



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

February 1, 1985

Docket Nos: 50-369
and 50-370

Mr. H. B. Tucker, Vice President
Nuclear Production Department
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

Subject: Issuance of Amendment No. 38 to Facility Operating License
NPF-9 and Amendment No. 19 to Facility Operating License
NPF-17 - McGuire Nuclear Station, Units 1 and 2

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 38 to Facility Operating License NPF-9 and Amendment No. 19 to Facility Operating License NPF-17 for the McGuire Nuclear Station, Units 1 and 2. These amendments are in response to your application dated August 31, 1984.

The amendments change the Technical Specifications to implement the use of time overcurrent trips of the circuit breakers for emergency diesel generators.

A copy of the related safety evaluation supporting Amendment No. 38 to Facility Operating License NPF-9 and Amendment No. 19 to Facility Operating License NPF-17 is enclosed.

Sincerely,

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

Enclosures:

1. Amendment No. 38 to NPF-9
2. Amendment No. 19 to NPF-17
3. Safety Evaluation

cc w/encl:
See next page

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Certified by *[Signature]*

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February 1, 1985

AMENDMENT NO. 38 TO FACILITY OPERATING LICENSE NPF-9 - McGUIRE NUCLEAR STATION, UNIT 1
AMENDMENT NO. 19 TO FACILITY OPERATING LICENSE NPF-17 - McGUIRE NUCLEAR STATION, UNIT 2

DISTRIBUTION:

✓ Docket Nos. 50-369/370

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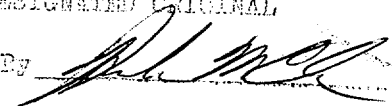
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DUKE POWER COMPANY

DOCKET NO. 50-369

McGUIRE NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 38
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 August 31, 1984, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-9 is hereby amended to read as follows:

(2) Technical Specifications

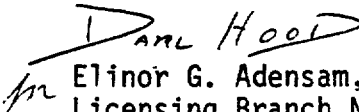
The Technical Specifications contained in Appendix A, as revised through Amendment No. 38, are hereby incorporated into this license.

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The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION


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

Attachment:
Technical Specification Changes

Date of Issuance: February 1, 1985



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

DUKE POWER COMPANY

DOCKET NO. 50-370

McGUIRE NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 19
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 August 31, 1984, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public;
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-17 is hereby amended to read as follows:

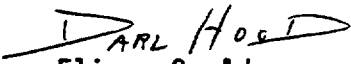
(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 19, are hereby incorporated into this license.

The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION


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

Attachment:
Technical Specification Changes

Date of Issuance: February 1, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 38

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

AND

TO LICENSE AMENDMENT NO. 19

FACILITY OPERATING LICENSE NO. NPF-17

DOCKET NO. 50-370

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

Amended
Page

3/4 8-5

Overleaf
Page

3/4 8-6

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 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 4160 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) Verifying that on a simulated loss of the diesel generator, with offsite power not available, the loads are shed from the emergency busses and that subsequent loading of the diesel generator is in accordance with design requirements;
- 7) Simulating a loss-of-offsite power in conjunction with an ESF actuation test signal, and
 - a) Verifying deenergization of the emergency busses and load shedding from the emergency busses;
 - 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 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 that all automatic diesel generator trips, except engine overspeed, lube oil pressure, and generator differential, and all diesel generator breaker trips, except generator time overcurrent, are automatically bypassed upon loss of voltage on the emergency bus concurrent with a Safety Injection Actuation signal.
- 8) Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 4400 kW and during the remaining 22 hours of this test, the diesel generator shall be loaded to greater than or equal to 4000 kW. The generator voltage and frequency shall be at least 4160 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 after completing this 24-hour test, perform Specification 4.8.1.1.2d.7)b);

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 9) Verifying that the auto-connected loads to each diesel generator do not exceed the 2-hour rating of 4400 kW;
 - 10) Verifying 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 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;
 - 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 that the following diesel generator lockout features prevent diesel generator starting only when required:
 - a) Turning gear engaged, and
 - b) Emergency stop.
 - 15) Verifying 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 conditions and accelerates to at least 488 rpm 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 488 rpm in less than or equal to 11 seconds; and
- g. At least once per 10 years by:



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SAFETY EVALUATION REPORT

RELATED TO AMENDMENT NO. 38 TO FACILITY OPERATING LICENSE NPF-9

AND TO AMENDMENT NO. 19 TO FACILITY OPERATING LICENSE NPF-17

DUKE POWER COMPANY

INTRODUCTION

By letter dated August 31, 1984, the licensee requested amendments to license Nos. NPF-9 and NPF-17 which would change Technical Specifications to implement the use of time overcurrent trips of the circuit breakers for emergency diesel generators. These time overcurrent trips are designed to prevent the destruction of a diesel generator in the event of a multiphase fault on a switch gear bus. Supplemental letters of October 4 and 26, 1984, clarified the proposed change. The staff's evaluation of this proposed change to the Technical Specifications is presented herein.

EVALUATION

Technical Specification 4.8.1.1.2.e.7.c presently requires verification that all automatic diesel generator trips except engine overspeed, lube oil pressure and generator differential are automatically bypassed upon loss of voltage on the emergency bus concurrent with a safety injection signal. The proposed change to the Technical Specifications would also except time overcurrent trips of the diesel generator circuit breakers from this requirement to be automatically bypassed.

In the event of a multiphase bus fault, the proposed time overcurrent protective device would trip the diesel generator breaker only. The diesel generator associated with that bus would continue to operate and could be manually reconnected to the associated bus after the bus fault is removed and the lockout relay is reset. Without the protective trip, a multiphase bus fault could quickly destroy the diesel generator. There is a small probability that safety injection would be required when the diesel generator breaker is spuriously tripped; however, for this event the redundant emergency power division is available to perform the safety function.

Regulatory Guide 1.9 recommends that protective trips which are not automatically bypassed by a safety injection signal (except engine overspeed and generator differential) have two or more independent measurements for each trip parameter with coincident logic to minimize spurious trips. In addition, Regulatory Guide 1.9 recommends that the bypass circuit include the capability for testing circuit status and operability and for alarming abnormal values of bypassed parameters in the control room. The proposed generator time overcurrent trip circuits meet these criteria in Regulatory Guide 1.9.

Based on our review, we conclude that the proposed change to Technical Specification 4.8.1.1.2.e.7.c to implement the use of time overcurrent trips of diesel generator circuit breakers meets regulatory requirements and is, therefore, acceptable.

ENVIRONMENTAL CONSIDERATION

The amendments involve a change in use of facility components located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration, and there have been no public comments on such findings. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR Section 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.

CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register December 31, 1984 (49 FR 50801) and consulted with the state of North Carolina. No public comments were received, and the state of North Carolina did not have any comments.

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: Iqbal Ahmed, Power Systems Branch, DSI
Lester L. Kintner, Licensing Branch No. 4, DL

Dated: February 1, 1985