50-369/370

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 12, 1996

Mr. T. C. McMeekin
Vice President, McGuire Site
Duke Power Company
12700 Hagers Ferry Road
Huntersville, NC 28078-8985

SUBJECT: ISSUANCE OF AMENDMENTS - McGUIRE NUCLEAR STATION, UNITS 1 AND 2 (TAC NOS. M94278 AND M94279)

Dear Mr. McMeekin:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 170 to Facility Operating License NPF-9 and Amendment No. 152 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 December 14, 1995, as supplemented by letters dated May 16 and August 29, 1996.

The amendments incorporate guidance and recommendations for diesel generators contained in NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," Generic Letter (GL) 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operations," GL 94-01, "Removal of Accelerated Testing and Reporting Requirements for Emergency Diesel Generators," and NUREG-1431, "Revised Standard Technical Specifications for Westinghouse PWRs."

By letter dated May 16, 1996, you withdrew the proposed change to the full-load rejection Surveillance Requirement 4.8.1.1.2e.3. Also, by letter dated August 29, 1996, you withdrew the proposed changes in (1) Surveillance Requirements 4.8.1.1.2c and 4.8.1.1.2d regarding using at least one air tank with no compressors for starting the diesel and lowering the maximum tank pressure from 220 psig to 210 psig, and (2) TS Section 6.8.4h regarding the diesel fuel oil surveillance testing. None of these withdrawn requirements affect the staff's conclusion.

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,
Original signed by:

Victor Nerses, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosures: 1. Amendment No. 170 to NPF-9
2. Amendment No. 152 to NPF-17
3. Safety Evaluation

cc w/encl: See next page

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Sincerely,

Victor Nerses

Victor Nerses, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosures:
1. Amendment No. 170 to NPF-9
2. Amendment No. 152 to NPF-17
3. Safety Evaluation

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE POWER COMPANY

DOCKET NO. 50-369

McGUIRE NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 170
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 December 14, 1995, as supplemented by letters dated May 16 and August 29, 1996, 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. 170 , 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 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: November 12, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 170

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

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.

Remove	Insert
XI	XI
3/4 8-1	3/4 8-1
3/4 8-2	3/4 8-2
3/4 8-3	3/4 8-3
3/4 8-4	3/4 8-4
3/4 8-5	3/4 8-5*
3/4 8-6	3/4 8-6
3/4 8-7	3/4 8-7
3/4 8-8	3/4 8-8
3/4 8-9	3/4 8-9
3/4 8-11	3/4 8-11
B 3/4 8-1	B 3/4 8-1
B 3/4 8-2	B 3/4 8-2

*overflow page - no change

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. Two physically independent circuits between the offsite transmission network and the Onsite Essential Auxiliary Power System, and

b. Two separate and independent diesel generators, each with:

1) A separate day tank containing a minimum volume of 120 gallons of fuel,

2) A separate Fuel Storage System containing a minimum volume of 39,500 gallons of fuel,

3) A separate fuel transfer pump.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With an offsite circuit of the above required A.C. electrical power sources inoperable:

1. Demonstrate the OPERABILITY of the remaining required offsite circuit by performing Surveillance Requirement 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; and

2. Restore the required offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one offsite circuit and one diesel generator of the above required A.C. electrical power sources inoperable: (also refer to ACTION c)

1. Demonstrate the OPERABILITY of the remaining required offsite circuit by performing Surveillance Requirement 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; and

LIMITING CONDITION FOR OPERATION

ACTION: (Continued)

2. Demonstrate* the operability of the remaining diesel generator by:

   a. Performing Surveillance Requirements 4.8.1.1.2a.4 and 4.8.1.1.2a.5 within 8 hours, or

   b. Verifying within 8 hours that no potential common mode failure for the remaining diesel exists;

3. Restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; with the diesel generator restored to OPERABLE status, follow ACTION a; with the offsite circuit restored to OPERABLE status, follow ACTION d.

c. With one diesel generator inoperable in addition to ACTION b or d, verify that:

   1. All required systems, subsystems, trains, components and devices that depend on the remaining OPERABLE diesel generator as a source of emergency power are also OPERABLE, and

   2. When in MODE 1, 2, or 3 with a steam pressure greater than 900 psig, the steam-driven auxiliary feedwater pump is OPERABLE.

   If these conditions are not satisfied within 2 hours be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

d. With a diesel generator of the above required A.C. electrical power sources inoperable: (also refer to ACTION c)

   1. Demonstrate the OPERABILITY of the A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1a within 1 hour and at least once per 8 hours thereafter; and

   2. Demonstrate* the OPERABILITY of the remaining diesel generator by:

---

* This action is not required if the inoperability of the diesel was due to an inoperable support system, an independently testable component, or preplanned testing or maintenance. If required, this action is to be completed regardless of when the inoperable diesel generator is restored to OPERABLE status. The provisions of Specification 3.0.2 are not applicable.

LIMITING CONDITION FOR OPERATION

ACTION: (Continued)

a. Performing Surveillance Requirements 4.8.1.1.2a.4) and 4.8.1.1.2a.5) within 24 hours, or

b. Verifying within 24 hours that no potential common mode failure for the remaining diesel exists;

3. Restore diesel generators to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

e. With two of the above required offsite A.C. circuits inoperable, restore at least one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. With only one offsite source restored, follow ACTION a.

f. With two of the above required diesel generators inoperable:

1. Demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; and

2. Restore at least one of the inoperable diesel generators to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. With one diesel generator restored, follow ACTION d.

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Essential Auxiliary Power System shall be:

a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments, indicated power availability, and

b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring (manually and automatically) unit power supply from the normal circuit to the alternate circuit.

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by:

1) Verifying the fuel level in the day tank,

2) Verifying the fuel level in the fuel storage tank,

SURVEILLANCE REQUIREMENTS (Continued)

3) Verifying the fuel transfer pump starts and transfers fuel from the storage system to the day tank,

4) Verifying** the diesel starts from standby (prelube) condition and maintains the steady-state generator voltage and frequency at 4160 ± 420 volts and 60 ± 1.2 Hz, respectively. The diesel generator shall be started for this test by using one of the following signals:

a) Manual, or

b) Simulated loss-of-offsite power by itself, or

c) Simulated loss-of-offsite power in conjunction with an ESF Actuation test signal, or

d) An ESF Actuation test signal by itself.

5) Verifying the generator is synchronized, loaded and operates at 3600 - 4000 kW*** for at least 60 minutes, and

6) Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

b. By removing accumulated water:

1) From the day tank at least once per 31 days and after each occasion when the diesel is operated for greater than 1 hour, and

2) From the storage tank at least once per 31 days.

c. By sampling new fuel oil in accordance with ASTM D4057-81 prior to addition to the storage tanks and:

1) By verifying in accordance with the tests specified in ASTM D975-81 prior to addition to the storage tanks that the sample has:

** Once per 184 days, start the engine from standby (prelube) condition, and verify generator reaches ≥ 3740 volts and ≥ 57 Hz in ≤ 11 seconds.

*** Diesel generator loadings may be done in accordance with the manufacturer's recommendations. The purpose of the load range is to prevent overloading the engine, and momentary excursions outside of the load range shall not invalidate the test.

SURVEILLANCE REQUIREMENTS (Continued)

a) An API Gravity of within 0.3 degrees at 60°F or a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate or an absolute specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89 or an API gravity at 60°F of greater than or equal to 27 degrees but less than or equal to 39 degrees.

b) A kinematic viscosity at 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes (alternatively, Saybolt viscosity, SUS at 100°F of greater than or equal to 32.6, but less than or equal to 40.1), if gravity was not determined by comparison with the supplier's certification.

c) A flash point equal to or greater than 125°F, and

d) A clear and bright appearance with proper color when tested in accordance with ASTM D4176-82.

2) By verifying within 31 days of obtaining the sample that the other properties specified in Table 1 of ASTM D975-81 are met when tested in accordance with ASTM D975-81 except that the analysis for sulfur may be performed in accordance with ASTM D1552-79 or ASTM D2622-82.

d. At least once every 31 days by obtaining a sample of fuel oil from the storage tanks in accordance with ASTM D2276-78, and verifying that total particulate contamination is less than 10 mg/liter when checked in accordance with ASTM D2276-78, Method A.

e. At least once per 18 months, by:

1) Subjecting the diesel to an inspection, during shutdown, in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service;

2) Verifying, during shutdown, the generator capability to reject a load of greater than or equal to 576 kW while maintaining voltage at 4160 ± 420 volts and frequency at 60 ± 1.2 Hz;

3) Verifying, during shutdown, the generator capability to reject a load of 4000 kW without tripping. The generator voltage shall not exceed 4784 volts during and following the load rejection;

4) Simulating a loss-of-offsite power by itself, during shutdown, and:

a) Verifying deenergization of the emergency busses and load shedding from the emergency busses, and

SURVEILLANCE REQUIREMENTS (Continued)

b) Verifying the diesel starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 11 seconds, energizes the auto-connected blackout loads through the load sequencer and operates for greater than or equal to 5 minutes while the generator is loaded with the blackout loads. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz during this test.

5) Verifying that on an ESF actuation test signal, without loss-of-offsite power, the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be at least 3740 volts and 57 Hz within 11 seconds after the auto-start signal; the steady-state generator voltage and frequency shall be maintained within 4160 ± 420 volts and 60 ± 1.2 Hz during this test;

6) Simulating a loss-of-offsite power in conjunction with an ESF actuation test signal, and

a) Verifying, during shutdown, deenergization of the emergency busses and load shedding from the emergency busses;

b) Verifying, during shutdown, the diesel starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 11 seconds, energizes the auto-connected emergency (accident) loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz during this test; and

c) Verifying, during shutdown#, that all automatic diesel generator trips, except engine overspeed, lube oil pressure, generator voltage-controlled overcurrent, and generator differential are automatically bypassed upon loss of voltage on the emergency bus concurrent with a Safety Injection Actuation signal.

7) [Deleted, Left Blank]

This Surveillance Requirement may be performed in conjunction with periodic preplanned preventative maintenance activity that causes the diesel generator to be inoperable provided that performance of the surveillance requirement does not increase the time the diesel generator would be inoperable for the PM activity alone.

SURVEILLANCE REQUIREMENTS (Continued)

8) Verifying, during shutdown, the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded between 4200 kW and 4400 kW*** and during the remaining 22 hours of this test, the diesel generator shall be loaded between 3600 kW and 4000 kW***. The generator voltage and frequency shall be at least 3740 volts and 57 Hz within 11 seconds after the start signal. The steady-state generator voltage and frequency shall be maintained within 4160 ± 420 volts and 60 ± 1.2 Hz during this test. Within 5 minutes of shutting down the diesel generator, restart the diesel generator and verify that the generator voltage and frequency reaches at least 3740 volts and 57 Hz within 11 seconds##.

9) (Deleted)

10) Verifying, during shutdown, the diesel generator's capability to:

   a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,

   b) Transfer its loads to the offsite power source, and

   c) Be restored to its standby status.

11) Verifying, during shutdown, that with the diesel generator operating in a test mode, connected to its bus, a simulated Safety Injection signal overrides the test mode by: (1) returning the diesel generator to standby operation, and (2) automatically energizing the emergency loads with offsite power;

*** Diesel generator loadings may be done in accordance with the manufacturer's recommendations. The purpose of the load range is to prevent overloading the engine, and momentary excursions outside of the load range shall not invalidate the test.

If the hot restart is not satisfactorily completed, it is not necessary to repeat the preceding 24-hour test. Instead, the diesel generator may be operated at 3600 - 4000 kW*** for 2 hours or until operating temperature has stabilized.

12) Verifying that the fuel transfer pump transfers fuel from each fuel storage tank to the day tank of each diesel via the installed cross-connection lines;

13) Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block are within the tolerances shown in Table 4.8-2;

14) Verifying, during shutdown#, that the following diesel generator lockout features prevent diesel generator starting only when required:

a) Turning gear engaged, or

b) Emergency stop.

15) Verifying, during shutdown#, that with all diesel generator air start receivers pressurized to less than or equal to 220 psig and the compressors secured, the diesel generator starts at least 2 times from standby (prelube) conditions and accelerates to at least 57 Hz in less than or equal to 11 seconds.

f. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting both diesel generators simultaneously, during shutdown, and verifying that both diesel generators accelerate to at least 57 Hz in less than or equal to 11 seconds; and

g. At least once per 10 years by:

1) Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite solution, and

2) Performing a pressure test of those portions of the diesel fuel oil system designed to Section III, subsection ND of the ASME Code at a test pressure equal to 110% of the system design pressure.

This Surveillance Requirement may be performed in conjunction with periodic preplanned preventative maintenance activity that causes the diesel generator to be inoperable provided that performance of the surveillance requirement does not increase the time the diesel generator would be inoperable for the PM activity alone.

SURVEILLANCE REQUIREMENTS (Continued)

4.8.1.1.3 Reports - (Not Used)

4.8.1.1.4 Diesel Generator Batteries - Each diesel generator 125-volt battery bank and charger shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that:

1) The electrolyte level of each battery is above the plates, and

2) The overall battery voltage is greater than or equal to 125 volts under a float charge.

b. At least once per 18 months by verifying that:

1) The batteries, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration;

2) The battery-to-battery and terminal connections are clear, tight, free of corrosion and coated with anti-corrosion material; and

3) The battery capacity is adequate to supply and maintain in OPERABLE status its emergency loads when subjected to a battery service test.

TABLE 4.8-1 - DIESEL GENERATOR TEST SCHEDULE (Not Used)

ELECTRICAL POWER SYSTEMS

A.C. SOURCES

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. One circuit between the offsite transmission network and the Onsite Essential Auxiliary Power System, and

b. One diesel generator with:

1) A day tank containing a minimum volume of 120 gallons of fuel,

2) A Fuel Storage System containing a minimum volume of 28,000 gallons of fuel, and

3) A fuel transfer pump.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above minimum required A.C. electrical power sources OPERABLE, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel, or crane operation with loads over the fuel storage pool, and within 8 hours, depressurize and vent the Reactor Coolant System through a greater than or equal to 4.5 square inch vent. In addition, when in MODE 5 with the reactor coolant loops not filled, or in MODE 6 with the water level less than 23 feet above the reactor vessel flange, immediately initiate corrective action to restore the required sources to OPERABLE status as soon as possible.

SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the requirements of Specifications 4.8.1.1.1, 4.8.1.1.2 (except for Specification 4.8.1.1.2a.5), and 4.8.1.1.4.

BASES

3/4.8.1, 3/4.8.2 AND 3/4.8.3 A.C. SOURCES, D.C. SOURCES AND ONSITE POWER DISTRIBUTION SYSTEMS

The OPERABILITY of the A.C. and D.C power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety-related equipment required for: (1) the safe shutdown of the facility, and (2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criterion 17 of Appendix A to 10 CFR 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the safety analyses and are based upon maintaining at least one redundant set of onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss-of-offsite power and single failure of the other onsite A.C. source. The A.C. and D.C. source allowable out-of-service times are based on Regulatory Guide 1.93, "Availability of Electrical Power Sources", December 1974. When one diesel generator is inoperable, there is an additional ACTION requirement to verify that all required systems, subsystems, trains, components and devices, that depend on the remaining OPERABLE diesel generator as a source of emergency power, are also OPERABLE, and that the steam-driven auxiliary feedwater pump is OPERABLE. This requirement is intended to provide assurance that a loss-of-offsite power event will not result in a complete loss of safety function of critical systems during the period one of the diesel generators is inoperable. The term verify as used in this context means to administratively check by examining logs or other information to determine if certain components are out-of-service for maintenance or other reasons. It does not mean to perform the Surveillance Requirements needed to demonstrate the OPERABILITY of the component.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that: (1) the facility can be maintained in the shutdown or refueling condition for extended time periods, and (2) sufficient instrumentation and control capability is available for monitoring and maintaining the unit status.

The Surveillance Requirements for demonstrating the OPERABILITY of the diesel generators are in accordance with the recommendations of Regulatory Guides 1.9, "Selection of Diesel Generator Set Capacity for Standby Power Supplies," March 10, 1971, 1.108, "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants," Revision 1, August 1977, and 1.137, "Fuel-Oil Systems for Standby Diesel Generators," Revision 1, October 1979; Generic Letter 84-15, which modified the testing frequencies specified in Regulatory Guide 1.108; Generic Letter 93-05, which reduced the surveillance requirements for testing of Diesel Generators during power operation; also, Generic Letter 94-01, which removed the accelerated testing and special reporting requirements for Emergency Diesel Generators.

A.C. SOURCES, D.C. SOURCES AND ONSITE POWER DISTRIBUTION SYSTEMS (Continued)

Some of the Surveillance Requirements for demonstrating the operability of the diesel generators are modified by a footnote. The Specifications state the Surveillance Requirements are to be performed during shutdown, with the unit in mode 3 or higher. The footnote allows the particular surveillance to be performed during preplanned Preventative Maintenance (PM) activities that would result in the diesel generator being inoperable. The surveillance can be performed at that time as long as it does not increase the time the diesel generator is inoperable for the PM activity that is being performed. The footnote is only applicable at that time. The provision of the footnote shall not be utilized for operational convenience.

Since the McGuire emergency diesel generator manufacturer (Nordberg) is no longer in business, McGuire engineering is the designer of record. Therefore, in the absence of manufacturer recommendations, McGuire engineering will determine the appropriate actions required for nuclear class diesel service taking into account McGuire diesel generator maintenance and operating history and industry experience where applicable.

The Surveillance Requirement for demonstrating the OPERABILITY of the station batteries are based on the recommendations of Regulatory Guide 1.129, "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," February 1978, and IEEE Std 450-1980, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations."

In SURVEILLANCE 4.8.2.1.2.e, after the battery is returned to service (reconnected to and supplying its normal DC distribution center) following a performance discharge test (PDT), no discharge testing shall be done within 10 days on the other three batteries. This is a conservative measure to ensure the tested battery is fully charged. This restriction is an interim measure until the concern regarding recovered battery capacity immediately following recharging is resolved.

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage onfloat charge, connection resistance values and the performance of battery service and discharge tests ensures the effectiveness of the charging system, the ability to handle high discharge rates and compares the battery capacity at that time with the rated capacity.

Table 4.8-3 specifies the normal limits for each designated pilot cell and each connected cell for electrolyte level, float voltage and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and 0.015 below the manufacturer's full charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE POWER COMPANY

DOCKET NO. 50-370

McGUIRE NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 152
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 December 14, 1995, as supplemented by letters dated May 16 and August 29, 1996, 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. 152 , 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 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: November 12, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 152

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.

Remove	Insert
XI	XI
3/4 8-1	3/4 8-1
3/4 8-2	3/4 8-2
3/4 8-3	3/4 8-3
3/4 8-4	3/4 8-4
3/4 8-5	3/4 8-5*
3/4 8-6	3/4 8-6
3/4 8-7	3/4 8-7
3/4 8-8	3/4 8-8
3/4 8-9	3/4 8-9
3/4 8-11	3/4 8-11
B 3/4 8-1	B 3/4 8-1
B 3/4 8-2	B 3/4 8-2

*overflow page - no change

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. Two physically independent circuits between the offsite transmission network and the Onsite Essential Auxiliary Power System, and

b. Two separate and independent diesel generators, each with:

1) A separate day tank containing a minimum volume of 120 gallons of fuel,

2) A separate Fuel Storage System containing a minimum volume of 39,500 gallons of fuel,

3) A separate fuel transfer pump.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With an offsite circuit of the above required A.C. electrical power sources inoperable:

1. Demonstrate the OPERABILITY of the remaining required offsite circuit by performing Surveillance Requirement 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; and

2. Restore the required offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one offsite circuit and one diesel generator of the above required A.C. electrical power sources inoperable: (also refer to ACTION c)

1. Demonstrate the OPERABILITY of the remaining required offsite circuit by performing Surveillance Requirement 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; and

LIMITING CONDITION FOR OPERATION

ACTION: (Continued)

2. Demonstrate* the operability of the remaining diesel generator by:

   a. Performing Surveillance Requirements 4.8.1.1.2a.4 and 4.8.1.1.2a.5 within 8 hours, or

   b. Verifying within 8 hours that no potential common mode failure for the remaining diesel exists;

3. Restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; with the diesel generator restored to OPERABLE status, follow ACTION a; with the offsite circuit restored to OPERABLE status, follow ACTION d.

c. With one diesel generator inoperable in addition to ACTION b or d, verify that:

   1. All required systems, subsystems, trains, components and devices that depend on the remaining OPERABLE diesel generator as a source of emergency power are also OPERABLE, and

   2. When in MODE 1, 2, or 3 with a steam pressure greater than 900 psig, the steam-driven auxiliary feedwater pump is OPERABLE.

   If these conditions are not satisfied within 2 hours be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

d. With a diesel generator of the above required A.C. electrical power sources inoperable: (also refer to ACTION c)

   1. Demonstrate the OPERABILITY of the A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1a within 1 hour and at least once per 8 hours thereafter; and

   2. Demonstrate* the OPERABILITY of the remaining diesel generator by:

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* This action is not required if the inoperability of the diesel was due to an inoperable support system, an independently testable component, or preplanned testing or maintenance. If required, this action is to be completed regardless of when the inoperable diesel generator is restored to OPERABLE status. The provisions of Specification 3.0.2 are not applicable.

LIMITING CONDITION FOR OPERATION

ACTION: (Continued)

a. Performing Surveillance Requirements 4.8.1.1.2a.4) and 4.8.1.1.2a.5) within 24 hours, or

b. Verifying within 24 hours that no potential common mode failure for the remaining diesel exists;

3. Restore diesel generators to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

e. With two of the above required offsite A.C. circuits inoperable, restore at least one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. With only one offsite source restored, follow ACTION a.

f. With two of the above required diesel generators inoperable:

1. Demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; and

2. Restore at least one of the inoperable diesel generators to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. With one diesel generator restored, follow ACTION d.

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Essential Auxiliary Power System shall be:

a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments, indicated power availability, and

b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring (manually and automatically) unit power supply from the normal circuit to the alternate circuit.

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by:

1) Verifying the fuel level in the day tank,

2) Verifying the fuel level in the fuel storage tank,

SURVEILLANCE REQUIREMENTS (Continued)

3) Verifying the fuel transfer pump starts and transfers fuel from the storage system to the day tank,

4) Verifying** the diesel starts from standby (prelube) condition and maintains the steady-state generator voltage and frequency at 4160 ± 420 volts and 60 ± 1.2 Hz, respectively. The diesel generator shall be started for this test by using one of the following signals:

a) Manual, or

b) Simulated loss-of-offsite power by itself, or

c) Simulated loss-of-offsite power in conjunction with an ESF Actuation test signal, or

d) An ESF Actuation test signal by itself.

5) Verifying the generator is synchronized, loaded and operates at 3600 - 4000 kW*** for at least 60 minutes, and

6) Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

b. By removing accumulated water:

1) From the day tank at least once per 31 days and after each occasion when the diesel is operated for greater than 1 hour, and

2) From the storage tank at least once per 31 days.

c. By sampling new fuel oil in accordance with ASTM D4057-81 prior to addition to the storage tanks and:

1) By verifying in accordance with the tests specified in ASTM D975-81 prior to addition to the storage tanks that the sample has:

** Once per 184 days, start the engine from standby (prelube) condition, and verify generator reaches ≥ 3740 volts and ≥ 57 Hz in ≤ 11 seconds.

*** Diesel generator loadings may be done in accordance with the manufacturer's recommendations. The purpose of the load range is to prevent overloading the engine, and momentary excursions outside of the load range shall not invalidate the test.

SURVEILLANCE REQUIREMENTS (Continued)

a) An API Gravity of within 0.3 degrees at 60°F or a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate or an absolute specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89 or an API gravity at 60°F of greater than or equal to 27 degrees but less than or equal to 39 degrees.

b) A kinematic viscosity at 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes (alternatively, Saybolt viscosity, SUS at 100°F of greater than or equal to 32.6, but less than or equal to 40.1), if gravity was not determined by comparison with the supplier's certification.

c) A flash point equal to or greater than 125°F, and

d) A clear and bright appearance with proper color when tested in accordance with ASTM D4176-82.

2) By verifying within 31 days of obtaining the sample that the other properties specified in Table 1 of ASTM D975-81 are met when tested in accordance with ASTM D975-81 except that the analysis for sulfur may be performed in accordance with ASTM D1552-79 or ASTM D2622-82.

d. At least once every 31 days by obtaining a sample of fuel oil from the storage tanks in accordance with ASTM D2276-78, and verifying that total particulate contamination is less than 10 mg/liter when checked in accordance with ASTM D2276-78, Method A.

e. At least once per 18 months, by:

1) Subjecting the diesel to an inspection, during shutdown, in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service;

2) Verifying, during shutdown, the generator capability to reject a load of greater than or equal to 576 kW while maintaining voltage at 4160 ± 420 volts and frequency at 60 ± 1.2 Hz;

3) Verifying, during shutdown, the generator capability to reject a load of 4000 kW without tripping. The generator voltage shall not exceed 4784 volts during and following the load rejection;

4) Simulating a loss-of-offsite power by itself, during shutdown, and:

a) Verifying deenergization of the emergency busses and load shedding from the emergency busses, and

SURVEILLANCE REQUIREMENTS (Continued)

b) Verifying the diesel starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 11 seconds, energizes the auto-connected blackout loads through the load sequencer and operates for greater than or equal to 5 minutes while the generator is loaded with the blackout loads. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz during this test.

5) Verifying that on an ESF actuation test signal, without loss-of-offsite power, the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be at least 3740 volts and 57 Hz within 11 seconds after the auto-start signal; the steady-state generator voltage and frequency shall be maintained within 4160 ± 420 volts and 60 ± 1.2 Hz during this test;

6) Simulating a loss-of-offsite power in conjunction with an ESF actuation test signal, and

a) Verifying, during shutdown, deenergization of the emergency busses and load shedding from the emergency busses;

b) Verifying, during shutdown, the diesel starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 11 seconds, energizes the auto-connected emergency (accident) loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz during this test; and

c) Verifying, during shutdown#, that all automatic diesel generator trips, except engine overspeed, lube oil pressure, generator voltage-controlled overcurrent, and generator differential are automatically bypassed upon loss of voltage on the emergency bus concurrent with a Safety Injection Actuation signal.

7) [Deleted, Left Blank]

This Surveillance Requirement may be performed in conjunction with periodic preplanned preventative maintenance activity that causes the diesel generator to be inoperable provided that performance of the surveillance requirement does not increase the time the diesel generator would be inoperable for the PM activity alone.

SURVEILLANCE REQUIREMENTS (Continued)

8) Verifying, during shutdown, the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded between 4200 kW and 4400 kW*** and during the remaining 22 hours of this test, the diesel generator shall be loaded between 3600 kW and 4000 kW***. The generator voltage and frequency shall be at least 3740 volts and 57 Hz within 11 seconds after the start signal. The steady-state generator voltage and frequency shall be maintained within 4160 ± 420 volts and 60 ± 1.2 Hz during this test. Within 5 minutes of shutting down the diesel generator, restart the diesel generator and verify that the generator voltage and frequency reaches at least 3740 volts and 57 Hz within 11 seconds##.

9) (Deleted)

10) Verifying, during shutdown, the diesel generator's capability to:

   a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,

   b) Transfer its loads to the offsite power source, and

   c) Be restored to its standby status.

11) Verifying, during shutdown, that with the diesel generator operating in a test mode, connected to its bus, a simulated Safety Injection signal overrides the test mode by: (1) returning the diesel generator to standby operation, and (2) automatically energizing the emergency loads with offsite power;

*** Diesel generator loadings may be done in accordance with the manufacturer's recommendations. The purpose of the load range is to prevent overloading the engine, and momentary excursions outside of the load range shall not invalidate the test.

If the hot restart is not satisfactorily completed, it is not necessary to repeat the preceding 24-hour test. Instead, the diesel generator may be operated at 3600 - 4000 kW*** for 2 hours or until operating temperature has stabilized.

SURVEILLANCE REQUIREMENTS (Continued)

12) Verifying that the fuel transfer pump transfers fuel from each fuel storage tank to the day tank of each diesel via the installed cross-connection lines;

13) Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block are within the tolerances shown in Table 4.8-2;

14) Verifying, during shutdown#, that the following diesel generator lockout features prevent diesel generator starting only when required:

a) Turning gear engaged, or

b) Emergency stop.

15) Verifying, during shutdown#, that with all diesel generator air start receivers pressurized to less than or equal to 220 psig and the compressors secured, the diesel generator starts at least 2 times from standby (prelube) conditions and accelerates to at least 57 Hz in less than or equal to 11 seconds.

f. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting both diesel generators simultaneously, during shutdown, and verifying that both diesel generators accelerate to at least 57 Hz in less than or equal to 11 seconds; and

g. At least once per 10 years by:

1) Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite solution, and

2) Performing a pressure test of those portions of the diesel fuel oil system designed to Section III, subsection ND of the ASME Code at a test pressure equal to 110% of the system design pressure.

This Surveillance Requirement may be performed in conjunction with periodic preplanned preventative maintenance activity that causes the diesel generator to be inoperable provided that performance of the surveillance requirement does not increase the time the diesel generator would be inoperable for the PM activity alone.

4.8.1.1.3 Reports - (Not Used)

4.8.1.1.4 Diesel Generator Batteries - Each diesel generator 125-volt battery bank and charger shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that:

1) The electrolyte level of each battery is above the plates, and

2) The overall battery voltage is greater than or equal to 125 volts under a float charge.

b. At least once per 18 months by verifying that:

1) The batteries, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration;

2) The battery-to-battery and terminal connections are clear, tight, free of corrosion and coated with anti-corrosion material; and

3) The battery capacity is adequate to supply and maintain in OPERABLE status its emergency loads when subjected to a battery service test.

TABLE 4.8-1 - DIESEL GENERATOR TEST SCHEDULE (Not Used)

ELECTRICAL POWER SYSTEMS

A.C. SOURCES

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. One circuit between the offsite transmission network and the Onsite Essential Auxiliary Power System, and

b. One diesel generator with:

1) A day tank containing a minimum volume of 120 gallons of fuel,

2) A Fuel Storage System containing a minimum volume of 28,000 gallons of fuel, and

3) A fuel transfer pump.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above minimum required A.C. electrical power sources OPERABLE, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel, or crane operation with loads over the fuel storage pool, and within 8 hours, depressurize and vent the Reactor Coolant System through a greater than or equal to 4.5 square inch vent. In addition, when in MODE 5 with the reactor coolant loops not filled, or in MODE 6 with the water level less than 23 feet above the reactor vessel flange, immediately initiate corrective action to restore the required sources to OPERABLE status as soon as possible.

SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the requirements of Specifications 4.8.1.1.1, 4.8.1.1.2 (except for Specification 4.8.1.1.2a.5), and 4.8.1.1.4.

3/4.8.1, 3/4.8.2 AND 3/4.8.3 A.C. SOURCES, D.C. SOURCES AND ONSITE POWER DISTRIBUTION SYSTEMS

The OPERABILITY of the A.C. and D.C power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety-related equipment required for: (1) the safe shutdown of the facility, and (2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criterion 17 of Appendix A to 10 CFR 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the safety analyses and are based upon maintaining at least one redundant set of onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss-of-offsite power and single failure of the other onsite A.C. source. The A.C. and D.C. source allowable out-of-service times are based on Regulatory Guide 1.93, "Availability of Electrical Power Sources", December 1974. When one diesel generator is inoperable, there is an additional ACTION requirement to verify that all required systems, subsystems, trains, components and devices, that depend on the remaining OPERABLE diesel generator as a source of emergency power, are also OPERABLE, and that the steam-driven auxiliary feedwater pump is OPERABLE. This requirement is intended to provide assurance that a loss-of-offsite power event will not result in a complete loss of safety function of critical systems during the period one of the diesel generators is inoperable. The term verify as used in this context means to administratively check by examining logs or other information to determine if certain components are out-of-service for maintenance or other reasons. It does not mean to perform the Surveillance Requirements needed to demonstrate the OPERABILITY of the component.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that: (1) the facility can be maintained in the shutdown or refueling condition for extended time periods, and (2) sufficient instrumentation and control capability is available for monitoring and maintaining the unit status.

The Surveillance Requirements for demonstrating the OPERABILITY of the diesel generators are in accordance with the recommendations of Regulatory Guides 1.9, "Selection of Diesel Generator Set Capacity for Standby Power Supplies," March 10, 1971, 1.108, "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants," Revision 1, August 1977, and 1.137, "Fuel-Oil Systems for Standby Diesel Generators," Revision 1, October 1979; Generic Letter 84-15, which modified the testing frequencies specified in Regulatory Guide 1.108; Generic Letter 93-05, which reduced the surveillance requirements for testing of Diesel Generators during power operation; also, Generic Letter 94-01, which removed the accelerated testing and special reporting requirements for Emergency Diesel Generators.

A.C. SOURCES, D.C. SOURCES AND ONSITE POWER DISTRIBUTION SYSTEMS (Continued)

Some of the Surveillance Requirements for demonstrating the operability of the diesel generators are modified by a footnote. The Specifications state the Surveillance Requirements are to be performed during shutdown, with the unit in mode 3 or higher. The footnote allows the particular surveillance to be performed during preplanned Preventative Maintenance (PM) activities that would result in the diesel generator being inoperable. The surveillance can be performed at that time as long as it does not increase the time the diesel generator is inoperable for the PM activity that is being performed. The footnote is only applicable at that time. The provision of the footnote shall not be utilized for operational convenience.

Since the McGuire emergency diesel generator manufacturer (Nordberg) is no longer in business, McGuire engineering is the designer of record. Therefore, in the absence of manufacturer recommendations, McGuire engineering will determine the appropriate actions required for nuclear class diesel service taking into account McGuire diesel generator maintenance and operating history and industry experience where applicable.

The Surveillance Requirement for demonstrating the OPERABILITY of the station batteries are based on the recommendations of Regulatory Guide 1.129, "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," February 1978, and IEEE Std 450-1980, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations."

In SURVEILLANCE 4.8.2.1.2.e, after the battery is returned to service (reconnected to and supplying its normal DC distribution center) following a performance discharge test (PDT), no discharge testing shall be done within 10 days on the other three batteries. This is a conservative measure to ensure the tested battery is fully charged. This restriction is an interim measure until the concern regarding recovered battery capacity immediately following recharging is resolved.

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage onfloat charge, connection resistance values and the performance of battery service and discharge tests ensures the effectiveness of the charging system, the ability to handle high discharge rates and compares the battery capacity at that time with the rated capacity.

Table 4.8-3 specifies the normal limits for each designated pilot cell and each connected cell for electrolyte level, float voltage and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and 0.015 below the manufacturer's full charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 170 TO FACILITY OPERATING LICENSE NPF-9

AND AMENDMENT NO. 152 TO FACILITY OPERATING LICENSE NPF-17

DUKE POWER COMPANY

MCGUIRE NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-369 AND 50-370

1.0 INTRODUCTION

By letter dated December 14, 1995, as supplemented by letters dated May 16 and August 29, 1996, Duke Power Company (the licensee) submitted a request for changes to the McGuire Nuclear Station, Units 1 and 2, Technical Specifications (TS). The requested changes would incorporate guidance and recommendations for diesel generators contained in NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," Generic Letter (GL) 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operations," GL 94-01, "Removal of Accelerated Testing and Reporting Requirements for Emergency Diesel Generators," and NUREG-1431, "Revised Standard Technical Specifications for Westinghouse PWRs." The August 29, 1996, letter provided clarifying information that did not change the scope of the December 14, 1995, application and the initial proposed no significant hazards consideration determination.

By letter dated May 16, 1996, the licensee withdrew the proposed change to the full-load rejection Surveillance Requirement 4.8.1.1.2e.3. Also, by letter dated August 29, 1996, the licensee withdrew the proposed changes in (1) Surveillance Requirements 4.8.1.1.2c and 4.8.1.1.2d regarding using at least one air tank with no compressors for starting the diesel and lowering the maximum tank pressure from 220 psig to 210 psig, and (2) TS Section 6.8.4h regarding the diesel fuel oil surveillance testing. None of these withdrawn requirements affect the staff's conclusion.

2.0 BACKGROUND

The NRC staff has completed a comprehensive examination of surveillance requirements (SRs) in the TS that require testing at power. The evaluation is documented in NUREG-1366. The NRC staff found that although most testing at power is important, safety can be improved, equipment degradation decreased, and an unnecessary burden on personnel resources eliminated by reducing the amount of testing at power that is required by TS. Subsequently, the NRC issue GL 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation." Additionally, in response to the NRC's decision on SECY-93-044, Resolution of Generic Safety Issue B-56, "Diesel Generator Reliability," the NRC issued GL 94-01, "Removal of Accelerated Testing and Special Reporting Requirements for Emergency Diesel Generators." In this GL the staff recommended that licensees be allowed to

voluntarily adopt the accelerated testing provisions of the Improved Standard TS upon the implementation of the provisions of the "Maintenance Rule" for the EDGs, including the applicable regulatory guidance, which will provide a program to assure EDG performance. Duke Power Company is proposing to modify McGuire, Units 1 and 2 TS incorporating recommendations and guidance in the above GLs. Additionally, Duke Power will be using guidance in NUREG-1431, "Revised Standard Technical Specifications for Westinghouse PWRs," in their effort to improve the McGuire TS.

3.0 EVALUATION

The proposed changes to the Duke Power Technical Specification (TS) are being made to improve the current TS Action Statements and Surveillance Requirements for the diesel generators (DGs) at McGuire Nuclear Power Station, Units 1 and 2. The following changes will incorporate the guidance and recommendations contained in NRC Generic Letter (GL) 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation," Generic Letter (GL) 94-01, "Removal of Accelerated Testing and Special Reporting Requirements for Emergency Diesel Generators," and NUREG-1431, "Revised Standard Technical Specifications for Westinghouse PWRs."

3.1 Proposed Changes to McGuire TS

Duke Power is proposing the following additions and deletions to McGuire TS Section 3/4.8.1 "A.C. Sources." The strikeouts represent the deletions and the bolded text represents the additions:

3.1.1 Change 1: Action Statement a.

a. With an offsite circuit of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining ~~A.C. Source~~ ***(required offsite circuit)*** by performing Surveillance Requirement 4.8.1.1.1a within 1 hour and at least once per 8 hours thereafter;
~~separately demonstrate the operability of two diesel generators by performing Surveillance Requirement 4.8.1.1.2a.4 and 4.8.1.1.2a.5 with 24 hours unless this surveillance requirement was performed within the previous 24 hours unless the diesel is operating~~, restore ~~at least two offsite~~ ***(the required offsite)*** circuits ~~and two diesel generators~~ to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

The above changes are consistent with the following recommendations in GL 93-05:

> with the offsite circuit of the above required A.C. electrical power sources inoperable...

(Delete the following requirement to test EDGs: If either generator has not been successfully tested within the past 24 hours, demonstrate the operability by performing Surveillance Requirement 4.8.1.1.2a.5 and 4.8.1.1.2a.6 for each such diesel generator, separately, within 24 hours.)

Additionally, the wording "A.C. Sources" will be replaced by "required offsite source." This is being done because there will no longer be a requirement to test the remaining EDGs for this action statement. Therefore, the only A.C. source to test would be the remaining offsite circuit. This is considered an administrative change.

3.1.2 Change 2: Action Statement b.

b. With one offsite circuit and one diesel generator of the above required A.C. electrical power sources inoperable~~*,~~ demonstrate the OPERABILITY of the remaining ~~A.C. source~~ **(required offsite circuit)** by performing Surveillance Requirement 4.8.1.1.1a within 1 hour and at lest once per 8 hours thereafter; demonstrate * the operability of the remaining diesel generator by performing Surveillance Requirement 4.8.1.1.2a.4 and 4.8.1.1.2a.5 within 8 hours ***(or verify within 8 hours that no potential common mode failure for the remaining diesel exists;)***
~~unless this surveillance was performed within the previous 24 hours, or unless the diesel is operating **~~ restore...
statement d.

~~* A diesel generator shall be considered to be inoperable from the time of failure until it satisfies the requirements of Surveillance Requirements 4.8.1.1.2a.4) and 4.8.1.1.2a.5).~~
~~** This test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABLE status. The provisions of specification 3.0.2 are not applicable.~~

** This action is not required if the inoperability of the diesel was due to an inoperable support system, an independently testable component, or preplanned testing or maintenance. If required, this action is to be completed regardless of when the inoperable diesel generator is restored to OPERABLE status. The provisions of Specification 3.0.2 are not applicable.*

The above changes are consistent with the following recommendations in GL 93-05:

With an offsite circuit of the above required A.C. electrical power sources inoperable,...

(Deleted the following requirement to test EDGs: "If either diesel generator has not been successfully tested within the past 2 ours,

demonstrate its OPERABILITY by performing Surveillance Requirements 4.8.1.1.2a.5 and 4.8.1.1.2a.6 for each such diesel generator, separately, within 24 hours.")

and

... If the diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirements 4.8.1.1.2a.5 and 4.8.1.1.2a.6 within 8 hours, unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated.

The deletion of "A.C. Sources" and the addition of "required offsite source" is being made because there will no longer be a requirement to test the remaining EDGs for this action statement. Therefore, the only A.C. source to test would be the remaining offsite circuit. Additionally, Duke Power is also proposing to delete, from the TS Bases, any reference to testing the remaining EDGs when an offsite source becomes unavailable. This is being made because this requirement has been eliminated from the NUREG-1431 per GL 93-05.

The deletion of the footnote * is considered to be an administrative change because it only clarifies what is considered to be an inoperable EDG and this definition already exists in the current McGuire TS Section 1.0.

3.1.3 Change 3: Action Statement d.

d. "With a diesel generator of the above required A.C. electrical power sources inoperable ~~*,~~ demonstrate the OPERABILITY of the A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1a within 1 hour and at least once per 8 hours thereafter; ~~and unless the inoperability of the diesel was due to preplanned testing or maintenance~~ demonstrate * the OPERABILITY of the remaining diesel generator by performing Surveillance Requirements 4.8.1.1.2a.4 and 4.8.1.1.2a.5 within 24 hours ~~or unless the diesel is operating **~~, ***(or verifying within 24 ours that no potential common mode failure for the remaining diesel exists;)*** restore diesel generators to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

~~* A diesel generator shall be considered to be inoperable from the time of failure until it satisfies the requirements of Surveillance Requirements 4.8.1.1.2a.4) and 4.8.1.1.2a.5)~~

~~** This test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABLE status. The provisions of Specification 3.0.2 are not applicable.~~

* This action is not required if the inoperability or the diesel was due to an inoperable support system, an independently testable component, or preplanned testing or maintenance. If required, this action is to be completed regardless of when the inoperable diesel generator is restored to OPERABLE status. The provisions of Specification 3.0.2 are not applicable.

The above changes are consistent with NUREG-1431 and the following recommendations in GL 93-05:

> ... If the diesel generator became inoperable due to any cause other than an inoperable support system, an independently testable component, or preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirements 4.8.1.1.2a.5) and 4.8.1.1.2a.6 within 8 hours, unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated.

3.1.4 Change 4: Action Statement e.

e. With two of the above required offsite A.C. circuits inoperable, ~~separately demonstrate the OPERABILITY of two diesel generators by performing Surveillance Requirements 4.8.1.1.2a.4) and 4.8.1.1.2a.5) within 8 hours, unless the diesel generators already operating;~~ restore at least one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. With only one offsite source restored, follow action statement a.

The above changes are consistent with the following recommendations of GL 93-05:

> With two of the above required offsite A.C. circuits inoperable, restore...
>
> (Deleted the following requirement to test EDGs; demonstrate the OPERABILITY of two diesel generators separately by performing the requirements of Specifications 4.8.1.1.2a.5 and 4.8.1.1.2a.6 within 1 hour and at least once per 8 hours thereafter, unless the diesel generators are already operating,)"

3.1.5 Change 5: Surveillance Requirement 4.8.1.1.2a.5)

5) "Verify the generator is synchronized, loaded ~~to greater than or equal to 3000 kW in less than or equal to 60 seconds, and to 4000 kW within 10 minutes~~ and operates ***(at 3600-4000 kW ***)*** for at least 60 minutes.

*** ***Diesel generator loadings may be done in accordance with the manufacturer's recommendations. The purpose of the load range is to prevent overloading the engine, and momentary excursions outside of the load range shall not invalidate the test.***

The above changes are consistent with the following recommendations in GL 93-05 and NUREG-1431 and are therefore acceptable:

TS 4.8.1.1.2:

a. In accordance with the frequency specified in Table 4.8-1 on a STAGGERED TEST BASIS by:

6) Verify the generator is synchronized, loaded to greater than or equal to [continuous rating] kW in accordance with the manufacturer's recommendations, and operates with a load greater than or equal to [continuous rating] for at least 60 minutes, and

(Replace "less than or equal to [60] seconds" with "accordance with the manufacturer's recommendations.")

NUREG-1431 is consistent with Regulatory Guide 1.9, Rev. 3 which states:

Demonstrate startup from standby conditions, and verify that required design voltage and frequency is attained. For these tests, the emergency diesel generator can be slow-started and reach rated speed on a prescribed schedule to minimize stress and wear. Demonstrate 90 to 100 percent of continuous rating of the emergency diesel generator, for an interval not less than 1 hour and until temperature equilibrium has been attained.

Additionally, Note 2 of NUREG-1431, for this surveillance, states that momentary transients, because of changing loads, do not invalidate this test, which is consistent with the NUREG-1431.

3.1.6 Change 6: Surveillance Requirement 4.8.1.1.2e.8)

8) Verify, during shutdown, the diesel generator... and 57Hz within 11 seconds.~~***~~**(##)**

~~*** If there is a test failure during the 24 hour test run, the hot restart test can be performed prior to completing the 24 hour test provided the diesel generator had operated for at least 2 hours loaded between 3800 and 4000 kW.**~~

If the hot restart is not satisfactorily completed, it is not necessary to repeat the preceding 24-hour test. Instead, the diesel generator may be operated at 3600-4000 kW * for 2 hours or until operating temperature has stabilized.**

The above changes are found to be consistent with the following recommendations in GL 93-05:

TS 4.8.1.1.2:

e. At least once per 18 months, during shutdown, by:

7) Verifying the diesel generator operates for at least 24 hours...Within 5 minutes after completing this 24-hour test, perform specification 4.8.1.1.2.a.5);*...

(Replaced TS "4.8.1.1.2.e.6).b)" [simulated loss-of-offsite power start and load test] with "4.8.1.1.2.a.5)" [EDG start test].)

* If Specification 4.8.1.1.2.a.5) is not satisfactorily completed, it is not necessary to repeat the preceding 24-hour test. Instead, the diesel generator may be operated at [continuous rating] kW for 2 hours or until operating temperature has stabilized.

3.1.7 Change 7: Surveillance Requirement 4.8.1.1.2.a

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

a. ~~In accordance with the frequency specified in Table 4.8.1~~ ***(at least once per 31 days)*** on a STAGGERED TEST BASIS, by:

Additionally, Duke Power is eliminating Table 4.8-1 "Diesel Generator Test Schedule" and the associated footnotes.

The above changes are consistent with the following recommendations in GL 94-01 and are therefore acceptable:

Licensees may now implement the provisions of the maintenance rule for EDGs, including the applicable regulatory guidance which will provide a program to assure EDG performance. Therefore, the requirements for accelerated testing of individual EDGs would no longer exist.

3.1.8 Change 8: Surveillance Requirement 4.8.1.1.3

~~4.8.1.1.3 Reports - All diesel generator failures, valid or non-valid, shall be reported to the Commission pursuant to Specification 6.9.2 within 30 days. Reports of diesel generator failures shall include the information recommended in Regulatory Position c.3.b of Regulatory Guide 1.108, Revision 1, August 1977. If the number of failures in the last 100 valid tests (on a per nuclear unit basis) is greater than or equal to 7, the report shall be supplemented to include the additional information recommended in Regulatory Position C.3.b or regulatory guide 1.108, Revision 1, August 1977.~~

The above change is consistent with the following recommendations in GL 94-01 and is therefore acceptable:

> Licensees may request the removal of the TS provisions for accelerated testing and special reporting requirements for EDGs at this time. However, when requesting this license amendment, licensees must commit to implement within 90 days of the issuance of the license amendment a maintenance program for monitoring and maintaining EDG performance consistent with the provisions of Section 50.56 of Title 10 of the Code of Federal Regulations (10 CFR 50.65), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," and the guidance (as applicable to EDGs) of Regulatory Guide (RG) 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants."

Additionally, Duke Power will be making administrative changes to the TS Bases for McGuire which will add references to GL 93-05 and GL 94-01.

3.1.9 Change 9: Surveillance Requirement 4.8.1.1.2a.4)

> 4) Verifying (**) the diesel starts form ~~ambient~~ **(standby (prelube))** condition and **(maintain the steady-state generator voltage and frequency at 4160 ± 420 volts and 60 ± 1.2 Hz, respectively.)** ~~accelerates to at least 488 rpm in less than or equal to 11 seconds*. The generator voltage and frequency shall be at least 4160 volts and 57 Hz within 11 seconds after the start signal.~~
>
> **** Once per 184 days, start the engine from standby (prelube) condition, and verify generator reaches ≥ 3750 volts and ≥ 57 Hz in ≤ 11 seconds.**

The above changes are consistent with the following recommendations in NUREG-1431 and are therefore acceptable:

> SR 3.8.1.2 and 3.8.1.7
>
> > In order to reduce stress and wear on diesel engines, some manufacturers recommend a modified start in which the starting speed of DGs is limited, warmup is limited to this lower speed, and the DGs are gradually accelerated to synchronous speed prior to loading.
>
> and
>
> SR 3.8.1.7 requires that, at a 184 day frequency, the DG starts from standby conditions and achieves required voltage and frequency within 10 seconds. The 10 second start requirement supports the assumptions of the design basis LOCA analysis in the FSAR, Chapter [15].

In the McGuire TS, the time required for the EDG to achieve adequate voltage and frequency deviates for the time specified in NUREG-1431. However, the NUREG-1431 basis for this surveillance requirement states that the time, voltage, and frequency elements should be derived from McGuire's accident analysis, which demonstrates the plant's response to a design basis large break loss-of-coolant accident (LOCA). The voltage, frequency, and time used at McGuire for this surveillance requirement are supported by their original TS, and their original licensing documents for the plant.

3.1.10 Change 10: Surveillance Requirement 4.8.1.1.2e.5)

> 5) ...The generator voltage and frequency shall be at least ~~4160~~ (3470) volts and 57 Hz with 11 seconds after the auto-start signal;...

The above changes are consistent with the following requirements of NUREG-1431 and are therefore acceptable:

> Verify on a actual or simulated Engineered Safety Feature (ESF) actuation signal each DG auto-starts form standby condition and:
>
> a. In $\leq$ [10] seconds after auto-start an during tests, achieves voltage $\geq$ [3740] V and $\leq$ [4580] V;
>
> b. In $\leq$ [10] seconds after auto-start and during tests, achieves frequency $\geq$ [58.8] Hz and $\leq$ [61.2] Hz;

The time required for the EDG to achieve adequate voltage and frequency deviates from the time in NUREG-1431. However, as stated above, the NUREG-1431 basis for this surveillance requirement states that the time, voltage, and frequency elements should be derived from McGuire's accident analysis, which demonstrates the plant's response to a design basis large break loss of coolant accident (LOCA). The time, voltage, and frequency used in this surveillance requirement at McGuire are supported by their original TS, and their original licensing basis documents for the plant. The change from 488 rpms to 57 Hz is considered to be administrative because 488 rpms corresponds to 57 Hz, and does not change the original intent of this surveillance requirement.

3.1.11 Change 11: Surveillance Requirement 4.8.1.1.2e.8)

> 8) Verify, during shutdown, the diesel generator operates for at least 24 hours. During the first 2 hours of the test, the diesel generator shall be loaded between 4200 kW and 4400 kW ***(***)*** and during the remaining 22 hours of the test, the diesel shall be loaded between ~~3800 kW~~ ***(3600 kW)*** and 4000 kW *** ***(***)***. The generator voltage and frequency shall be at least ~~4160 V~~ ***(3740 V)*** and 57 Hz within 11 seconds after the start signal. ...Within 5 minutes of shutting down the diesel generator, restart the diesel generator and verify that the generator voltage and frequency reaches at least ~~4160 V~~ ***(3740 V)*** and 57 Hz within 11 seconds. *** ***(##)***

If the hot restart is not satisfactorily completed, it is not necessary to repeat the preceding 24-hour test. Instead, the diesel generator may be operated at 3600- 4000 kW *** for 2 hours or until operating temperature has stabilized.

The guidance and recommendations in NUREG-1431 for the 24-hour test are consistent with RG 1.9, Rev. 3, in which it is stated:

> Demonstrate full load carrying capability at a power factor between 0.8 and 0.9 for an interval of less than 24 hours, of which 2 hours are at a load equal to 105 to 110 percent of the continuous rating of the emergency diesel generator, and 22 hours are at a load equal to 90 to 100 percent of its continuous rating. Verify that voltage and frequency requirements are maintained.

The NRC staff identified a concern with this change because there was no power factor specified in the proposed TS by the licensee. It was concluded that Duke Power must use a power factor for the 24-hour endurance test surveillance to be consistent with recommendations and guidance of RG 1.9, Rev. 3, and NUREG-1431. In a response to NRC request for additional information (RAI) dated March 26, 1996, the licensee stated that this test is conducted using a 0.8 power factor, which is consistent with NUREG 1431.

The additional proposed changes to this section of the McGuire TS are consistent with the following recommendations in GL 93-05 and are therefore acceptable:

TS 4.8.1.1.2:

e. At least once per 18 months, during shutdown, by:

7) Verifying the diesel generator operates for at least 24 hours...Within 5 minutes after completing this 24-hour test, perform specification 4.8.1.1.2a.5);*...

(Replaced TS "4.8.1.1.2e.6).b)" [simulated loss-of-offsite power start and load test] with "4.8.1.1.2a.5)" [EDG start test].)

* If Specification 4.8.1.1.2a.5) is not satisfactorily completed, it is not necessary to repeat the preceding 24-hour test. Instead, the diesel generator may be operated at [continuous rating] kW for 2 hours or until operating temperature has stabilized.

3.1.12 Change 12: Surveillance Requirement 4.8.1.1.2e.15) and f.

15) Verifying, during shutdown#, that with all diesel generator air start receivers pressurized to less than or equal to 220 psig and the compressors secured, the diesel generator starts at least 2 times from ~~ambient~~ **(standby (prelube))** conditions and accelerates to at least ~~488 rpm~~ **(57) Hz** in less than or equal to 11 seconds.

and

f. At least once per 10 years ... at least ~~488 rpm~~ ***(57 Hz)*** on less than or equal to 11 seconds; and

The above changes are consistent with the following recommendations in NUREG-1431 and are therefore acceptable:

SR 3.8.1.2 and 3.8.1.7

In order to reduce stress and wear on diesel engines, some manufacturers recommend a modified start in which the starting speed of DGs is limited, warmup is limited to this lower speed, and the DGs are gradually accelerated to synchronous speed prior to loading.

and

SR 3.8.1.20

Verify when started simultaneously from standby condition, each DG achieves, in $\leq$ [10] seconds, voltage $\geq$ [3774] V and, [4576], and frequency $\geq$ [58.8] Hz and $\leq$ [61.2] Hz.

The time required for the EDG to achieve adequate voltage and frequency deviates for the time in NUREG-1431. However, as stated before, the NUREG-1431 basis for this surveillance requirement explains that the time, voltage, and frequency elements should be derived from the accident analysis, which demonstrates the plant's response to a design basis large break loss of coolant accident (LOCA). The voltage, frequency, and time used at McGuire for this surveillance requirement are supported by their original TS, and their original licensing basis documents for the plant.

This....PM activity alone.

Currently, footnote "#" is part of the TS Surveillance Requirement Section 4.8.1.1.2e.14 regarding the surveillance of EDG lockout features. Adding footnote "#" to the TS Surveillance Requirement Section 4.8.1.1.2e.15 will also allow the surveillance of EDG air starting system to be performed during preplanned Preventative Maintenance (PM) activities that would result in the diesel generator being inoperable. The surveillance can be performed as long

as it does not increase the time the diesel generator is inoperable for PM activity that is being performed. The footnote is only applicable at that time and will not be utilized for operational convenience.

Based on its review, the staff determines that the proposed footnote will not increase in the consequences of an accident previously evaluated and will provide added flexibility in plant operations. The proposed change is, therefore, acceptable.

The change of "ambient" to "standby (prelube)," is considered to be an administrative change and is, therefore, acceptable.

3.1.13 Change 13: TS Bases

Duke power is proposing to insert the following statement to the TS Bases:

> Since the McGuire emergency diesel generator manufacturer (Nordberg) is no longer in business, McGuire engineering is the designer of record. Therefore, the term "manufacturer's (or vendor) recommendations" is taken to mean recommendations as determined by Mcguire engineering (with specific industry Nordberg input as available) that were intended for nuclear class diesel service taking into account McGuire diesel generator maintenance and operating history and industry experience where applicable.

The staff would expect that the licensee, in the absence of manufacturer's guidance, would use prudent engineering judgment when conducting testing, preventive, and corrective maintenance on the EDG. However, this does not require the removal of the "manufacturer's recommendations" or "vendors recommendations" from the McGuire TS. The staff concluded that the licensee can accomplish the same thing without removing "manufacturer recommendations" from the TS. Therefore, the staff suggested the following changes to the proposed insert in NRC RAI dated March 26, 1996:

> Since the McGuire emergency diesel generator manufacturer (Nordberg) is no longer in business, McGuire engineering is the designer of record. Therefore, in the absence of manufacturer recommendations, McGuire engineering will determine what are the appropriate actions required for the nuclear class diesel service taking into account McGuire diesel generator maintenance and operating history and industry experience where applicable.

In response to this NRC concern identified in NRC RAI dated March 26, 1996, the licensee has proposed to insert the above paragraph and this is therefore acceptable.

4.0 STAFF CONCLUSIONS

4.1 Summary of Changes Related to GL 93-05

The NRC staff has completed a comprehensive examination of surveillance requirements in the TS that require testing during power operation. This effort is a part of the NRC Technical Specification Improvement Program (TSIP). The results of this work are reported in NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," dated December 1992. In performing this study the staff found that, while the majority of the testing at power is important, some testing can be eliminated. The staff encourages licensees who plan to adopt suggested line-item TS improvements in GL 93-05 to propose TS changes that are consistent with the guidance in the GL. As part of this amendment request, Duke Power Company has proposed changes related to GL 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation." The staff has reviewed the proposed changes and found them consistent with the guidance and recommendations in GL 93-05, and therefore acceptable.

4.2 Summary of Changes Related to GL 94-01

In GL 94-01, the NRC staff concluded that licensees may request the removal of the TS provisions for accelerated testing and special reporting requirements for EDGs at this time. However, when proposing this amendment request, licensees must commit to implement within 90 days of the issuance of the licensing amendment a maintenance program for monitoring and maintaining EDG performance consistent with the provisions of Section 50.65 of Title 10 of the *Code of Federal Regulations*, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," and the guidance of Regulatory Guide (RG) 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." The staff encourages licensees who plan to adopt suggested improvements in GL 94-01, "Removal of Accelerated Testing and Reporting Requirements for Emergency Diesel Generators," to propose TS changes that are consistent with the guidance in the GL. Duke Power has proposed TS changes related to GL 94-01 and has committed to implementing the maintenance programs at McGuire at the beginning of 1996, prior to issuance of this amendment request. The staff has reviewed the proposed changes and found them consistent with the guidance and recommendations in GL 94-01, and therefore acceptable.

4.3 Summary of Changes Related to NUREG-1431

This NUREG contains improved Standard Technical Specifications (STS) for Westinghouse plants and documents the positions of the NRC based on the Westinghouse Owners Group's proposed STS. This NUREG is the result of extensive technical meetings and discussions among vendors, and the Nuclear Management and Resource Council. The improved STS are used as the basis for developing improved plant-specific TS by individual nuclear power plant licensees. Duke Power has proposed TS changes related to NUREG-1431. The staff reviewed the proposed changes and found the changes consistent with the guidance and recommendations in NUREG-1431, and, therefore, acceptable.

5.0 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.

6.0 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 (61 FR 28612 dated June 5, 1996). 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.

7.0 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.

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