UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 195

TO FACILITY OPERATING LICENSE NO. DPR-65

NORTHEAST NUCLEAR ENERGY COMPANY

THE CONNECTICUT LIGHT AND POWER COMPANY

THE WESTERN MASSACHUSETTS ELECTRIC COMPANY

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 2

DOCKET NO. 50-336

1.0 INTRODUCTION

By letter dated September 29, 1995, as supplemented November 9, 1995, the Northeast Nuclear Energy Company (NNECO/the licensee) submitted a request for changes to the Millstone Nuclear Power Station, Unit No. 2 Technical Specifications (TS). The requested changes would provide three changes to the TS relating to the pressurizer safety valves (PSV) and the main steam safety valves (MSSV).

The first change is to TS 3.4.2.1 and 3.4.2.2 and involves relaxing the as-found setpoint tolerance for the PSVs and the MSSVs from the current value of ±1% to ±3%. Table 4.7-1 is also modified to correct the as-found tolerance for the MSSV from ±1% to ±3%. Notes are added to TS 3.4.2.2 and Table 4.7-1 which specify that the lift setting should be determined at nominal operating conditions and should be set at ±1% of the lift setting.

For the second change, Surveillance Requirement 4.7.1.1 and Table 4.7-1 are modified to eliminate the need to verify the orifice size of each MSSV.

The third change modifies the statement for TS 3.7.1.1 so that if a MSSV is inoperable and compensating action cannot be taken, the plant must be brought to hot shutdown (Mode 4) within 12 hours instead of cold shutdown (Mode 5) in 30 hours.

The November 9, 1995, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 BACKGROUND

Overpressure protection for the reactor coolant system (RCS) and the main steam system is provided, in part, by the PSVs and the MSSVs located on the pressurizer and on the four main steam lines, respectively.

The PSVs are credited for mitigation of RCS overpressurization events. The limiting RCS overpressurization event is the loss of electrical load.

TS 3.7.1.1 requires all MSSVs to be operable in Modes 1, 2, and 3. If the MSSVs are not operable, the action statement specifies that operation in Modes 1, 2, and 3 may continue provided that either the inoperable valves are restored to operable status or the high power level trip setpoint be reduced per Table 3.7.1 (which allows up to three of the eight valves on any one steam generator to be inoperable). Otherwise, the plant is required to be in Mode 3 within the next 6 hours and in Mode 5, cold shutdown, within the following 30 hours. The proposed modification is to require that the plant be in hot shutdown (Mode 4) within the following 12 hours instead of cold shutdown (Mode 5) in 30 hours.

3.0 EVALUATION

In the telecon of November 1, 1995, the staff had informed NNECO that in similar proposals by licensees with plants designed by Combustion Engineering, the Feedwater Line Break Event was frequently determined to be the limiting pressurization event for the RCS. NNECO's letter of November 9, 1995 stated that the limiting RCS pressurization event for Millstone Unit 2 is the Loss of Load Event, as described in Section 14.2.1 of the FSAR. As stated in Section 14.2.8 of the FSAR, the Feedwater System Pipe Break Event is "not in the current licensing basis for Millstone Unit 2 and, therefore, is not analyzed."

The loss of electrical load was reanalyzed by NNECO with a +3 percent tolerance from the nominal setpoints for the pressurizer safety valves and the main steam safety valves. The analysis showed that RCS pressure remains below the ASME allowable of 110 percent of design. NNECO also stated that the RCS pressure used for accidents where minimum departure from nucleate boiling ratio (DNBR) is a concern bounds the -3 percent lower bound on the PSV nominal setpoint. Thus, the allowance of a ±3% tolerance has no impact on the pressure limit or minimum DNBR for the limiting DNBR transients. The staff, therefore, finds the ±3% tolerance limit to be acceptable for the PSVs.

NNECO reanalyzed the steam generator tube rupture (SGTR) event to take into account the ±3% as-found tolerance and to extend the margin for operator action to 1 hour. The results indicated that the combined effect of extended releases and a ±3% tolerance on the MSSV setpoint has only a small effect on the calculated offsite doses which were found to be a small fraction of the 10 CFR Part 100 acceptance criteria. The staff, therefore, finds the results for the reanalysis of the SGTR event to be acceptable.

By the letter of November 9, 1995, NNECO informed the staff that, with the exception of the SGTR event, the events analyzed in the Safety Analyses section (Chapter 14) of the Millstone Unit 2 FSAR already take into account a ±3 percent tolerance for the PSVs and MSSVs. This is verified in Table 14.0.9-1 of the FSAR. As a result, the analysis provided with the proposed revision to the TS was limited to the change to the analysis of the SGTR event. Upon approval of the proposed TS change, NNECO stated that the new results of the SGTR event will be incorporated into the FSAR. The staff, therefore, finds that NNECO has provided acceptable reanalyses for the proposed changes and, therfore, the proposed changes are acceptable.

NNECO proposed to eliminate the orifice diameter of 4.515 square inches listed for the steam line safety valves in Table 4.7-1. NNECO stated that the MSSV orifice size represents the smallest inside diameter of the safety valve nozzle, an internal part of the valve. The orifice diameter is not adjustable and can only be changed by replacement of the nozzle. Replacement of the nozzle requires removal and disassembly of the safety valve. Further, only one size nozzle is available for these safety valves. Since there is no adjustment possible to the orifice size, and changes to the orifice requires a modification of the valve that would be covered under the design change process, the specification of the orifice size in the TS is unnecessary. The staff agrees with this since removing the specification will have no impact on the plant configuration or operation and the safety analysis is unaffected by the change.

The proposed modification to require that the plant be in hot shutdown (Mode 4) within the following 12 hours instead of cold shutdown (Mode 5) in 30 hours is on the following basis. The limiting condition for operation (LCO) does not require the MSSVs to be operable in Mode 4 (RCS average temperature less than 300 °F but greater than 200 °F). Therefore, the action statement is being changed to be consistent with the LCO. This change is also consistent with NUREG-1432, "Standard Technical Specifications - Combustion Engineering Plants." The staff, therefore, finds this modification to be acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Connecticut State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards

consideration, and there has been no public comment on such finding (60 FR 54723). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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