

Dominion Nuclear Connecticut, Inc.
Millstone Power Station
Rope Ferry Road
Waterford, CT 06385



DominionSM

APR 23 2001

Docket No. 50-336
B18391

RE: 10 CFR 50.90

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Millstone Nuclear Power Station, Unit No. 2
Technical Specifications Change Request 2-5-01
Emergency Diesel Generator Surveillance Requirement

Introduction

Pursuant to 10 CFR 50.90, Dominion Nuclear Connecticut, Inc. (DNC) hereby proposes to amend Operating License DPR-65, by incorporating the attached proposed changes into the Millstone Unit No. 2 Technical Specifications. DNC is proposing to change Technical Specifications 3.8.1.1, "Electrical Power Systems - A.C. Sources - Operating."

Attachment 1 provides a discussion of the proposed change and the Safety Summary. Attachment 2 provides the Significant Hazards Consideration. Attachment 3 provides the marked-up version of the appropriate page of the current Technical Specifications. Attachment 4 provides the retyped page of the Technical Specifications.

Environmental Considerations

DNC has reviewed the proposed license amendment request against the criteria of 10 CFR 51.22 for environmental considerations. The Technical Specification change is associated with a surveillance requirement for the Emergency Diesel Generators (EDGs). The proposed change will remove the surveillance requirement to perform EDG inspections from the Technical Specifications; however, EDG inspections will still be performed as a maintenance activity, as recommended by the manufacturer.

This change will not result in an increase in the type and amounts of effluents that may be released off site. In addition, this amendment request will not increase individual or cumulative occupational radiation exposures. Therefore, DNC has determined the proposed change will not have an effect on the quality of the human environment.

ADD1

Conclusions

The proposed change to the Millstone Unit No. 2 Technical Specifications does not involve an impact on public health and safety (see the Safety Summary provided in Attachment 1) and does not involve a Significant Hazards Consideration pursuant to the provisions of 10 CFR 50.92 (see the Significant Hazards Consideration provided in Attachment 2). Therefore, DNC requests that the NRC review and approve the proposed change to the Millstone Unit No. 2 Technical Specifications through an amendment to Operating License DPR-65, pursuant to 10 CFR 50.90.

Site Operations Review Committee and Nuclear Safety Assessment Board

The Site Operations Review Committee and Nuclear Safety Assessment Board have reviewed and concurred with the determinations.

Schedule

We request issuance of this amendment for Millstone Unit No. 2 prior to December 1, 2001, with the amendment to be implemented within 60 days of issuance. This will allow Millstone Unit No. 2 to use the proposed changes during the next refueling outage currently scheduled in early February 2002.

State Notification

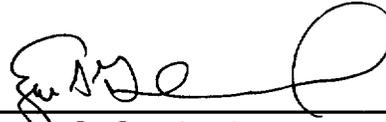
In accordance with 10 CFR 50.91(b), a copy of this License Amendment Request is being provided to the State of Connecticut.

There are no regulatory commitments contained within this letter.

If you should have any questions on the above, please contact Mr. Ravi Joshi at (860) 440-2080.

Very truly yours,

DOMINION NUCLEAR CONNECTICUT, INC.



Eugene S. Grecheck
Vice President - Nuclear Operations/Millstone

Subscribed and sworn to before me

this 23 day of April, 2001

Donna Lynne Williams
Notary Public

Date Commission Expires: Nov 30, 2001

Attachments (4)

cc: H. J. Miller, Region I Administrator
D. S. Collins, NRC Project Manager, Millstone Unit No. 2
S. R. Jones, Senior Resident Inspector, Millstone Unit No. 2

Director
Bureau of Air Management
Monitoring and Radiation Division
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Attachment 1

Millstone Nuclear Power Station, Unit No. 2

Technical Specifications Change Request 2-5-01
Emergency Diesel Generator Surveillance Requirement
Discussion of Proposed Change and Safety Summary

**Technical Specifications Change Request 2-5-01
Emergency Diesel Generator Surveillance Requirement
Discussion of Proposed Change and Safety Summary**

Pursuant to 10 CFR 50.90, Dominion Nuclear Connecticut, Inc. (DNC) hereby proposes to amend Operating License DPR-65, by incorporating the attached proposed change into the Millstone Unit No. 2 Technical Specifications. DNC is proposing to change Technical Specifications 3.8.1.1, "Electrical Power Systems - A.C. Sources - Operating."

DNC has reviewed the surveillance requirements (SRs) for the Emergency Diesel Generators (EDGs) contained in the Millstone Unit No. 2 Technical Specifications. The purpose of this review was to determine if any of the current EDG SRs currently required to be performed when the plant is shut down, could be safely performed while the plant is operating. This would help to reduce outage length and increase EDG availability when the plant is shut down.

As a result of this review, DNC has determined that a SR to perform EDG inspections can be safely removed from the Technical Specifications, and be performed while the plant is operating. The proposed Technical Specification change to accomplish this is described below.

System Description

Millstone Unit No. 2 Technical Specifications require 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 Class 1E distribution system, and two separate and independent EDGs. The safety function of the EDGs is to supply Alternating Current (AC) electrical power to plant safety systems whenever the preferred AC power supply is unavailable.

Millstone Unit No. 2 has two onsite EDGs that provide a reliable onsite source of auxiliary power if the preferred AC power supply is unavailable. They are redundant, independent and separate, and each EDG is capable of supplying power to the respective emergency 4160 Volts AC bus. Both EDGs are 12-cylinder 900 rpm opposed piston Fairbanks Morse diesel engines. During normal power operation, the EDGs are maintained in a standby mode. The EDGs may be manually started and will automatically start on a loss of power (LOP) to the respective emergency bus, or a safety injection actuation signal. If the normal and alternate offsite power sources are not available, the EDGs are then automatically connected to the respective emergency bus and sequentially loaded. Upon receiving an automatic start signal, the EDGs are accelerated to rated speed, frequency, and voltage within 15 seconds, and are ready to accept load in accordance with the unit's sequential loading schedule. The capacity of one EDG is sufficient to meet the engineered safety features demand. The EDG loading sequence permits the start of large loads without voltage and frequency instability.

Technical Specification Change

Technical Specification 3.8.1.1

A change to Technical Specification 3.8.1.1 is proposed to remove the surveillance requirement to perform EDG inspections. SR 4.8.1.1.2.c.1 will be removed. This SR refers to performing EDG inspections in accordance with procedures prepared in conjunction with the recommendations of the manufacturer. This is a maintenance activity that can be removed from Technical Specifications since it does not verify operability or the EDG functions assumed in the safety analysis. This is consistent with NUREG-1432, Rev. 1.⁽¹⁾

A similar change was reviewed and approved by the NRC for Millstone Unit No. 3, Docket 50-423, for issuance of Amendment No. 194.⁽²⁾

Safety Summary

This Technical Specification change is associated with the surveillance requirement to perform inspections of the EDGs during shutdown conditions. The proposed change will remove this surveillance requirement from Technical Specifications; although, inspections of the EDGs will continue to be performed in accordance with procedures prepared in conjunction with the recommendations of the manufacturer.

The EDGs are required to be operable by Technical Specification 3.8.1.1. The EDGs meet the criteria of 10 CFR 50.36 for items which must be controlled by Technical Specifications. The ability of the EDGs to perform as assumed in the safety analysis is verified by the performance of various SRs contained in this specification. However, SR 4.8.1.1.2.c.1, which requires EDG inspections to be performed in accordance with procedures prepared in conjunction with the recommendations of the manufacturer, is a maintenance activity and does not verify operability or any EDG function assumed in the safety analysis. As a result, SR 4.8.1.1.2.c.1 can be removed from Technical Specification 3.8.1.1 without adversely affecting the ability of the EDGs to function as assumed in the safety analysis.

EDG inspections, and other maintenance activities that are recommended by the manufacturer, will still be performed. Plant procedures can adequately control these types of maintenance activities. The majority of these inspections and maintenance activities, done to perform this surveillance requirement, will still be performed when the plant is shut down since the activities normally take seven to ten days to complete, and the current allowed outage time is only three days. In the future, DNC may submit a change to the allowed outage time that will allow more of these activities to be

⁽¹⁾ NUREG-1432, Rev. 1, "Standard Technical Specifications Combustion Engineering Plants," April 1995.

⁽²⁾ NRC letter, "Millstone Nuclear Power Station, Unit No. 3 - Issuance of Amendment RE: Electrical Power Systems (TAC No. MA9661)," dated February 2, 2001.

performed while the plant is operating. By removing this requirement from Technical Specifications, DNC will be able to evaluate the manufacturer's recommendations and process procedure changes utilizing the provisions of 10 CFR 50.59.

The Millstone Unit No. 2 procedure for the EDG inspections provides guidance for the inspection and maintenance of the EDGs. It is primarily based on manufacturer (Fairbanks Morse) recommendations. Removal of the Technical Specification requirement to perform the diesel inspections will not change any of the inspection requirements contained in this procedure. Changes to the inspection requirements based on manufacturer recommendations will be evaluated first to determine if they are appropriate for the Millstone Unit No. 2 EDGs. Any change to the EDG inspection procedure will be performed utilizing the provisions of 10 CFR 50.59.

The removal of maintenance activities from Technical Specifications is consistent with industry standards as indicated by the Standard Technical Specifications for Combustion Engineering Plants contained in NUREG-1432, Rev. 1. The requirement to perform EDG inspections based on the manufacturer's recommendation is not contained in NUREG-1432, Rev. 1. Therefore, removal of this SR is consistent with NUREG-1432, Rev. 1.

The proposed change to the Technical Specification will not adversely affect the operation of the equipment used to mitigate the design basis accidents. The EDG inspections constitute maintenance activities and do not verify operability of the EDG functions assumed in the safety analysis. There will be no adverse effect on plant operation and the plant response to the design basis accidents will not change. Therefore, there will be no adverse impact on public health and safety. Thus, the proposed change is safe.

Attachment 2

Millstone Nuclear Power Station, Unit No. 2

**Technical Specifications Change Request 2-5-01
Emergency Diesel Generator Surveillance Requirement
Significant Hazards Consideration**

**Technical Specifications Change Request 2-5-01
Emergency Diesel Generator Surveillance Requirement
Significant Hazards Consideration**

Description of License Amendment Request

Dominion Nuclear Connecticut (DNC) hereby proposes to revise the Millstone Unit No. 2 Technical Specifications as described in this License Amendment Request. The Technical Specification change is associated with the surveillance requirement to perform inspections of the Emergency Diesel Generators (EDGs) during shutdown conditions. The proposed change will remove this surveillance requirement from Technical Specifications; although, inspections of the EDGs will continue to be performed in accordance with procedures prepared in conjunction with the recommendations of the manufacturer. A brief summary of the change is provided below. Refer to Attachment 1 of this submittal for a detailed discussion of the proposed changes.

Technical Specification 3.8.1.1

Surveillance Requirement 4.8.1.1.2.c.1 will be removed from the Technical Specifications. This surveillance requires EDG inspections to be performed in accordance with procedures prepared in conjunction with the recommendations of the manufacturer.

Basis for No Significant Hazards Consideration

In accordance with 10 CFR 50.92, DNC has reviewed the proposed change and has concluded that it does not involve a Significant Hazards Consideration (SHC). The basis for this conclusion is that the three criteria of 10 CFR 50.92(c) are not compromised. The proposed change does not involve an SHC because the change does not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

The Technical Specification change is associated with the surveillance requirement to perform inspections of the EDGs during shutdown conditions. The proposed change will remove this surveillance requirement from Technical Specifications; although, inspections of the EDGs will continue to be performed in accordance with procedures prepared in conjunction with the recommendations of the manufacturer.

Removal of the EDG inspection surveillance requirement from Technical Specifications is acceptable since it does not verify operability or EDG functions assumed in the safety analysis. EDG inspections, which are maintenance activities that can be adequately controlled by plant procedures, will still be

performed in accordance with the recommendations of the manufacturer. This will provide continued assurance the EDGs will be available when required.

The proposed Technical Specification change will have no adverse effect on plant operation or the operation of accident mitigation equipment, and will not impact the availability of accident mitigation equipment. The plant response to the design basis accidents will not change. In addition, the equipment covered by this specification change is not an accident initiator and cannot cause an accident. Therefore, the proposed Technical Specification change will not result in an increase in the probability or consequences of an accident previously evaluated.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change does not impact any system or component which could cause an accident. The proposed change will not alter the plant configuration (no new or different type of equipment will be installed) or require any unusual operator actions. The proposed change will not alter the way any structure, system, or component functions, and will not alter the manner in which the plant is operated. There will be no adverse effect on plant operation or accident mitigation equipment. The proposed change does not introduce any new failure modes. Also, the response of the plant and the operators following an accident will not be different as a result of this change. In addition, the accident mitigation equipment affected by the proposed change is not an accident initiator. Therefore, the proposed change will not create the possibility of a new or different kind of accident from any previously analyzed.

3. Involve a significant reduction in a margin of safety.

Removal of the EDG inspection surveillance requirement from Technical Specifications is acceptable since it does not verify operability or EDG functions assumed in the safety analysis. EDG inspections, which are maintenance activities that can be adequately controlled by plant procedures, will still be performed in accordance with the recommendations of the manufacturer. This will provide continued assurance the EDGs will be available when required. By removing this requirement from Technical Specifications, DNC will be able to evaluate the manufacturer's recommendation and process procedure changes utilizing the provisions of 10 CFR 50.59. This is also consistent with NUREG-1432, rev. 1.

The proposed change will have no adverse effect on plant operation or equipment important to safety. The plant response to the design basis accidents will not change and the accident mitigation equipment will continue to function as assumed in the design basis accident analysis. Therefore, there will be no reduction in a margin of safety.

Attachment 3

Millstone Nuclear Power Station, Unit No. 2

**Technical Specifications Change Request 2-5-01
Emergency Diesel Generator Surveillance Requirement
Marked Up Pages**

FOR WFO ONLY March 12, 1999

ACTION (Continued)

Inoperable Equipment	Required Action
e. Two diesel generators	<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 ≥ 1300 kW and operates with a load ≥ 1300 kW for ≥ 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.

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: **DELETED**

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:

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

3. Verifying the generator capability to reject a load of ≥ 250 kw and maintain voltage at 4160 ± 500 volts and frequency at 60 ± 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 ≥ 5 minutes while its generator is loaded with the emergency loads.

FOR INFO ONLY

ELECTRICAL POWER SYSTEMS

March 12, 1999

SURVEILLANCE REQUIREMENT (Continued)

- 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 ≥ 60 minutes while loaded to ≥ 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 ≥ 1300 kW and operates with a load ≥ 1300 kW for ≥ 60 minutes.

Attachment 4

Millstone Nuclear Power Station, Unit No. 2

Technical Specifications Change Request 2-5-01
Emergency Diesel Generator Surveillance Requirement
Retyped Page

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. Deleted

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 ₁)	1.5	2.2
2 (T ₂)	T ₁ + 5.5	8.4
3 (T ₃)	T ₂ + 5.5	14.6
4 (T ₄)	T ₃ + 5.5	20.8

3. Verifying the generator capability to reject a load of ≥ 250 kw and maintain voltage at 4160 ± 500 volts and frequency at 60 ± 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 ≥ 5 minutes while its generator is loaded with the emergency loads.