

June 2, 2005

G. R. Peterson, Vice President  
McGuire Nuclear Station  
Duke Energy Corporation  
12700 Hagers Ferry Road  
Huntersville, NC 28078

SUBJECT: MCGUIRE NUCLEAR STATION, UNITS 1 AND 2 RE: ISSUANCE OF  
AMENDMENTS (TAC NOS. MB9525 AND MB9526)

Dear Mr. Peterson:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 229 to Renewed Facility Operating License NPF-9 and Amendment No. 211 to Renewed Facility Operating License NPF-17 for the McGuire Nuclear Station, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated June 3, 2003, as supplemented by letters dated January 18 and May 10, 2005.

The amendments allow the Auxiliary Building pressure boundary to be opened intermittently under administrative control by adding a note to TS 3.7.11, "Auxiliary Building Filtered Ventilation Exhaust System (ABFVES)," in accordance with provisions in Technical Specification Task Force 287, Revision 5.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

*/RA/*

James J. Shea, Project Manager, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosures:

1. Amendment No. 229 to NPF-9
2. Amendment No. 211 to NPF-17
3. Safety Evaluation

cc w/encls: See next page

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OFFICE	PDII-1/PM	PDII-1/LA	DIPM	OGC	PDII-1/SC (A)
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DATE	06/2/05	06/2/05	05/17/05	05/27/05	06/2/05

**OFFICIAL AGENCY RECORD**

DUKE ENERGY CORPORATION

DOCKET NO. 50-369

MCGUIRE NUCLEAR STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 229  
Renewed 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), Renewed Facility Operating License No. NPF-9 filed by the Duke Energy Corporation (licensee) dated June 3, 2003, as supplemented by letters dated January 18 and May 10, 2005, 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, 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 attachment to this license amendment, and Paragraph 2.C.(2) of Renewed 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. 229 , are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA CGratton for/*

Evangelos C. Marinos, Chief, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment:  
Technical Specification  
Changes

Date of Issuance: June 2, 2005

DUKE ENERGY CORPORATION

DOCKET NO. 50-370

MCGUIRE NUCLEAR STATION, UNIT 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 211  
Renewed 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 1 (the facility), Renewed Facility Operating License No. NPF-9 filed by the Duke Energy Corporation (licensee) dated June 3, 2003, as supplemented by letters dated January 18 and May 10, 2005, 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, 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 attachment to this license amendment, and Paragraph 2.C.(2) of Renewed 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. 211 , are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA CGratton for/*

Evangelos C. Marinos, Chief, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment:  
Technical Specification  
Changes

Date of Issuance: June 2, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 229  
RENEWED FACILITY OPERATING LICENSE NO. NPF-9  
DOCKET NO. 50-369  
AND LICENSE AMENDMENT NO. 211  
RENEWED FACILITY OPERATING LICENSE NO. NPF-17  
DOCKET NO. 50-370

Replace the following pages of the Appendix A Technical Specification and associated Bases with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

<u>Remove</u>	<u>Insert</u>
3.7.11-1	3.7.11-1
B3.7.11-1 thru B3.7.11-5	B3.7.11-1 thru B3.7.11-6

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 229 TO RENEWED FACILITY

OPERATING LICENSE NPF-9 AND

AMENDMENT NO. 211 TO RENEWED FACILITY OPERATING LICENSE NPF-17

DUKE ENERGY CORPORATION

MCGUIRE NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-369 AND 50-370

1.0 INTRODUCTION

By letter to the Nuclear Regulatory Commission (NRC or the Commission) dated June 3, 2003, as supplemented by letters dated January 18 and May 10, 2005, Duke Energy Corporation (Duke, the licensee) submitted a request for changes to the McGuire Nuclear Station (McGuire), Units 1 and 2 Technical Specifications (TSs). The requested changes would revise TS 3.7.11, "Auxiliary Building Filtered Ventilation Exhaust System (ABFVES)" and the associated Bases in accordance with the provisions in Technical Specification Task Force (TSTF) 287, Revision 5.

In its response to the NRC staff request for additional information (RAI) dated January 18, 2005, Duke made a commitment to implement appropriate "compensatory measures" whenever the Auxiliary Building pressure boundary is open (i.e., inoperable). In addition Duke, provided updated TS Bases pages in a May 10, 2005 supplement that reflected appropriate wording from TSTF 287, Revision 5 which included a paragraph that calls for appropriate compensatory measures. Duke had previously committed to implementing similar compensatory measures whenever the control room pressure boundary became inoperable in support of its amendment application dated September 13, 1999, to incorporate the applicable provisions of TSTF 287 into McGuire TS 3.7.9 "Control Room Area Ventilation System (CRAVS);" this application was approved in Amendment Nos. 187 and 168, on September 22, 1999. The January 18, 2005 and the May 10, 2005, supplements provided additional clarifications that did not change the original no significant hazards consideration determination.

2.0 REGULATORY EVALUATION

Section 182a of the Atomic Energy Act of 1954, as amended (the "Act") requires applicants for nuclear power plant operating licenses to include TSs as a part of the license. The TSs ensure the operational capability of structures, systems, and components that are required to protect the health and safety of the public. The NRC's regulatory requirements that are related to the content of the TSs are contained in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36. 10 CFR 50.36 requires that the TSs include items in the following specific

categories: (1) safety limits, limiting safety system settings, and limiting control settings (50.36(c)(1)); (2) Limiting Condition for Operations (LCOs) (50.36(c)(2)); (3) surveillance requirements (SRs) (50.36(c)(3)); (4) design features (50.36(c)(4)); and (5) administrative controls (50.36(c)(5)).

Pursuant to 10 CFR 50.90 a licensee may apply for an amendment to its license including the TSs incorporated into the license. In determining the acceptability of the proposed changes the NRC staff interprets the requirements of the current version of 10 CFR 50.36. Within this general framework licensees may revise their current TSs provided that a plant-specific review supports a finding of continued adequate safety such that: (1) the change is editorial, administrative, or a clarification (i.e., no requirements are materially altered); (2) the change is more restrictive than the licensee's current requirement; or (3) the change is less restrictive than the licensee's current requirement, but continues to afford adequate assurance of safety when judged against current regulatory standards.

## 2.1 TSTF 287, Revision 5

In 1998, Duke adopted improved TSs for McGuire, Units 1 and 2 that were based on Revision 1 of NUREG-1431, "Standard Technical Specifications Westinghouse Plants" (STS). Since Revision 1 was published in 1995, industry and NRC staff have identified additional STS improvements referred to by TSTF. Following industry acceptance and NRC-staff approval, the NRC incorporated each TSTF into NUREG-1430 (Babcock & Wilcox plants), NUREG-1431 (Westinghouse plants), NUREG-1432 (Combustion Engineering plants), NUREG-1433 (General Electric BWR/4 plants), and NUREG-1434 (General Electric BWR/6 plants), as applicable. In most cases, these changes are generally applicable to Westinghouse plants and may be adopted by individual Westinghouse licensees for improving existing TSs subject to plant-specific findings of applicability and an adequate safety basis. In June 2001 the NRC published Revision 2 of the STS which incorporated all approved TSTF changes that had been made to Revision 1. In March 2004 the NRC published Revision 3 which incorporated all approved TSTF changes that had been made to Revision 2. Since then additional TSTFs have been approved. TSTFs are considered a part of the STS upon approval by the NRC staff. TSTF 287, Revision 5, approved in January 2000 has been incorporated into the STS and applies to McGuire. This revision added a 24 hour allowance to the associated ventilation specification action requirements to repair an inoperable boundary of the control room, an emergency core cooling system (ECCS) pump room, a penetration room, or the fuel building before requiring a unit shutdown.

## 2.2 McGuire ABFVES TS Requirements

The McGuire TSs currently allow both ABFVES trains to be inoperable for 24 hours regardless of the reason and without any corresponding commitment to implement compensatory measures if the cause is an inoperable Auxiliary Building pressure boundary.

The two 100 percent capacity ABFVES trains are shared between Unit 1 and Unit 2; consequently, an inoperable Auxiliary Building pressure boundary could result in a dual unit shutdown upon expiration of the specified 24 hour repair time. The McGuire ABFVES maintains a negative pressure relative to atmosphere in areas of the Auxiliary Building subject to contamination (FSAR Section 9.4.2.2.5). It provides filtration for ECCS pump rooms under post

loss-of-coolant accident (LOCA) conditions (FSAR Section 9.4.2.3). An operable ABFVES requires both of its 50 percent capacity fans to be operable.

The McGuire TS SR 3.7.11.4, verifies the integrity of the ECCS pump room boundary. This requires a negative pressure of  $\leq - 0.125$  inches water gauge in the ECCS pump room area relative to atmospheric pressure, and a negative pressure in the ECCS pump room area relative to adjacent uncontaminated (presumed) areas, to prevent unfiltered radioactive leakage during post accident conditions (post-LOCA recirculation). While other ABFVES SRs verify the operability of the ABFVES the pressure test ensures that the Auxiliary Building pressure boundary leak tightness is adequate to meet design assumptions for post-accident radiological dose analyses.

### 3.0 TECHNICAL EVALUATION

#### 3.1 Addition of a Note to LCO 3.7.11

Duke proposed to add, consistent with TSTF 287 and the STS LCO, a note to the corresponding McGuire ABFVES LCO which would allow the Auxiliary Building pressure boundary to be opened intermittently under administrative controls. However, the licensee did not need to add a required action to restore the operability of the ECCS pump room boundary (Auxiliary Building pressure boundary at McGuire) within 24 hours consistent with the TSTF 287. This is because the McGuire TS 3.7.11 Action B already contains an action condition for two ABFVES inoperable which allows 24 hours to exit the condition before requiring a unit shutdown.

The associated Bases for TS 3.7.11 is revised to describe the administrative controls that are required to minimize the consequences of the open boundary. For entry and exit through doors, the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings, controls consist of stationing a dedicated individual at the opening who is in continuous communication with the control room. This individual will have a method to rapidly close the opening when a need for ECCS pump room boundary isolation is indicated. This Note and the associated Bases, which is consistent with TSTF 287 is acceptable because:

- (1) the probability of an event, which requires an operable Auxiliary Building pressure boundary, occurring during the short period of intermittent opening of the boundary is very low, and
- (2) should an event occur, which requires an operable boundary, the administrative controls will ensure that the boundary is closed in time to maintain the validity of the accident analysis assumptions regarding the capability of the ABFVES.

#### 3.2 Actions Condition for Auxiliary Building Boundary Inoperable

If two ABFVES are inoperable in MODE 1, 2, 3, or 4 because neither ABFVES can establish and maintain the required pressure within the Auxiliary Building pressure boundary and in the ECCS pump rooms, the existing McGuire TS 3.7.11, Condition B, "Two ABFVES inoperable" must be entered. Required Action B.1 requires restoring one ABFVES to operable status within 24 hours. If the two ABFVES are inoperable because the Auxiliary Building pressure boundary is inoperable then restoring the pressure boundary to operable status is required to meet Required Action B.1. As a condition for adopting STS Required Action B.1 a licensee must

commit to implement mitigating actions to offset the potential consequences of an event occurring when the pressure boundary is inoperable. In its RAI response letter dated January 18, 2005, the licensee made the following commitment regarding compensatory measures:

At the time of implementation of the applicable change contained in this LAR, McGuire will have approved, written administrative controls in place that describe the compensatory measures to be taken when the affected pressure boundary is opened.

In addition, the licensee added a paragraph to the existing Bases for Required Action B.1 of TS 3.7.11 to make it consistent with the corresponding STS Bases description of compensatory measures for an inoperable pressure boundary. This Bases wording was included in the May 10, 2005, supplement in response to a request from the NRC staff.

- The proposed Bases adds the following STS wording as a new paragraph,

“If the Auxiliary Building pressure boundary is inoperable such that the ABFVES trains cannot establish or maintain the required pressure, action must be taken to restore an OPERABLE Auxiliary Building pressure boundary within 24 hours. During the period that the Auxiliary Building pressure boundary is inoperable, appropriate compensatory measures [consistent with the intent, as applicable, of GDC 19, 60, 64 and 10 CFR Part 100] should be utilized to protect plant personnel from potential hazards such as radioactive contamination, toxic chemicals, smoke, temperature and relative humidity, and physical security. Preplanned measures should be available to address these concerns for intentional and unintentional entry into the condition.”

In accepting TSTF 287, the NRC staff expected that licensees would adopt the STS Bases language with few changes. In particular, the staff insisted that compensatory measures be “preplanned,” which implies staging of functional equipment for personnel trained in its use, to ensure timely implementation if needed for accident consequence mitigation and personnel protection. The licensee has committed to have preplanned measures when the amendment is implemented as previously discussed.

- The proposed Bases for Required Action B.1 does not include the specific STS sentence,

“The 24 hour Completion Time is a typically reasonable time to diagnose, plan and possibly repair, and test most problems with the [auxiliary building boundary].”

This sentence may not apply to a particular licensee; therefore, its omission is acceptable. The McGuire TS 3.7.11 Bases already includes a similar statement related to Required Action B.1 for Two ABFVES inoperable.

“The 24 hour Completion Time is based on an adequate period of time to determine the cause of the inoperability and affect repairs without the need of shutting down both units”.

The NRC staff finds the licensee's commitment to administratively control any opening in the pressure boundary of the auxiliary building or ECCS pump room to be acceptable. This is because the 24 hour allowance for an inoperable Auxiliary Building pressure boundary is already a part of the McGuire licensing basis. In addition the commitment, which is subject to the reasonable controls for implementation and for subsequent evaluation of proposed changes in accordance with the licensee's commitment management program, is an additional constraint on unit operation that will enhance safety. Therefore, the NRC staff finds the proposed TS change for McGuire, Units 1 and 2 acceptable and consistent with TSTF-287.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the North Carolina State official was notified of the proposed issuance of the amendments. The State official had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC 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 radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (69 FR 12365). 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 the amendments.

#### 6.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Charles Craig Harbuck

Date: June 2, 2005

McGuire Nuclear Station

cc:

Ms. Lisa F. Vaughn  
Duke Energy Corporation  
Mail Code - PB06E  
422 South Church Street  
P.O. Box 1244  
Charlotte, North Carolina 28201-1244

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

Mr. C. Jeffrey Thomas  
Regulatory Compliance Manager  
Duke Energy Corporation  
McGuire Nuclear Site  
12700 Hagers Ferry Road  
Huntersville, North Carolina 28078

Anne Cottingham, Esquire  
Winston and Strawn  
1400 L Street, NW.  
Washington, DC 20005

Senior Resident Inspector  
c/o U.S. Nuclear Regulatory Commission  
12700 Hagers Ferry Road  
Huntersville, North Carolina 28078

Dr. John M. Barry  
Mecklenburg County  
Department of Environmental  
Protection  
700 N. Tryon Street  
Charlotte, North Carolina 28202

Mr. Peter R. Harden, IV  
VP-Customer Relations and Sales  
Westinghouse Electric Company  
6000 Fairview Road, 12th Floor  
Charlotte, North Carolina 28210

Ms. Karen E. Long  
Assistant Attorney General  
North Carolina Department of Justice  
P. O. Box 629  
Raleigh, North Carolina 27602

Mr. R. L. Gill, Jr.  
Manager - Nuclear Regulatory Issues  
and Industry Affairs  
Duke Energy Corporation  
526 South Church Street  
Mail Stop EC05P  
Charlotte, North Carolina 28202

NCEM REP Program Manager  
4713 Mail Service Center  
Raleigh, North Carolina 27699-4713

Mr. Richard M. Fry, Director  
Division of Radiation Protection  
North Carolina Department of  
Environment, Health and Natural  
Resources  
3825 Barrett Drive  
Raleigh, North Carolina 27609-7721

Mr. T. Richard Puryear  
Owners Group (NCEMC)  
Duke Energy Corporation  
4800 Concord Road  
York, South Carolina 29745