



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT TO OPERATING LICENSE DPR-63

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT UNIT 1

DOCKET NO. 50-220

1.0 INTRODUCTION

By application dated January 15, 1986, Niagara Mohawk Power Corporation (the licensee) requested an amendment to the Technical Specification for Facility Operating License No. DPR-63 for Nine Mile Point Nuclear Station, Unit No. 1. The Amendment would add notes for Tables 3.6.2a, 4.6.2a, 3.6.2d, and 4.6.2d which allow that one reactor water level instrument channel in each trip system may be bypassed in the cold shutdown and refuel conditions during the Spring 1986 refueling outage to modify the emergency condenser system.

2.0 EVALUATION

During this refueling outage, the licensee intends to replace the emergency condenser piping from the reactor vessel to the isolation valves. However, the instrument line for Yarway water level column No. 12 (for reactor water level measurement) passes directly over the top of the piping for emergency condenser loop No. 11. In order to replace this section of the piping for emergency condenser loop No. 11, it requires cutting and capping the instrument line.

The reactor water level instrument channels are required to be operational in the shutdown and refuel modes of operation under the current Technical Specification requirements. The low-low reactor water level signals initiate the core spray system while the low reactor water level signals initiate reactor scram.

The logic to initiate the core spray function is based on low-low reactor water level or high drywell pressure. During the refuel mode of operation, only the low-low reactor water level signals could initiate the actuation logic. There are four level instrument channels relating to the core spray actuation logic, two channels per trip system. The signals are used in a one-out-of-two taken twice logic for starting core spray pumps. Temporary cutting and capping of the instrument line will affect two instrument channels, one in each trip system. The licensee proposed that one instrument channel in each trip system may be bypassed in the cold shutdown and refuel conditions during this refueling outage. The core spray automatic actuation logic on low-low reactor water level will be changed from a one-out-of-two taken twice to a one-out-of-one taken twice. Technical Specification table 3.6.2d and notes for tables 3.6.2d and 4.6.2d will indicate this one time exception.

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The reactor water level signals are an input to the scram logic. The capability to scram is required even in the refuel mode of operation because an individual control rod may be withdrawn one at a time in the refuel condition. The licensee proposed that one instrument channel in each trip system may be bypassed in the cold shutdown and refuel conditions during the refueling outage.

The scram initiation logic on low reactor water level will be changed from a one-out-of-two taken twice to a one-out-of-one taken twice. Technical Specification table 3.6.2a and notes for tables 3.6.2a and 4.6.2a will indicate this one time exception.

During the outage the reactor core will be off-loaded to the spent fuel pool. Decay heat removal will be accomplished by the spent fuel pool cooling system. The majority of time the reactor water level instruments are bypassed will be with the plant in this configuration. During periods of core off-loading and reloading, the reactor coolant is at or near ambient temperature. The reactor cavity is filled with refueling water. The water level is much higher than the level during other modes of operation.

There are several annunciators at the control room panel and at the computer console to alert the operator on reactor water level. The core spray pumps and a scram can be manually initiated by the operator from the control room.

The staff has reviewed the above information which is based on the licensee's submittal dated January 15, 1986 and a subsequent telephone conference held on February 28, 1986. The staff finds that the licensee's request for one time exception from this technical specification is acceptable. The decision is based on the following:

1. The water level in reactor cavity during the refuel mode is much higher than during other modes of operation. The needs for core spray action or a scram due to low reactor water level is very unlikely.
2. During this refueling outage, the decay heat in the reactor will be low because the majority of time the fuel is off-loaded to the spent fuel pool.

In addition this one time exception will be contingent upon the control room operators receiving special instructions with regard to their role in monitoring reactor vessel water level and taking appropriate manual actions required in response to vessel level changes.

### 3.0 CONCLUSION

The staff 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, 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 not to the health and safety of the public.

