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May 26, 1995

Docket No. 50-336
B15255

Re: 10CFR50.90
10CFR50.91

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

Millstone Nuclear Power Station, Unit No. 2
Proposed Revision to Technical Specifications
Emergency Power Systems - Shutdown

Pursuant to 10CFR50.90, Northeast Nuclear Energy Company (NNECO) hereby proposes to amend Operating License DPR-65 by incorporating the attached changes into the Technical Specifications of Millstone Unit No. 2. The proposed revisions would modify Technical Specifications 3.8.1.1., "Electric Power Systems, A.C. Sources, Operating," Technical Specification 3.8.1.2, "Electrical Power Systems, Shutdown" and 3.8.2.2, "Electrical Power Systems, A.C. Distribution - Shutdown," to provide operational flexibility as well as consistency between action statements and to eliminate certain surveillance requirements that are not applicable in Modes 5 or 6.

In addition, NNECO is requesting that the NRC Staff process this license amendment request on an exigent basis pursuant to 10CFR50.91(a)(6). Currently, NNECO is in an extended shutdown, but is performing activities to return the unit to power in June 1995. The proposed license amendment is required to eliminate a minimum of one week of additional outage time and is therefore required on an exigent basis to support planned reactor startup.

NNECO believes that expedited treatment is warranted in this case to avoid an unnecessary delay in reactor startup. NNECO has determined that this request does not involve any significant safety impact or a significant hazards consideration (SHC). Thus, the operational risk associated with the request has no significant impact on public health and safety.

Background

Millstone Unit No. 2 is currently in an extended refueling outage, and is experiencing difficulties with its emergency diesel generator load sequencers. Technical Specification 3.8.2.2

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requires that one train of an AC distribution system comprised of a 4.16kV emergency bus, 480V emergency load center as well as two 120V AC vital buses be connected to an operable diesel generator. Due to the difficulties associated with the sequencers, the associated diesel generators have been declared inoperable. With the inoperable diesel generators, Technical Specification 3.8.2.2 requires that containment integrity be established and maintained. The establishment of containment integrity in Modes 5 or 6, while no core alterations or reactivity changes are being made, is overly restrictive and will needlessly extend the Millstone Unit No. 2 outage.

Description of Proposed Changes

The proposed change to Surveillance Requirement 4.8.1.1.1 is being made because presently, the surveillance requirement for demonstrating offsite sources are operable states that "two" independent circuits are required. The surveillance requirement is referenced for both operating and shutdown modes. While it is accurate for operating modes, it is inconsistent with the limiting condition for operation for shutdown. The proposed change to Surveillance Requirement 4.8.1.2 is required to clarify the surveillance requirement for performance of the testing required in Modes 5 or 6. Currently the surveillance requirement refers to the testing required to be performed in Modes 1, 2, 3 and 4. However, certain of the testing requirements are not required or applicable in Modes 5 or 6. In Modes 5 and 6, a safety injection actuation signal (SIAS) cannot be automatically processed since blocks are enabled for low pressurizer pressure, and there is an insufficient energy source to generate a high containment pressure condition. There is no design basis accident in Modes 5 or 6 that results in a SIAS signal even being generated.

The Millstone Unit No. 2 design basis for Modes 5 and 6 has no accidents that are assumed to occur concurrent with a loss of normal power. Thus, the design basis for these modes does not challenge the sequencer. In the event that a loss of normal power did occur in Modes 5 or 6, the consequence would be a loss of shutdown cooling. However, even without automatic starting and sequencing of the diesel generator, sufficient time is available to manually restore shutdown cooling consistent with the shutdown risk reduction program. This is supported by the existing Technical Specifications and their bases. Technical Specification 3.9.8.2 requires that two shutdown cooling loops be OPERABLE, however, it explicitly notes that either the normal or emergency power source for each loop can be inoperable. The basis for this is that "a single failure of the operating shutdown cooling loop will not result in a complete loss of decay heat removal capability." Further, if only one loop is required to be operable (when the

applicability for 3.9.8.2 is not met, the basis for shutdown cooling operability states that "adequate time is thus available to initiate emergency procedures to provide core cooling in the event of a failure of the operating shutdown cooling loop." Thus, the Millstone Unit No. 2 shutdown risk reduction program will assure that the risks encountered during a shutdown condition are considered and maintained acceptably low.

The proposed change to the action statement of Technical Specification 3.8.2.2 is being made to provide an action statement that is consistent with other action statements for Modes 5 and 6. Technical Specification 3.8.1.2 requires that if the A.C. power sources are unavailable, then all operations involving core alterations or positive reactivity changes should be halted until the event is corrected. Technical Specification 3.8.2.2 is proposed to be modified so that this action statement is consistent with Technical Specification 3.8.1.2.

Safety Assessment

The proposed change to Surveillance Requirement 4.8.1.1.1 is being made because presently, the surveillance requirement for demonstrating offsite sources are operable states that "two" independent circuits are required. The surveillance requirement is referenced for both operating and shutdown modes. While it is accurate for operating modes, it is inconsistent with the limiting condition for operation for shutdown. The proposed change is safe because it renders the surveillance requirement consistent with the applicable limiting condition for operation (i.e., operating or shutdown) and eliminates a potential source of confusion. The proposed change to surveillance requirement 4.8.1.2 is proposed to eliminate the performance of 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.c.8. Surveillance requirement 4.8.1.1.2.a.3 requires that every 31 days the diesel generator be synchronized and loaded to 1300 kw in 60 seconds. Surveillance requirement 4.8.1.1.2.c.2 requires the verification of the operability of the automatic time delay sequencer. Surveillance requirement 4.8.1.1.2.c.5 requires the simulation of a loss of normal power (LNP) signal in conjunction with a SIAS and verification of the deenergization of the emergency buses and proper load shedding, verification of the diesel generator auto-start, energization of the emergency buses with permanently connected loads, energization of the auto connected emergency loads through the load sequencer and subsequent operation. Surveillance requirement 4.8.1.1.2.c.8 requires that on an actual or simulated SIAS, without loss of offsite power, the diesel generator starts and operates, and the diesel start time to reach rated voltage and frequency is acceptable.

The proposed change to delete the monthly diesel generator load test with the diesel generator operating in parallel with the offsite system is safe because it precludes the possibility that a single event could compromise both sources. This is consistent with the CE Owners Group Standard Technical Specifications - Shutdown Bases. Additionally, because of the anticipated limited duration of a unit outage (typically not more than twice the test frequency required during operation) and the reduced electrical load requirements during shutdown, eliminating the requirement to perform a load test during shutdown is safe. Note that the diesel generator test to rated speed and voltage will be conducted during an outage with the same test interval specified for the test during operation.

The proposed changes to the 31 day and 18 month surveillance requirements to eliminate these tests are safe because neither the sequencer nor the SIAS associated with the operable diesel generator need be operable in Modes 5 and 6 for the diesel generator to perform its safety function. The function of the diesel generator in Modes 5 and 6 is that it be capable of providing motive power to safe shutdown loads in the event offsite power is lost. Automatic start and load of the operable diesel generator in response to an LNP is unnecessary during shutdown because of the less challenging time constraints compared to those imposed during Modes 1 through 4, when a loss of coolant accident (LOCA) coincident with an LNP must be assumed. The Millstone Unit No. 2 shutdown risk reduction program will assure that the risks encountered during a shutdown condition are considered and maintained acceptably low. Additionally, an automatic SIAS is not possible during shutdown because the SIAS is blocked prior to initiating shutdown cooling, per plant Operating Procedure OP 2310.

This conclusion is supported by the following:

- Undervoltage sensors designed to detect an LNP are only required to be operable in Modes 1, 2 and 3 to meet Technical Specifications (See Technical Specification Table 3.3-3).
- Similarly, sensors required to develop an automatic SIAS are only required to be operable in Modes 1, 2 and 3 to meet technical specifications (See Table 3.3-3).

The proposed change to technical specification 3.8.2.2 is safe because it better identifies the appropriate actions for Modes 5 and 6. The action statement is being revised to be consistent with Technical Specification 3.8.1.2 which requires that core alterations and fuel movement be halted until the situation is corrected. With the plant in Modes 5 or 6 and fuel in the reactor core, and no core alterations or fuel movement being made, it is

unnecessary to maintain containment integrity.

Technical Specification 3/4.6.1, "Primary Containment" requires that primary containment be maintained in Modes 1 through 4. If primary containment is lost, then the plant must be brought to Mode 5. This corroborates that Mode 5 or Mode 6, with no core alteration and no fuel movement, is a safe plant configuration.

Containment integrity in Modes 5 or 6 is in fact a personnel safety issue during a refueling. Air usage for valve operation and air leakage into containment from the control air system has raised internal pressure in the containment approximately 1 psia. The elevated pressure in containment causes pain and discomfort to plant workers during the pressurization and depressurization in the airlock personnel access tunnel.

Continually maintaining containment integrity will also unnecessarily delay what has already become a long plant shutdown.

Justification for Exigent License Amendment

Pursuant to 10CFR50.91(a)(6), NNECO hereby requests NRC Staff exigent approval of the proposed amendment to Operating License DPR-65. This request needs to be addressed in an exigent manner to allow Millstone Unit No. 2 to expedite refueling activities for an eventual return to power operation.

The proposed change to the technical specifications was first suggested the week ending May 20, 1995. Increasing internal containment pressure, combined with the continued failure to restore the sequencers to an operable status, confirmed the need for this change. The inability to restore the sequencers to an operable status, as the technical specifications are written, necessitates declaring the otherwise operable diesel generators inoperable. Pursuant to technical specification 3.8.2.2 with an inoperable diesel generator, containment integrity must be maintained. With containment integrity maintained, outage work in the containment has dramatically slowed down, thereby prolonging an already long outage. It is estimated that approval of this exigent license amendment will allow the unit to return to power at least one week sooner, when compared to the situation if the unit continues to operate in its current configuration.

The exigent change is also warranted on a personnel safety basis. Air usage and air leakage into containment has increased internal pressure which has caused personal pain and discomfort to workers.

Further, the requested exigent amendment is appropriate because

this amendment request does not involve an SHC. Based on the SHC discussion provided below, we have determined that those changes to technical specifications do not significantly affect the overall ability of the systems and does not affect the overall risk.

Significant Hazards Considerations

In accordance with 10CFR50.92, NNECO has reviewed the proposed changes and has concluded that they do not involve an SHC. The basis for this conclusion is that the three criteria of 10CFR50.92(c) is not compromised. The proposed changes do not involve an SHC because the change would not:

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

The proposed change to Surveillance Requirement 4.8.1.1.1 is being made because presently, the surveillance requirement for demonstrating offsite sources are operable states that "two" independent circuits are required. The surveillance requirement is referenced for both operating and shutdown modes. While it is accurate for operating modes, it is inconsistent with the limiting condition for operation for shutdown. The proposed change is safe because it renders the surveillance requirement consistent with the applicable limiting condition for operation (i.e., operating or shutdown) and eliminates a potential source of confusion.

The change to Surveillance Requirement 4.8.1.2 and Technical Specification 3.8.2.2 merely clarifies the diesel generator surveillance and operability requirements for Modes 5 and 6 and renders action statements for related technical specification sections consistent with and appropriate for operational Modes 5 and 6.

Regarding diesel generator surveillance requirements, automatic A.C. power for LNP events in Modes 5 and 6 is not required. This is validated by the fact that the undervoltage sensors are only required to be operable in Modes 1, 2 and 3 to meet technical specifications. Because the undervoltage sensors provide the logic that results in actuation of the sequencer, it follows that the sequencer need not be operable in Modes 5 and 6. Accordingly, the sequencer is not required to support operability of the available diesel generator in Modes 5 and 6. Further, because SIAS is blocked in Modes 5 and 6, automatic start of the diesel generator upon receipt of a SIAS is similarly not required to support operability of the diesel generator in Modes 5 and 6.

Additionally, operation of the diesel generator in parallel with the system during Modes 5 and 6 is not required to perform its intended safety function. In fact, such operation may compromise both sources as the result of a single event.

Since automatic A.C. power is not credited in the mitigation of Mode 5 and 6 events and accidents, such as fuel handling accidents, there is no increase in the probability or consequences of previously evaluated accidents.

The action statement in Technical Specification 3.8.2.2 has been revised to cite actions that are more appropriate for Modes 5 and 6 for Millstone Unit No. 2. This is due to the ability to maintain the plant in a safe condition without needing to automatically load the diesel generator through the sequencers in Modes 5 and 6. In addition, the proposed change is consistent with the CE Owner's Group Standard Technical Specification and with other Millstone Unit No. 2 action statements. Consequently, there is no increase in the probability or consequences of previously evaluated accidents.

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

The proposed changes do not alter or affect the design, function, failure mode, or operation of the plant. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

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

The proposed changes to the technical specifications provides greater consistency between the action statements and clarifies which surveillance requirements are required in Modes 5 and 6. Since the diesel generators are not required to be loaded automatically in Modes 5 and 6, and since it is part of our shutdown risk management program to assure that adequate cooling is able to be provided, and since the diesel will still be verified to start and achieve rated speed, the proposed changes to the technical specifications do not reduce the margin of safety.

The Commission has provided guidance concerning the application of the standards of 10CFR50.92 by providing certain examples (51FR7751, March 6, 1986) of amendments that are not considered likely to involve an SHC. While the proposed change is not enveloped by a specific example, it has been shown that the proposed changes to the technical specification are safe and are not an SHC.

Environment Considerations

NNECO has reviewed the proposed license amendment against the criteria of 10CFR51.22 for environmental considerations. The proposed change does not increase the types and amounts of effluents that may be released offsite, nor does it significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, NNECO concludes that the proposed change meets the criteria delineated in 10CFR51.22(c)(9) for a categorical exclusion from the requirements for an environmental impact statement.

Nuclear Safety Assessment Board Review

The Nuclear Safety Assessment Board has reviewed and concurred with the above determination.

State Notification

In accordance with 10CFR50.91(b), we are providing the State of Connecticut with a copy of this proposed amendment via facsimile to ensure their awareness of this request.

Conclusion

In summary, NNECO is requesting an exigent license amendment that would allow the plant to modify Technical Specifications 3.8.1.1, 3.8.1.2 and 3.8.2.2. This will allow the unit to continue with the refueling outage for an eventual return to power operation. Therefore, NNECO hereby requests the NRC Staff to process and issue this proposed amendment prior to June 15, 1995, to be effective upon issuance. We acknowledge and apologize for the short time available to process this request on an exigent basis. We also wish to emphasize our conclusion that this proposed amendment does not involve any undue safety risk or the need for an environmental impact statement. We are, therefore, requesting this action to allow the plant to support an uneventful return to power operation.

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We will promptly provide any additional information that the NRC Staff may need to respond to this request. The NNECO contact for this proposed revision is Mr. M. Robles, Jr. at (203) 440-2073.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

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Subscribed and sworn to before me

this 26th day of May, 1995

Gerald P. van Noorden

Date Commission Expires: 12/31/97