



**Northeast
Nuclear Energy**

Rope Ferry Rd. (Route 156), Waterford, CT 06385

Millstone Nuclear Power Station
Northeast Nuclear Energy Company
P.O. Box 128
Waterford, CT 06385-0128
(860) 447-1791
Fax (860) 444-4277

The Northeast Utilities System

JUL 13 2000

Docket No. 50-336
B18150

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 Specification Amendment Request
Reactor Coolant Loops and Shutdown Cooling Trains (TAC NO. MA8089)
Revised Significant Hazards Consideration

In a letter dated February 1, 2000,⁽¹⁾ Northeast Nuclear Energy Company (NNECO) requested a change to the Millstone Unit No. 2 Technical Specifications. The proposed changes modified the Technical Specification requirements for the Reactor Coolant System loops and Shutdown Cooling System trains during various modes of plant operation. The format of the original Significant Hazards Consideration (SHC) has been revised to reflect current industry standards. The revised SHC is contained in Attachment 1.

The proposed changes to the Millstone Unit No. 2 Technical Specifications requested in the letter dated February 1, 2000, have not been modified. As a result, there are no technical changes to the revised SHC, and the conclusions contained in the original Safety Summary and SHC remain the same.

There are no regulatory commitments contained within this letter.

⁽¹⁾ R. P. Necci letter to U.S. Nuclear Regulatory Commission, "Millstone Nuclear Power Station, Unit No. 2, Proposed Revision to Technical Specifications, Reactor Coolant Loops and Shutdown Cooling Trains," dated February 1, 2000.

ADD1

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

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



Raymond P. Necci
Vice President - Nuclear Technical Services

Sworn to and subscribed before me

this 13 day of July, 2000


Notary Public

My Commission expires _____

SANDRA J. ANTON
NOTARY PUBLIC
COMMISSION EXPIRES
MAY 01 2005

Attachments (1)

cc: H. J. Miller, Region I Administrator
J. I. Zimmerman, 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 Specification Amendment Request
Reactor Coolant Loops and Shutdown Cooling Trains (TAC NO. MA8089)
Revised Significant Hazards Consideration

**Technical Specification Amendment Request
Reactor Coolant Loops and Shutdown Cooling Trains (TAC NO. MA8089)
Revised Significant Hazards Consideration**

Description of License Amendment Request

The proposed Technical Specification and Bases changes are associated with the requirements for the Reactor Coolant System (RCS) loops and Shutdown Cooling (SDC) System trains during all modes of plant operation. Many of the proposed changes are associated with the format and structure of the affected Technical Specifications and will not result in any technical changes to the current requirements. The proposed format changes will result in Technical Specifications that will be clear, concise, and easier for the Control Room operators to use.

Proposed Technical Specification changes common to various specifications.

- Non-technical changes to the Technical Specifications such as standardizing terminology, format, and numbering, and adding or correcting amendment numbers.
- Change the action statements to be consistent with the proposed changes to the Limiting Conditions for Operation (LCO) and change the action statement time requirements to require immediate action instead of within 1 hour.
- Remove extraneous information from various Surveillance Requirements (SRs).
- Transfer information from the LCO to the associated Technical Specification Bases.

Proposed Technical Specification changes unique to the identified specification.

Technical Specification 3.0.3

- Clarify that this specification does not apply in Modes 5 and 6.

Technical Specification 3.4.1.1

- Expand the LCO to require the RCS loops to be operable, in addition to operating.
- Change the action statement to require the plant to be in Hot Standby within 6 hours instead of 1 hour.

Technical Specification 3.4.1.2

- Add the phrase “per 8 hour period” to the 1 hour time period that the Reactor Coolant Pumps (RCPs) may be secured.
- Modify Action Statement a to only address one inoperable reactor coolant loop, and expand Action Statement b to address two inoperable reactor coolant loops in addition to no reactor coolant loop in operation.
- Add SR 4.4.1.2.3 to verify secondary water level.

Technical Specification 3.4.1.3

- Divide this specification into three separate specifications based on operational mode and plant condition. This specification will address Mode 4 only.
- Delete the first footnote (#), which is only applicable in Mode 5.
- Add the phrase “per 8 hour period” to the 1 hour time period that the RCPs and SDC pumps may be secured.
- Change the action statements to encompass all combinations of inoperable equipment. A cooldown to Mode 5 will no longer be required if both SDC trains are inoperable. If two RCS loops and one SDC train are inoperable, a cooldown to Mode 5 will still be required, but the time to reach Mode 5 will be increased from 20 hours to 24 hours.
- Delete SR 4.4.1.3.2 to remove duplicate requirements.
- Replace the phrase “10% of span” with “10% narrow range” in the proposed SR 4.4.1.3.2 to reflect the instrumentation used to verify compliance with this SR.

Technical Specification 3.4.1.4

- Relocate the Mode 5 requirements when the RCS loops are filled currently contained in Technical Specification 3.4.1.3 into this new specification.
- Change the LCO to require at least one SDC train to be operable and in operation, and to allow the second heat removal path to be either the second SDC train, or both steam generators with sufficient secondary water volume to support natural circulation. RCP operability will no longer be required.
- Add the phrase “per 8 hour period” to the 1 hour time period that the SDC pumps may be secured.

- Add two additional notes, one to allow a SDC train to be inoperable for up to 2 hours for surveillance testing, and one to allow both SDC trains to not be in operation when at least one RCP is in operation.
- Change the action statements to address the situation when no SDC trains are operable. A cooldown to Mode 5 will no longer be required if both SDC trains are inoperable since the proposed specification is only applicable in Mode 5.
- Delete SR 4.4.1.3.2 to remove requirements that are no longer applicable.
- Replace the phrase "10% of span" with "10% narrow range" in the proposed SR 4.4.1.4.2 to reflect the instrumentation used to verify compliance with this SR.

Technical Specification 3.4.1.5

- Relocate the Mode 5 requirements when the RCS loops are not filled currently contained in Technical Specification 3.4.1.3 into this new specification.
- Change the LCO to require two SDC trains to be operable and at least one SDC train to be in operation, and no longer taking credit for the RCS loops since the applicability of this specification is limited to when the RCS loops are not filled.
- Modify the second footnote (*) such that all SDC pumps can be secured for only 15 minutes instead of 1 hour, and only when switching from one SDC train to the other. Add a limitation to prohibit draining operations that would reduce the RCS volume when switching the operating SDC train.
- Add an additional note to allow a SDC train to be inoperable for up to 2 hours for surveillance testing.
- Change the action statements to address the situation when no SDC trains are operable. A cooldown to Mode 5 will no longer be required if both SDC trains are inoperable since the proposed specification is only applicable in Mode 5.
- Delete SRs 4.4.1.3.2 and 4.4.1.3.3 to remove requirements that are no longer applicable.

Technical Specification 3.9.8.1

- Combine the Mode 6 requirements currently contained in Technical Specifications 3.9.8.1 and 3.9.8.2 into one Technical Specification, 3.9.8.1, that is limited in applicability to Mode 6 with the refueling cavity filled to a water level of at least 23 feet above the reactor vessel flange.

- Change the LCO to include a requirement for the operating SDC train to also be operable. The LCO will not specify that a second heat removal method be operable since the large volume of water above the reactor vessel flange is capable of providing a sufficient heat sink for core decay heat removal.
- Modify the first footnote (*) to replace the phrase "during the performance of CORE ALTERATIONS in the vicinity of the reactor pressure vessel hot legs" with "provided no operations are permitted that would cause a reduction in Reactor Coolant System boron concentration."
- Add a third note to allow the SDC pumps to be removed from operation to provide additional operational flexibility to perform work that is currently done during plant heatup after SDC has been removed from service, and to perform work on the valves located in the common SDC suction line.
- Change the Mode of Applicability for this specification to Mode 6 with the refueling cavity filled to a water level of at least 23 feet above the reactor vessel flange.
- Change the action statements to require the suspension of activities to load irradiated fuel assemblies in the core. Expand the action statements to specify the containment penetrations and required status.
- Remove the statement that the provisions of Specification 3.0.3 are not applicable.
- Delete SR 4.9.8.2 to remove a requirement no longer necessary.

Technical Specification 3.9.8.2

- Combine the Mode 6 requirements currently contained in Technical Specifications 3.9.8.1 and 3.9.8.2 into one Technical Specification, 3.9.8.2, that is limited in applicability to Mode 6 when the refueling cavity is not filled to a water level of at least 23 feet above the reactor vessel flange.
- Change the LCO to require two SDC trains to be operable and one SDC train to be in operation, and remove the word "independent" from the LCO.
- Delete the first footnote (*) since there are no expected plant operations that would require all SDC flow to be secured before at least 23 feet of water is established above the reactor vessel flange.

- Change the Mode of Applicability for this specification such that to relax the requirement for two operable SDC trains, the refueling cavity must be filled to a water level of at least 23 feet above the reactor vessel flange.
- Add an action requirement to establish ≥ 23 feet of water above the reactor vessel flange if one SDC train is inoperable.
- Include an additional action to require an immediate suspension of any activity that could reduce the RCS boron concentration if both SDC trains are inoperable, or no SDC train is in operation. Exclude the requirement to suspend activities that would increase the reactor decay heat load. Expand the action statement to specify the containment penetrations and required status.
- Remove the statement that the provisions of Specification 3.0.3 are not applicable.
- Remove the requirement to verify reactor vessel water level.

Basis for No Significant Hazards Consideration

In accordance with 10 CFR 50.92, NNECO has reviewed the proposed changes and has concluded that they do 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 changes do not involve an SHC because the changes do not:

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

The proposed Technical Specification changes are associated with the requirements for the RCS loops and SDC trains during all modes of plant operation. These systems provide for the transportation of heat from the reactor core to a heat sink. The proposed changes will not adversely affect power operation, and will ensure that two methods of decay heat removal are available when the plant is shut down. These specifications include requirements for various equipment, based on plant conditions, and provide appropriate actions to take if the required equipment is not available. This ensures the equipment necessary to mitigate the design basis accidents is available and functioning as assumed, or plant operation is limited accordingly.

Standardizing the terminology, format, and numbering of the Technical Specifications, adding or correcting amendment numbers, changing the action statements to be consistent with the proposed changes to the LCO, removal of extraneous information from various SRs, and transferring information from the

LCO to the associated Technical Specification Bases are non-technical changes that will not affect any of the current requirements.

The operation of, and requirements for, the equipment covered by the affected Technical Specifications will remain essentially the same. In Modes 1 and 2, the proposed requirements are more restrictive in that the two RCS loops must be operable in addition to being in operation. In Modes 3 (RCS loops) and 4 (RCS loops and SDC trains), the requirements remain the same. In Mode 5, the requirements will be separated into two specifications based on the status of the RCS loops. If the RCS loops are filled, two SDC trains will be required unless both steam generators (instead of one) have sufficient inventory. RCPs will no longer be required. If the RCS loops are not filled, two SDC trains will be required. These are not significant changes to the Mode 5 requirements. In Mode 6, the SDC train requirements are more restrictive since both SDC trains will be required unless the refueling cavity is filled to at least 23 feet above the reactor vessel flange.

Changes to the action statements will be made based on the proposed changes to the LCOs. If the required equipment is not operable, the proposed action requirements will require timely restoration of the equipment, or the plant will be placed in a configuration where there is no adverse impact associated with the inoperable equipment. The changes to the action statements will also address additional combinations of inoperable equipment. The allowed outage times provide a reasonable time for repairs before requiring a plant shutdown to a lower mode, as applicable. The shutdown times will allow an orderly shutdown, as applicable, to be performed. Surveillance requirements will be added or modified as appropriate based on the changes to the LCOs. This will ensure the required equipment is operable. Additional restrictions will be placed on plant operation to properly control various evolutions when the plant is shutdown. These additional restrictions (e.g., how often the RCPs and SDC pumps can be secured) provide sufficient administrative control to ensure safe operation of the plant.

The proposed changes will have no adverse effect on plant operation, or the availability or operation of any accident mitigation equipment. The plant response to the design basis accidents will not change. In addition, the proposed changes can not cause an accident. Therefore, there will be no significant 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 Technical Specification changes will not alter the plant configuration (no new or different type of equipment will be installed) or require

any new or unusual operator actions. They do not alter the way any structure, system, or component functions and do not significantly alter the manner in which the plant is operated. The proposed changes do not introduce any new failure modes. Also, the response of the plant and the operators following these accidents is unaffected by the changes. Therefore, the proposed changes will not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

The proposed Technical Specification changes are associated with the requirements for the RCS loops and SDC trains during all modes of plant operation. These systems provide for the transportation of heat from the reactor core to a heat sink. The specifications associated with these systems include requirements for various equipment, based on plant conditions, and provide appropriate actions to take if the required equipment is not available. This will ensure that the equipment necessary to mitigate the design basis accidents is available and functioning as assumed, or plant operation is limited accordingly.

The proposed changes will result in Technical Specifications that are clear, concise, and easier for the plant operators to use. The format, structure and technical content of the affected specifications is consistent with current industry guidance as contained in NUREG-1432, with the exception of the third note to the LCO for Technical Specification 3.9.8.1. This note, which will allow the SDC pumps to be removed from operation, will provide additional operational flexibility to perform work that is currently done during plant heatup after the SDC trains have been removed from service, and to perform work on the valves located in the common SDC suction line. However, the restrictions on what work can be performed utilizing the provisions of this note, the plant conditions that must first be established, and the required management review of the planned plant evolution will ensure plant safety is maintained.

The proposed changes to the Technical Specifications are consistent with the Millstone Unit No. 2 design basis accident analyses. This will ensure the analyses remains valid, and the consequences of the accidents are acceptable. They will provide the necessary control to ensure the required plant conditions are established and the required plant equipment is available. If the required equipment is not operable, the proposed action requirements will require timely restoration of the equipment or the plant will be placed in a configuration where there is no adverse impact associated with the inoperable equipment. The proposed allowed outage times provide a reasonable time for repairs before requiring a plant shutdown, as applicable, and reflect the low probability of an event occurring while the equipment is inoperable. The proposed shutdown times will allow an orderly shutdown, as applicable, to be performed. The proposed allowed outage times and shutdown times are consistent with times

already contained in the Millstone Unit No. 2 Technical Specifications and with generic industry guidance (NUREG-1432), where applicable.

The proposed changes 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 analyses. Therefore, there will be no significant reduction in a margin of safety.