

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



SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 64 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

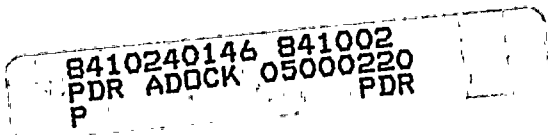
By application dated May 22, 1980 as supplemented and clarified in a letter of April 2, 1984, Niagara Mohawk Power Corporation (the licensee) requested an amendment to Appendix A of Operating License No. DPR-63 for Nine Mile Point Nuclear Power Station Unit No. 1 (NMP-1). The amendment request involves changes to the Limiting Conditions for Operation and supporting bases for the triple low reactor water level setpoint. The change reflects the modification to the low-low-low reactor water level trip setpoint to account for the difference in actual to indicated water level due to potentially high drywell temperature effects. The licensee has raised the low-low-low water level setpoint 20 inches above the original setpoint.

2.0 Evaluation

NMP-1 has a two-division reactor water level instrumentation system with a wide range, narrow range and fuel zone range instrument in each division. It has two Yarway reference water level instruments and two cold reference leg water level instruments. The reference leg in the Yarway system is heated by condensing chamber steam. The Yarway temperature compensated reference leg establishes a heated static reference leg of water for the wide range instrumentation. Large vertical drops (approximately 135") of the reference legs are in the drywell and they exit at approximately the same elevation as the variable legs.

Changes in drywell temperature can result in changes in the temperature of the heated reference column of the Yarway instrumentation. This can result in differences between measured and actual reactor vessel water level.

General Electric prepared Service Information Letter (SIL) No. 299 "High Drywell Temperature Effect on Reactor Vessel Water Level Instrumentation" to correct this inaccuracy in reactor water level instrumentation. The purpose of this SIL 299 is to recommend that BWR licensees review the calibration of their reactor water level instrumentation and where necessary increase the Automatic Depressurization System trip setpoints, the main steam isolation valve trip setpoints, the ECCS trip setpoints and other related trip





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setpoints to mitigate the effects of this potential inaccuracy in reactor vessel water level instrumentation.

For drywell temperatures consistent with a steamline break (340°F) the recommended change in trip setpoint of Yarway instruments was about 12.7% of reference leg length. Based on this information, the licensee has raised the triple low water level to 20 inches higher than the original setpoint. This is conservative because this water level setpoint can initiate emergency core cooling system earlier and maintain adequate core cooling. Therefore, the proposed change is acceptable.

### 3.0 Environmental Considerations

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the 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.

### 4.0 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: October 2, 1984

