

November 23, 1981

Docket No. 50-369

Mr. William O. Parker, Jr.  
Vice President Steam Production  
Duke Power Company  
P.O. Box 2178  
422 South Church Street  
Charlotte, North Carolina 28242

Dear Mr. Parker:

Subject: Issuance of Amendment No. 9 to Facility Operating License  
NPF-9 - McGuire Nuclear Station, Unit 1

The Nuclear Regulatory Commission has issued Amendment No. 9 to Facility Operating License NPF-9 for the McGuire Nuclear Station, Unit 1, located in Mecklenburg County, North Carolina.

This amendment is in response to your letter dated November 11, 1981. This amendment revises the minimum reactor coolant system flow rate to permit an option for operation at a reduced flow rate (95%) in conjunction with a reduced power level (90%). The amendment is effective as of its date of issuance.

A copy of the related safety evaluation supporting Amendment No. 9 to Facility Operating License NPF-9 is enclosed. Also enclosed is a copy of a related notice which has been forwarded to the Office of the Federal Register for publication.

Sincerely,

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

Enclosures:

1. Amendment No. 9
2. Safety Evaluation
3. Federal Register Notice

cc w/encl:

See next page

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11/23/81

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DATE	11/13/81	11/13/81	11/13/81	11/13/81	11/13/81	11/19/81	11/24/81

McGuire

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Duke Power Company  
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cc: Mr. W. L. Porter  
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San Francisco, California 94104

Mr. J. E. Houghtaling  
NUS Corporation  
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Clearwater, Florida 33515

Mr. Jesse L. Riley, President  
The Carolina Environmental Study Group  
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Charlotte, North Carolina 28207

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Resident Inspector McGuire NPS  
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Cornelius, North Carolina 28031

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Raleigh, North Carolina 27608

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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  
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Department of the Interior  
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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

Mr. David E. Smith  
City of Charlotte  
Legal Department  
600 E. Trade Street  
City Hall  
Charlotte, North Carolina 28211

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

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SURNAME							
DATE							

DUKE POWER COMPANY

DOCKET NO. 50-369

MCGUIRE NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 9  
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 November 11, 1981, 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:

(2) Technical Specifications

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The Technical Specifications contained in Appendix A, as revised through Amendment No. 9, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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

Attachment:  
Technical Specification  
change

Date of Issuance: November 23, 1981

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11/23/81

E.K

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SURNAME	RBirke	JHolomich	Phillips	CBerlinger	LBenstein	KETCHEN	EAdensam
DATE	11/19/81	11/13/81	11/13/81	11/13/81	11/13/81	11/19/81	11/20/81

ATTACHMENT TO LICENSE AMENDMENT NO. 9

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains a vertical line indicating the area of change. The corresponding overleaf page is also provided to maintain document completeness.

Overleaf  
Page

3/4 2-12

Amended  
Page

3/4 2-11

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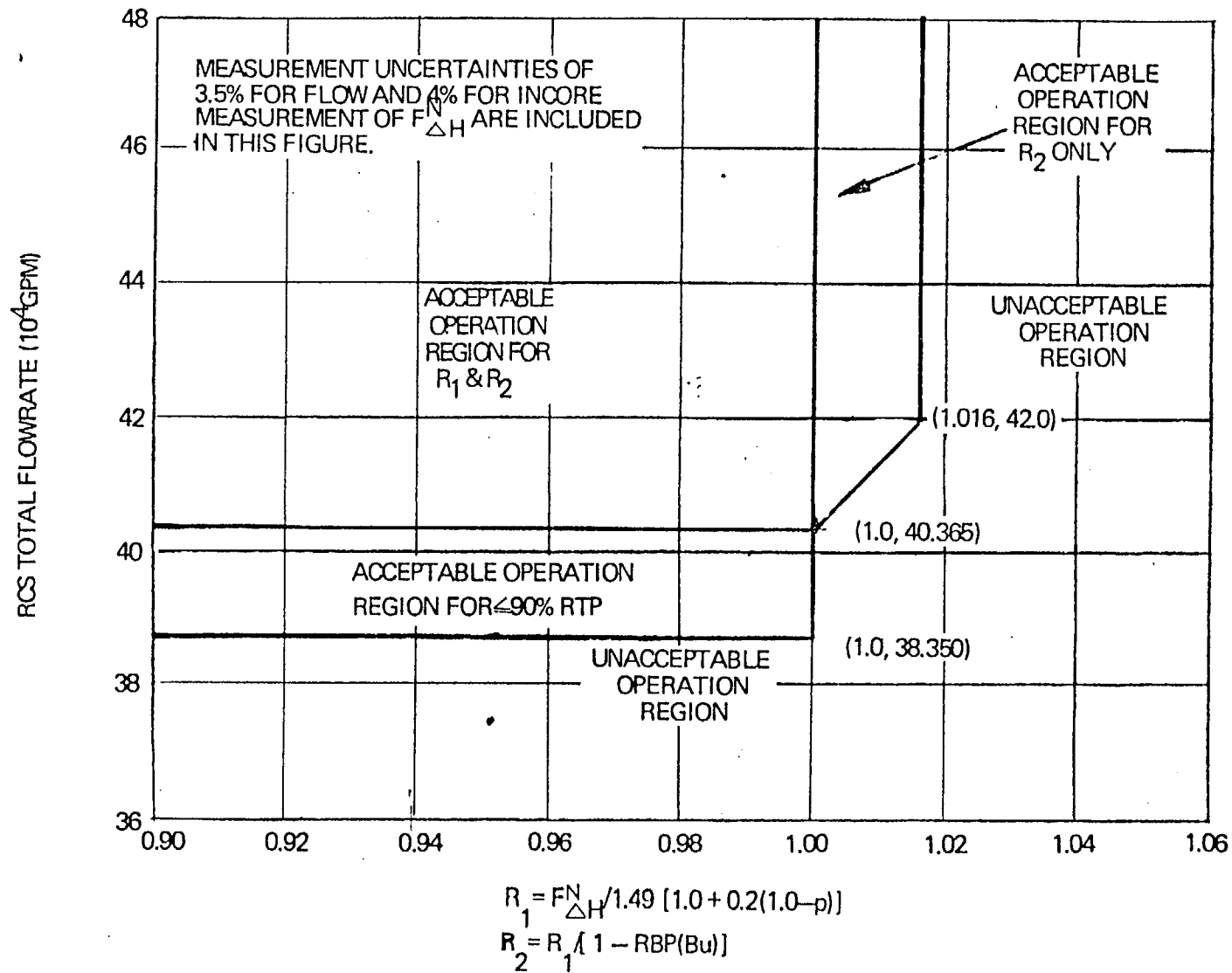


FIGURE 3.2.3 RCS TOTAL FLOWRATE VERSUS  $R_1$  AND  $R_2$ —FOUR LOOPS IN OPERATION

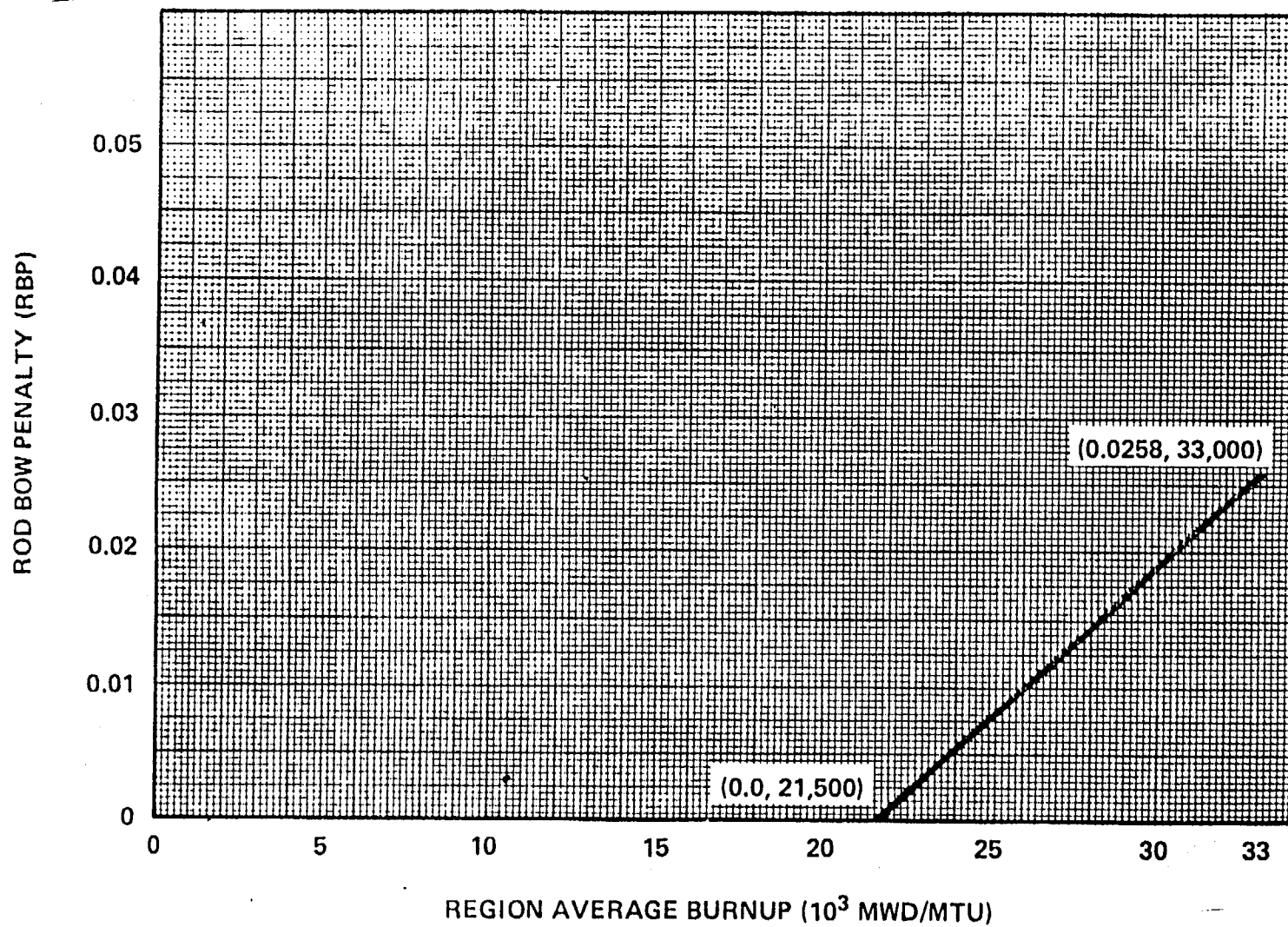


Figure 3.2-4 Rod Bow Penalty as a Function of Burnup.

SAFETY EVALUATION BY THE  
OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 9  
TO LICENSE NPF-9  
DUKE POWER COMPANY

INTRODUCTION

By letter dated November 11, 1981, the licensee requested a change to the McGuire Nuclear Station Unit 1 Technical Specifications, Appendix A, to License NPF-9, Item 3/4.2.3. The requested change relates to the minimum measured reactor coolant system flow rate. Based on preliminary measurements the licensee may be unable to achieve the thermal design flow limits defined in Item 3/4.2.3. The licensee requested that the Technical Specifications minimum reactor coolant system flow rate as a function of F be modified to permit an option for operation at a reduced flow rate (95% of the current value) in conjunction with a reduced power level (90% of the specification value). The reduced power level is specified to maintain the thermal margin at the full flow value which was the basis for the final design safety analysis.

EVALUATION

In Attachment 1 to the November 11, 1981 letter, the licensee stated that the relationship between power and flow is:

$$\frac{\Delta \text{Power}}{\Delta \text{Flow}} = \frac{1\%}{1.8\%}$$

By using this relationship, a 5% reduction in flow results in a 2.7% reduction in power.

The staff has performed an independent audit using the sensitivity factors reported in References (1), (2) and (3)\*. For the worst cast, Reference (3), a 5% reduction in flow requires a 4.32% reduction in power.

\*References:

- (1) Westinghouse Topical Report, WCAP-8567, "Improved Thermal Design Procedure"
- (2) Memorandum, K. Goller to R. Baer, October 21, 1977, "Evaluation of Indian Point No. 2 Thermal Margins for DBR Reduction Due to Fuel Rod Bow"
- (3) Battelle Northwest Laboratory Report, FATE-79-101, "Analysis of the Sensitivity of Calculated NDNBR to Eight Selected DNS Parameters"

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The staff has also reviewed the amount of bypass flow stated in the McGuire Final Safety Analysis Report. The bypass flow reported in the Final Safety Analysis Report is consistent with that required to ensure the validity of the safety analyses at the proposed technical specification flow limit.

Based on our evaluation we conclude that the proposed change to technical specification 3/4.2.3 is acceptable.

#### ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does 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 amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR Section 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 this amendment.

#### CONCLUSION

We have concluded, based on the consideration discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: November 23, 1981

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UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-369

DUKE POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENT

FACILITY OPERATING LICENSE NO. NPF-9

The U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 9 to Facility Operating License No. NPF-9, issued to Duke Power Company (licensee) for the McGuire Nuclear Station, Unit 1 (the facility) located in Mecklenburg County, North Carolina. This amendment revises the minimum reactor coolant system flow rate to permit an option for operation at a reduced flow rate (95%) in conjunction with a reduced power level (90%). The amendment is effective as of its date of issuance.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment 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 this amendment.

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For further details with respect to this action, see (1) Duke Power Company letter dated November 11, 1981, (2) Amendment No. 9 to Facility Operating License No. NPF-9 with Appendix A Technical Specification page changes, 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 the Atkins Library, University of North Carolina, Charlotte (UNCC Station), North Carolina 28223. 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 23<sup>rd</sup> day of November 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

*S/*  
Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing, NRR

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DATE	11/12/81	11/16/81	11/19/81	11/20/81			

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

DISTRIBUTION w/enclosures:

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