



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 60 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 letter dated January 5, 1984 (Reference 1) Niagara Mohawk Power Corporation (the 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 revision to the Technical Specifications addressed in this Safety Evaluation concerns the changing of the isolation of the emergency condensers from automatic to manual on a high radiation signal.

The current control logic for the emergency condenser initiates automatic isolation upon receiving a high radiation signal from the emergency condenser vent radiation monitors or on high steam flow signals. In the event of a fire in the control complex, high radiation and high steam flow signals may cause a spurious isolation of both emergency condensers. Therefore the removal of the high radiation signal from the control complex was initially proposed as an Appendix R.III.G.3 modification by the licensee. Subsequent to this proposal, the licensee has adopted a position that manual isolation of the emergency condensers on a high radiation signal is acceptable. Manual isolation of the emergency condenser is done on other BWR plants (Big Rock Point, Dresden 2 and 3, Millstone 1, Oyster Creek and LaCrosse). Instead of making changes in the logic circuitry to prevent the spurious isolation, the licensee is proposing the deletion of the automatic isolation of the emergency condenser on high radiation signals.

2.0 Evaluation

During emergency condenser operation, water on the shell side of the condenser boils and vents to the atmosphere while condensing steam inside the tube bundles. Radiation monitors are located on the condenser vent to detect any tube leaks. The proposed change will provide only an alarm in the control room from the radiation monitors with no automatic isolation of the emergency condensers. In the event of a tube leak in the emergency condenser, an uncontrolled release of radioactive gases to the atmosphere could occur for a short time until operator action is taken. Staff concerns about this potential occurrence were discussed with the licensee in a telephone conference on March 5, 1984. Subsequently the licensee in their letter dated March 19, 1984 explained the operator actions that will

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be prescribed for emergency condenser operation. The licensee stated that the operators will take into account the plant condition and other indications, besides the high radiation signal, before manually isolating. The plant conditions and indications include the following:

The high radiation signal is one indicator of a tube leak. The high radiation signal does not, however, provide sufficient indication of a tube leak. There is other guidance available to operators to confirm a tube leak, for example:

- a. Checking Radiation Monitors - If a tube leak exists, high radiation would be sustained. The signal may have been only a radiation spike.
- b. Checking Shell Side Temperature Monitors - If a tube leak exists, shell temperature may increase.
- c. Checking Water Level Monitors - If a tube leak exists, water level may be fluctuating.

The licensee is committed to add the above operator guidance to the appropriate procedures. As described in Reference 2 more flexibility and availability are attained by manual isolation of the emergency condensers. The design basis of the emergency cooling system remains the same. Isolation condensers will still be automatically isolated on a high steam flow.

We find that the modification and changes to the Technical Specifications, in light of this commitment, are acceptable.

3.0 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 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



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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.

5.0 References

1. Letter from C. V. Mangan of Niagara Mohawk Power Corporation to Director of NRR, license amendment request dated January 5, 1984.
2. Memorandum from Themis P. Speis, Assistant Director, DSI to Thomas N. Novak, Assistant Director, DL - "Safety Evaluation of Licensee's Response to NUREG-0737 Item II.K.3.14 - Isolation of Isolation Condensers," dated November 3, 1981.
3. Letter from C. V. Mangan of Niagara Mohawk Power Corporation to Director of NRR dated March 19, 1984.

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Dated: May 8, 1984



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