

Mr. Martin L. Bowling, Jr.  
 Recovery Officer - Technical Services  
 Northeast Nuclear Energy Company  
 c/o Ms. Patricia A. Loftus  
 Director - Regulatory Affairs  
 P. O. Box 128  
 Waterford, CT 06385

March 12, 1999

SUBJECT: ISSUANCE OF AMENDMENT - MILLSTONE NUCLEAR POWER STATION,  
 UNIT NO. 2 (TAC NO. MA2311)

Dear Mr. Bowling:

The Commission has issued the enclosed Amendment No. 231 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2, in response to your application dated July 17, 1998, as supplemented by letters dated November 10, 1998, and February 11, 1999. Your letter of November 10, 1998, withdrew a portion of the original request, concerning the change to TS 3.8.1.1., SR 4.8.1.1.2.c. A Notice of Partial Withdrawal will be published shortly.

The amendment revises certain diesel generator (DG) action statements and surveillance requirements to improve overall DG reliability and availability.

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,

/s/

Stephen Dembek, Project Manager  
 Project Directorate I-2  
 Division of Licensing Project Management  
 Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures: 1. Amendment No. 231 to DPR-65  
 2. Safety Evaluation

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

March 12, 1999

Mr. Martin L. Bowling, Jr.  
Recovery Officer - Technical Services  
Northeast Nuclear Energy Company  
c/o Ms. Patricia A. Loftus  
Director - Regulatory Affairs  
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Sincerely,

A handwritten signature in black ink, appearing to read "Stephen Dembek".

Stephen Dembek, Project Manager  
Project Directorate I-2  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-336

Enclosures: 1. Amendment No. 231 to DPR-65  
2. Safety Evaluation

cc w/encls: See next page

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Unit 2

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Millstone Nuclear Power Station  
Unit 2

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

NORTHEAST NUCLEAR ENERGY COMPANY  
THE CONNECTICUT LIGHT AND POWER COMPANY  
THE WESTERN MASSACHUSETTS ELECTRIC COMPANY

DOCKET NO. 50-336

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 231  
License No. DPR-65

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 July 17, 1998, as supplemented by letters dated November 10, 1998, and February 11, 1999, 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.

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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-65 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 231, 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, to be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Elinor G. Adensam, Director  
Project Directorate I-2  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 12, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 231

FACILITY OPERATING LICENSE NO. DPR-65

DOCKET NO. 50-336

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

3/4 8-1  
3/4 8-2  
3/4 8-2a  
3/4 8-3  
3/4 8-4  
3/4 8-5  
B 3/4 8-1  
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Insert

3/4 8-1  
3/4 8-2  
3/4 8-2a  
3/4 8-3  
3/4 8-4  
3/4 8-5  
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 a separate fuel oil supply tank containing a minimum of 12,000 gallons of fuel.

APPLICABILITY: MODES 1, 2, 3 and 4.

##### ACTION:

Inoperable Equipment	Required Action
a. One offsite circuit	a.1 Perform Surveillance Requirement 4.8.1.1.1 for remaining offsite circuit within 1 hour and at least once per 8 hours thereafter.  AND  a.2 Restore the inoperable offsite circuit to OPERABLE status within 72 hours or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
b. One diesel generator	b.1 Perform Surveillance Requirement 4.8.1.1.1 for the offsite circuits within 1 hour and at least once per 8 hours thereafter.  AND  b.2 Demonstrate OPERABLE diesel generator is not inoperable due to common cause failure within 24 hours or perform Surveillance Requirement 4.8.1.1.2.a.2 for the OPERABLE diesel generator within 24 hours.  AND  b.3 Restore the inoperable diesel generator to OPERABLE status within 72 hours or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

ELECTRICAL POWER SYSTEMS

ACTION (Continued)

Inoperable Equipment	Required Action
<p>c. One offsite circuit</p> <p>AND</p> <p>One diesel generator</p>	<p>c.1 Perform Surveillance Requirement 4.8.1.1.1 for remaining offsite circuit within 1 hour and at least once per 8 hours thereafter.</p> <p>AND</p> <p>c.2 Demonstrate OPERABLE diesel generator is not inoperable due to common cause failure within 8 hours or perform Surveillance Requirement 4.8.1.1.2.a.2 for the OPERABLE diesel generator within 8 hours.</p> <p>AND</p> <p>c.3 Restore one inoperable A.C. source to OPERABLE status within 12 hours or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.</p> <p>AND</p> <p>C.4 Restore remaining inoperable A.C. source to OPERABLE status following the time requirements of Action Statements a or b above based on the initial loss of the remaining inoperable A.C. source.</p>
<p>d. Two offsite circuits</p>	<p>d.1 Restore one of the inoperable offsite sources to OPERABLE status within 24 hours or be in HOT STANDBY within the next 6 hours.</p> <p>AND</p> <p>d.2 Following restoration of one offsite source restore remaining inoperable offsite source to OPERABLE status following the time requirements of Action Statement a above based on the initial loss of the remaining inoperable offsite source.</p>

**ACTION (Continued)**

Inoperable Equipment	Required Action
<p>e. Two diesel generators</p>	<p>e.1 Perform Surveillance Requirement 4.8.1.1.1 for the offsite circuits within 1 hour and at least once per 8 hours thereafter.</p> <p>AND</p> <p>e.2 Restore one of the inoperable diesel generators to OPERABLE status within 2 hours or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.</p> <p>AND</p> <p>e.3 Following restoration of one diesel generator restore remaining inoperable diesel generator to OPERABLE status following the time requirements of Action Statement b above based on the initial loss of the remaining inoperable diesel generator.</p>

**SURVEILLANCE REQUIREMENTS**

4.8.1.1.1 Verify correct breaker alignment and indicated power available for each required offsite circuit at least once per 24 hours.

4.8.1.1.2 Each required diesel generator shall be demonstrated OPERABLE:\*

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

1. Verifying the fuel level in the fuel oil supply tank,
2. Verifying the diesel starts from standby conditions and accelerates to  $\geq 90\%$  of rated speed and to  $\geq 97\%$  of rated voltage.\*\* A modified start involving idling and gradual acceleration to synchronous speed may be used as recommended by the manufacturer. If a modified start, as just defined, is not used, the requirements of Surveillance Requirement 4.8.1.1.2.d.1 apply for this test.
3. Verifying the generator is synchronized and loaded in accordance with the manufacturer's recommendations to  $\geq 1300$  kW and operates with a load  $\geq 1300$  kW for  $\geq 60$  minutes.\*\*

\*All diesel starts may be preceded by an engine prelube period.

\*\*Performance of Surveillance Requirement 4.8.1.1.2.d satisfies this Surveillance Requirement.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 92 days by verifying that a sample of diesel fuel from each of the three fuel oil storage tanks, obtained in accordance with ASTM D4057, is within the acceptable limits specified in Table 1 of ASTM D975 when checked for viscosity, water and sediment.
- c. 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 that the automatic time delay sequencer is OPERABLE with the following settings:

<u>Sequence Step</u>	<u>Time After Closing of Diesel Generator Output Breaker (Seconds)</u>	
	<u>Minimum</u>	<u>Maximum</u>
1 (T <sub>1</sub> )	1.5	2.2
2 (T <sub>2</sub> )	T <sub>1</sub> + 5.5	8.4
3 (T <sub>3</sub> )	T <sub>2</sub> + 5.5	14.6
4 (T <sub>4</sub> )	T <sub>3</sub> + 5.5	20.8

3. Verifying the generator capability to reject a load of  $\geq 250$  kw and maintain voltage at  $4160 \pm 500$  volts and frequency at  $60 \pm 3$  Hz.
4. Verifying the generator capability to reject a load of 1300 Kw without exceeding the overspeed trip setpoint.
5. Simulating a loss of offsite power in conjunction with a safety injection actuation 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 autostart signal, energizes the emergency busses with permanently connected loads, energizes the auto-connected emergency loads through the load sequencer and operates for  $\geq 5$  minutes while its generator is loaded with the emergency loads.

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENT (Continued)

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- c) Verifying that on the safety injection actuation signal, all diesel generator trips, except engine overspeed, generator differential current, voltage restraint overcurrent, and low lube oil pressure (2 out of 3) are automatically bypassed.
  
- 6. Verifying the diesel generator operates for  $\geq 60$  minutes while loaded to  $\geq 2750$  kw.
- 7. Verifying that the auto-connect loads to each diesel generator do not exceed the 2000 hour rating of 3000 kw.
- 8. Verifying that on an actual or simulated Safety Injection Actuation Signal (SIAS) without a loss of offsite power:
  - a. The diesel generator starts from standby conditions on the auto-start signal and operates on Standby for greater than 5 minutes;
  - b. The generator frequency and voltage shall reach 58.8 to 61.2 Hertz, and 3740 to 4580 VAC, and be maintained during this test;
  - c. The diesel start time (time to reach 90% of rated speed and 97% of rated voltage) shall be less than or equal to 15 seconds.
  
- d. At least once per 184 days by:
  - 1. Verifying the diesel starts from standby conditions and accelerates to  $\geq 90\%$  of rated speed and to  $\geq 97\%$  of rated voltage within 15 seconds after the start signal.
  - 2. Verifying the generator is synchronized and loaded in accordance with the manufacturer's recommendations to  $\geq 1300$  kW and operates with a load  $\geq 1300$  kW for  $\geq 60$  minutes.

## ELECTRICAL POWER SYSTEMS

### SHUTDOWN

#### LIMITING CONDITION FOR OPERATION

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

- a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and
- b. One diesel generator with a fuel oil supply tank containing a minimum of 12,000 gallons of fuel.

APPLICABILITY: MODES 5 and 6.

#### ACTION:

With less than the above minimum required A.C. electrical power sources OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes or movement of irradiated fuel assemblies.

#### SURVEILLANCE REQUIREMENTS

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4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE per Surveillance Requirements 4.8.1.1.1 and 4.8.1.1.2, except for testing pursuant to Surveillance Requirements 4.8.1.1.2.a.3, 4.8.1.1.2.c.2, 4.8.1.1.2.c.5, and 4.8.1.1.2.d.2.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### BASES

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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 Criteria 17 of Appendix "A" to 10 CFR 50.

The required circuits between the offsite transmission network and the onsite Class 1E distribution system (Station Busses 24C, 24D, and 24E) that satisfy Technical Specification 3.8.1.1.a (MODES 1, 2, 3, and 4) consist of the following:

1. At least two of the four 345 kV transmission lines (310 Line, 348 Line, 371 Line, and 383 Line) that tie the switchyard to the grid are in service with their switchyard breakers closed.

AND

2. The following circuits from the switchyard to the onsite electrical distribution system:
  - a. Station safeguards busses 24C and 24D via the Unit 2 Reserve Station Service Transformer and bus 24G; and
  - b. Station bus 24E via the Unit 1 Reserve Station Service Transformer or Unit 1 Normal Station Service Transformer (backfeeding) and bus 14H.

The required circuit between the offsite transmission network and the onsite Class 1E distribution system (Station Busses 24C, 24D, and 24E) that satisfies Technical Specification 3.8.1.2.a (MODES 5 and 6) consists of the following:

1. At least one of the four 345 kV transmission lines (310 Line, 348 Line, 371 Line, and 383 Line) that tie the switchyard to the grid are in service with their switchyard breakers closed.

AND

2. The following circuit from the switchyard to the onsite electrical distribution system:
  - a. Station safeguards bus 24C or 24D via the Unit 2 Reserve Station Service Transformer and bus 24G; or
  - b. Station bus 24E via the Unit 1 Reserve Station Service Transformer or Unit 1 Normal Station Service Transformer (backfeeding) and bus 14H.

## 3/4.8 ELECTRICAL POWER SYSTEMS

### BASES

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When the plant is operating with the main generator connected to the grid, the output of the main generator will normally be used to supply the onsite Class 1E distribution system. During this time the required offsite circuits will be in standby, ready to supply power to the onsite Class 1E distribution system if the main generator is not available. When shut down, only one of the offsite circuits will normally be used to supply the onsite Class 1E distribution system. The other offsite circuit, if required, will be in standby. Verification of the required offsite circuits consists of checking control power to the breakers (breaker indicating lights), proper breaker position for the current plant configuration, and voltage indication as appropriate for the current plant configuration.

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 accident analyses and are based upon maintaining at least one of each of the 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.

Technical Specification 3.8.1.1 Action Statements b and c provide 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.2 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, Action Statement e would be entered, and appropriate actions will be taken. Once the failure is corrected, the common cause failure no longer exists, and the required Action Statements (b, c, and e) will be satisfied.

If it cannot be determined that the cause of the inoperable diesel generator does not exist on the remaining diesel generator, performance of Surveillance Requirement 4.8.1.1.2.a.2, within the allowed time period, suffices to provide assurance of continued OPERABILITY of the diesel generator. If the inoperable diesel generator is restored to OPERABLE status prior to the determination of the impact on the other diesel generator, evaluation will continue of the possible common cause failure. This continued evaluation is no longer under the time constraint imposed while in Action Statement b or c.

The determination of the existence of a common cause failure that would affect the remaining diesel generator will require an evaluation of the current failure and the applicability to the remaining diesel generator. Examples that would not be a common cause failure include, but are not limited to:

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

BASES

3. An independently testable component with no potential common mode failure for the remaining diesel generator.

During performance of Surveillance Requirements 4.8.1.1.2.a.2 and 4.8.1.1.2.d.2, the diesel generators shall be started by using one of the following signals:

1. Manual;
2. Simulated loss of offsite power in conjunction with a safety injection actuation signal;
3. Simulated safety injection actuation signal alone; or
4. Simulated loss of power alone.

The diesel generator surveillance requirements specify that the diesel generators are started from a standby condition. Standby conditions for a diesel generator means the diesel engine coolant and oil are being circulated and temperature is being maintained consistent with manufacturer recommendations.

Surveillance Requirement (SR) 4.8.1.1.2.d.1 verifies that the diesel generators will reach  $\geq 90\%$  of rated speed and  $\geq 97\%$  of rated voltage within 15 seconds after a start signal is generated. Diesel generator voltage and speed will continue to increase to rated values, and then should stabilize. The time for voltage and speed (frequency) to stabilize is periodically monitored and the trend evaluated to identify degradation of governor or voltage regulator performance when testing in accordance with the requirements of SR 4.8.1.1.2.d.1.

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 facility status.

The non-safety grade 125V D.C. Turbine Battery is required for accident mitigation for a main steam line break within containment with a coincident loss of a vital D.C. bus. The Turbine Battery provides the alternate source of power for Inverters 1 & 2 respectively via non-safety grade Inverters 5 & 6. For the loss of a D.C. event with a coincident steam line break within containment, the feedwater regulating valves are required to close to ensure containment design pressure is not exceeded.

The feedwater regulating valves require power to close. On loss of a vital D.C. bus, the alternate source of power to the vital A.C. bus via the Turbine Battery ensures power is available to the affected feedwater regulating valve such that the valve will isolate feed flow into the faulted generator. The Turbine Battery is considered inoperable when bus



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 231

TO FACILITY OPERATING LICENSE NO. DPR-65

NORTHEAST NUCLEAR ENERGY COMPANY

THE CONNECTICUT LIGHT AND POWER COMPANY

THE WESTERN MASSACHUSETTS ELECTRIC COMPANY

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

DOCKET NO. 50-336

1.0 INTRODUCTION

By letter dated July 17, 1998, as supplemented by letters dated November 10, 1998, and February 11, 1999, the Northeast Nuclear Energy Company, et al. (NNECO, or the licensee), submitted a request for changes to the Millstone Nuclear Power Station, Unit 2, Technical Specifications (TS) regarding certain diesel generator (DG) action statements and surveillance requirements (SRs). The supplemental letters provided additional information that did not change the staff's original no significant hazards consideration determination.

2.0 BACKGROUND

The licensee's requested changes would incorporate recommendations contained in Generic Letters (GLs) 84-15, "Proposed Staff Actions To Improve and Maintain Diesel Generator Reliability," dated July 2, 1984; 91-04, "Changes in Technical Specifications Improvements To Reduce Surveillance Intervals To Accommodate a 24-Month Fuel Cycle," dated April 2, 1991; 93-05, "Line-Item Technical Specifications Improvements for Testing During Power Operation," dated September 27, 1993; and NUREG -1432, "Standard Technical Specifications, Combustion Engineering Plants," Revision 1, dated April 1, 1995. Specifically, the proposed changes would amend TS 3.8.1.1, "Electrical Power Systems - A.C. Sources - Operating," and 3.8.1.2, "Electrical Power System - Shutdown." Information will be added to the Bases of the TS to address the proposed changes. The proposed changes will revise the DG TS SRs to achieve overall improvement in DG reliability and availability.

Millstone Unit 2 TS requires that while in Modes 1 through 4, as a minimum, the unit will have two physically independent circuits between the offsite transmission network and the onsite

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Class 1E distribution system, and two separate and independent DGs. The safety function of DGs is to supply ac electrical power to plant safety systems whenever the preferred ac power supply is unavailable.

The staff has reviewed and evaluated the changes to the TS proposed by the licensee in the following section.

### 3.0 EVALUATION

#### 3.1 Change 1

##### TS Section 3.8.1.1 Limiting Condition for Operation (LCO) "a"

The word "switchyard" will be replaced by "onsite Class 1E distribution system." This change is consistent with NUREG-0212, "Standard Technical Specification for Combustion Engineering Pressurized-Water Reactors," Revision 2, Fall 1980, and therefore, is acceptable to the staff.

#### 3.2 Change 2

##### TS Section 3.8.1.1 Action Statement "a"- One offsite circuit inoperable

TS 3.8.1.1.a currently requires that if one offsite circuit breaker is inoperable, that the licensee demonstrate the operability of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1. It also requires that if either DG has not been successfully tested within the past 24 hours, the licensee must demonstrate its operability by performing Surveillance Requirement 4.8.1.1.2.a.2. In its submittal, the licensee proposed changes to these requirements. Specifically, 3.8.1.1, action statement a, would (1) state that if one offsite circuit is inoperable, perform Surveillance Requirement 4.8.1.1.1 for the remaining offsite circuit and (2) delete the statement regarding the DG. These changes will eliminate an unnecessary start of the DG, are consistent with GL 93-05 and NUREG-1432 and are therefore, acceptable to the staff.

The requirement contained in the second footnote (\*\*) to allow a one-time extension of the allowed outage time to 7 days will be deleted. This provision is no longer necessary since the Millstone Unit 1 work has been completed. The Bases explanation of this provision (\*) will also be deleted.

Since this change was due to an expired one-time extension, the staff accepts this change.

#### 3.3 Change 3

##### Section 3.8.1.1 Action Statement "b"- One diesel generator inoperable

The requirement to test the remaining operable DG will be modified. Testing will not be required unless a common-cause failure is the reason for declaring the DG inoperable. Guidance concerning common-cause failures will be added to the Bases for the specification instead of defining it in the action statement. This approach is consistent with GL 93-05 and NUREG-1432 and is therefore, acceptable to the staff.

The time requirement for determining whether a common-cause failure exists on the other DG will remain at 24 hours. Even though this time requirement is not consistent with GL 93-05, it is consistent with NUREG-1432.

The requirement contained in the first footnote (\*) to complete testing of the remaining DG will be based on the determination of a common-cause failure. This change will eliminate a potential unnecessary start of a DG. The removal of this requirement is consistent with GL 93-05 and NUREG-1432 and is therefore, acceptable to the staff.

#### 3.4 Change 4

##### TS 3.8.1.1 Action Statement "C"- One offsite circuit and one diesel generator inoperable

The wording will be changed from "remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1" to "Perform Surveillance Requirement 4.8.1.1.1 for remaining offsite circuit." This wording change is editorial in nature, and is therefore, acceptable.

The requirement to test the remaining operable DG will be modified. This proposed change is consistent with the proposed changes to Action Statement b as previously discussed in Change 3.

As discussed in Change 3, the requirement contained in the first footnote (\*) to complete the test of the remaining DG will be deleted for the same reason.

The statement that a successful test of the DG for this action statement will satisfy the required test of Action Statement a or b is no longer necessary as a result of the proposed changes previously discussed. Therefore, this sentence will be deleted.

These changes are acceptable to the staff.

#### 3.5 Change 5

##### TS 3.8.1.1 Action Statement "d"- Two offsite circuits inoperable

The requirement to test the DGs for inoperable offsite circuits will be deleted to eliminate an unnecessary start of the DGs. This practice is consistent with GL 93-05 and NUREG-1432.

The statement that successful tests of the DGs for this action statement will satisfy the required test of Action Statement a or b is no longer necessary with the proposed changes previously discussed. Therefore, this sentence will be deleted.

These changes are acceptable to the staff.

### 3.6 Change 6

#### TS 3.8.1.1 Action Statement "e" - Two diesel generators inoperable

The statement that a successful test of the diesel generator for this action statement will satisfy the required test of Action Statement b is no longer necessary with the proposed changes discussed previously. Therefore, this sentence will be deleted. This change is acceptable to the staff.

### 3.7 Change 7

#### TS 3.8.1.1, SR 4.8.1.1.1

The words "Two physically independent circuits between the offsite transmission network and the switchyard" will be replaced by "Each required offsite circuit." The details concerning the offsite circuits, which are proposed to be eliminated, are still contained in the LCO. The Bases will also be expanded to discuss offsite circuits. Therefore, this wording change does not affect any technical aspect of this SR and is consistent with NUREG-1432. This change is acceptable to the staff.

### 3.8 Change 8

#### TS 3.8.1.1, SR 4.8.1.1.2

The wording of the SR will be changed from "Each diesel generator" to "Each required diesel generator." This is an editorial change.

A footnote (\*) will be added to apply to all DG surveillance starts. The footnote will allow an engine prelube before starting, which in turn will reduce unnecessary engine wear. This practice is consistent with GL 84-15 and NUREG- 1432.

Both changes are acceptable to the staff.

### 3.9 Change 9

#### TS 3.8.1.1, SR 4.8.1.1.2.a.2

Millstone Unit 2 does not specify acceptance criteria for frequency or upper limit for voltage in the 31-day test as required by the standard technical specification. Instead, the existing TS calls for a DG test to verify that the DG starts at  $\geq 97$  percent voltage and  $\geq 90$  percent rated speed within 15 seconds. Millstone Unit 2 is not committed to Regulatory Guide (RG) 1.9, Revision 3. The licensee is committed to address the differences of the TS during the conversion to NUREG-1432, since NUREG-1432 is based on RG 1.9 Rev. 3.

The words "Verifying the diesel starts from ambient conditions" are replaced with the words "Verifying the diesel starts from standby conditions." The Bases will be expanded to include the definition of "standby condition." This is consistent with NUREG-1432.

The 31-day testing requirement for the DGs to start and obtain speed and voltage will be retained. The addition of the sentence "A modified start involving idling and gradual acceleration to synchronous speed may be used as recommended by the manufacturer," will allow the use of a modified start. In a conference call with the licensee, the staff noted that NUREG-1432 includes specific requirements for when the modified start procedure is not used. Based on this discussion with the staff, in its February 11, 1999, supplemental submittal the licensee agreed to add the following sentence "If a modified start, as just defined, is not used, the requirements of Surveillance Requirement 4.8.1.1.2.d.1 apply for the test." This is consistent with NUREG-1432.

A footnote (\*\*\*) will be added to state that this SR can be satisfied by performance of SR 4.8.1.1.2.d. SR 4.8.1.1.2.d, which is proposed to be added for at least once per 184 days, is a more restrictive test of the DGs. Therefore, successful performance will meet the requirements of this SR. This is consistent with NUREG-1432. The list of acceptable methods to start the DGs for this SR will be added to the Bases of this specification.

These changes are acceptable to the staff.

### 3.10 Change 10

#### TS 3.8.1.1, SR 4.8.1.1.2.a.3

The requirement to load the DG within 60 seconds will be deleted. Instead, a statement will be added: "loaded in accordance with manufacturer's recommendations." This statement will allow gradual loading, on the basis of the manufacturer's recommendations. This change is consistent with GL 84-15, GL 93-05 and NUREG-1432.

A footnote (\*\*\*) will be added stating that this SR can be satisfied by performance of SR 4.8.1.1.2.d, which is proposed to be added, a more restrictive test of the DG. Therefore, successful performance will meet the requirement of this SR. This practice is consistent with NUREG-1432.

These changes are acceptable to the staff.

### 3.11 Change 11

#### TS 3.8.1.1, SR 4.8.1.1.2.b

The standard referenced for diesel fuel oil sampling will be changed from American Society for Testing and Materials (ASTM) 270-65 to ASTM D4057. ASTM D270 was replaced by ASTM D4057 (manual sampling) and ASTM D4177 (automatic sampling). Millstone Unit 2 only performs manual sampling. The standard referenced for the acceptable limits of the sample, ASTM D975-78, will be modified by deleting - "78", which refers to either the year of adoption or the year of revision. Deleting the reference to the year will allow the latest revised standard to be used without requiring a TS change. This change will not affect the sampling frequency or the acceptance limits of this SR and is, therefore, acceptable to the staff.

### 3.12 Change 12

#### TS 3.8.1.1, SR 4.8.1.1.2.c

In its first submittal of July 17, 1998, the licensee proposed to delete the words "during shutdown" from the first sentence: "At least once per 18 months during shutdown." The licensee claimed the change was consistent with GL 93-04, which concluded that TSs need not restrict surveillance as only being performed during shutdown. However, GL 93-04 also added that "safety dictates that when refueling interval surveillances are performed during power operation, licensees give proper regard for their effect on the safe operation of the plant. If the performance of a refueling interval surveillance during plant operation would adversely affect safety, the licensee should postpone the surveillance until the unit is shut down for refueling or is in a condition or a mode that is consistent with safe conduct of the surveillance." Additionally, NUREG-1432 specifically mentions not to perform any of the 18-month surveillances in Mode 1 and 2, and some of the surveillances at any Modes 1 through 4. Because of the contradictory statements in two different regulatory documents, the staff has taken a consistent position that if any licensee wants to perform this 18-month surveillance during any other modes other than shutdown, a justification is needed to describe all compensatory measures to be taken and how these measures ensure plant safety for each of these surveillance. In a telephone conference call with the licensee on November 4, 1998, the staff conveyed its position regarding 18-month surveillance to be performed in any other mode than shutdown. In a letter dated November 10, 1998, the licensee, after re-evaluating the need for this change, withdrew this proposed change.

### 3.13 Change 13

#### TS 3.8.1.1, SR 4.8.1.1.2.c.5.b

The wording of this SR will be changed from "verifying the diesel start from ambient conditions" to "verifying the diesel starts from standby conditions."

This change is consistent with NUREG-1432 and is therefore, acceptable to the staff.

### 3.14 Change 14

#### TS 3.8.1.1, SR 4.8.1.1.2.c.8.a

The wording of this SR will be modified by adding "from standby conditions" after "the diesel generator starts." This change is consistent with NUREG-1432 and is therefore, acceptable to the staff.

### 3.15 Change 15

#### TS 3.8.1.1 SR 4.8.1.1.2.d

This SR will be added to test the DGs every 184 days at conditions similar to the current 31-day SR which is discussed in Change 9.

As is discussed in Change 9, Millstone Unit 2 does not specify acceptance criteria for frequency or upper limit for voltage in the 184-day test as required by the standard technical specification. Instead, the existing TS calls for DG test to verify it starts at  $\geq 97$  percent voltage and  $\geq 90$  percent rated speed within 15 seconds. In a conference call with the licensee, the staff expressed concern that if the time for voltage and speed to stabilize was not monitored and trended then any degradation of governor or voltage regulator performance would not be known. As a result of this discussion, in its February 11, 1999, supplemental response the licensee agreed to add a paragraph to the Bases section stating that the time for voltage and speed to stabilize would be monitored and trended.

The words "Verifying the diesel starts from ambient conditions" are replaced with the words "Verifying the diesel starts from standby conditions." The Bases will be expanded to include the definition of "standby condition." This is consistent with NUREG-1432.

The list of acceptable methods of starting the DGs for this SR will be added to the Bases for this TS.

This SR will require the DGs to start and obtain speed and voltage within 15 seconds. It will also require the DGs to be synchronized, loaded, and maintain the load for at least 60 minutes. However, it will allow a gradual loading, based on manufacturer's recommendations, to be used. This is consistent with GL 84-15, GL 93-05, and NUREG-1432.

The addition of this SR is acceptable to the staff.

### 3.16 Change 16

#### TS 3.8.1.2 (SHUTDOWN) LCO a

The word "switchyard" will be changed to "onsite Class 1E distribution system." This is the same change proposed for TS 3.8.1.1 (OPERATING) LCO a, as previously discussed in Change 1. This change is consistent with NUREG-0212 and is therefore, acceptable to the staff.

### 3.17 Change 17

#### TS 3.8.1.2, SR 4.8.1.2

The SR will be changed by adding SR 4.8.1.1.2.d.2 to the list of SRs that do not have to be performed for the operable DG in Modes 5 and 6. This measure is consistent with NUREG-1432 and is therefore, acceptable to the staff.

### 3.18 Change 18

#### TS 3.8.1.1 and 3.8.1.2 Bases

The Bases of these TS will be changed and expanded to discuss proposed changes and to provide guidance to ensure that the requirements are correctly applied. The changes are acceptable to the staff.

### 3.19 Evaluation Summary

The proposed changes will revise the DG TS SRs to achieve an overall improvement in DG reliability and availability. The proposed changes will modify the requirement for the DG operability testing when the other DG is inoperable, delete the requirement for DG operability testing when one or both offsite sources are inoperable, eliminate the fast loading of the DGs except for the 18-month test and eliminate fast starts (15 seconds) except for once every 6 months and during 18-month tests. The changes are consistent with GL 84-15, GL 93-05, NUREG-0212, and NUREG-1432. Since the proposed changes do not involve any modification to the physical plant and do not involve a significant increase in the probability or consequences of an accident previously evaluated or created the possibility of a new or different kind of accident from any previously evaluated, the staff concludes that the proposed TS changes are consistent with other provisions of the existing TS and their technical bases.

### 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 requirements 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 (63 FR 43207, August 12, 1998). 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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