

Docket No. 50-423
B16304

Attachment 1
Millstone Nuclear Power Station Unit No. 3
Proposed Revision to Technical Specification
Reactor Coolant System Overpressure Protection System
(PTSCR 3-14-96)
NNECO's Commitments

April 1997

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Enclosure
List of Regulatory Commitments

The following table identifies those actions committed to by NNECO in this document. Any other actions discussed in the submittal represent intended or planned actions by NNECO. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Manager - Nuclear Licensing at the Millstone Nuclear Power Station Unit No. 3 of any questions regarding this document or any associated regulatory commitments.

Commitment	Committed Date or Outage
NONE	N/A

Attachment 2

Millstone Nuclear Power Station Unit No. 3
Proposed Revision to Technical Specification
Reactor Coolant System Overpressure Protection System
(PTSCR 3-14-96)
Marked Up Page

MARKUP OF PROPOSED CHANGE

Refer to the attached markup of the proposed change to the Technical Specifications. The attached markup reflects the currently issued revision of the Technical Specifications listed below. Pending Technical Specifications changes or Technical Specification changes issued subsequent to this submittal are not reflected in the enclosed markup.

The following Technical Specifications change is included in the attached markup.

- The required setpoint of the residual heat removal suction relief valves is being revised from 450 psig to a range of ≥ 426.8 psig and ≤ 453.2 psig :

3.4.9.3

REACTOR COOLANT SYSTEMOVERPRESSURE PROTECTION SYSTEMSLIMITING CONDITION FOR OPERATION

3.4.9.3 An Overpressure Protection System shall be OPERABLE with either a or b below:

- a. Two relief valves, as follows:
 1. Two power-operated relief valves (PORVs) with lift settings which do not exceed the limit established in Figure 3.4-4a or Figure 3.4-4b, as appropriate, or
 2. Two residual heat removal (RHR) suction relief valves ~~each~~ with ~~a setpoint of 450 psig~~, or $\text{SETPOINTS } \geq 426.8 \text{ PSIG AND } \leq 453.2 \text{ PSIG}$
 3. One PORV with lift settings within the limits specified in Figure 3.4-4a or Figure 3.4-4b, as appropriate and one RHR suction relief valve with a setpoint of ~~450 psig~~. $\geq 426.8 \text{ PSIG AND } \leq 453.2 \text{ PSIG}$
- b. The Reactor Coolant System (RCS) depressurized with an RCS vent of greater than or equal to 5.4 square inches.

APPLICABILITY: MODE 3 when the temperature of any RCS cold leg is less than or equal to 350°F and MODE 4; MODE 5, and MODE 6 when the head is on the reactor vessel.

ACTION:

- a. With one of two required relief valves inoperable in MODE 3 or 4, restore two relief valves to OPERABLE status within 7 days or depressurize and vent the RCS through at least a 5.4 square inch vent within the next 8 hours.
- b. With one of two required relief valves inoperable in MODE 5 OR 6, either (1) restore two relief valves to OPERABLE status within 24 hours, or (2) complete depressurization and venting of the RCS through at least a 5.4 square inch vent within a total of 32 hours.
- c. With both of the required relief valves inoperable, complete depressurization and venting the RCS through at least a 5.4 square inch vent within 8 hours.
- d. With the RCS vented per ACTIONS a, b or c, verify the vent pathway at least once per 31 days when the pathway is provided by a valve(s), that is locked, sealed or otherwise secured in the open position; otherwise, verify the vent pathway every 12 hours.

Attachment 3

Millstone Nuclear Power Station Unit No. 3
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(PTSCR 3-14-96)
Retyped Page

RETYPE OF PROPOSED CHANGE

Refer to the attached retype of the proposed change to the Technical Specifications. The attached retype reflects the currently issued version of the Technical Specifications. Pending Technical Specification changes or Technical Specification changes issued subsequent to this submittal are not reflected in the enclosed retype. The enclosed retype should be checked for continuity with Technical Specifications prior to issuance.

REACTOR COOLANT SYSTEM

OVERPRESSURE PROTECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.9.3 An Overpressure Protection System shall be OPERABLE with either a or b below:

- a. Two relief valves, as follows:
 1. Two power-operated relief valves (PORVs) with lift settings which do not exceed the limit established in Figure 3.4-4a or Figure 3.4-4b, as appropriate, or
 2. Two residual heat removal (RHR) suction relief valves with setpoints ≥ 426.8 psig and ≤ 453.2 psig, or
 3. One PORV with lift settings within the limits specified in Figure 3.4-4a or Figure 3.4-4b, as appropriate and one RHR suction relief valve with a setpoint ≥ 426.8 psig and ≤ 453.2 psig.
- b. The Reactor Coolant System (RCS) depressurized with an RCS vent of greater than or equal to 5.4 square inches.

APPLICABILITY: MODE 3 when the temperature of any RCS cold leg is less than or equal to 350°F and MODE 4; MODE 5, and MODE 6 when the head is on the reactor vessel.

ACTION:

- a. With one of two required relief valves inoperable in MODE 3 or 4, restore two relief valves to OPERABLE status within 7 days or depressurize and vent the RCS through at least a 5.4 square inch vent within the next 8 hours.
- b. With one of two required relief valves inoperable in MODE 5 OR 6, either (1) restore two relief valves to OPERABLE status within 24 hours, or (2) complete depressurization and venting of the RCS through at least a 5.4 square inch vent within a total of 32 hours.
- c. With both of the required relief valves inoperable, complete depressurization and venting the RCS through at least a 5.4 square inch vent within 8 hours.
- d. With the RCS vented per ACTIONS a, b or c, verify the vent pathway at least once per 31 days when the pathway is provided by a valve(s), that is locked, sealed or otherwise secured in the open position; otherwise, verify the vent pathway every 12 hours.

Attachment 4

Millstone Nuclear Power Station Unit No. 3
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Background and Safety Assessment

April 1997

Background

The decrease in the residual heat removal (RHR) suction relief valves setpoint was the result of recent reviews of the Millstone Unit No. 3 design bases. The review revealed that the original setpoint of 450 psig (with a ASME Code tolerance of $\pm 3\%$) of the RHR suction relief valves was modified in 1985 when it was determined that the setpoint was too high to prevent potential overpressurization of the RHR and RCS when the RHR is unisolated from the RCS. The setpoint was lowered to 440 psig (with a ASME Code tolerance of $\pm 3\%$), in 1985 prior to the issuance of Millstone Unit No. 3 operating license. Although the operating procedures and most design documents were modified to indicate the 440 psig $\pm 3\%$ setpoint, the setpoint listed in Technical Specification 3.4.9.3 for the suction relief valves was not changed.

Safety Assessment

The RHR suction relief valves are used in conjunction with the Power Operated Relief Valves at Millstone Unit No. 3 to ensure that the 10CFR50, Appendix G requirements are not exceeded during low temperature operation. The RHR suction relief valves must be capable of mitigating mass injection and heat injection transients which may occur during low temperature operation. The decrease in the relief valve setpoint was evaluated against the valve's ability to mitigate a postulated RCS cold overpressurization event. The evaluation calculated the maximum expected RCS pressure during a cold overpressurization event to be 547 psig with the relief valves set conservatively at their upper limit of 453.2 psig. The 547 psig RCS pressure is 11 psig less than the 10CFR50, Appendix G allowable pressure of 558 psig. The evaluation concluded that a RHR relief valve setpoint of 440 psig $\pm 3\%$ (≥ 426.8 psig and ≤ 453.2 psig) is adequate to ensure that the 10CFR50, Appendix G requirements are not exceeded during a postulated cold overpressurization event.

Additionally, the decrease in the relief valve setpoint was evaluated against the pressure in which the RHR is unisolated from the RCS. Each RHR loop is isolated from the RCS on the suction side by three normally closed, motor operated valves. Two of the valves are interlocked to prevent opening if the RCS pressure is above 375 psig. This provides adequate margin between the minimum relief valve setpoint and the maximum RCS pressure. The evaluation concluded that a RHR relief valve setpoint of 440 psig $\pm 3\%$ (≥ 426.8 psig and ≤ 453.2 psig) provides sufficient allowance to minimize the probability of an inadvertent valve opening.

Based on the above, the proposed Technical Specification change is safe.

Docket No. 50-423
B16304

Attachment 5

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Significant Hazards Consideration and Environmental Considerations

April 1997

Significant Hazards Consideration

NNECO has reviewed the proposed change in accordance with 10CFR 50.92 and has concluded that the change does not involve a significant hazards consideration (SHC). The bases for this conclusion is that the three criteria of 10CFR 50.92(c) are not satisfied. The proposed change does not involve a SHC because the changes would not:

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

The proposed change to Technical Specification 3.4.9.3 to decrease the setpoint of the residual heat removal suction relief valves from 450 psig \pm 3% to 440 psig \pm 3% (\geq 426.8 psig and \leq 453.2 psig) is consistent with the design capabilities and system requirements of the relief valves and the relief valves are not credited in previously evaluated accidents.

Therefore, the proposed change does not involve a significant increase in the probability or consequence 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 to Technical Specification 3.4.9.3 to decrease the setpoint of the residual heat removal suction relief valves from 450 psig \pm 3% to 440 psig \pm 3% (\geq 426.8 psig and \leq 453.2 psig) does not change the operation of the residual heat removal system, reactor coolant system or any system component during normal or accident evaluations. The proposed change to the setpoint of the residual heat removal suction relief valves from 450 psig \pm 3% to 440 psig \pm 3% (\geq 426.8 psig and \leq 453.2 psig) also ensures protection of the reactor coolant system against cold overpressurization transients in accordance with the requirements of 10CFR50, Appendix G.

Therefore, the proposed change does 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 change to Technical Specification 3.4.9.3 to decrease the setpoint of the residual heat removal suction relief valves from 450 psig \pm 3% to 440 \pm 3% (\geq 426.8 psig and \leq 453.2 psig) provides an acceptable allowance between the maximum relief valve setpoint (\leq 453.2 psig) and 10CFR50, Appendix G requirements. The proposed change to the setpoint provides sufficient allowance between the minimum relief valve setpoint (\geq 426.8 psig) and reactor coolant

- .. system pressure when residual heat removal system is unisolated from the reactor coolant system to minimize the probability of an inadvertent residual heat removal system relief valve opening.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

In conclusion, based on the information provided, it is determined that the proposed change does not involve an SHC.

Environmental Considerations

NNECO has reviewed the proposed license amendment against the criteria of 10CFR 51.22 for environmental considerations. The proposed change does not involve a SHC, does not significantly increase the type and amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, NNECO concludes that the proposed change meets the criteria delineated in 10CFR 51.22(c)(9) for categorical exclusion from the requirements of environmental considerations.