

January 5, 1995

Mr. Roger O. Anderson, Director
Licensing and Management Issues
Northern States Power Company
414 Nicollet Mall
Minneapolis, Minnesota 55401

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT NOS. 1 AND 2 -
ISSUANCE OF AMENDMENTS RE: EMERGENCY DIESEL GENERATOR TESTING
REQUIREMENTS (TAC NOS. M90564 AND M90565)

Dear Mr. Anderson:

The Commission has issued the enclosed Amendment No. 113 to Facility Operating License No. DPR-42 and Amendment No. 106 to the Facility Operating License No. DPR-60 for the Prairie Island Nuclear Generating Plant, Unit Nos. 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application dated October 3, 1994, as supplemented November 30, 1994,

The amendments revise Prairie Island Nuclear Generating Plant Technical Specification 4.6, "Periodic Testing of Emergency Power Systems." Specifically, the amendments modify the emergency diesel generator (EDG) 24-hour load test requirements to provide an indicated load range of 103-110 percent of the continuous rating. The amendments also rephrase various EDG test requirements to provide clarity and delete the requirement to verify that the auto-connected loads for the Unit 1 and Unit 2 EDGs do not exceed 3,000 kilowatts and 5,100 kilowatts, respectively.

A copy of our related Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,
Sheri R. Peterson
Sheri R. Peterson, Project Manager
Project Directorate III-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

- Enclosures: 1. Amendment No. 113 to DPR-42
2. Amendment No. 106 to DPR-60
3. Safety Evaluation

cc w/encl: See next page

DOCUMENT NAME: G:\WPDOCS\PRAIRIE\PI90564.AMD *See Previous Concurrence

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

January 5, 1995

Mr. Roger O. Anderson, Director
Licensing and Management Issues
Northern States Power Company
414 Nicollet Mall
Minneapolis, Minnesota 55401

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT NOS. 1 AND 2 -
ISSUANCE OF AMENDMENTS RE: EMERGENCY DIESEL GENERATOR TESTING
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The amendments revise Prairie Island Nuclear Generating Plant Technical Specification 4.6, "Periodic Testing of Emergency Power Systems." Specifically, the amendments modify the emergency diesel generator (EDG) 24-hour load test requirements to provide an indicated load range of 103-110 percent of the continuous rating. The amendments also rephrase various EDG test requirements to provide clarity and delete the requirement to verify that the auto-connected loads for the Unit 1 and Unit 2 EDGs do not exceed 3,000 kilowatts and 5,100 kilowatts, respectively.

A copy of our related Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

A handwritten signature in cursive script, appearing to read "Sheri R. Peterson".

Sheri R. Peterson, Project Manager
Project Directorate III-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-282 and 50-306

Enclosures: 1. Amendment No. 113 to DPR-42
2. Amendment No. 106 to DPR-60
3. Safety Evaluation

cc w/encl: See next page

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DATED: January 5, 1995

AMENDMENT NO. 113 TO FACILITY OPERATING LICENSE NO. DPR-42-PRAIRIE ISLAND - UNIT 1
AMENDMENT NO. 106 TO FACILITY OPERATING LICENSE NO. DPR-60-PRAIRIE ISLAND - UNIT 2

Docket File

PUBLIC

PDIII-1 Reading

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J. Hannon

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C. Berlinger

M. Pratt

D. Thatcher

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C. Grimes, DOPS/OTSB, O-11F23

ACRS (4)

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OC/LFDCB

W. Kropp, RIII

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Northern States Power Company

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Plant
Northern States Power Company
1717 Wakonade Drive East
Welch, Minnesota 55089

November 1994



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

NORTHERN STATES POWER COMPANY

DOCKET NO. 50-282

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 113
License No. DPR-42

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Northern States Power Company (the licensee) dated October 3, 1994, as supplemented November 30, 1994, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations 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;
 - 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 amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-42 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 113, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance with full implementation within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John N. Hannon, Director
Project Directorate III-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: January 5, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 113

FACILITY OPERATING LICENSE NO. DPR-42

DOCKET NO. 50-282

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

REMOVE

TS.4.6-1

TS.4.6-2

B.4.6-1

B.4.6-2

INSERT

TS.4.6-1

TS.4.6-2

B.4.6-1

B.4.6-2

4.6 PERIODIC TESTING OF EMERGENCY POWER SYSTEM

Applicability

Applies to periodic testing and surveillance requirements of the emergency power system.

Objective

To verify that the emergency power sources and equipment are OPERABLE.

Specification

The following tests and surveillance shall be performed:

A. Diesel Generators

1. At least once each month, for each diesel generator:
 - a. Verify the fuel level in the day tank.
 - b. Verify the fuel level in the fuel storage tank.
 - c. Verify that a sample of diesel fuel from the fuel storage tank is within the acceptable limits specified in Table 1 of ASTM D975-77 when checked for viscosity, water, and sediment.
 - d. Verify the fuel transfer pump can be started and transfers fuel from the storage system to the day tank.
 - e. Verify the diesel generator can start and gradually accelerate. Verify the generator voltage and frequency can be adjusted to 4160 ± 420 volts and 60 ± 1.2 Hz. Subsequently, manually synchronize the generator, gradually load to at least 1650 kW (Unit 2: 5100 kW to 5300 KW), and operate for at least 60 minutes. This test should be conducted in consideration of the manufacturer's recommendations regarding engine prelude, warm-up, loading and shutdown procedures where possible.

Prairie Island Unit 1

Amendment No. 49, 97, 103, 113

Prairie Island Unit 2

Amendment No. 43, 84, 96, 106

4.6.A.2. At least once each 6 months, for each diesel generator:

- a. Verify the diesel generator starts and achieves generator voltage and frequency of 4160 ± 420 volts and 60 ± 1.2 Hz within 10 seconds after the start signal.
- b. Manually synchronize the generator, load to at least 1650 kW (Unit 2: 5100 kW to 5300 kW) in less than or equal to 60 seconds and operate for at least one hour.
- c. This test should be conducted from standby conditions in consideration of the manufacturer's recommendations regarding engine prelube and shutdown procedures where possible.

3. At least once each 18 months:

- a. Subject each diesel generator to a thorough inspection in accordance with procedures prepared in consideration of the manufacturer's recommendations for this class of standby service.
- b. For each unit, simulate a loss of offsite power in conjunction with a safety injection signal, and:
 1. Verify de-energization of the emergency buses and load shedding from the emergency buses.
 2. Verify the diesels start on the auto-start signal and energize the emergency buses in one minute. This test should be conducted in consideration of the manufacturer's recommendations regarding engine prelube and shutdown procedures where possible.
 3. During this test, operation of the emergency lighting system shall be ascertained.
- c. For each diesel generator, demonstrate full-load carrying capability for an interval of not less than 24 hours, of which at least 2 hours are at a load equal to 103 to 110 percent of the continuous rating of the emergency diesel generator (i.e., 2832 to 3000kW [Unit 2: 5562 to 5940 kW]), and the remainder of the 24 hours are at a load of greater than or equal to 90 percent of its continuous rating (i.e., 2475 kW [Unit 2: 4860 kW]). Verify the generator voltage and frequency to be 4160 ± 420 volts and 60 ± 1.2 Hz. Momentary transients outside the load ranges do not invalidate this test.
- d. Verify the capability of each generator to reject a load of at least 650 kW (Unit 2: 860 kW) without tripping.
- e. For each unit, simulate a safety injection signal and verify that the diesel generator system trips, except those for engine overspeed, ground fault, and generator differential current (Unit 2: except those for engine overspeed and generator differential current), are automatically bypassed.

4.6 PERIODIC TESTING OF EMERGENCY POWER SYSTEMSBases

The monthly tests specified for the diesel generators will demonstrate their continued capability to start and to carry load. The fuel supplies and starting circuits and controls are continuously monitored, and abnormal conditions in these systems would be alarm-indicated without need for test startup.

The less frequent overall system test will demonstrate that the emergency power system and the control systems for the engineered safeguards equipment will function automatically in the event of loss of all other sources of a-c power, and that the diesel generators will start automatically in the event of a loss-of-coolant accident. This test will demonstrate proper tripping of motor feeder breakers, main supply and tie breakers on the affected bus, and sequential starting of essential equipment, as well as the OPERABILITY of the diesel generators. The load rejection test will demonstrate the capability to reject the single largest emergency load without tripping.

The specified test frequencies provide reasonable assurance that any mechanical or electrical deficiency will be detected and corrected before it can result in failure of one emergency power supply to respond when called upon to function. Its possible failure to respond is, of course, anticipated by providing two diesel generators per unit, each supplying, through an independent bus, a complete and adequate set of engineered safeguards equipment. Further, both diesel generators are provided as backup to multiple sources of external power, and this multiplicity of sources should be considered with regard to adequacy of test frequency.

Each diesel generator can start and be ready to accept full load within 10 seconds, and will sequentially start and supply the power requirements for one complete set of safeguards equipment in approximately one minute (Reference 1).

An internal fault in the generator could damage the generator severely. Moreover, this change complies with BTP EICSB 17. Auto-connected loads should not exceed the overload rating of the diesel generator for the 2000 hour maintenance interval, as prescribed in Regulatory Guide 1.9.

The diesel load test values mean those values as measured by the test instrumentation. For example, the load carrying capability test requirement that the diesel generator be run for a period of time at a load of greater than or equal to 2475 kW means that the instrumentation must be measuring a load of at least 2475 kW. It is not necessary to assume an instrument error such that the test would be performed at an indicated load of 2475 kW + 60 kW (choosing a potential instrument error in a particular direction). The operating ranges for these tests were included in the Technical Specifications to account for instrument

inaccuracies plus the usual load swings when connected to the grid.

Station batteries will deteriorate with time, but precipitous failure is extremely unlikely. The surveillance specified is that which has been demonstrated over the years to provide indication of a cell becoming unserviceable long before it fails.

If a battery cell has deteriorated, or if a connection is loose, the voltage under load will drop excessively, indicating need for replacement or maintenance.

4.6 PERIODIC TESTING OF EMERGENCY POWER SYSTEMS

Bases continued

The surveillance specified for the pressurizer heater power source provides assurance that Backup Heater Group "B" can be transferred to its emergency bus. Normally, this group of heaters is supplied from a normal plant 480 volt bus. In an emergency, a manual transfer switch can be used to supply the heater group from a safeguards supply bus.

Reference

1. USAR, Section 8.4

Prairie Island Unit 1
Prairie Island Unit 2

Amendment No. 97, 103, 113
Amendment No. 84, 86, 106



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

NORTHERN STATES POWER COMPANY

DOCKET NO. 50-306

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 106
License No. DPR-60

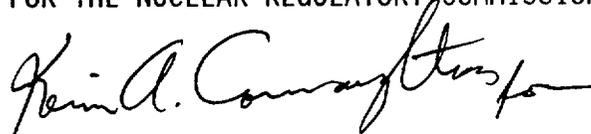
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Northern States Power Company (the licensee) dated October 3, 1994, as supplemented November 30, 1994, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations 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;
 - 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 amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-60 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 106, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance with full implementation within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John. N. Hannon, Director
Project Directorate III-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: January 5, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 106

FACILITY OPERATING LICENSE NO. DPR-60

DOCKET NO. 50-306

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

REMOVE

TS.4.6-1

TS.4.6-2

B.4.6-1

B.4.6-2

INSERT

TS.4.6-1

TS.4.6-2

B.4.6-1

B.4.6-2

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 - d. Verify the fuel transfer pump can be started and transfers fuel from the storage system to the day tank.
 - e. Verify the diesel generator can start and gradually accelerate. Verify the generator voltage and frequency can be adjusted to 4160 ± 420 volts and 60 ± 1.2 Hz. Subsequently, manually synchronize the generator, gradually load to at least 1650 kW (Unit 2: 5100 kW to 5300 KW), and operate for at least 60 minutes. This test should be conducted in consideration of the manufacturer's recommendations regarding engine prelude, warm-up, loading and shutdown procedures where possible.

- 4.6.A.2. At least once each 6 months, for each diesel generator:
- a. Verify the diesel generator starts and achieves generator voltage and frequency of 4160 ± 420 volts and 60 ± 1.2 Hz within 10 seconds after the start signal.
 - b. Manually synchronize the generator, load to at least 1650 kW (Unit 2: 5100 kW to 5300 kW) in less than or equal to 60 seconds and operate for at least one hour.
 - c. This test should be conducted from standby conditions in consideration of the manufacturer's recommendations regarding engine prelube and shutdown procedures where possible.
3. At least once each 18 months:
- a. Subject each diesel generator to a thorough inspection in accordance with procedures prepared in consideration of the manufacturer's recommendations for this class of standby service.
 - b. For each unit, simulate a loss of offsite power in conjunction with a safety injection signal, and:
 1. Verify de-energization of the emergency buses and load shedding from the emergency buses.
 2. Verify the diesels start on the auto-start signal and energize the emergency buses in one minute. This test should be conducted in consideration of the manufacturer's recommendations regarding engine prelube and shutdown procedures where possible.
 3. During this test, operation of the emergency lighting system shall be ascertained.
 - c. For each diesel generator, demonstrate full-load carrying capability for an interval of not less than 24 hours, of which at least 2 hours are at a load equal to 103 to 110 percent of the continuous rating of the emergency diesel generator (i.e., 2832 to 3000kW [Unit 2: 5562 to 5940 kW]), and the remainder of the 24 hours are at a load of greater than or equal to 90 percent of its continuous rating (i.e., 2475 kW [Unit2: 4860 kW]). Verify the generator voltage and frequency to be 4160 ± 420 volts and 60 ± 1.2 Hz. Momentary transients outside the load ranges do not invalidate this test.
 - d. Verify the capability of each generator to reject a load of at least 650 kW (Unit 2: 860 kW) without tripping.
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4.6 PERIODIC TESTING OF EMERGENCY POWER SYSTEMS

Bases

The monthly tests specified for the diesel generators will demonstrate their continued capability to start and to carry load. The fuel supplies and starting circuits and controls are continuously monitored, and abnormal conditions in these systems would be alarm-indicated without need for test startup.

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The specified test frequencies provide reasonable assurance that any mechanical or electrical deficiency will be detected and corrected before it can result in failure of one emergency power supply to respond when called upon to function. Its possible failure to respond is, of course, anticipated by providing two diesel generators per unit, each supplying, through an independent bus, a complete and adequate set of engineered safeguards equipment. Further, both diesel generators are provided as backup to multiple sources of external power, and this multiplicity of sources should be considered with regard to adequacy of test frequency.

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An internal fault in the generator could damage the generator severely. Moreover, this change complies with BTP EICSB 17. Auto-connected loads should not exceed the overload rating of the diesel generator for the 2000 hour maintenance interval, as prescribed in Regulatory Guide 1.9.

The diesel load test values mean those values as measured by the test instrumentation. For example, the load carrying capability test requirement that the diesel generator be run for a period of time at a load of greater than or equal to 2475 kW means that the instrumentation must be measuring a load of at least 2475 kW. It is not necessary to assume an instrument error such that the test would be performed at an indicated load of 2475 kW + 60 kW (choosing a potential instrument error in a particular direction). The operating ranges for these tests were included in the Technical Specifications to account for instrument

inaccuracies plus the usual load swings when connected to the grid.

Station batteries will deteriorate with time, but precipitous failure is extremely unlikely. The surveillance specified is that which has been demonstrated over the years to provide indication of a cell becoming unserviceable long before it fails.

If a battery cell has deteriorated, or if a connection is loose, the voltage under load will drop excessively, indicating need for replacement or maintenance.

4.6 PERIODIC TESTING OF EMERGENCY POWER SYSTEMS

Bases continued

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Reference

1. USAR, Section 8.4

Prairie Island Unit 1
Prairie Island Unit 2

Amendment No. 97, 103, 113
Amendment No. 84, 96, 106



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 113 AND 106 TO

FACILITY OPERATING LICENSE NOS. DPR-42 AND DPR-60

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-282 AND 50-306

1.0 INTRODUCTION

By letters dated October 3, 1994, and November 30, 1994, Northern States Power Company (the licensee) submitted a request for change to the Technical Specifications (TS) for the Prairie Island Nuclear Generating Plant, Unit Nos. 1 and 2, specifically, TS Section 4.6 "Periodic Testing of Emergency Power System." The TS change was submitted to provide a more flexible test band during the 24-hour load test of an emergency diesel generator (EDG), and to rephrase various EDG test requirements.

2.0 EVALUATION

2.1 Background

Each EDG at the Prairie Island Nuclear Generating Station, as a backup to the normal standby a-c power supply, is capable of sequentially starting and supplying power to one complete set of Engineered Safety Features equipment for one reactor unit, while providing sufficient power to allow the second unit to be placed in a safe shutdown condition. The Unit 1 EDGs consist of two Fairbanks Morse units each rated at 2750 kilowatts (kW) continuous (8750-hour basis), 0.8 power factor, 900 rpm, 4160-volt, 3-phase, 60 Hertz. The 2000-hour rating of each Unit 1 EDG is 3000 kW. In addition, the EDG manufacturer's design limits include a required special inspection to verify that the EDG has not been damaged if the time of operation between 3000 and 3250 kW exceeds 30 minutes.

The TS require a 24-hour load test at least once every 18 months. The load test verifies that the EDGs can start and run continuously at full load for an interval of not less than 24 hours. The test requires that the EDGs be run at a load equivalent to 110 percent of the continuous duty rating for at least 2 hours, and at a load equivalent to the continuous duty rating for the remainder of the 24 hours. The licensee proposes to revise the 24-hour load test to avoid exceeding the 30-minute rating during the test. The licensee is concerned that the present 2-hour testing band, as stated in the TS, of 105-110 percent of the continuous rating of the EDG, could cause the 30-minute rating of 3000 kW (109.1 percent) to be exceeded when instrument error is considered.

2.2 Evaluation

Amendment to the 24-Hour load Test

On October 3, 1994, the licensee submitted a license amendment request to provide a more flexible test band during the 24-hour EDG load test which is performed every 18 months. The primary concern addressed by the licensee's amendment request is the potential overloading of the Unit 1 EDGs. Prairie Island's Unit 1 EDGs have a 30-minute rating between a range of 3000 and 3250 kW (109.1 and 118.2 percent). The current TS require that each EDG be operated once each 18 months for at least 2 hours while loaded to 2887.5 to 3025 kW (105 to 110 percent). Considering a potential instrument error of ± 2 percent, an EDG could be operated above the 3000 kW design limit during the load test. As a result, the licensee desires to maintain the load at 107.1 percent during the 2-hour run of the 24-hour test to avoid exceeding the 30-minute rating set by the manufacturer. However, operating at 107.1 percent indicated load creates the possibility of exceeding the low end of the test band, currently defined in the TS as 105 percent, considering instrument error. Therefore, the licensee is proposing to change the required test band from 105-110 percent to 103-110 percent, which would allow the licensee to run the 24-hour load test without exceeding the manufacturer's 30-minute rating of 3000 kW (109.1 percent).

In Generic Letter 88-15, "Electric Power Systems - Inadequate Control Over Design Processes," dated September 12, 1988, the NRC discussed the hazards of testing EDGs at a load greater than the design rating specified by the manufacturer. The NRC's concern is that repeated testing beyond the manufacturer's design load limit could, over time, jeopardize the diesel generator's capacity to reliably perform its intended safety function during an event involving a loss of offsite power. The highest anticipated event loads at Prairie Island are 2510 kW and 3813 kW for Unit 1 and Unit 2, respectively. For the EDGs, 103 percent of the continuous rating represents a significantly greater load on the EDGs than the highest anticipated event load for either unit.

- * Unit 1, 103 percent of 2750 kW (continuous rating) = 2832.5 kW
(represents 112.8 percent of the highest anticipated event load)
- * Unit 2, 103 percent of 5400 kW (continuous rating) = 5562 kW
(represents 145.9 percent of the highest anticipated event load)

A test load of 103 percent is significantly greater than the load required for each unit during accident conditions. Since the surveillance test would continue to demonstrate an adequate level of electrical load carrying capacity to ensure that each EDG is capable of performing its accident-mitigating function, the NRC staff finds the proposed change of the 24-hour test band from 105-110 percent to 103-110 percent, to be acceptable.

Rephrasing of Various Emergency Generator Test Requirements

Proposed changes:

- (A) Change the first sentence of Technical Specification 4.6.A.1.e from "Verify the diesel generator can start and gradually accelerate to synchronous speed with generator voltage and frequency at 4160 ± 420 volts and 60 ± 1.2 Hz" to "Verify the diesel generators can start and gradually accelerate. Verify the generator voltage and frequency can be adjusted to 4160 ± 420 and 60 ± 1.2 Hz."

The reason for the change is that TS 4.6.A.1.e had been previously modified to allow monthly "slow starts." It was the intent of this change to allow the diesel to accelerate to operating speed prior to field flashing the generator. Field flashing the generator prior to achieving operating speed is harmful to the generator and would partially defeat the purpose of conducting "slow starts." The subject TS change is intended to clarify the test requirement.

- (B) 1. Change the words in the sentence contained in TS 4.6.A.1.e from "should be conducted in accordance with the manufacturer's recommendations...." to "should be conducted in consideration of the manufacturer's recommendations...."
2. Change the words in the sentence contained in TS 4.6.A.d from "should be conducted in accordance with the manufacturer's recommendations...." to "should be conducted from standby conditions in consideration of the manufacturer's recommendations...."

The reason for the changes is to clarify the intentions of the original TS Section 4.6.A.1.e. The licensee believes that it was not the intention that all of the manufacturer's recommendations be incorporated into the procedures without the use of good judgment and operational and maintenance experience by the licensee. The new wording would provide the necessary latitude to balance all of the inputs to the procedures development process and would provide for prudent decision-making.

- (C) Relocate existing TS 4.6.A.3.e, "During this test operation of the emergency lighting system shall be ascertained", to become new TS 4.6.A.3.b.3.

TS 4.6.A.3.e states: "During this test...." However, "this test" refers to the test specified in TS 4.6.A.3.b. The purpose of this proposed change is merely to place the specification in its logical location.

- (D) Combine existing TS 4.6.A.2.a, "Verify the diesel generator starts and accelerates to at least synchronous speed in less than or equal to 10 seconds," and 4.6.A.2.b, "Verify the generator voltage and frequency to be 4160 ± 420 volts and 60 ± 1.2 Hz within 10 seconds after the start signal," to the following new specification 4.6.A.2.a, "Verify the diesel generator starts and achieves generator voltage and frequency of 4160 ± 420 volts and 60 ± 1.2 Hz within 10 seconds after the start signal."

The purpose behind combining TS 4.6.A.2.a and 4.6.A.2.b is to remove the words "accelerates to at least synchronous speed." The test is intended to verify that the diesel is ready to accept load within 10 seconds of a start signal. The licensee does not have an instrumented method of verifying that the diesel has achieved synchronous speed, and verification of this does not provide any necessary information.

- (E) Relocate existing TS 4.6.A.3.b.4, "Verify that the diesel generator system trips, except those for engine overspeed, ground fault, and generator differential current (Unit 2: except those for engine overspeed and generator differential current), are automatically bypassed.", to become new TS 4.6.A.3.e, "For each unit, simulate a safety injection signal and verify that the diesel generator system trips, except those for engine overspeed, ground fault, and generator differential current (Unit 2: except those for engine overspeed and generator differential current), are automatically bypassed."

There are two purposes associated with the relocation of existing TS 4.6.A.3.b.4 to 4.6.A.3.e. The first is to de-couple this test from the "Integrated Safety Injection Test" required by TS 4.6.A.3.b. It is unnecessary to perform these two tests simultaneously, and the subject change will clarify the requirement to verify the bypass of selected diesel generator system trips. The other purpose is to remove the requirement to simulate a loss-of-offsite power and a safety injection signal in order to verify that the diesel generator trips are automatically bypassed. Simulation of a safety injection signal is sufficient to automatically bypass the system trips.

- (F) Delete the existing TS 4.6.A.3.b.3, "Verify that the auto-connected loads do not exceed 3000 kW (Unit 2: 5100 kW)."

The licensee's purpose for deleting the requirement to "Verify that the auto-connected loads do not exceed 3000 kW (Unit 2: 5100 kW)", is that this requirement is not appropriate for a surveillance test, but rather is a configuration management issue. During the performance of the integrated safety injection test per TS 4.6.A.3.b, the licensee observes and records the loads on the EDGs, and verifies that the loads do not exceed 3000 kW (5100 kW for Unit 2). However, this provides no meaningful information since the loads during the test are significantly less than those during an actual event, due to differences in plant conditions.

2.3 Conclusion

The staff concludes that changing the 24-hour test band for the EDGs at Prairie Island from 105-110 percent to 103-110 percent does not affect the EDG's ability to carry required loads, and thus perform their accident mitigation function, since the EDGs have significantly greater load carrying capacity than that required during a worse case accident condition. Additionally, the proposed changes in A, B, C, D, E, F are intended to clarify the meaning of the existing specifications without changing the requirements. These changes to the TS will not change the manner in which the plant is operated or maintained. Therefore, the changes are considered acceptable by the staff.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The amendments 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 (59 FR 55877). 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.

5.0 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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