



**Northeast  
Nuclear Energy**

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Northeast Nuclear Energy Company  
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Fax (860) 444-4277

The Northeast Utilities System

**FEB 22 2000**

**Docket No. 50-336**  
**B18003**

**Re: 10CFR50.90**

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

**Millstone Nuclear Power Station, Unit No. 2  
Response to a Request for Additional Information  
Proposed Revision to Technical Specifications  
Charging and High Pressure Safety Injection Pump  
Surveillance Requirements (TAC NO. MA7309)**

In a letter dated December 6, 1999,<sup>(1)</sup> Northeast Nuclear Energy Company requested a change to the Millstone Unit No. 2 Technical Specifications. The proposed changes modify the surveillance requirements for the charging and high pressure safety injection pumps and the associated Bases. In response to this letter, the NRC has requested that additional information be added to the proposed Bases change. Attachment 1 contains a discussion of the requested revision, and a marked up copy of the original retyped page previously submitted. Attachment 2 provides a revised retyped page.

The addition of this information to the proposed Bases change does not affect the conclusions of the Safety Summary or the Significant Hazards Consideration, or any of the other changes requested by the letter dated December 6, 1999.

There are no regulatory commitments contained within this letter.

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<sup>(1)</sup> R. P. Necci letter to U.S. Nuclear Regulatory Commission, "Millstone Nuclear Power Station, Unit No. 2, Proposed Revision to Technical Specifications, Charging and High Pressure Safety Injection Pump Surveillance Requirements," dated December 6, 1999.

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

Very truly yours,

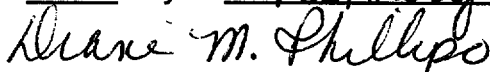
NORTHEAST NUCLEAR ENERGY COMPANY



\_\_\_\_\_  
Raymond P. Necci  
Vice President - Nuclear Technical Services

Sworn to and subscribed before me

this 22 day of February, 2000



\_\_\_\_\_  
Notary Public

**DIANE M. PHILLIPO**  
Notary Public

My Commission expires \_\_\_\_\_ My Commission Expires Dec. 31, 2000

Attachments (1)

cc: H. J. Miller, Region I Administrator  
J. I. Zimmerman, NRC Project Manager, Millstone Unit No. 2  
D. P. Beaulieu, 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**

**Response to a Request for Additional Information  
Proposed Revision to Technical Specifications  
Charging and High Pressure Safety Injection Pump Surveillance Requirements  
Marked Up Pages**

**February 2000**

**Response to a Request for Additional Information  
Proposed Revision to Technical Specifications  
Charging and High Pressure Safety Injection Pump Surveillance Requirements**

The changes to the Millstone Unit No. 2 Technical Specifications proposed in the letter dated December 6, 1999,<sup>(1)</sup> modified the surveillance requirements that verify only a specific number of charging and high pressure safety injection (HPSI) pumps are capable of injecting into the Reactor Coolant System (RCS) when the plant is shut down. The current surveillance requirements include the methods by which the charging and HPSI pumps are prevented from injecting into the RCS. The proposed changes relocated the acceptable methods to the respective Technical Specification Bases. In addition, two new methods to prevent the charging pumps from injecting into the RCS were added to the proposed Bases changes. These new methods meet the requirement that two independent means to prevent pump start are utilized. This will prevent a single failure or single action from starting the respective pump. This requirement for two independent means is specified in NUREG-1432<sup>(2)</sup> (Technical Specification 3.4.12 Bases).

The two new methods, removing the charging pump motor overload heaters from the charging pump circuit and removing the charging pump motor controller from the motor control center, when combined with the use of administrative controls (e.g., tagout) meet the two independent means requirement. Removing the charging pump motor overload heaters is technically equivalent to opening the associated circuit breaker. With the overload heaters removed, continuity between power source (480 VAC) and load (charging pump) is not possible. The use of administrative controls ensures that the overload heaters will not be inadvertently installed by the action of a single individual at the switchgear. Removing the charging pump motor controller from the motor control center is also technically equivalent to opening the associated circuit breaker. With the motor controller removed, continuity between power source (480 VAC) and load (charging pump) is not possible. The use of administrative controls ensures that the motor controller will not be inadvertently installed by the action of a single individual at the switchgear.

The Bases of Technical Specification 3.4.9.3, "Reactor Coolant System - Overpressure Protection Systems," will be modified to indicate that the methods to prevent pump injection into the RCS that were added or relocated from the respective surveillance requirements to the Bases are consistent with the requirement for two independent means as specified in NUREG-1432. The proposed modification is included in this attachment. A new retype page is included in Attachment 2.

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<sup>(1)</sup> R. P. Necci letter to U.S. Nuclear Regulatory Commission, "Millstone Nuclear Power Station, Unit No. 2, Proposed Revision to Technical Specifications, Charging and High Pressure Safety Injection Pump Surveillance Requirements," dated December 6, 1999.

<sup>(2)</sup> U.S. NRC NUREG - 1432, "Standard Technical Specifications Combustion Engineering Plants," Volume 1, Revision 1, dated April 1995.

## REACTOR COOLANT SYSTEM

### BASES

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input from the secondary system. They also ensure sufficient steam volume exists in the pressurizer to accommodate the insurge. No credit for PORV actuation was assumed in the LTOP analysis of the energy addition transient.

The restrictions apply only to the start of the first RCP. Once at least one RCP is running, equilibrium is achieved between the primary and secondary temperatures, eliminating any significant energy addition associated with the start of the second RCP.

The LTOP restrictions are based on RCS cold leg temperature. This temperature will be determined by using RCS cold leg temperature indication when RCPs are running, or natural circulation if it is occurring. Otherwise, SDC return temperature indication will be used.

Restrictions on RCS makeup pumping capacity are included in Technical Specification 3.4.9.3. These restrictions are based on balancing the requirements for LTOP and shutdown risk. For shutdown risk reduction, it is desirable to have maximum makeup capacity and to maintain the RCS full (not vented). However, for LTOP it is desirable to minimize makeup capacity and vent the RCS. To satisfy these competing requirements, makeup pumps can be made not capable of injecting, but available at short notice.

A charging pump can be considered to be not capable of injecting into the RCS by use of any of the following methods and the appropriate administrative controls.

1. Placing the motor circuit breaker in the open position.
2. Removing the charging pump motor overload heaters from the charging pump circuit.
3. Removing the charging pump motor controller from the motor control center.

A HPSI pump can be considered to be not capable of injecting into the RCS by use of any of the following methods and the appropriate administrative controls.

1. Racking down the motor circuit breaker from the power supply circuit.
2. Shutting and tagging the discharge valve with the key lock on the control panel (2-SI-654 or 2-SI-656).
3. Placing the pump control switch in the pull-to-lock position and removing the breaker control power fuses.
4. Placing the pump control switch in the pull-to-lock position and shutting the discharge valve with the key lock on the control panel (2-SI-654 or 2-SI-656).

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INSERT A - Page B 3/4 4-7b

These methods to prevent charging pumps and HPSI pumps from injecting into the RCS, when combined with the appropriate administrative controls, meet the requirement for two independent means to prevent pump starts. The use of these methods prevent pump starts as a result of a single failure or inadvertent single action.

**Attachment 2**

**Millstone Nuclear Power Station, Unit No. 2**

**Response to a Request for Additional Information  
Proposed Revision to Technical Specifications  
Charging and High Pressure Safety Injection Pump Surveillance Requirements  
Retyped Pages**

**February 2000**

## REACTOR COOLANT SYSTEM

### BASES

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The restrictions apply only to the start of the first RCP. Once at least one RCP is running, equilibrium is achieved between the primary and secondary temperatures, eliminating any significant energy addition associated with the start of the second RCP.

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Restrictions on RCS makeup pumping capacity are included in Technical Specification 3.4.9.3. These restrictions are based on balancing the requirements for LTOP and shutdown risk. For shutdown risk reduction, it is desirable to have maximum makeup capacity and to maintain the RCS full (not vented). However, for LTOP it is desirable to minimize makeup capacity and vent the RCS. To satisfy these competing requirements, makeup pumps can be made not capable of injecting, but available at short notice.

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1. Placing the motor circuit breaker in the open position.
2. Removing the charging pump motor overload heaters from the charging pump circuit.
3. Removing the charging pump motor controller from the motor control center.

A HPSI pump can be considered to be not capable of injecting into the RCS by use of any of the following methods and the appropriate administrative controls.

1. Racking down the motor circuit breaker from the power supply circuit.
2. Shutting and tagging the discharge valve with the key lock on the control panel (2-SI-654 or 2-SI-656).
3. Placing the pump control switch in the pull-to-lock position and removing the breaker control power fuses.
4. Placing the pump control switch in the pull-to-lock position and shutting the discharge valve with the key lock on the control panel (2-SI-654 or 2-SI-656).

These methods to prevent charging pumps and HPSI pumps from injecting into the RCS, when combined with the appropriate administrative controls, meet the requirement for two independent means to prevent pump starts. The use of these methods prevent pump starts as a result of a single failure or inadvertent single action.