

SAFETY EVALUATION REPORT
PROPOSED CHANGE TO TECHNICAL SPECIFICATIONS
AND EXEMPTION REQUEST CONCERNING
APPENDIX J CONTAINMENT LEAKAGE TESTING
MCGUIRE NUCLEAR STATION, UNIT 1

Background

By letter dated October 21, 1982, the licensee proposed a change to the facility Technical Specifications concerning containment leakage testing. Since the proposed change does not comply with the requirements of Appendix J to 10 CFR Part 50, the licensee also requested an exemption from certain requirements of Appendix J.

Technical Specification 4.6.1.2d of the McGuire plant requires that Type C penetration tests "...be conducted at intervals no greater than 24 months". This is based on 10 CFR 50, Appendix J, III.D.3, which requires that Type C penetration tests "...be performed during each reactor shutdown for refueling but in no case at intervals greater than 2 years."

McGuire, Unit 1 had previously been scheduled for shutdown in October 1982 to install a design modification on the Model D Westinghouse steam generators. Recent delays in delivery of the special tooling required for this modification have resulted in a delay of the scheduled shutdown until November 1982. Therefore, the licensee is proposing a change to the Technical Specifications (and thus also requesting an exemption from the requirements of Appendix J) to allow penetration number M320 to be leak tested no later than November 30, 1982. This would allow a 1-month extension of the test interval from 24 months to 25 months.

For several penetrations, the unit needs to be in cold shutdown during performance of the Type C leakage tests. These penetrations were last tested in 1980 and, therefore, are required by Appendix J to be tested in 1982. Previous shutdowns for steam generator eddy current inspections provided an opportunity to test penetrations which were tested mid-year 1980. At the time of the last shutdown in July 1982, a review was performed by the licensee of all surveillance requiring a unit shutdown to ensure the unit could operate until the next shutdown, which at that time was scheduled for September 1982. Penetration M320 was not leak tested during this July outage since it was believed the next shutdown in 1982 would occur no later than the expiration of the interval for testing of this penetration. Other penetrations with earlier test dates were tested during this outage.

EVALUATION

Penetration M320 is the component cooling return line for components in the reactor building, including the reactor coolant pump motor coolers. Testing of this penetration requires isolating and draining this portion of the line, and thus requires isolation of component cooling flow to the affected components. Therefore, Unit 1 would have to be shut down and cooled down in order to switch to residual heat removal, which would allow isolation of component cooling to the

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reactor coolant pump motor coolers. The licensee's current estimate for shutdown, cooldown, penetration testing, and heatup is approximately 72 hours. More importantly, the reactor coolant system would be subjected to a thermal cycle, only for the purpose of obtaining test results a few weeks earlier than otherwise would be available.

The licensee states, and we agree, that acceptance of a small increase in the surveillance interval when compared with the unnecessary thermal cycle of cooldown and heatup represents responsible and prudent concern for the safety of plant operations. The next outage planned to begin in mid-November allows more than sufficient time to complete this penetration test and all other required surveillance for 1982.

The component cooling system penetration M320 (component cooling water from reactor vessel support coolers and RCP coolers) was previously tested in May 1979 and October 1980. The results from these prior tests were 40 sccm and 45 sccm, respectively. The total allowable leakage for bypass penetrations is specified as 0.07 La or 6343 sccm at 14.8 psig. The average maximum allowable leakage for each of the 69 penetrations would thus be 92 sccm. Therefore, penetration M320 has previously exhibited leakage rates less than half the maximum allowable for individual penetrations. The latest results for leakage rates of all penetrations show a current total of 2187 sccm which is well below the allowable limit of 6343 sccm.

The past history shows the leak rate of the penetration to be well within the allowable limit and there is no reason to assume that penetration M320 will degrade beyond the allowable limit by November 30, 1982.

CONCLUSION

Based on our review of the licensee's submittal, we conclude that this limited extension in the surveillance period, as proposed, does not represent a significant increase in the risk to the health and safety of the public, and is acceptable. We also conclude that a temporary exemption to the requirements of Appendix J, to permit the proposed change to the Technical Specifications, is justified and should be granted.

ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR Section 51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the consideration discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered, does not create the possibility of an accident of a type different from any evaluated previously and does not

involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: October 29, 1982

Principal Contributors: J. Pulsipher, CSB
R. Birkel, LB #4