



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 117 TO FACILITY OPERATING LICENSE NO. DPR-63

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION, UNIT NO. 1

DOCKET NO. 50-220

1.0 INTRODUCTION

By letter dated August 19, 1988, Niagara Mohawk Power Corporation (the licensee) requested an amendment to Facility Operating License No. 63 for Nine Mile Point Unit 1 (NMP-1). The amendment as initially proposed would have made the following changes: (1) the frequency of feedwater and main steam line power-operated isolation valves part-stroke testing would be changed from at least twice per week to at least once per quarter (Surveillance Requirement 4.2.7.c); (2) a feedwater and main steam line isolation valves full-stroke test would be added (Surveillance Requirement 4.2.7.d); and (3) the frequency of the main steam line isolation valve position instrument channel test would be changed from once per three months to once per cold shutdown (Surveillance Requirement 4.6.2a).

By submittal dated May 15, 1990, the licensee withdrew the proposed change to Surveillance Requirement 4.6.2a (item 3 above) and its associated note in Table 4.6.2a. With this withdrawal, the prior frequency for performing the instrument channel test for the main steam line isolation valve (MSIV) position trip to the reactor protection system (RPS) will remain unchanged at once per 3 months.

2.0 DISCUSSION

Two types of surveillance tests were initially involved in this matter. One is the requirement for a periodic functional test for the feedwater (FW) isolation valves and the MSIVs. The other is a requirement for an instrument channel test for the MSIV position switch.

In the past, the licensee has performed the valve functional test for the power operated MSIV and the FW isolation valve by actuating a test mode of valve operation which causes the valves to travel to approximately the seven percent closed position and to automatically stop and return to fully open on a twice per week basis. The objective of the licensee's application for amendment

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of the TS dated August 19, 1988, as amended on May 15, 1990, is to change the frequency of this test to once-per-quarter and to add a full stroke valve functional test for each cold shutdown unless already performed within the preceding 92 days.

In the past, the MSIV position switch channel test has not been conducted as a complete channel functional test, rather, it has been conducted by pulling fuses in the channel upstream of the position switch and observing the resulting trip signal to the RPS. Additional details regarding this past mode of instrument channel testing may be found in an NRC staff evaluation as attached to an NRC staff memorandum (Memorandum of M. L. Slosson, NRC, to NMP-1 docket file and public document room dated May 4, 1989). The effect of the licensee's amendment of its application dated May 15, 1990, was to withdraw previously proposed changes to the instrument channel test frequency thus leaving it to be performed at a once-per-three-month frequency. This removes this issue from the scope of this amendment. The licensee has indicated that it is considering changes such that the instrument channel test is conducted as a complete channel test including actuation of the position switch. This subject will be addressed, as necessary, apart from this amendment to the TS.

3.0 EVALUATION

The NMP-1 Technical Specifications (Surveillance Requirement 4.2.7.c) have required that the feedwater and main steam line power-operated isolation valves be part-stroke tested twice per week. A change of frequency from twice per week to once per quarter was requested by the licensee.

The licensee's basis for its request to revise the frequency of the functional testing of the power operated MSIV and the FW isolation valve notes that Article IWV-3000 of ASME Boiler and Pressure Vessel Code, Section XI, 1983 Edition, with Summer 1983 Addendum states that "Category A and B valves shall be exercised at least once every 3 months except as provided by IWV-3412(a), IWV-3415, and IWV-3416." With regard to the exercising procedure, IWV-3412(a) gives the following directions:

"Valves shall be exercised to the position required to fulfill their function unless such operation is not practical during plant operation. If only limited operation is practical during plant operation, the valve shall be part-stroke exercised during plant operation and full-stroke exercised during cold shutdowns. Valves that cannot be exercised during plant operation shall be specifically identified by the Owner and shall be full-stroke exercised during cold shutdowns. Full-stroke exercising during cold shutdowns for all valves not full-stroke exercised during plant operation shall be on a frequency determined by the intervals between shutdowns as follows:

For intervals of 3 months or longer -- exercise during each shutdown.

For intervals of less than 3 months -- full-stroke exercise is not required unless 3 months have passed since last shutdown exercise."



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The licensee indicated that it had reviewed previous MSIV and FW isolation valve test data and had found few failures to meet the test acceptance criteria. The licensee also indicated that its vendor for the MSIV's considered the past functional test frequency of twice weekly to be excessive. On these bases, as well as the consistency of the revised functional testing frequency with ASME Code Section XI and STS guidance, the staff finds acceptable the change of frequency of the power operated MSIV and FW isolation valves testing from at least twice per week to at least once per quarter.

The NMP-1 Technical Specifications have not previously required a full closure test for the feedwater and main steam line isolation valves. The licensee proposes to add a requirement to perform this test during each cold shutdown (TS 4.2.7.d). The staff finds acceptable the licensee's proposal to add Surveillance Requirement 4.2.7.d to incorporate the full closure test for the feedwater and main steam line isolation valves since it is consistent with IWV-3412(a) of ASME Boiler and Pressure Vessel Code, Section XI, 1983 Edition, with Summer 1983 Addendum. The existing Surveillance Requirement 4.2.7.d is renumbered to be 4.2.7.e. This revision is purely administrative.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of the facility components located within the restricted areas as defined in 10 CFR 20 and changes to the surveillance requirements. The staff has determined that this 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 this amendment.

5.0 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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: June 29, 1990

PRINCIPAL CONTRIBUTOR:

Robert E. Martin

