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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 15 TO FACILITY OPERATING LICENSE NO. NPF-69

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION, UNIT NO. 2

DOCKET NO. 50-410

1.0 INTRODUCTION

By letter dated August 17, 1989, Niagara Mohawk Power Corporation (the licensee) proposed a revision to Table 3.3.2-2 of Section 3/4.3.2 of the Nine Mile Point Unit 2 Technical Specifications (TS) to increase the Trip Setpoints and Allowable Values for high absolute and differential temperature isolation instrumentation systems in the main steam tunnel.

The Leakage Detection System monitors, which are located in the main steam tunnel, are equipped with thermocouples and detect increases in temperature which are equivalent to a 25 gpm reactor coolant leakage in the area. When high temperature setpoint values are reached these monitors initiate signals which result in Main Steam Isolation Valve automatic closure and reactor scram. Analysis based on Nine Mile Point Unit 2 first cycle operating data indicate that the operating margin between the current isolation system setpoint and maximum expected main steam tunnel temperature can be negligible. In early July 1989, Nine Mile Point Unit 2 operated in a half-isolation condition due to high temperatures in the main steam tunnel. The proposed increase in setpoint temperatures would increase the operating margin and reduce unnecessary challenges to the plant shutdown system.

2.0 EVALUATION

The proposed TS temperature changes involve three distinct review areas. They are the changes to the Process Safety limits, the TS setpoint values, and the environmental qualification limits. Since they involve unique considerations, they will be discussed separately.

Process Safety Limits

The NRC staff has reviewed the Safety Analysis submitted by the licensee and considers it to be acceptable for establishing the Process Safety Analysis Limits of Table 1 of their submittal entitled Isolation Actuation Instrumentation Septoints, as a starting point for calculating the Technical Specification Setpoints.

Technical Specification Setpoints

We have reviewed the allowances for drift, the effects of the operating environment, and accuracies of components and calibration equipment. We find that the actual instrumentation and control systems and related principal equipment have remained unchanged from the time at which the existing setpoints were accepted for the TS; therefore, they remain acceptable.

However, there have been two changes; removal of the "additional allowances" for conservatism and time response. Both changes will not impact plant safety as these deletions have been considered in the revised analysis to ensure that the related Process Safety Analysis Limit still ensures isolation at no greater than the 25 gpm protective requirement. These changes are thereby acceptable.

Environmental Qualification (EQ)

We have reviewed the licensee's EQ submittal and find no proposed changes to the methodology for recalculating qualified (service) life. The licensee has recalculated values for the revised tunnel operating and transient environment considering the expected changes to normal operating temperatures and expected abnormal operating transient temperatures. Since qualified lives are continually adjusted (recalculated) based upon actual temperature readings, we find the submittal acceptable. In this respect, we also note that the actual increase in the maximum normal design temperature for the main steam tunnel and the related lead enclosure has been increased from 120°F to 130°F. Further, it has been concluded that all equipment and components in the main steam tunnel would remain operable at temperatures up to 146°F and would perform their intended safety function. We interpret this to mean that the qualified (service) life for the existing equipment is now based upon an increased normal operating temperature of 130°F, with provision for related abnormal operating transients of up to 146°F.

Final Safety Analysis Report (FSAR) Amendment

Significant operating protective data from the analysis submitted by the licensee should be documented within the FSAR. They include the process safety limits, the related "allowances," and the increased environmental temperatures in the main steam line tunnel and its related lead enclosure.

3.0 SUMMARY

We find the proposed changes to the process safety limits and the related TS acceptable. We also find acceptable the changes proposed to the normal design temperatures for the Main Steam Line Tunnel and its related lead enclosure, and the accompanying changes to the environmental qualification temperatures.

4.0 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. 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 my be released offsite and that there is no significant increases 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 Section 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.

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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: May 15, 1990

PRINCIPAL CONTRIBUTOR:

R. Licciardo