



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 23

TO FACILITY OPERATING LICENSE NO. NPF-49

NORTHEAST NUCLEAR ENERGY COMPANY, ET AL.

MILLSTONE NUCLEAR POWER STATION, UNIT NO. 3

DOCKET NO. 50-423

INTRODUCTION

By application dated May 19, 1988, Northeast Nuclear Energy Company (NNECO) requested changes to the Technical Specifications (TS) for Millstone Unit 3. The proposed changes would modify TS 4.6.1.3.a, "Containment Air Locks" to allow the use of alternate test methods for the leak rate testing of the containment air locks.

DISCUSSION AND EVALUATION

At the present time, TS 4.6.1.3.a requires that the containment air locks be leak rate tested using the pressure decay method. The subject test must be conducted within 72 hours following each closing except when the air lock is used for multiple entries, then at least once per 72 hours. NNECO has proposed that two alternate containment air lock leak rate test methods should also be permitted. The alternate test methods would be the precision flow method and overall air lock leakage method which would be designated as TS 4.6.1.3.a.2 and 4.6.1.3.a.3, respectively.

Methods for determining containment leakage are specified in 10 CFR Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors." Specifically, Section III.B or Appendix J describes three test methods which are equally acceptable for the leak rate testing of containment air locks. The presently approved method, specified in existing TS 4.6.1.3.a.1 involves ". . . verifying no detectable seal leakage by pressure decay when the volume between the door seals is pressurized to greater than or equal to Pa, 54.1 psia (39.4 psig), for at least 15 minutes." The "pressure decay" test method is specifically permitted by Appendix J, Section III.B.1.(b) which describes such tests as follows:

"(b) Measurement of the rate of pressure loss of the test chamber of the containment penetration pressurized with air, nitrogen, or pneumatic fluids specified in the technical specifications or associated bases."

NNECO has proposed new TS 4.6.1.3.a.2 to provide an alternate means of containment air lock testing to allow, ". . . verifying that the seal leakage is less than .01 L<sub>a</sub> as determined by precision flow measurements when measured

for at least 30 seconds with the volume between the seals at a constant pressure of greater than or equal to Pa, 54.1 psia (39.4 psig)." The "precision test" method is also permitted by Appendix J, specifically, Section III.B.1.(c) as follows:

"(c) Leakage surveillance by means of a permanently installed system with provisions for continuous or intermittent pressurization of individual or groups of containment penetrations and measurement of rate of pressure loss of air, nitrogen, or pneumatic fluid specified in the technical specification or associated bases through the leak paths."

Finally, NNECO has proposed a second alternate containment air lock test method to be specified in new TS 4.6.1.3.a.8 by referencing TS 4.6.1.3.b, as follows: ". . . conducting overall air lock leakage tests at not less than Pa, 54.1 psia (39.4 psig), and verifying the overall air lock leakage rate is within its limits." The second alternate test method, also permitted by Appendix J, Section III.B.1.(c) involves pressurizing the air lock itself and has the additional benefit of also, routinely, determining the leakage due to air lock penetrations.

Based upon the above, we conclude that the existing and two proposed alternate routine containment air lock test methods are permitted by Appendix J. Moreover, these test methods represent suitable means for determining containment air lock leakage at Millstone Unit 3. Accordingly, the proposed changes to Millstone Unit 3, TS 4.6.1.3.a are acceptable.

#### ENVIRONMENTAL CONSIDERATION

This amendment changes surveillance requirements. The 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 published a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(e)(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.

#### CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: September 26, 1988

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