



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 12 TO FACILITY OPERATING

LICENSE NO. DPR-22

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

1.0 Introduction

Our concerns regarding the deficiencies in the existing design of reactor protection system (RPS) power monitoring in BWRs was transmitted to Northern States Power Company (the licensee) by NRC Generic Letter dated September 24, 1980. In response to this, by letters dated November 12, 1980, April 24, 1981, March 23, 1982 and May 17, 1982, the licensee proposed design modifications and draft changes to the Technical Specifications. By letter dated September 24, 1982, the licensee proposed changes to the Technical Specifications of Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. A detailed review and Technical Evaluation of these proposed modifications and Technical Specification changes was performed by Lawrence Livermore Laboratory (LLL) under contract to the NRC, and with general supervision by NRC staff. This work is reported in LLL report UCID-19145 "Technical Evaluation of the Monitoring of Electric Power to the Reactor Protection System" dated July 1982 (enclosed).

2.0 Proposed Changes and Evaluation Criteria

The following design modifications and Technical Specification changes were proposed by the licensee:

1. Installation of General Electric (GE) designed protection assemblies, two in each of the three sources of power to the RPS (RPS M-G sets A and B and the one alternate source). Each assembly includes a circuit breaker and a monitoring module consisting of an undervoltage, overvoltage and an underfrequency sensing relay.
2. The licensee also proposed the addition of trip setpoints, Limiting Condition for Operation and Surveillance Requirements in the Technical Specification associated with the design modifications cited above.

The criteria used by LLL in its Technical Evaluation of the proposed changes includes General Design Criteria (GDC) 2 "Design Basis for Protection Against Natural Phenomenon", and GDC 21, "Protection System Reliability and Testability", of Appendix A to 10 CFR Part 50; IEEE-279-1971, "Criteria for Protection Systems for Nuclear Power Generating Stations"; and NRC memorandum from F. Rosa to J. Stolz, T. Ippolito and G. Lainas dated February 19, 1979.

### 3.0 Summary

We have reviewed the LLL Technical Evaluation Report and concur in its findings that: (1) the proposed modifications will provide automatic protection to the RPS components from sustained abnormal power supply and (2) the proposed changes to the Technical Specifications include acceptable Limiting Conditions for Operation and periodic testing in accordance with the Standard Technical Specifications for BWRs. Therefore, we conclude that the licensee's proposed design modifications and changes to Technical Specifications are acceptable.

### 4.0 Environmental Considerations

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact, and pursuant to 10 CFR 51.5(d)(4) that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of the amendment.

### 5.0 Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, the amendment does not involve a 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: November 30, 1982

Principal Contributor: I. Ahmed.