May 12, 1995

Mr. John F. Opeka
Executive Vice President, Nuclear
Connecticut Yankee Atomic Power Company
Northeast Nuclear Energy Company
Post Office Box 270
Hartford, CT 06141-0270

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. M91370)

Dear Mr. Opeka:

The Commission has issued the enclosed Amendment No. 112 to Facility Operating License No. NPF-49 for the Millstone Nuclear Power Station, Unit No. 3, in response to your application dated December 9, 1994, as supplemented by letter dated March 28, 1995.

The amendment eliminates certain surveillance requirements for the emergency diesel generators, in accordance with staff guidance contained in Generic Letter 93-05, "Line Item Technical Specification Improvements to Reduce Surveillance Requirements for Testing during Power Operation," dated September 27, 1993.

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

Sincerely,
Original signed by

Vernon L. Rooney, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-423
Enclosures: 1. Amendment No. 112 to NPF-49
2. Safety Evaluation
cc w/encls: See next page
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Docket No. 50-423

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2. Safety Evaluation

cc w/encls: See next page

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

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

DOCKET NO. 50-423

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 112
License No. NPF-49

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Northeast Nuclear Energy Company, et al. (the licensee), dated December 9, 1994, as supplemented March 28, 1995 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. NPF-49 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 112 , and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto are hereby incorporated in the 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 the date of its issuance, to be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Phillip F. McKee, Director
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: May 12, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 112

FACILITY OPERATING LICENSE NO. NPF-49

DOCKET NO. 50-423

Replace the following pages of the Appendix A, Technical Specifications, with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove	Insert
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
B 3/4 8-1	B 3/4 8-1
----	B 3/4 8-1a
----	B 3/4 8-1b

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 Class 1E Distribution System, and

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

1) A separate day tank containing a minimum volume of 278 gallons of fuel,
2) A separate Fuel Storage System containing a minimum volume of 32,760 gallons of fuel,
3) A separate fuel transfer pump,
4) Lubricating oil storage containing a minimum total volume of 280 gallons of lubricating oil, and
5) Capability to transfer lubricating oil from storage to the diesel generator unit.

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

ACTION:

a. With one offsite circuit inoperable, demonstrate the OPERABILITY of the remaining A.C. source by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

b. With one diesel generator inoperable, demonstrate the OPERABILITY of the A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirement 4.8.1.1.2.a.5 within 24 hours*; restore the diesel generator 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 OPERABILITY of the remaining diesel generator need not be verified if the diesel generator became inoperable due to:

(1) Preplanned preventive maintenance or testing,
(2) An inoperable support system with no potential common mode failure for the remaining diesel generator, or
(3) An independently testable component with no potential common mode failure for the remaining diesel generator.

LIMITING CONDITION FOR OPERATION

ACTION (continued)

c. With one offsite circuit and one diesel generator inoperable, demonstrate the OPERABILITY of the remaining offsite A.C. source by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirement 4.8.1.1.2.a.5 within 8 hours*; restore 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. Restore the other A.C. power source (offsite circuit or diesel generator) to OPERABLE status in accordance with the provisions of Section 3.8.1.1 Action Statement a or b, as appropriate with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable A.C. power source. A successful test of diesel generator OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.5 performed under this Action Statement for an OPERABLE diesel generator or a restored to OPERABLE diesel generator satisfies the diesel generator test requirement of Action Statement b.

d. With one diesel generator inoperable, in addition to ACTION b or c above, 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, 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.

e. With two of the required offsite A.C. circuits inoperable, restore one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. Following restoration of one offsite source, follow Action Statement a with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable offsite A.C. circuit.

---

*The OPERABILITY of the remaining diesel generator need not be verified if the diesel generator became inoperable due to:
(1) Preplanned preventive maintenance or testing,
(2) An inoperable support system with no potential common mode failure for the remaining diesel generator, or
(3) An independently testable component with no potential common mode failure for the remaining diesel generator.

LIMITING CONDITION FOR OPERATION

ACTION (continued)

f. With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; restore 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. Following restoration of one diesel generator unit, follow Action Statement b with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable diesel generator. A successful test of diesel generator OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.5 performed under this Action Statement for a restored to OPERABLE diesel generator satisfies the diesel generator test requirement of Action Statement b.

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the Onsite Class 1E Distribution 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. In accordance with the frequency specified in Table 4.8-1 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,
3) Verifying the fuel transfer pump starts and transfers fuel from the storage system to the day tank,
4) Verifying the lubricating oil inventory in storage,
5) Verifying the diesel starts from standby conditions and achieves generator voltage and frequency at 4160 ± 420 volts and 60 ± 0.8 Hz. The diesel generator shall be started for this test by using one of the following signals:

a) Manual, or

*All planned starts for the purpose of these surveillances may be preceded by an engine prelube period.

SURVEILLANCE REQUIREMENTS (Continued)

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.

6) Verifying the generator is synchronized and gradually loaded in accordance with the manufacturer's recommendations to greater than or equal to 4986 kW and operates with a load greater than or equal to 4986 kW for at least 60 minutes, and

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

b. At least once per 184 days, verify that the diesel generator starts and attains generator voltage and frequency of 4160 $\pm$420 volts and 60 $\pm$ 0.8 Hz within 11 seconds after the start signal. The generator shall be synchronized to the associated emergency bus, loaded to greater than or equal to 4986 kW in accordance with the manufacturer's recommendations, and operate with a load greater than or equal to 4986 kW for at least 60 minutes. The diesel generator shall be started for this test using one of the signals in Surveillance Requirement 4.8.1.1.2.a.5. This test, if it is performed so it coincides with the testing required by Surveillance Requirement 4.8.1.1.2.a.5, may also serve to concurrently meet those requirements as well.

c. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by checking for and removing accumulated water from the day tank;

d. At least once per 31 days by checking for and removing accumulated water from the fuel oil storage tanks;

e. By sampling new fuel oil in accordance with ASTM-D4057 prior to addition to 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:

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 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 not 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 30 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, ASTM-D2622-82 or ASTM-D4294-83.

f. At least once every 31 days by obtaining a sample of fuel oil 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;

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

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

2) Verifying the generator capability to reject a load of greater than or equal to 595 kW while maintaining voltage at 4160 $\pm$ 420 volts and frequency at 60 $\pm$ 3 Hz;

3) Verifying the generator capability to reject a load of 4986 kW without tripping. The generator voltage shall not exceed 5000 volts during and 4784 volts following the load rejection;

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

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

b) Verifying the diesel starts from standby conditions on the auto-start signal, energizes the emergency busses with permanently connected loads within 11 seconds, energizes the auto-connected shutdown loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at 4160 $\pm$ 420 volts and 60 $\pm$ 0.8 Hz during this test.

SURVEILLANCE REQUIREMENTS (Continued)

5) Verifying that on an ESF Actuation test signal, without loss- of-offsite power, the diesel generator starts from standby conditions on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be 4160 ± 420 volts and 60 ± 0.8 Hz within 11 seconds after the auto-start signal; the steady-state generator voltage and frequency shall be maintained within these limits during this test;

6) 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 from standby conditions 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 ± 0.8 Hz during this test; and

   c) Verifying that all automatic diesel generator trips, except engine overspeed, lube oil pressure low (2 of 3 logic) and generator differential, are automatically bypassed upon loss of voltage on the emergency bus concurrent with a Safety Injection Actuation signal.

7) 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 5485 kW and during the remaining 22 hours of this test, the diesel generator shall be loaded to greater than or equal to 4986 kW. The generator voltage and frequency shall be 4160 ± 420 volts and 60 ± 0.8 Hz within 11 seconds after the start signal; the steady-state generator voltage and frequency shall be maintained within these limits during this test.* Within 5 minutes after completing this 24-hour test, perform Specification 4.8.1.1.2.a.5);**

*Diesel generator loadings may include gradual loading as recommended by the manufacturer.

**If Surveillance Requirement 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 4986 kW for 2 hours or until operating temperature has stabilized.

8) Verifying that the auto-connected loads to each diesel generator do not exceed the 2000-hour rating of 5335 kW;

9) 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.

10) 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;

11) 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;

12) Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block within ± 10% of its design interval; and

13) Verifying that the following diesel generator lockout features prevent diesel generator starting:

a) Engine overspeed,

b) Lube oil pressure low (2 of 3 logic),

c) Generator differential, and

d) Emergency stop.

h. 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 achieve generator voltage and frequency at 4160 ± 420 volts and 60 ± 0.8 Hz in less than or equal to 11 seconds; and

i. 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

BASES

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

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 Part 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.

Action Statement 'b'

Required Action Statement 'b' provides an allowance to avoid unnecessary testing of the other operable diesel generator. If it can be determined that the cause of the inoperable diesel generator does not exist on the OPERABLE diesel generator, Surveillance Requirement 4.8.1.1.2.a.5 does not have to be performed. If the cause of inoperability exists on the other OPERABLE diesel generator, the other OPERABLE diesel generator would be declared inoperable upon discovery and ACTION Statement 'f' would be entered and appropriate actions will be completed per ACTION Statement 'f'. Once the failure is repaired, the common cause failure no longer exists, and the required ACTION 'b' will be satisfied. If the cause of the initial inoperable diesel generator can not be confirmed not to exist on the remaining diesel generator, performance of Surveillance Requirement 4.8.1.1.2.a.5 (within 24 hours of entering ACTION Statement 'b') suffices to provide assurance of continued OPERABILITY of the other diesel generator. In the event the inoperable diesel generator is restored to OPERABLE status prior to determination of the cause of the inoperability of the diesel

generator, NNECO will continue to evaluate the common cause possibility. This continued evaluation, however, is no longer under the 24 hour constraint imposed while in ACTION Statement 'b'.

According to Generic Letter 84-15, 24 hours is reasonable to confirm that the OPERABLE diesel generator is not affected by the same problem as the inoperable diesel generator.

Action Statement 'c'

Required ACTION Statement 'c' provides an allowance to avoid unnecessary testing of the other OPERABLE diesel generator. If it can be determined that the cause of the inoperable diesel generator does not exist on the operable diesel generator, Surveillance Requirement 4.8.1.1.2.a.5 does not have to be performed. If the cause of inoperability exists on the other OPERABLE diesel generator, the other OPERABLE diesel generator would be declared inoperable upon discovery and ACTION Statement 'f' would be entered and appropriate actions will be completed per ACTION Statement 'f'. Once the failure is repaired, the common cause failure no longer exists, and the required ACTION 'c' will be satisfied. If the cause of the initial inoperable diesel generator can not be confirmed not to exist on the remaining diesel generator, performance of Surveillance Requirement 4.8.1.1.2.a.5 (within 8 hours of entering ACTION Statement 'c') suffices to provide assurance of continued OPERABILITY of the other diesel generator.

In the event, the inoperable diesel generator is restored to operable status prior to determination of the cause of the inoperability of the diesel generator, NNECO will continue to evaluate the common cause possibility. This continued evaluation, however, is no longer under eight hours constraint imposed while in ACTION Statement 'c'.

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.

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

Technical Specifications 3.8.1.1.b.1 and 3.8.1.2.b.1 require a minimum volume of 278 gallons be contained in each of the diesel generator day tanks. This capacity ensures that a minimum usable volume of 189 gallons is available to permit operation of each of the diesel generators for approximately 27 minutes with the diesel generators loaded to the 2,000 hour rating of 5335 kW. The shutoff level for the (two) fuel oil transfer pumps is 493 gallons (413 gallons usable volume) which corresponds to approximately 60 minutes of engine operation at the 2,000 hour rating. The first pump has a make-up setpoint of 372 gallons (284 gallons usable volume) which corresponds to approximately 42 minutes of operation at the 2,000 hour rating. The 278 gallon day tank low level value corresponds to the auto make-up setpoint of the second pump and is therefore the lowest value of fuel oil with auto make-up capability. Loss of the two redundant pumps would cause day tank level to drop below the minimum value.

Technical Specifications 3.8.1.1.b.2 and 3.8.1.2.b.2 require a minimum volume of 32,760 gallons be contained in each of the diesel generator's fuel storage systems. This capacity ensures that a minimum usable volume (29,180 gallons) is available to permit operation of each of the diesel generators for approximately three days with the diesel generators loaded to the 2,000 hour rating of 5335 kW. The ability to cross-tie the diesel generator fuel oil supply tanks ensures that one diesel generator may operate up to approximately six days. Additional fuel oil can be supplied to the site within twenty-four hours after contacting a fuel oil supplier.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 112

TO FACILITY OPERATING LICENSE NO. NPF-49

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3

DOCKET NO. 50-423

1.0 INTRODUCTION

By letter dated December 9, 1994, as supplemented by letter dated March 28, 1995, Northeast Nuclear Energy Company (NNECO/the licensee) proposed changes to the Technical Specifications (TS) for Millstone, Unit 3. The March 28, 1995, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination. The proposed changes are the elimination of certain surveillance requirements (SRs) for the emergency diesel generators (EDGs) that have been determined to be unnecessary. These changes are in accordance with the NRC Technical Specification Improvement Program as documented in Generic Letter (GL) 93-05, "Line-Item Technical Specifications Improvements for Testing During Power Operation," September 27, 1993; NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," December 1992; and NUREG-1433, "Improved Standard Technical Specifications," September 1992. This submittal supersedes the licensee's April 1, 1993, request to change the placement of a footnote to the TS regarding the DG prelube system.

The U.S. Nuclear Regulatory Commission (NRC) staff has completed a comprehensive examination of 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. On the basis of the results of the evaluations documented in NUREG-1366, the NRC issued GL 93-05. NNECO proposes to modify Millstone, Unit 3 TS 3/4.8.1 and 4.8.1.1.2 by incorporating recommendations regarding EDG SRs included in GL 93-05 (Section 10-1) except two, which are discussed in the following section.

2.0 EVALUATION

Millstone, Unit 3 TS 3/4.8.1.1.a requires that while in Modes 1 through 4, as a minimum, each unit have two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and

two separate and independent EDGs. The safety function of EDGs is to supply ac electrical power to plant safety systems whenever the preferred ac power supply is unavailable.

As mentioned in the previous section, NNECO is taking exception to two recommendations of GL 93-05. The first pertains to the loading and synchronization of the operable EDG during certain conditions, and the second pertains to the allowed timeframe to determine the operability of one EDG when the opposite train's EDG has been declared inoperable.

GL 93-05 recommends that an operable EDG be started and loaded to demonstrate its operability in accordance with the vendor recommendations during the limiting condition for operation (LCO) when one offsite power source or one EDG is inoperable. To load the operable EDG, the EDG must be synchronized with the grid, which could subject the loaded EDG to grid faults and adversely affect its capability to perform its safety function. Severe weather or other off-normal grid conditions can cause the loss of an EDG, leaving the EDG's safety bus without an ac power source when the other EDG is inoperable. In NRC Information Notice 84-69, "Operation of Emergency Diesel Generators," August 29, 1984, the staff warns that disturbances at the offsite source can adversely affect EDG reliability when the EDG is connected to the offside source. Also, NUREG-1431, "Improved Standard Technical Specifications - Westinghouse Plants," does not require that the EDG be loaded and connected to the offsite grid during the LCO. The staff agrees with NNECO that connecting and loading the operable EDG to the offside source is not necessary during the LCO.

In addition, Millstone, Unit 3 TS 3/4.8.1.1.b requires operability testing of an EDG within 24 hours whenever the alternate EDG is declared inoperable for any cause other than preplanned preventive maintenance and testing. Since many potential failures of EDG subsystems would not be classified as common mode failures yet would cause an EDG to be declared inoperable, this TS requirement can cause unnecessary testing of operable EDGs when the alternate EDG is declared inoperable because of inoperable support equipment or an independent testable component. NUREG-1366 states,

> The NRC staff recommends that the requirements to test the remaining diesel generator(s) when the one diesel generator is inoperable due to any cause other than preplanned preventive maintenance or testing be limited to those situations where the cause of inoperability has not been conclusively demonstrated to preclude the potential for a common mode failure. However, when such test is required, it should be performed within 8 hours of having determined that the diesel generator is inoperable.

However, NUREG-1431 allows 24 hours to determine the cause of the inoperable EDG's failure before requiring testing of the remaining operable EDG. Therefore, NNECO's request that the testing required by the Millstone, Unit 3 TS be completed within 24 hours is appropriate for complying with the intent

of GL 93-05. Since the staff agrees with the position taken in NUREG-1431, NNECO's argument is acceptable.

The staff's evaluation of the specific TS changes proposed by NNECO follows.

Change 1:

Section 3.8.1.1

Action Statement a: NNECO proposes to delete the following sentence: "If either diesel generator has not been successfully tested within the past 24 hours, demonstrate its OPERABILITY by performing Surveillance Requirement 4.8.1.1.2.a.5 separately for each such diesel generator within 24 hours."

Action Statement e: NNECO proposes to delete the following sentences: "...demonstrate the OPERABILITY of the two diesel generators by sequentially performing Surveillance Requirement 4.8.1.1.2.a.5 on both diesel generators within 8 hours, unless the diesel generators are already operating..." and "A successful test(s) of diesel generator OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.5 performed under this Action Statement for the OPERABLE diesel generators satisfies the diesel generator test requirement of Action Statement a."

These proposed changes are in accordance with the recommendations of Section 10-1 of GL 93-05 and are acceptable.

Change 2:

Section 3.8.1.1

Action Statements b and c: NNECO proposes to delete the following clause: "...and if the diesel generator became inoperable due to any cause other than preplanned preventive maintenance or testing..." It also proposes the addition of the following footnote: "The OPERABILITY of the remaining diesel generator need not be verified if the diesel generator became inoperable due to: (1) Preplanned preventive maintenance or testing, (2) An inoperable support system with no potential common mode failure for the remaining diesel generator, or (3) An independently testable component with no potential common mode failure for the remaining diesel generator."

These proposed changes are in accordance with the intent of Section 10-1 of GL 93-05 and are acceptable.

NNECO also proposes to delete the following footnote for Action Statements b and c because it believes it is unnecessary: "This test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABILITY." This footnote requires that if either EDG becomes inoperable the operability of the remaining EDG be tested by starting it within 24 hours for Action Statement b and 8 hours for Action Statement c, regardless of when the inoperable EDG is restored to operability. In GL 93-05, the staff states

that this test will still have to be done if any potential common mode failure can be demonstrated. In a conference call with NNECO on February 15, 1995, the staff wanted to know the reason for the deletion of the footnote. NNECO stated that it believed that the new footnote given above essentially conveyed the same message as the existing footnote. The staff pointed out to NNECO that the new footnote did not address the situation of the inoperable EDG being restored to service in less time than that imposed by Action Statement b or c. The staff also pointed out that it had accepted an owners group proposal in September 1993, to remove the note from the new standard TS (NUREG-1431). The effect of this change is to reduce alternate EDG testing if the inoperable EDG is returned to operable status in less time than that imposed by the action statements. However, the element of common cause failure determination is captured in the Bases. The Bases will state that if the inoperable EDG is restored to operable status before the cause of the inoperability of the EDG is determined, the licensee will continue to evaluate the common cause failure possibilities. This continued evaluation, however, is no longer under the time constraints imposed by the Action Statements. NNECO accepted the staff's suggestion and revised Bases 3/4.8.1 according to NUREG-1431 and submitted it on March 28, 1995.

NNECO also proposes to add the word "offsite" after the phrase "the remaining" and to delete the phrase "a or" from Action Statement c. These changes are editorial and are acceptable.

Change 3:

SR 4.8.1.1.2.a.6) and 4.8.1.1.2.b

NNECO proposes to replace the words "...in less than or equal to 60 seconds..." in SR 4.8.1.1.2.b with the words "...in accordance with the manufacturer's recommendations..." The same words also will be added to SR 4.8.1.1.2.a.6). The words "with a load greater than or equal to 4986 kW" will be inserted in both SRs.

These changes are in accordance with the recommendations of Section 10-1 of GL 93-05 and are acceptable.

Change 4:

SR 4.8.1.1.2.g.7

NNECO proposes to replace the reference to SR 4.8.1.1.2.g.6)b) with a reference to SR 4.8.1.1.2.a.5) in SR 4.8.1.1.2.g.7 and associated footnote. Additionally, the time requirement in the footnote to run the EDG for 1 hour to achieve normal operating temperature will be increased to 2 hours. A footnote is to be added to indicate that EDG loading for the 24-hour test may include gradual loading as recommended by the manufacturer.

These changes are in accordance with the recommendations of Section 10-1 of GL 93-05 and are acceptable.

Change 5:

NNECO plans to change the placement of a footnote regarding the EDG prelube system from TS 4.8.1.1.2(a) and 4.8.1.1.2(b) to the main heading 4.8.1.1.2. The proposed change will result in the prelube system being operable for all surveillance tests required by TS 4.8.1.1.2. The existing footnote, "Testing shall be conducted in accordance with the manufacturer's recommendations regarding engine prelube and warmup procedures, and as applicable regarding loading requirements" is to be replaced by, "All planned starts for the purpose of these surveillances may be preceded by an engine prelube period."

These changes are consistent with NUREG-1431 and are acceptable.

Change 6:

NNECO proposes to replace the term "ambient condition" with the term "standby conditions" in SR 4.8.1.1.2.a.5). The term "standby conditions" will be inserted in SRs 4.8.1.1.2.g.4.b), 4.8.1.1.2.g.5), and 4.8.1.1.2.g.6)b) The term "standby conditions" more accurately describes the condition in which the EDGs are maintained, accounts for the continual operation of the jacket water and lube oil warming systems, and is used in NUREG-1431. The proposed changes are acceptable.

Change 7:

NNECO proposes to delete the reference to speed (508 rpm) for the EDGs from SRs 4.8.1.1.2.a.5), 4.8.1.1.2.b, and 4.8.1.1.2.h. These SRs specify, among other requirements, that after a start signal, the EDGs gradually accelerate to at least 508 rpm with generator voltage and frequency at 4160 +/- 420 volts and 60 +/- 0.8 Hz. The most significant parameters regarding these SRs are frequency, voltage, and time following the start signal; that is, the EDGs should be able to accept loads in proper sequence and continue to carry safety-related electrical loads within the required time after the start signal. NUREG-1431 deleted engine speed requirements. Therefore, the proposed change is acceptable.

Change 8:

NNECO proposes to add paragraphs to the Bases section 3.4.8 consistant with the revised Section 3.8.1.1.

The proposed changes were discussed in Change 2 and because the Bases changes are consistent with the revised TS, the Bases changes are acceptable to the staff.

3.0 SUMMARY

The proposed changes will modify the requirement for operability testing of an EDG when the alternate EDG is inoperable, delete the requirement for operability testing of the EDGs when one or both offsite ac sources are

inoperable, eliminate fast loading of EDGs except for the 18-month test, and modify the hot restart test from the 24-hour loaded test run for the EDG. The staff examined and accepted this reduction in operability testing and modified surveillance requirements for the EDGs at power in GL 93-05, Section 10-1. It 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. The licensee also proposes changes that are consistent with the improved Standard Technical Specifications (NUREG-1431), such as replacing current footnotes to SR 4.8.1.1.2 with a footnote that states, "All planned starts for the purpose of these surveillances may be preceded by an engine prelube period"; replacing the term "ambient condition" with "standby condition"; and eliminating the reference to EDG speed in various surveillance test acceptance criteria. These changes are acceptable.

4.0 STATE CONSULTATION

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

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves 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 amendment involves no significant hazards consideration, and there has been no public comment on such finding (60 FR 8749). Accordingly, the amendment meets 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 amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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