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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 13 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

By letter dated August 3, 1988, Niagara Mohawk Power Corporation, the licensee, proposed changes to Nine Mile Point Unit 2 Technical Specifications and associated Bases to revise the Nominal Trip Setpoints and Allowable Values pertaining to High Pressure Core Spray (HPCS) and Reactor Core Isolation Cooling (RCIC) pump suction transfer. In the existing Technical Specification calculations, velocity head was not a parametric consideration in pump suction transfer, and hence the existing calculations do not accurately reflect the levels at which transfer should occur.

The licensee has checked and corrected these calculations by introducing the velocity head consideration. The actual transfer level in the tank at a given pressure switch setpoint will vary as a function of flow rate due to the effects of resistance and velocity head losses in the suction piping. In order to provide a parameter with a constant value and to reduce potential confusion over what the CST level in the Technical Specification actually represents, the setpoints for the pressure switches will be specified in the Technical Specification in lieu of tank level.

EVALUATION

Pump Suction Transfer Indication

The licensee proposes to change the existing indication at which HPCS and RCIC pump suction transfers from the condensate storage tank to the suppression pool.

Instead of specifying the tank level at which transfer occurs, the licensee intends to reflect the setpoint of the pressure switch which controls pump suction. The pressure switches are presently located on the safety related portion of the HPCS and RCIC pump suction lines inside of secondary containment. There are no hardware changes involved in the pressure switches modification; only the setpoints will be changed.

Changing the transfer indication of the pressure switches from level to pressure, increases the licensee's flexibility with regard to switchover. During low flow conditions, the licensee may maximize use of the available water volume in the CST by delaying transfer to the suppression pool. The licensee has stated that the proposed change is also intended to promote greater operator convenience. These changes are acceptable.

High Pressure Core Spray (HPCS) and Reactor Coolant Isolation System (RCIC) Switchover Setpoint

The revised calculations account for the velocity head component and replace condensate tank level with the corresponding actuation pressure for both high and low flow conditions. The derived analytical limits are above the required corresponding minimum submergence level in order to prevent vortexing at both high and low flow conditions. Instrument and calibration accuracies and drift have been allowed for.

The actuation pressure associated with the new pressure setpoint remains constant at all flow conditions while the tank level varies. This provides a better means of addressing suction transfer of the HPCS and RCIC systems than does specifying a tank level because it establishes a parameter with a constant value. Incorporating the actuation pressure in the pump suction lines will result in a Technical Specification that is easier to implement and to understand; the potential confusion over what the tank level in the Technical Specifications actually represents will be eliminated. The Allowable Values and Nominal Trip Setpoints proposed in the amendment should assure actuation occurs above the minimum submergence levels under all flow conditions. Therefore, we find this change to be acceptable.

Technical Specification Changes

The following are the Technical Specification changes associated with the proposal:

(1) Table 3.3.3-1/ Item C.1.d

Replace CST level Indication with Pump Suction Pressure Transfer Indication.

(2) Table 3.3.3-2

Replace CST level Trip Setpoint and Allowable Value with Pump Suction Pressure Transfer Trip Setpoint and Allowable Value.

(3) Table 4.3.3.1-1/Item C.1.d

Replace CST level Indication with Pump Suction Pressure Transfer Indication

(4) Table 3.3.5-1

Replace CST level Indication with Pump Suction Transfer Indication

(5) Table 3.3.5-2

Replace CST level Trip Setpoint and Allowable Value with Pump Suction Pressure Transfer Trip Setpoints and Allowable Value.

(6) Table 4.3.5.1-1

Replace CST level Indication with Pump Suction Pressure Transfer Indication

The above Technical Specification changes are consistent with the licensee's supporting analyses and are, therefore, acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in a requirement with respect to the installation or use of the facility components located within the restricted areas as defined in 10 CFR 20 and changes surveillance requirements. 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.

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: April 5, 1990

PRINCIPAL CONTRIBUTOR:
A. Massey