY OPERATING LICENSE NPF-17

DUKE POWER COMPANY

INTRODUCTION

In a letter dated August 2, 1983, the Duke Power Company (licensee) requested a number of amendments to Appendix A of Operating Licenses NPF-9 and NPF-17. One proposed amendment would revise Technical Specification 3.5.1.2 to allow unit operation at less than or equal to 46% rated thermal power with the Upper Head Injection Accumulator System inoperable. The system performs no function during normal operation but serves to mitigate accidents after they occur.

EVALUATION

A limited spectrum of large and small breaks was analyzed at 46% power with an F_g of 4.64. This F_g is permissible in this power range. The 1981 model was used for large breaks and the corrected 1975 model was used for small breaks. UHI support columns and guide tubes were modeled as in previous UHI ECCS calculations. The cold leg accumulators were maintained at 400 psi to reflect that specification for UHI plants. We have reviewed these elements of this calculation and conclude that this is an appropriate methodology for analyzing ECCS performance under these conditions. The results of the analyses were within the performance limits of 10 CFR 50.46. We, therefore, conclude that LOCA analysis for this condition is acceptable. Analyses of other transients and accidents is not necessary, since all other transients and accidents would be bounded by previous analyses at zero power or full power.

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.

8411210238 841031
PDR ADCK Q5000369
P PDR

CONCLUSION

Notice of opportunity for a prior hearing was published in the Federal Register on January 4, 1984 (49 FR 530). No requests for a hearing were received.

We have concluded, based on the consideration discussed above, that: (1) there 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: Norman Lauben - Reactor Systems Branch, DSI
R. Birkel, Licensing Branch No. 4, DL

Dated: October 31, 1984

U. S. NUCLEAR REGULATORY COMMISSIONDUKE POWER COMPANYDOCKET NOS. 50-369 AND 50-370NOTICE OF ISSUANCE OF AMENDMENTS TOFACILITY OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (Commission) has issued Amendment No. 37 to Facility Operating License No. NPF-9 and Amendment No. 18 to Facility Operating License No. NPF-17, issued to Duke Power Company (the licensee), which revised the Technical Specifications for operation of the McGuire Nuclear Station, Units 1 and 2, (the facility) located in Mecklenburg County, North Carolina. The amendments were effective as of the date of their issuance.

The amendments change the Technical Specifications to permit unit operation at less than or equal to 46% rated thermal power with the Upper Head Injection Accumulator System inoperable.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment.

Notice of Consideration of Issuance of Amendments and Opportunity for Prior Hearing in connection with this action was published in the FEDERAL REGISTER on January 4, 1984 (49 FR 530). No request for a hearing or petition for leave to intervene was filed following this notice.

The Commission has determined that the issuance of the amendments will not result in any significant environmental impact and that pursuant to 10 CFR

§ 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of the amendments.

For further details with respect to the action see (1) the application for amendment dated August 2, 1983, (2) Amendment No. 37 to License No. NPF-9 and Amendment No. 18 to License No. NPF-17, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C., and at the Atkins Library, University of North Carolina, Charlotte (UNCC Station), North Carolina 28242. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland this 31st day of October 1984.

FOR THE NUCLEAR REGULATORY COMMISSION



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