



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 96 TO FACILITY OPERATING LICENSE NO. DPR-22

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

1.0 INTRODUCTION

By application dated March 1, 1996, the Northern States Power Company (the licensee) requested an amendment to the Technical Specifications (TS) appended to Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. This application superseded the licensee's previous application dated December 11, 1995. The proposed amendment would modify TS Section 4.7, Surveillance Requirements for Primary Containment Automatic Isolation Valves, to revise Surveillance Requirement 4.7.D.4, which requires replacement of the seat seals for the drywell and suppression chamber purge and vent valves every 5 years, to change the seat replacement frequency to every six operating cycles. Further, the amendment would add a new requirement to replace the seat seals of all drywell and suppression chamber 18-inch purge and vent valves if local leak rate testing identified a common mode test failure attributable to seat seal degradation.

2.0 EVALUATION

Surveillance Requirement 4.7.D.4 was established in the Monticello TS by Amendment No. 64, dated May 10, 1989. The changes incorporated by Amendment No. 64 provided resolution, in part, to the NRC's Multi-Plant Action (MPA) B-24, purge and vent valve operability. In response to the staff's position requiring accelerated local leakage testing of containment purge and vent valves due to the poor performance in the industry of butterfly valves, Monticello proposed to add the surveillance requirement to replace the seals of the 18-inch drywell and suppression chamber purge and vent valves every 5 years. In a letter dated November 22, 1985, the licensee indicated that the T-shaped seal valve design for the Monticello purge and vent valves is relatively free of the valve leakage problems found at other facilities and that the existing preventive maintenance program with periodic seal replacement would provide assurance that the valve would seal tightly. In the November 22, 1985, letter, the licensee provided valve leakage test data for the period 1970 to 1985 to support the problem-free performance of these valves.

The licensee has since reviewed the maintenance history and the results of the leakage test program for the primary containment purge and vent valves for the period 1985 to present. The results of the leakage test program for the primary containment purge and vent valves was provided in the licensee's letters dated December 11, 1995, and March 1, 1996. The licensee has indicated that this data supports the conclusion that no significant improvement in valve leakage performance can be attributed to replacement of the valve's elastomer T-shaped seat seal. Furthermore, the results of the leakage tests performed between the elastomer T-shaped seat seal replacement during the 1986 outage and the 1991 outage and subsequent to the 1991 outage indicate no adverse change in valve seat leakage performance.

The licensee also indicated that the leakage test data for the torus to reactor building vacuum breaker isolation valves provide further indication for allowing the revision of Surveillance Requirement 4.7.D.4. The torus to reactor building vacuum breaker isolation valves are 20-inch air-operated butterfly valves of the same model and design as the primary containment purge and vent valves. These valves employ the same T-shaped elastomer seat seal as the purge and vent valves and are not subject to the 5-year seat seal replacement requirement. The T-shaped elastomer seat seals of these valves were replaced in 1986. Since 1986, the torus to reactor building vacuum breaker isolation valves have shown no degradation of valve seat leakage attributed to a failure of the T-shaped elastomer seat seal.

The licensee is not proposing any change to the existing requirements contained in the TS for the leak testing of the primary containment purge and vent valves per 10 CFR Part 50, Appendix J, which requires Type C tests to be "performed during each reactor shutdown for refueling but in no case at intervals greater than 2 years."

This amendment adds a new requirement to replace the seat seals of all drywell and suppression chamber 18-inch purge and vent valves if Type C leakage test identified a common mode test failure attributable to seat seal degradation. This requirement will help to maintain a high level of assurance that the ability of the purge and vent valves is maintained, thus providing an added level of conservatism.

The staff has reviewed the licensee's submittal, including the data provided in support of the revision of Surveillance Requirement 4.7.D.4, and finds the proposed change to be acceptable. Based upon the licensee's operational experience, the fact that the primary containment purge and vent valves will still be local leak rate tested in accordance with 10 CFR Part 50, Appendix J, and the new seat seal replacement requirement, the staff finds that the revision of Surveillance Requirement 4.7.D.4 to require replacement of the purge and vent valve seat seals every six operating cycles instead of 5 years is acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Minnesota 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 surveillance requirement. 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 issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (61 FR 9504). 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 staff 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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