



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

SAFETY EVALUATION OF REQUEST FOR RELIEF
FROM HYDROSTATIC TEST PRESSURE REQUIREMENTS
MAIN STEAM WARMUP LINES
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT NUCLEAR STATION UNIT NO. 1
DOCKET NO: 50-220

1.0 BACKGROUND

During the current refueling and maintenance outage, Niagara Mohawk is removing the Main Steam Warmup Valves 01-05 and 01-06. The valves will be cut out of the system and socket welded caps will be installed over the remaining two-inch pipe tail pieces. The pipe caps will become part of the reactor coolant pressure boundary.

2.0 CODE REQUIREMENT

The 1983 Edition with Addenda through Summer 1983 of Section XI of the ASME Code, Subsection IWA-5214 requires a hydrostatic test after repairs or replacements. The hydrostatic test must be performed in accordance with Subsection IWB-5222 which requires a hydrostatic test at a pressure above the nominal operating pressure.

3.0 RELIEF REQUEST

Relief is requested from the hydrostatic test pressure requirement for the welded caps. The licensee's request is documented in letters dated March 1 and March 9, 1988.

4.0 LICENSEE'S BASIS FOR REQUEST

The two-inch pipe caps are located downstream of the inboard Main Steam Isolation Valve. The valve manufacturer has advised Niagara Mohawk that pressurizing in the reverse direction would damage the valve. The entire reactor system would have to be pressurized to hydrostatically test these connections. The reactor vessel is designed for a limited number of hydrostatic tests during the plant lifetime. These tests are normally performed at the end of the ten year inservice inspection interval or after major maintenance. The reactor coolant pressure boundary was hydrostatically tested during the 1986 refueling outage.

Niagara Mohawk proposes to perform a system inservice pressure test of these caps at nominal operating pressure in accordance with IWA-5211(c). This inservice pressure test, in combination with the nondestructive examinations to be performed, provides sufficient confidence of the integrity of the piping.

Accordingly, the proposed alternative provides an acceptable level of quality and safety. A reactor coolant system hydrostatic test for a minor modification constitutes a hardship without a compensatory increase in the level of quality and safety.



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5.0 EVALUATION AND CONCLUSION.

The licensee identified in its letters that the cap welds will be one hundred percent surface examined in accordance with ASME Code Standards. The repair will be performed in accordance with ASME Section III, Division 1, paragraph NC 4427, and the weld will be examined by dye penetrant in accordance with paragraph NC 5242(b). The original construction Code was B31.1

A system leakage test will be performed at a nominal pressure of 1035 psig and 200°F per IWB-5221. This leakage pressure is in lieu of a pressure test at 1118 psig and 200°F.

We have reviewed the licensee's proposed repair and testing and find they are being performed in accordance with the proper standards. We conclude that the proposed leakage test pressure (7.4% below that required) is adequate to provide an acceptable level of quality and safety.

The staff finds the Code requirement to pressurize the entire reactor system to be impractical to perform and to impose the requirement on the licensee would create an undue burden on plant systems or equipment whereby the results obtained would not compensate for the level of effort required. The staff grants the relief as requested by the licensee for the above Section XI Code requirements provided the alternate examination provisions contained in the relief request are performed.

PRINCIPAL CONTRIBUTOR:

J. D. Neighbors

