



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 48 TO FACILITY OPERATING LICENSE NO. NPF-69
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT NUCLEAR STATION, UNIT 2
DOCKET NO. 50-410

1.0 INTRODUCTION

By letter dated April 7, 1993, Niagara Mohawk Power Corporation (the licensee) submitted a request for changes to the Nine Mile Point Nuclear Station, Unit 2, Technical Specifications (TSs). The requested changes would revise TS 3.1.5, "Standby Liquid Control System," to remove the requirement for the standby liquid control (SLC) system to be operable in OPERATIONAL CONDITION 5 (Refueling) when any control rod is withdrawn.

2.0 EVALUATION

The purpose of the SLC system is to provide the capability of shutting down the reactor from a full power condition, and maintaining it subcritical until the cold shutdown condition is achieved without control rod movement. The SLC system injects sodium pentaborate solution into the reactor core upon initiation. In OPERATIONAL CONDITION 5, the reactor is already shut down with control rods fully inserted in any core cells that have fuel assemblies in them.

The one-rod-out interlock associated with the Refuel position of the reactor mode switch provides protection against inadvertent criticality while the reactor is in OPERATIONAL CONDITION 5. Specifically, the reactor mode switch will be in the Refuel position (and locked) and this initiates the Refuel position one-rod-out interlock which prevents the selection of a second control rod for movement when any other control rod is not fully inserted. The core is designed such that adequate shutdown margin (SDM) is maintained with one control rod fully withdrawn.

Additional protection against inadvertent criticality is also achieved in OPERATIONAL CONDITION 5 because in accordance with TS and procedural controls, the amount of reactivity present in the core will be constantly reduced during core offloading. This means that the SDM of the core is the same or greater than its initial value during the entire core offloading process. SDM is analytically determined prior to fuel being reloaded into the reactor vessel. The calculated SDM is the acceptance criterion used in TS 4.1.1. If a control rod is withdrawn in OPERATIONAL CONDITION 5 and SDM has not been demonstrated (i.e., during reload) additional restrictions are placed on the plant by TSs 3.9.2 and 3.10.3. Specifically, if adequate SDM has not been

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demonstrated, at least two source range monitor channels must be operable with the shorting links removed from the reactor protection system (RPS) circuitry prior to and any time one control rod is withdrawn. In the extremely unlikely event that an inadvertent criticality occurs during this time, these additional restrictions assure that the control rod system will be automatically actuated by the RPS.

The NRC staff has concluded that the SLC system should not be required to be operable in OPERATIONAL CONDITION 5 when any control rod is withdrawn since adequate SDM in conjunction with TS requirements for operability of the Refuel position one-rod-out interlock will assure that an inadvertent criticality event will not occur during refueling operations. The staff, therefore, finds the TS changes proposed by the licensee to be acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the 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 the amendment involves no significant hazards consideration, and there has been no public comment on such finding (58 FR 25859). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 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 the amendment.

5.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor:
M. Razzaque

Date: September 30, 1993



Docket No. 50-410

September 30, 1993

Mr. B. Ralph Sylvia
Executive Vice President, Nuclear
Niagara Mohawk Power Corporation
301 Plainfield Road
Syracuse, New York 13212

Dear Mr. Sylvia:

SUBJECT: ISSUANCE OF AMENDMENT FOR NINE MILE POINT NUCLEAR STATION,
UNIT 2 (TAC NO. M86186)

The Commission has issued the enclosed Amendment No. 48 to Facility Operating License No. NPF-69 for the Nine Mile Point Nuclear Station, Unit 2. The amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated April 7, 1993.

The amendment revises TS 3.1.5, "Standby Liquid Control System," to remove the requirement for the standby liquid control system to be operable in OPERATIONAL CONDITION 5 (Refueling) when any control rod is withdrawn.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

Original signed by:

Donald S. Brinkman for
John E. Menning, Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 48 to NPF-69
- 2. Safety Evaluation

cc w/enclosures:
See next page

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