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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 230

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 9, 1998, as supplemented February 19 and 26, 1999, the Northeast Nuclear Energy Company, et al. (the licensee), submitted a request for changes to the Millstone Nuclear Power Station, Unit No. 2 Technical Specifications (TS). The requested changes would change the TS by: (1) changing TS definitions 1.24, "Core Operating Limits Report," 1.27, "Engineering Safety Feature Response Time," and 1.31, "Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODCM)"; (2) changing TS 3.0.2, "Limiting Condition for Operation," by adding a new TS 3.0.6 to the Limiting Condition for Operation TS section; (3) changing TS 4.0.5, "Surveillance Requirements"; (4) changing the mode applicability of TS 3.2.3, "Total Unrodded Integrated Radial Peaking—F_r^T"; (5) changing TS 3.3.2.1, "Engineered Safety Features Actuation System Instrumentation," by modifying TS Table 4.3-2 Table Notation (1) which it references; (6) changing TS 4.4.1.1, "Reactor Coolant System - Coolant Loops and Coolant Circulation Startup and Power Operation;" and, (7) changing TS 4.4.11, "Reactor Coolant System - Reactor Coolant System Vents." The associated TS Bases sections would also be changed. The proposed changes would resolve previously identified TS compliance issues. The supplemental letters provided clarifying information that did not change the original proposed no significant hazards consideration determination or expand the scope of the original Federal Register notice.

2.0 EVALUATION

The licensee has requested changes to the TS to resolve previously identified TS compliance issues. The issues are described below along with the staff's evaluation of the licensee's proposals.

2.1 TS Definitions

Currently, TS definition 1.24, "Core Operating Limits Report," refers to TS 6.9.1.7, "Monthly Operating Report." This reference is in error. The correct reference should be TS 6.9.1.8, "Core Operating Limits Report." The licensee's proposal corrects an editorial error in the TS definition and is therefore acceptable.

Currently, TS definition 1.27, reads, "Engineering Safety Feature Response Time." The word "Engineering" should actually read "Engineered." The licensee's proposal corrects an editorial error in the TS definition and is therefore acceptable.

Currently, TS definition 1.31, "Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODCM)," contains the incorrectly spelled word "radionuclines." The correct spelling should be "radionuclides." Also, the definition's reference to TS 6.16 is incorrect. The correct reference should be to TS 6.15. The licensee's proposal corrects editorial errors in the TS definition and is therefore acceptable.

2.2 Technical Specifications 3.0.2 and 3.0.6

The licensee is proposing to add a new TS, i.e., TS 3.0.6, to allow inoperable equipment to be placed in a condition different from that required by the TS action statement. This new TS will state that it is acceptable to return inoperable equipment to service, under administrative control, but only to demonstrate operability of that equipment, or the operability of other equipment. Since this is an exception to TS 3.0.2, a reference to TS 3.0.6 will be added to TS 3.0.2. The TS Bases will also be changed to reflect the changes to the TS.

The licensee's proposal is consistent with NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants," Revision 1, April 1995. The Bases section of NUREG-1432 contains the safety evaluation justifying the proposed TS 3.0.6 wording (the corresponding section in NUREG-1432 is 3.0.5). The applicable portions of NUREG-1432, are quoted below:

> LCO 3.0 [6] establishes the allowance for restoring equipment to service under administrative controls when it has been removed from service or declared inoperable to comply with ACTIONS. The sole purpose of this Specification is to provide an exception to LCO 3.0.2 (e.g., to not comply with the applicable Required Action(s)) to allow the performance of SRs [surveillance requirements] to demonstrate:
>
> a. The OPERABILITY of the equipment being returned to service; or
>
> b. The OPERABILITY of other equipment.
>
> The administrative controls ensure that time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the allowed SRs. This Specification does not provide time to perform any other preventive or corrective maintenance.
>
> An example of demonstrating the OPERABILITY of the equipment being returned to service is reopening a containment isolation valve that has been closed to comply with Required Actions and must be reopened to perform the SRs.

> An example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to prevent the trip function from occurring during the performance of an SR on another channel in the other trip system. A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to permit the logic to function and indicate the appropriate response during the performance of an SR on another channel in the same trip system.

The licensee's proposed TS revision allows the licensee to perform SRs to demonstrate equipment operability. The licensee's proposed TS has previously been shown by the staff, in NUREG-1432, to ensure adequate safety. Therefore, the licensee's proposal is acceptable.

2.3 Technical Specification 4.0.5 and Bases 3/4.4.10

Currently, TS 4.0.5 states, in part:

> Inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).

Also, TS Bases 3/4.4.10 currently states:

> The inservice inspection and testing programs for ASME Code Class 1, 2 and 3 components ensure that the structural integrity and operational readiness of these components will be maintained at an acceptable level throughout the life of the plant. These programs are in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR Part 50.55a(g) except where specific written relief has been granted by the Commission pursuant to 10 CFR Part 50.55a(g)(6)(i).

The licensee is proposing to delete the phrase "(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i)" from TS 4.0.5 and TS Bases 3/4.4.10.

The licensee referenced the guidance of NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants," April 1995, for its justification. As noted in NUREG-1482, the NRC staff recognized that situations would arise which would put the licensee in a condition that is not in strict compliance with the TS 4.0.5 requirement to comply with ASME Section XI "except where specific written relief has been granted." For instance, 10 CFR 50.55a(f)(5)(iv) and 10 CFR 50.55a(g)(5)(iv), allows licensees up to 1 year after the start of a new 120-month inspection interval to inform the NRC of code requirements that are impractical. Thus, the licensee's current TS would require them to receive prior NRC approval even though the regulations explicitly allow licensees up to 1 year to inform the NRC of impractical code requirements. The licensee's request is acceptable because continued compliance with the regulation will ensure adequate safety.

2.4 Technical Specification 3.2.3

The licensee is proposing to change the mode of operability for TS 3.2.3, "Total Unrodded Integrated Radial Peaking Factor - F_r^T," from "Mode 1" to "Mode 1 with Thermal Power >20% RTPP*." The licensee stated that the accuracy of the neutron flux information from the incore detectors is not reliable below 20% power. The licensee has proposed that the TS apply only when the data from the incore detectors is reliable. The licensee stated that the current TS surveillance requirements do not require the verification of this limit until prior to operation above 70% following each fuel loading, prior to 31 days accumulated operation in Mode 1, or if the azimuthal power tilt limit is exceeded (TS 3.2.4 which is applicable in Mode 1 above 50% power). Based on the information provided by the licensee, the staff agrees that requiring operability of this instrument during a period when the incoming data is unreliable is not required to ensure safety. Therefore, the staff finds the licensee's proposal acceptable.

The licensee has also proposed several changes to the TS Bases to correct errors and provide more information to the plant operators. These changes are acceptable because they provide the plant operators with more accurate information.

2.5 Technical Specification 3.3.2.1

The licensee is proposing to revise TS 3.3.2.1 to add an exception to TS 4.0.4. The exception will allow a delay in the channel functional test of the automatic actuation logic associated with ESF actuations for safety injection, containment isolation, main steam line isolation, and enclosure building filtration, until the actuation blocks are removed. Normally, the automatic actuation logic for these functions is tested by use of the Automatic Testing Insertor (ATI) circuit. However, the licensee stated that the ATI will not function properly when the features checked by the ATI are blocked or bypassed. During plant startup, the low pressurizer pressure safety injection and the low steam line pressure main steam line isolation actuations are blocked until pressurizer pressure and steam generator pressure have been raised sufficiently to automatically remove the blocks. The pressurizer and steam generator pressures are normally not high enough to remove the blocks until after Mode 3 is entered. The proposed exception to TS 4.0.4 allows entry into Mode 3 with equipment that is inoperable because conditions can not be established to perform the surveillance requirement until after Mode 3 is entered. The applicable pressures at which these actuation blocks are expected to be removed are listed in the new TS.

Based on the information provided by the licensee, the staff finds that the licensee's proposal is acceptable because it ensures the component testing is performed only when the appropriate inputs to the ATI are available, which is consistent with FSAR assumptions for removing engineered safety features actuation system interlocks.

2.6 Technical Specification 4.4.1.1

TS surveillance requirement 4.4.1.1 currently states "The Flow Dependent Selector Switch shall be determined to be in the 4 pump position within 15 minutes prior to making the reactor critical and at least once per 12 hours thereafter." The licensee is proposing to replace this wording with "The above required coolant loops shall be verified to be in operation and circulating reactor coolant at least once per 12 hours."

The licensee proposed this change to make the TS SR more consistent with the corresponding Limiting Condition for Operation. The actual requirements for operable reactor coolant pumps and the actual position of the Flow Dependent Selector Switch will not be changed by the licensee's proposal. The licensee's proposal is consistent with NUREG-1432. The Bases section of NUREG-1432 contains the safety evaluation justifying the proposed TS surveillance requirement 4.4.1.1 wording. The applicable portions of NUREG-1432, are quoted below:

> This SR requires verification every 12 hours of the required number of loops in operation. Verification includes flow rate, temperature, or pump status monitoring, which help to ensure that forced flow is providing heat removal while maintaining the margin to DNB. The Frequency of 12 hours has been shown by operating practice to be sufficient to regularly assess degradation and verify operation within safety analyses assumptions. In addition, control room indication and alarms will normally indicate loop status.

The licensee's proposed TS revision allows the licensee to perform a different SR to demonstrate reactor coolant loop operability. The licensee's proposed TS has previously been shown by the staff, in NUREG-1432, to ensure adequate safety. Therefore, the licensee's proposal is acceptable.

2.7 Technical Specification 4.4.11.3

The licensee is proposing to revise TS SR 4.4.11.3 by deleting the words "during venting," from the sentence "Verifying flow through the reactor coolant vent system vent paths during venting during COLD SHUTDOWN or REFUELING." The licensee requested this change because the current wording requires that flow through the entire reactor vessel head and pressurizer vent paths be verified in Modes 5 and 6. The vent paths discharge through a sparger directly into the containment structure. This will result in possible contamination of the area where the sparger discharges. Additionally, verifying the vent path requires establishment of solid water condition in the reactor coolant system. This could lead to a cold overpressure event.

As an alternative, the licensee is proposing to verify vent flow with a series of overlapping tests. When the overlapping tests are completed, flow will be verified through all parts of the vent system. The licensee's proposal will provide an acceptable alternative method for verifying the vent path while minimizing the potential to contaminate the area surrounding the sparger and minimizing the chance of a reactor coolant system cold overpressure event. Therefore, the licensee's proposal is acceptable.

3.0 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.

4.0 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 (63 FR 56251). 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.

5.0 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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