

April 11, 1988

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. 80 to Facility Operating License NPF-9 and
Amendment No. 61 to Facility Operating License NPF-17 - McGuire
Nuclear Station, Units 1 and 2 (TACS 67202/67203)

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The Nuclear Regulatory Commission has issued the enclosed Amendment No.80 to Facility Operating License NPF-9 and Amendment No. 61 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 February 5, 1988.

The amendments correct Technical Specifications 3.1.2.5 and 3.1.2.6 by increasing the minimum volume of borated water to be maintained in the Boric Acid Storage System. The amendments are effective as of their date of issuance.

A copy of the related safety evaluation supporting Amendment No. 80 to Facility Operating License NPF-9 and Amendment No. 61 to Facility Operating License NPF-17 is enclosed.

Notice of issuance of amendments will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,

Original signed by:

Darl Hood, Project Manager
Project Directorate II-3
Division of Reactor Projects I/II

Enclosures:

1. Amendment No.80 to NPF-9
2. Amendment No.61 to NPF-17
3. Safety Evaluation

cc w/enclosures: See next page

PD#IX-3/DRP-I/II

MRood

3/3/88

DSH PD#II-3/DRP-I/II

DHood:pw

3/2/88

DSIT AM 4/11/88 PD#II-3/DRP-I/II

Acting PD

3/2/88

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PDR ADDCK 05000369
P PDR

Mr. H. B. Tucker
Duke Power Company

McGuire Nuclear Station

cc:

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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. 80
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 5, 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.

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P PDR

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. 80, 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:

Lawrence Crocker , Acting Director
Project Directorate II-3
Division of Reactor Projects-I/II

Attachment:
Technical Specification
Changes

Date of Issuance: April 11, 1988

PD#II-3/DRP-II/I
MRood
3/3/88

DSH
PD#II-3/DRP-I/II
DHood:pw
3/2/88

SRXB
WHodges
3/14/88

OGC/WF
3/10/88

PD#II-3/DRP-I/II
Acting PD
4/11/88

AD/R-II
Blainas
3/14/88



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. 61
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 5, 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. 61, 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:

Lawrence Crocker , Acting Director
Project Directorate II-3
Division of Reactor Projects-I/II

Attachment:
Technical Specification
Changes

Date of Issuance: April 11, 1988

PD#II-3/DRP-II/I
MRobd
3/3/88
AD/R-II
Lainas
3/19/88

DSjt
PD#II-3/DRP-I/II
DHood:pw
3/2/88

SRXB *mu*
WHodges
3/14/88

APH
OGC/WF
3/10/88

me
PD#II-3/DRP-I/II
Acting PD
4/11/88

ATTACHMENT TO LICENSE AMFNDMENT NO. 80

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

AND

TO LICENSE AMENDMENT NO. 61

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.

Amended
Page

3/4 1-11

3/4 1-12

REACTIVITY CONTROL SYSTEMS

BORATED WATER SOURCE - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.5 As a minimum, one of the following borated water sources shall be OPERABLE:

- a. A Boric Acid Storage System and at least one associated Heat Tracing System with:
 - 1) A minimum contained borated water volume of 6132 gallons,
 - 2) Between 7000 and 7700 ppm of boron, and
 - 3) A minimum solution temperature of 65°F.
- b. The refueling water storage tank with:
 - 1) A minimum contained borated water volume of 26,000 gallons,
 - 2) A minimum boron concentration of 2000 ppm, and
 - 3) A minimum solution temperature of 70°F.

APPLICABILITY: MODES 5 and 6.

ACTION:

With no borated water source OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

SURVEILLANCE REQUIREMENTS

4.1.2.5 The above required borated water source shall be demonstrated OPERABLE:

- a. At least once per 7 days by:
 - 1) Verifying the boron concentration of the water,
 - 2) Verifying the contained borated water volume, and
 - 3) Verifying the boric acid storage tank solution temperature when it is the source of borated water.
- b. At least once per 24 hours by verifying the RWST temperature when it is the source of borated water and the outside air temperature is less than 70°F.

REACTIVITY CONTROL SYSTEMS

BORATED WATER SOURCES - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.6 As a minimum, the following borated water source(s) shall be OPERABLE as required by Specification 3.1.2.2:

- a. A Boric Acid Storage System and at least one associated Heat Tracing System with:
 - 1) A minimum contained borated water volume of 20,453 gallons,
 - 2) Between 7000 and 7700 ppm of boron, and
 - 3) A minimum solution temperature of 65°F.
- b. The refueling water storage tank with:
 - 1) A contained borated water volume of at least 372,100 gallons,
 - 2) Between 2000 and 2100 ppm of boron,
 - 3) A minimum solution temperature of 70°F, and
 - 4) A maximum solution temperature of 100°F.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With the Boric Acid Storage System inoperable and being used as one of the above required borated water sources, restore the storage system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and borated to a SHUTDOWN MARGIN equivalent to at least 1% delta k/k at 200°F; restore the Boric Acid Storage System to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 30 hours.
- b. With the refueling water storage tank inoperable, restore the tank to OPERABLE status within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 80 TO FACILITY OPERATING LICENSE NPF-9
AND AMENDMENT NO. 61 TO FACILITY OPERATING LICENSE NPF-17

DUKE POWER COMPANY

DOCKET NOS. 50-369 AND 50-370

McGUIRE NUCLEAR STATION, UNITS 1 AND 2

INTRODUCTION

By letter dated February 5, 1988, Duke Power Company (the licensee) proposed amendments to increase the minimum volume of borated water required by McGuire Technical Specifications (TS) 3.1.2.5 and 3.1.2.6 to be maintained in the Boric Acid Storage System during Modes 5 and 6 and Modes 1, 2, 3 and 4, respectively.

EVALUATION

The present McGuire TS 3.1.2.6, "Reactivity Control Systems-Borated Water Source-Operating," which applies to Modes 1, 2, 3 and 4, specifies as part of its limiting conditions for operation that the Boric Acid Storage System contain a minimum borated water volume of 19,500 gallons. Similarly, TS 3.1.2.5 "Reactivity Control Systems-Borated Water Source-Shutdown," presently specifies for Modes 5 and 6 a minimum contained borated water volume in this System of 5100 gallons. As noted in associated TS Bases 3/4.1.2, these values are based on boration capability requirements to provide a shutdown margin from expected operating conditions of 1.3% delta k/k after xenon decay and cooldown to 200 degrees-F (16,321 gallons of 7000 ppm borated water), and a shutdown margin of 1% delta k/k after xenon decay and cooldown from 200 degrees-F to 140 degrees-F (2000 gallons of 7000 ppm borated water), to ensure that negative reactivity control is available during each mode of facility operation. These current technical specifications reflect a minimum usable level (i.e., zero percent level) in the Unit 1 and 2 Boric Acid Tanks corresponding to the outlet pipe centerline. The outlet pipe is nominally 4 inches in diameter with a centerline located 6 inches above the bottom of the tank. Six inches of unusable tank level corresponds to approximately 3100 gallons of unusable volume. Therefore, $3100 + 2000 = 5100$ gallons and $3100 + 16,321 = 19,421$ gallons. This is conservatively rounded up to 19,500 gallons.

The licensee has recently discovered that the highest point for the piping associated with the Boric Acid Tanks is higher than the piping tap on the tank. The minimum usable level for the Boric Acid Tanks should be at the top of the outlet pipe, rather than the pipe centerline. The new zero percent level of the tank occurs at 8 inches above the bottom of the tank (i.e., at the top of the outlet pipe), which corresponds to an unusable volume of about 4132 gallons. This means that, in order to satisfy the existing

boration capability requirements, the present minimum values in TS 3.1.2.5 and 3.1.2.6 should be increased. Specifically, TS 3.1.2.5 should require minimum tank levels of $4132 + 2000 = 6132$ gallons, and TS 3.1.2.6 should require $4132 + 16,321 = 20,453$ gallons.

The NRC staff has reviewed the proposed changes and finds that they appropriately correct the present non-conservative values by substituting more restrictive (i.e., increased) borated water volumes. The revised values restore the boration capability to that which will satisfy the originally intended shutdown margins. Therefore, the staff concludes that the changes enhance safety and are acceptable.

ENVIRONMENTAL CONSIDERATION

These amendments involve changes to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational exposure. The NRC staff has made a determination that the amendments involve no significant hazards consideration, and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (53 FR 7590) on March 9, 1988. The Commission consulted with the state of North Carolina. No public comments were received, and the state of North Carolina did not have any comments.

We have concluded, based on the considerations discussed 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 or to the health and safety of the public.

Principal Contributor: D. Hood, PD#I1-3

Dated: April 11, 1988

April 11, 1988

Docket Nos.: 50-369/370

MEMORANDUM FOR: Sholly Coordinator

FROM: Darl Hood, Project Manager
Project Directorate II-3
Division of Reactor Projects I/II

SUBJECT: REQUEST FOR PUBLICATION IN BI-WEEKLY FR NOTICE - NOTICE OF
ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE
(TAC 67202/67203)

Duke Power Company, Docket Nos. 50-369 and 50-370, McGuire Nuclear Station,

Units 1 and 2, Mecklenburg County, North Carolina

Date of application for amendments: February 5, 1988

Brief description of amendments: The amendments corrected Technical
Specifications 3.1.2.5 and 3.1.2.6 by increasing the minimum volume of borated
water to be maintained in the Boric Acid Storage System.

Date of issuance: April 11, 1988

Effective date: April 11, 1988

Amendment Nos.: 80 and 61

Facility Operating License Nos. NPF-9 and NPF-17. Amendments revised the
Technical Specifications.

Date of initial notice in Federal Register: March 9, 1988 (53 FR)

The Commission's related evaluation of the amendments is contained in a Safety
Evaluation dated April 11, 1988.

No significant hazards consideration comments received: No

Local Public Document Room location: Atkins Library, University of North
Carolina, Charlotte (UNCC Station), North Carolina 28242

Original signed by:

Darl Hood, Project Manager
Project Directorate II-3
Division of Reactor Projects-I/II

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PDR ADOCK 05000369
P PDR

PD I/II-3
MRood
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DHood:pw
3/2/88

DSH
PD I/II-3
Acting PD
3/2/88

MC
4/11/88