



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 62 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 and Summary

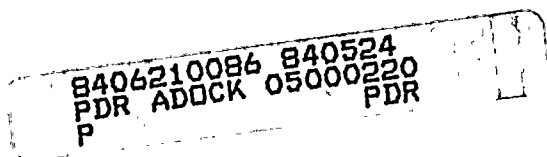
By letter dated January 13, 1984 Niagara Mohawk Power Corporation (NMPC/ licensee) proposed changes to the Technical Specifications (TS) of Facility Operating License No. DPR-63 for the Nine Mile Point Nuclear Station, Unit No. 1. The revisions to the Technical Specifications addressed in this Safety Evaluation include limiting conditions for operation, surveillance requirements and changes to the bases for the protective relaying that was installed on the output side of the reactor protection and reactor trip bus motor generator sets.

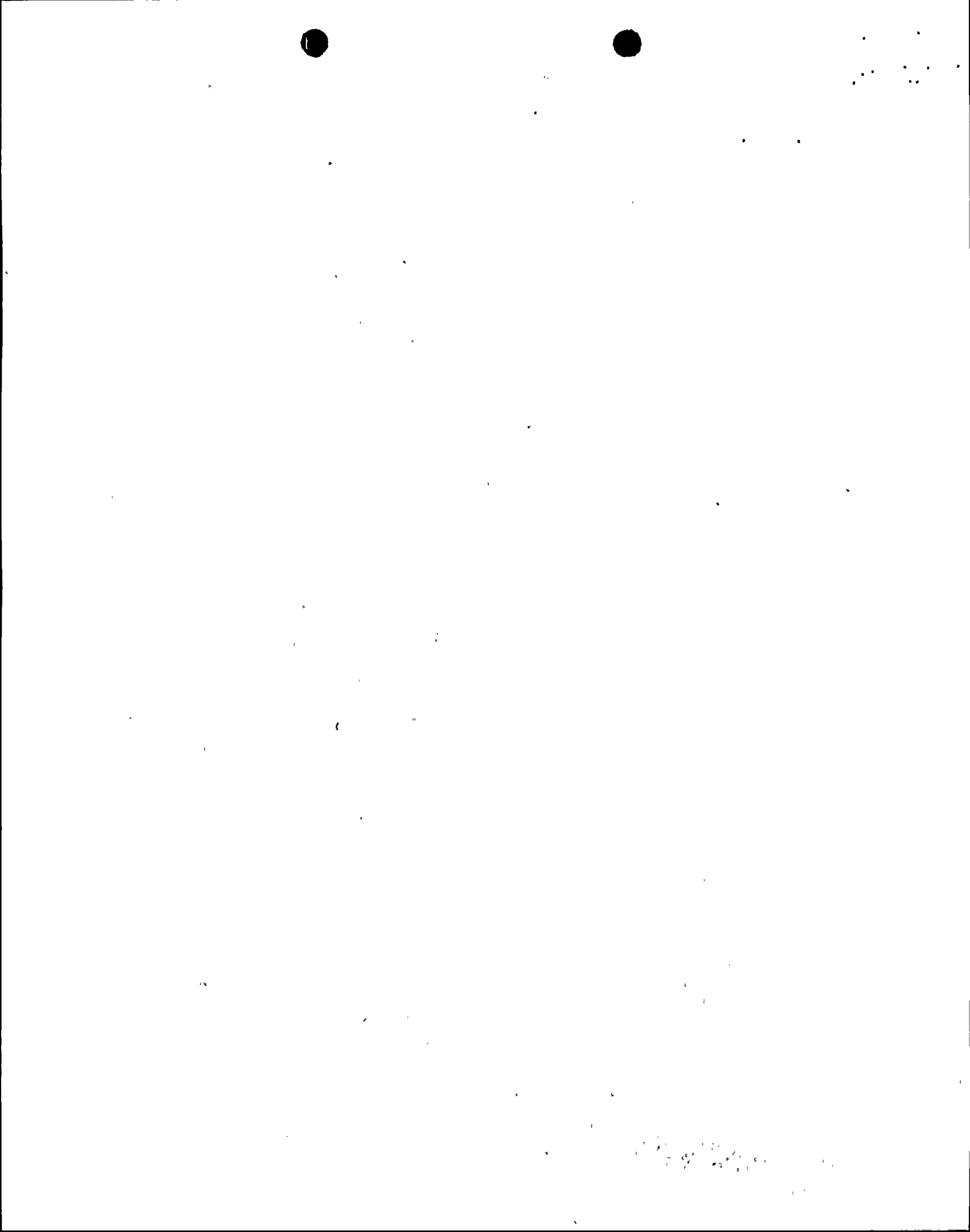
Concerns regarding the deficiencies in the existing design of Reactor Protection System (RPS) power monitoring in BWRs was transmitted to NMPC by NRC generic letter dated September 24, 1980. In response to this, by letters dated December 1, 1982, July 22, 1983, and December 15, 1983, NMPC proposed design modifications. A detailed review and technical evaluation of these proposed modifications and changes to the Technical Specifications were 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-20037 "Technical Evaluation of the Monitoring of Electric Power to the Reactor Protection System," dated March 1984 (enclosed). We have reviewed this technical evaluation report and concur in its conclusion that the proposed design modifications and technical specification changes are acceptable.

2.0 Proposed Changes and Evaluation Criteria

The following design modifications and technical specification changes were proposed by NMPC for Nine Mile Point Unit 1.

1. Installation of two Class 1E detection and isolation assemblies, similar to the GE designed protection assemblies, in each of the five sources of power to the RPS (four M-G sets and the one alternate source). Each assembly includes a circuit breaker and a monitoring module consisting of an undervoltage, an overvoltage and an under-frequency sensing relay. The set points of the voltage relays are based on an assumed maximum cable voltage drop of 5 volts to provide + 10% of 115 volts at the terminals of the RPS components. If tests indicate excessive cable voltage drop in any RPS power cable, then the





circuit containing that cable will be modified to assure + 10% of 115 volts at the terminal of the affected RPS component.

2. 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 include GDC-2, "Design Basis for Protection Against Natural Phenomenon," and GDC-21, "Protection System Reliability and Testability," of Appendix A to 10 CFR 50; IEEE-279-1971, "Criteria for Protection Systems for Nuclear Power Generating Stations;."

3.0 Evaluation

We have reviewed the LLL Technical Evaluation Report and concur in its findings that (1) 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 (LCO) and periodic testing in accordance with the standard technical specification for BWRs. Therefore, we conclude that NMPC's proposed design modifications and changes to the technical specifications are acceptable.

4.0 Environmental Consideration

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

Principal Reviewer: I. Ahmed

Enclosure:
Technical Evaluation Report

Dated: May 24, 1984

