



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 119 TO FACILITY OPERATING LICENSE NO. DPR-63.

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION, UNIT NO. 1

DOCKET NO. 50-220

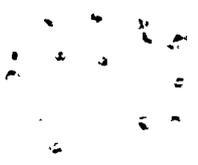
INTRODUCTION

By letter dated November 28, 1990, as supplemented on December 4, 1990, Niagara Mohawk Power Corporation (the licensee) requested a license amendment to revise Technical Specification (TS) 3.6.2/4.6.2. The proposed amendment would permit protective instrumentation to be placed in an inoperable status for up to two hours (up to five hours for the High Radiation Main-Steam Line Instrument Channel Calibration) for required surveillances without placing the Trip System in the tripped condition, provided at least one operable channel in the same Trip System is monitoring that parameter. The December 4, 1990, letter requested that the November 28, 1990, license amendment request be processed on an emergency basis. The licensee's request to process this amendment on an emergency basis was made after the licensee discovered at noon on December 3, 1990, that it was not possible to trip (as required by the TS) the individual channels for two parameters (Low-Low-Low Reactor Water Level and High Drywell Pressure) while attempting to perform required surveillances for these channels. The ability to trip these individual channels also led the licensee to request, and the NRC staff to grant, an oral Temporary Waiver of Compliance (TWOC) on December 3, 1990. The oral TWOC was followed up by a written TWOC on December 4, 1990.

EVALUATION

TS 3.6.2 requires a minimum of two channels of protective instrumentation in each of two Trip Systems to be either operable or tripped. TS 4.6.2 requires periodic surveillance testing of these protective instrumentation channels to demonstrate their operability. Surveillance testing causes the channel being tested to be inoperable during performance of the surveillance tests. Therefore, the channel cannot be relied upon to perform its safety function while being tested. Consequently, the licensee's current operational practices and procedures require the associated Trip System be tripped. Tripping the associated Trip System completes one of the two logic trains for that parameter and leaves the protective instrumentation for that parameter subject to inadvertent actuations (e.g., scrams, isolations, actuations of emergency cooling, etc.) if a spurious trip signal occurs in the other Trip System.

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The changes proposed in the licensee's November 28, 1990, submittal obviate the requirement to place a channel's associated Trip System in the tripped condition for up to two hours (up to five hours for the High Radiation Main-Steam Line Instrument Channel Calibration) during the performance of required surveillances, provided at least one operable channel in the same Trip System is monitoring that parameter.

The licensee's evaluation for the proposed changes noted that tripping a channel in addition to making it inoperable during surveillance testing will increase the likelihood of inadvertent trips, scrams, transients, and challenges to safety systems. Moreover, reliance on one remaining operable channel in the same Trip System will not prevent the required protective actions from being initiated if a trip setpoint is exceeded during a surveillance test while a redundant channel is being tested. The allowable out-of-service time intervals (two or five hours) for performance of surveillances are small in comparison to a normal operating cycle so that the impact on the safety function of the affected Trip System is relatively insignificant. Therefore, the staff concludes that not placing a Trip System in the tripped condition for the proposed allowable out-of-service time will have a negligible effect on the reliable operation of the reactor protective system and will decrease the likelihood of inadvertent trips, scrams, transients, and challenges to safety systems. In addition, the proposed changes are consistent with the guidance provided in the NRC's Standard Technical Specifications for General Electric Boiling Water Reactors, NUREG-0213, Revision 3. As a result of the foregoing discussions, the staff finds the proposed amendment to permit protective instrumentation to be placed in an inoperable status for the specified time intervals while performing required surveillances without placing the Trip System in the tripped condition acceptable, provided at least one operable channel in the same Trip System is monitoring that parameter.

The High Radiation Main-Steam Line Instrument Channel Calibration surveillance requirement is more complex and requires a longer time (five hours) to complete than is required for the other protective instrumentation channels and, therefore, five hours is the proposed allowable out-of-service time for this channel. The staff finds this proposed allowable out-of-service time reasonable and acceptable.

The proposed change to page 191 of the Technical Specification would correct an editorial error which was made when License Amendment No. 43 was issued on May 13, 1981, and is, therefore, acceptable.

STATEMENT OF EMERGENCY CIRCUMSTANCES

The emergency situation developed at noon on December 3, 1990, when the licensee was attempting to perform required surveillances of two parameters (Low-Low-Low Reactor Water Level and High Drywell Pressure). At that time, the licensee determined that it was not possible to trip the individual channels for these parameters while performing the surveillances in accordance

with the licensee's recent determination that the TS required the individual channel to be either operable or tripped to satisfy the requirements of TS 3.6.2. The December 3, 1990, attempt to perform the surveillance test of the two affected parameters was the first time the licensee attempted to perform the required surveillance test in accordance with its determination of the applicable TS requirement. As previously noted, a TWOC was issued to permit performance of the required surveillance test in accordance with the proposed amendment. Approximately 26 surveillance test procedures of the subject type are utilized in performing the required surveillance tests of the protective instrumentation. The next surveillance test is required to be completed by December 10, 1990, consequently emergency action is required.

STAFF CONCLUSION

The staff has concluded that the licensee has made a timely amendment application once the problem was analyzed and defined. The staff has determined that if the changes are not granted, the plant's TS require prompt reactor shut down due to failure to demonstrate operability of the protective instrumentation. Therefore, the staff has concluded that the licensee has justified the need for emergency action, and that the changes are necessary and proper. The proposed changes to the TS are, therefore, acceptable.

FINAL NO SIGNIFICANT HAZARDS CONSIDERATION

The Commission has provided standards for determining whether a significant hazards consideration exists (10 CFR 50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from an accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The following evaluation, by the licensee and with which we agree, demonstrates that the proposed amendment does not involve a significant hazards consideration.

The operation of Nine Mile Point Unit 1, in accordance with the proposed amendment, will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated. The inherent redundancy and reliability of the protective instrumentation trip systems assure that the probability of an accident is not significantly increased. In addition, the restrictive time intervals that govern the trip system condition during the surveillance further limits the probability of an accident that would require the actuation of the instrument channel and associated trip system. The requirement that the associated channel within the same trip system be operable assures that the protective instrumentation response will occur such that the consequences of an accident are not different from that previously evaluated.



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The operation of Nine Mile Point Unit 1, in accordance with the proposed amendment, will not create the possibility of a new or different kind of accident from any previously evaluated.

The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated because the proposed changes do not introduce any new operational modes or physical modifications to the plant.

The operation of Nine Mile Point Unit 1, in accordance with the proposed amendment, will not involve a significant reduction in a margin of safety.

The Technical Specification 4.6.2 surveillance requirements provide verification of the operability of all trip system instrumentation channels. In addition, the channel that monitors the identical parameter within the same trip system must be operable for the relatively short duration that the coincidence change is in effect. This assures that protective instrumentation reliability is maintained. The proposed change provides for a specific time period to perform required surveillances on instrument channels without trips present in associated trip systems. This time allotment tends to enhance the margin of safety by decreasing the probability of unnecessary challenges to safety systems and inadvertent plant transients. Therefore, the proposed amendment will not involve a significant reduction in a margin of safety.

Based on the foregoing, the Commission has concluded that the standards of 10 CFR 50.92 are satisfied. Therefore, the Commission has made a final determination that the proposed amendment does not involve a significant hazards consideration.

STAFF CONSULTATION

The appropriate representative of the State of New York was notified of this amendment. The State of New York had no comments.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in a requirement with respect to the installation or use of the facility components located within the restricted areas as defined in 10 CFR Part 20. 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 made a final no significant hazards consideration finding with respect to this amendment. 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.

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CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) the amendment does not (a) significantly increase the probability or consequences of an accident previously evaluated, (b) increase the possibility of a new or different kind of accident from any previously evaluated or (c) significantly reduce a safety margin and, therefore, the amendment does not involve 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 the amendment will not be inimical to the common defense and security nor to the health and safety of the public.

Dated: December 7, 1990

PRINCIPAL CONTRIBUTOR:

D. Brinkman

