



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 7 TO FACILITY OPERATING LICENSE NO. NPF-69
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT NUCLEAR POWER STATION, UNIT NO. 2
DOCKET NO. 50-410

INTRODUCTION

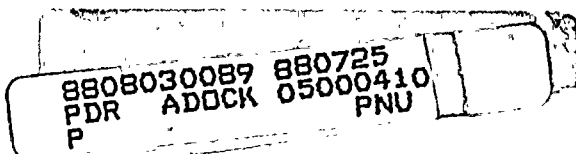
In a letter dated April 28, 1988, the licensee requested Table 3.3.9-2 of the Technical Specifications for Nine Mile Point Unit 2 be revised to reduce the allowable value for the Feedwater System/Main Turbine Trip System Reactor Water Level - High Level 8 from less than or equal to 209.3 inches to less than or equal to 203.8 inches. This change was proposed by the licensee following the review of a January 20, 1988 scram and vessel overflow event. During that review the licensee's staff determined that the allowable value of 209.3 inches was erroneously set too high. The proposed Technical Specification amendment would correct that error.

EVALUATION

In the licensee's April 28, 1988 application for an amendment the following information was provided:

A Level 8 trip signal indicates that the water level in the reactor vessel has increased and initiates protective actions to prevent further vessel overflow. The trip signal is selected low enough to protect the turbine against gross carryover of moisture and to provide adequate core thermal margins during abnormal events. Protective actions initiated with the Level 8 trip signal include closure of main turbine valves, trips of reactor feedwater pumps, trip of Reactor Core Isolation Cooling System and closure of High Pressure Core Spray System shutoff valve.

The Level 8 trip signals are generated from two different reactor water level measurement systems. They are the Narrow Water Range System which has a range of 60 inches (or approximately Level 3 to above Level 8) and the Wide Water Range System which has a range of 210 inches (or approximately top of active fuel to above Level 8). The Narrow Range System provides the trip signal for the Feedwater System/Main Turbine Trip System and the Wide Range System provides the trip signal for the Reactor Core Isolation Cooling System and closure of High Pressure Core Spray System shutoff valve.





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The Feedwater System/Main Turbine Trip System Level 8 trip off the Narrow Range water level instrumentation is the only Level 8 trip which is discussed in the FSAR Chapter 15 transient analysis. The narrow range Level 8 trip itself provides a safety-grade initiation signal and is isolated from the non-safety related control circuitry which initiates turbine and feedwater pump trips. Nine Mile Point Unit 2 takes no credit for the trip in mitigating the consequences of design basis accident.

Credit is taken for the narrow range trip in mitigating the consequences of anticipated operational occurrences (moderate frequency transients). This assumed performance is based on extensive failure rate data for equipment of similar design and quality requirements. For all analyzed transients, failure of the narrow range Level 8 trip would still yield events bounded by the safety limits of transients and limiting fault events analyzed in Chapters 6 and 15 of the Unit 2 FSAR. The Analytical Limit for this trip from the FSAR is at 207.4 inches (referenced to instrument zero). The Wide Range Level 8 trip does not affect any Chapter 15 analysis.

The proposed revision to the Technical Specifications regarding the Feedwater System/Main Turbine Trip System Reactor Water Level - High Level 8 allowable value would revise this value from a non-conservative value with respect to the FSAR Chapter 15 accident analysis to a conservative value. The trip setpoint would remain the same. However, the allowable value provides an upper limit for the trip signal and is the value assumed in performing the accident analysis. Reducing the allowable value would ensure the trip signal would occur at a level that was conservative with respect to the accident analysis. The difference between the Analytical Limit of 207.4 inches and the proposed allowable value of 203.8 inches would allow a margin of 3.6 inches for instrument and calibration inaccuracies. On the basis that the revised value corrects the existing value to make it conservative with respect to existing accident analysis, and therefore would maintain the plant within the design basis, the staff finds the proposed revision acceptable.

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. 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 Sec 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

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: July 25, 1988

PRINCIPAL CONTRIBUTOR:

M. Haughey



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