

July 10, 2003

G. R. Peterson, Vice President  
McGuire Nuclear Station  
Duke Energy Corporation  
12700 Hagers Ferry Road  
Huntersville, NC 28078-8985

SUBJECT: McGUIRE NUCLEAR STATION, UNITS 1 AND 2 RE: ISSUANCE OF  
AMENDMENTS (TAC NOS. MB6176 AND MB6177)

Dear Mr. Peterson:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 215 to Facility Operating License NPF-9 and Amendment No. 196 to Facility Operating License NPF-17 for the McGuire Nuclear Station, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated August 26, 2002, as supplemented by letter dated June 18, 2003.

The amendments revise the TS for the Diesel Fuel Oil Testing Program.

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/**

Robert E. Martin, Senior 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. 215 to NPF-9
2. Amendment No. 196 to NPF-17
3. Safety Evaluation

cc w/encls: See next page

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**Package: ML032160114**

\*\*No major changes to SE

**ADAMS Accession No.: ML032160342**

\*See previous concurrence/SE

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DUKE ENERGY CORPORATION

DOCKET NO. 50-369

McGUIRE NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 215  
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 Energy Corporation (licensee) dated August 26, 2002, as supplemented by letter dated June 18, 2003, 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 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. 215, 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 90 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA by L N Olshan for/**

John A. Nakoski, Chief, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment:  
Technical Specification  
Changes

Date of Issuance: July 10, 2003

DUKE ENERGY CORPORATION

DOCKET NO. 50-370

McGUIRE NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 196  
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 Energy Corporation (licensee) dated August 26, 2002, as supplemented by letter dated June 18, 2003, 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 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. 196, 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 90 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA by L N Olshan for/**

John A. Nakoski, Chief, Section 1  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment:  
Technical Specification  
Changes

Date of Issuance: July 10, 2003

ATTACHMENT TO LICENSE AMENDMENT NO. 215

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

ATTACHMENT TO LICENSE AMENDMENT NO. 196

FACILITY OPERATING LICENSE NO. NPF-17

DOCKET NO. 50-370

Replace the following pages of the Appendix A Technical Specifications 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.

Remove

5.5-16  
5.5-17  
3.8.3-3  
B3.8.3-4  
B3.8.3-5  
B 3.8.3-6  
B 3.8.3-7

Insert

5.5-16  
5.5-17  
3.8.3-3  
B 3.8.3-4  
B 3.8.3-5  
B 3.8.3-6  
B 3.8.3-7

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 215 TO FACILITY OPERATING LICENSE NPF-9  
AND AMENDMENT NO. 196 TO FACILITY OPERATING LICENSE NPF-17

DUKE ENERGY CORPORATION

MCGUIRE NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-369 AND 50-370

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-413 AND 50-414

## 1.0 INTRODUCTION

By letter dated August 26, 2002, as supplemented by letter dated June 18, 2003, Duke Energy Corporation, et al. (the licensee), submitted a request for changes to the McGuire Nuclear Station, Units 1 and 2, and the Catawba Nuclear Station, Units 1 and 2, Technical Specifications (TS). The requested changes would revise the TS for emergency diesel generator (DG) fuel oil specifications in the Catawba Nuclear Station, Units 1 and 2, and the McGuire Nuclear Station, Units 1 and 2.

The letter dated June 18, 2003, provided clarifying information that did not change the scope of the August 26, 2002, application nor the initial proposed no significant hazards consideration determination.

## 2.0 REGULATORY EVALUATION

### 2.1 TS 5.5.13, Diesel Fuel Oil Testing Program and Surveillance Requirements (SR) 3.8.3.2, Fuel Oil Properties

As stated in the BASES for the TS, each DG is provided with a storage tank having a fuel oil capacity sufficient to operate that DG while it is supplying maximum post loss-of-coolant accident load demand as discussed in the Updated Final Safety Analysis Report (UFSAR). For proper operation of the DGs, it is necessary to ensure the proper quality of the fuel oil.

SR 3.8.3.2 for McGuire and SR 3.8.3.3 for Catawba require verification that fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program. The TS BASES for these SRs state that the subject tests are a means of determining whether new fuel oil is of the appropriate grade and has not been contaminated with substances that would have an immediate, detrimental impact on diesel engine combustion.



## 2.2 SR 3.8.3.5 (McGuire), SR 3.8.3.6 (Catawba) Diesel Fuel Oil Storage Tanks

The licensee has proposed to relocate the requirements of this SR to a licensee controlled document, such as the UFSAR's Selected Licensee Commitments Manual or to the Diesel Fuel Oil Testing Program. The licensee acknowledges, in its application dated August 26, 2002, that changes to these licensee-controlled documents are performed in accordance with the provisions of Title 10 of the Code of *Federal Regulations* (10 CFR) Part 50.59.

With respect to the relocation of requirements from the TS to licensee-controlled documents, Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to state the TSs to be included as part of the license. The Commission's regulatory requirements related to the content of the TSs are set forth in 10 CFR 50.36. That regulation requires the TSs to include items in five specific categories, including: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; and (5) administrative controls. However, the regulation does not specify the particular requirements to be included in a plant's TSs.

Under 10 CFR 50.36(c)(2)(ii), a limiting condition for operation must be included in TSs for any item meeting one or more of the following four criteria:

- 1) Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
- 2) A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- 3) A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- 4) A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

As a result, existing TS requirements that fall within or satisfy any of the criteria in 10 CFR 50.36 must be retained in the TSs, while those TS requirements that do not fall within or satisfy these criteria may be relocated to other licensee controlled documents.

## 3.0 TECHNICAL EVALUATION

The licensee stated that the proposed TSs follow many concepts used in the Standard Technical Specifications Task Force (TSTF) traveler numbered TSTF 374, Revision 0. The NRC staff found a number of areas where the application was not consistent with the TSTF. Therefore, the NRC staff review was based on the details provided in the application. The NRC staff is not approving the TSTF 374 for generic usage in this Safety Evaluation.

### 3.1 TS 5.5.13, Diesel Fuel Oil Testing Program

The licensee proposes to add the following underlined phrase to TS 5.5.13(a)(3):

- a. Acceptability of new fuel oil for use prior to addition to storage tanks by determining that the fuel oil has:
  3. A clear and bright appearance with proper color; or a water and sediment content within limits.

The amendment of TS 5.5.13 applies to the new fuel oil before its addition to the storage tanks. It provides two additional test options. In addition to having clear and bright appearance with its proper color determined by American Society for Testing Materials (ASTM) standard D-4176, "Standard Test Method for Free Water and Particulate Contamination in Distillate Fuels (Visual Inspection Procedures)," the fuel oil should have its water and sediment content within the specified limits. This property is determined by the methods specified in the ASTM standards D-1796, "Standard Method for Water and Sediment in Fuel Oils by the Centrifuge Method (Laboratory Procedure)," and ASTM D-2709, "Test Method for Water and Sediment in Distillate Fuels by Centrifuge." Currently, the licensee is using the ASTM D-1796 standard to verify water and sediment content in the fuel oil within 31 days of addition of fuel oil to the storage tank. The NRC staff finds that using these additional methods in determining the properties of the new fuel oil, prior to its addition to storage tanks, will supplement the currently used clear and bright appearance test with a test to determine water and sediment content and will provide additional verification of the fuel oil quality. Therefore, the NRC staff finds this proposed change to TS 5.5.13 to be acceptable.

The amendment will also replace the reference to the ASTM D-2276 standard, "Particulate Contaminant in Aviation Turbine Fuels," bracketed in the following current version of TS 5.5.13.c, with the ASTM D-6217 standard, "Particulate Contamination in Middle Distillate Fuels By Laboratory Filtration," and then relocate this standard from TS 5.5.13.c to a licensee controlled document:

- c. Total particulate concentration of the fuel oil is  $\leq 10$  mg/l when tested every 31days [based on ASTM D-2276, Method A].

As discussed in the licensee's letter dated June 18, 2003, the ASTM D-6217 standard is specifically designed to test middle distillate fuels and is much better suited for testing diesel fuel oil for total particulate concentration. The relocation of the particulate contaminant standard will provide the licensee with flexibility for implementing the required testing for particulate concentration in both the new and the stored fuel oil. This will also permit performing sampling and testing in accordance with the most up-to-date standards. The NRC staff reviewed this proposed change and finds that the relocation of the particulate contaminant standard from the TS to a licensee controlled document will reduce administrative burden, will contribute to more efficient operation of the plant and will not cause any safety concerns. Therefore, the NRC staff finds this change to TS 5.5.13 to be acceptable.

### 3.2 SR 3.8.3.5 (McGuire), SR 3.8.3.6 (Catawba) Diesel Fuel Oil Storage Tanks

The licensee proposes to relocate the following SR and its associated Bases to a licensee-controlled document.

For each fuel oil storage tank: [at a frequency of once per 10 years]

- a. Drain the fuel oil;
- b. Remove the sediment; and
- c. Clean the tank

### SR 3.8.3.5 (McGuire), SR 3.8.3.6 (Catawba) BASES

Draining of the fuel oil stored in the supply tanks, removal of accumulated sediment, and tank cleaning are required at 10 year intervals by Regulatory Guide 1.137 (Ref 2), paragraph 2.f. This SR also requires the performance of the ASME Code, Section XI (Ref. 9), examinations of the tanks. To preclude the introduction of surfactants in the fuel oil system, the cleaning should be accomplished using sodium hypochlorite solutions, or their equivalent, rather than soap or detergents. This SR is for preventive maintenance. The presence of sediment does not necessarily represent a failure of this SR, provided that accumulated sediment is removed during performance of the Surveillance.

The SRs specified in SR 3.8.3.5 for McGuire and SR 3.8.3.6 for Catawba were modified by relocating the requirement for the 10-year fuel oil storage tank cleaning to a document that is controlled by the licensee pursuant to 10 CFR 50.59. The NRC staff has determined that the current SR 3.8.3.5 and SR 3.8.3.6 requirements are a maintenance activity, and are not a necessary surveillance to demonstrate operability of the diesel generators, and thus do not meet the criteria in 10 CFR 50.36 for retention in the TS. The change is also consistent with NUREG-1431, "Standard Technical Specifications, Westinghouse Plants, Rev 2." On these bases, the NRC staff finds that relocation of the specification for fuel oil storage tank cleaning to a licensee-controlled document is acceptable.

### 3.3 Section 3.8.3 Bases

The licensee has updated the Bases for SR 3.8.3 to include more recent standards and to remove the specific date for each standard. This modification will allow the licensee to use the up-to-date standards for fuel oil.

TS 5.5.13 requires that the absolute position indication gravity or absolute specific gravity should be within limits. The amendment to the Bases for SR 3.8.3.2 for McGuire and SR 3.8.3.3 for Catawba specifies the required test conditions for these parameters that are referenced in the ASTM D-287 and D-1298 standards. The NRC staff finds that including specific references ensures that the proper methodology is chosen for performing these tests.

### 3.4 Summary

The NRC staff evaluated the licensee's proposed modifications to the TS requirements for fuel oil in the emergency DG. The licensee proposed to add tests for determination of water and sediment in fuel oil and to relocate testing methodology and SRs for 10-year fuel oil storage tank cleanup to licensee controlled documents. The NRC staff evaluated these amendments and finds that the licensee's proposed modifications will improve the fuel oil testing procedures. The NRC staff, therefore, finds the proposed amendments to be acceptable. The licensee proposed associated revisions to the Bases.

### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the North Carolina State official for McGuire and the South Carolina official for Catawba were notified of the proposed issuance of the amendments. The State officials 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 and change surveillance requirements. 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 (67 FR 66008). 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 Contributors: K. Parczewski  
N. Le

Date: July 10, 2003

McGuire Nuclear Station

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