



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 138 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

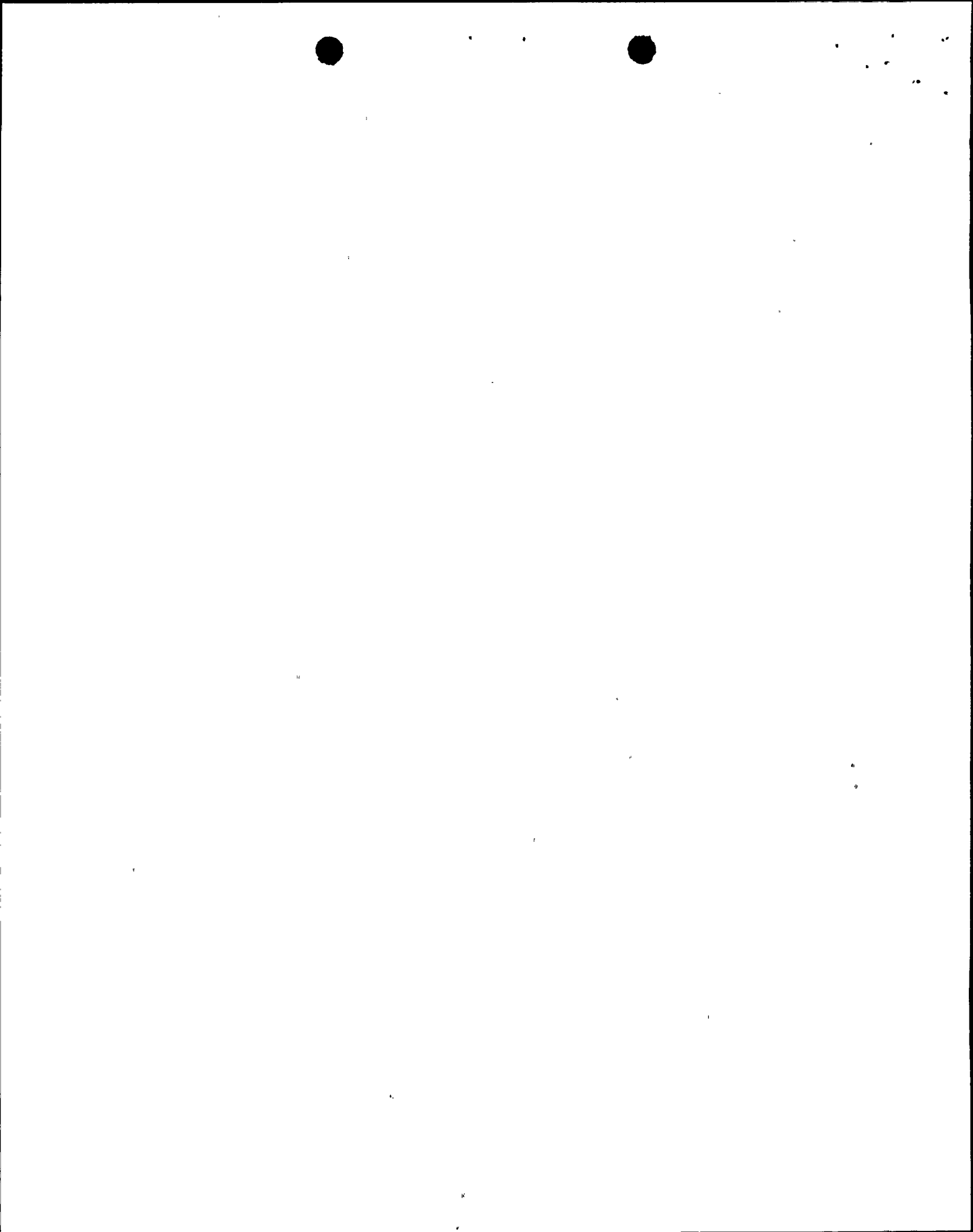
By letter dated September 25, 1992, Niagara Mohawk Power Corporation (the licensee) submitted a request for changes to the Nine Mile Point Nuclear Station Unit No. 1, Technical Specifications (TS). The requested changes would revise TS Table 3.6.2a to permit bypassing of the High Reactor Pressure and Main Steam Line Isolation Valve Position scram signals during reactor coolant system pressure testing and/or control rod scram testing when the Reactor Mode Switch is in the Refuel Position.

2.0 EVALUATION

The current TS require the High Reactor Pressure scram instrumentation to be operable with a set point of  $\leq 1080$  psig whenever the Reactor Mode Switch is in the Refuel, Startup, or Run position. These TS also require the Main Steam Line Isolation Valve Position scram instrumentation to be operable with a set point of  $\leq 10$  percent valve closure from full open whenever the Reactor Mode Switch is in the Refuel, Startup, or Run position but permit this scram instrumentation to be bypassed when the Reactor Mode Switch is in the Refuel or Startup position if reactor pressure is less than 600 psig.

Reactor coolant system (RCS) hydrostatic leak testing is performed with the reactor subcritical at a minimum pressure of 1050 psig, which is 30 psi or less below the set point of the High Reactor Pressure scram. Since the RCS is isolated during the performance of these tests, the reactor coolant temperature and pressure may inadvertently rise due to heat addition from fuel decay heat and/or operation of the recirculation pumps. Such pressure increases could result in unnecessary actuations of the reactor protection system if the RCS pressure reaches the scram set point of  $\leq 1080$  psig. Actuation of the reactor protection system would result in unnecessary hydraulic cycles on the control rod drive components. Therefore, the licensee proposed to bypass the High Reactor Pressure scram when the Reactor Mode Switch is in the Refuel position during RCS pressure testing.

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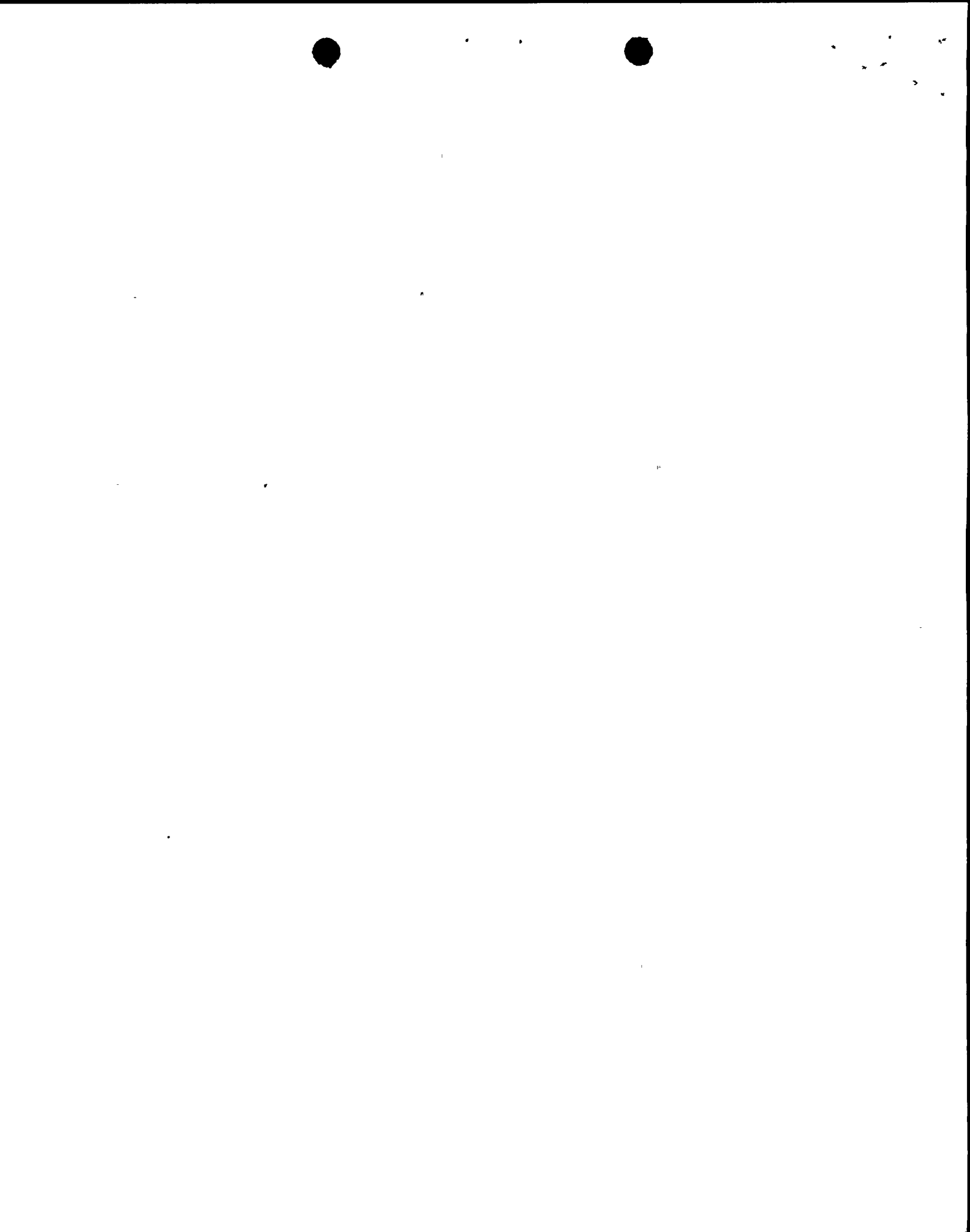


The High Reactor Pressure scram provides overpressure protection for the RCS when the reactor is critical and making a substantial heat input to the reactor coolant. Operation of this scram will make the reactor subcritical and will thereby substantially decrease the reactor's heat input to the reactor coolant. However, if the reactor is already subcritical, operation of this scram will have no significant affect on heat addition to the reactor coolant and therefore, its operability and operation are not required when the reactor is being maintained subcritical. The one rod out interlock prevents withdrawal of more than one control rod at a time when the Reactor Mode Switch is in the Refuel position. Since the reactor cannot be made critical by withdrawal of only one control rod, operability or operation of the High Reactor Pressure scram is not required when the Reactor Mode Switch is in the Refuel position. Therefore, the NRC staff finds that the proposal to permit bypassing of the High Reactor Pressure scram during RCS pressure testing when the Reactor Mode Switch is in the Refuel position acceptable.

The licensee also proposed to bypass the High Reactor Pressure scram during scram time testing of individual control rods when the Reactor Mode Switch is in the Refuel position. As noted above, the overpressure protection provided by the High Reactor Pressure scram is not required when the Reactor Mode Switch is in the Refuel position since the reactor cannot then be made critical. Therefore, the NRC staff finds the proposal to permit bypassing of the High Reactor Pressure scram during scram time testing of individual control rods while the Reactor Mode Switch is in the Refuel position acceptable.

The licensee further proposed to permit bypassing of the Main Steam Line Isolation Valve Position scram during RCS pressure tests and/or during individual control rod scram time testing when the Reactor Mode Switch is in the Refuel position. The Main Steam Line Isolation Valve Position scram initiates a reactor scram on partial closure ( $\leq 10$  percent from full open) of the main steam line isolation valves. This scram functions to ensure that the reactor is not operated without its main heat sink.

The main steam line isolation valves must be closed during RCS pressure tests since they are part of the RCS pressure boundary during these tests. RCS pressure tests are conducted with the reactor in a shutdown condition (Reactor Mode Switch in Shutdown position or Refuel position). The reactor cannot be made critical with the Reactor Mode Switch in the Shutdown position because no control rods can be withdrawn. The reactor cannot be made critical with the Reactor Mode Switch in the Refuel position since the one rod out interlock prevents the withdrawal of more than one control rod and the reactor cannot be made critical with only one control rod withdrawn. Since the reactor cannot be made critical during RCS pressure tests, the operability or operation of the main steam line isolation valve position scram is not required during RCS pressure tests. Therefore, we find the proposal to bypass the main steam line isolation valve position scram during RCS pressure tests with the Reactor Mode Switch in the Refuel position acceptable.



TS 4.1.1c requires all operable control rods to be scram time tested from the fully withdrawn position prior to power operation after each refueling outage with reactor pressure above 800 psig. Control rod withdrawal can only be accomplished with the Reactor Mode Switch in the Refuel, Startup, or Run positions. However, since TS 4.1.1c requires that scram time testing be performed prior to power operation, such testing must be performed with the Reactor Mode Switch in the Refuel position. As noted above, the reactor cannot be made critical with the Reactor Mode Switch in the Refuel position; therefore, the operability or operation of the main steam line isolation valve position scram is not required during control rod scram time testing when the Reactor Mode Switch is in the Refuel position. Therefore, we find the proposal to bypass the main steam line isolation valve position scram during control rod scram time testing with the Reactor Mode Switch in the Refuel position acceptable.

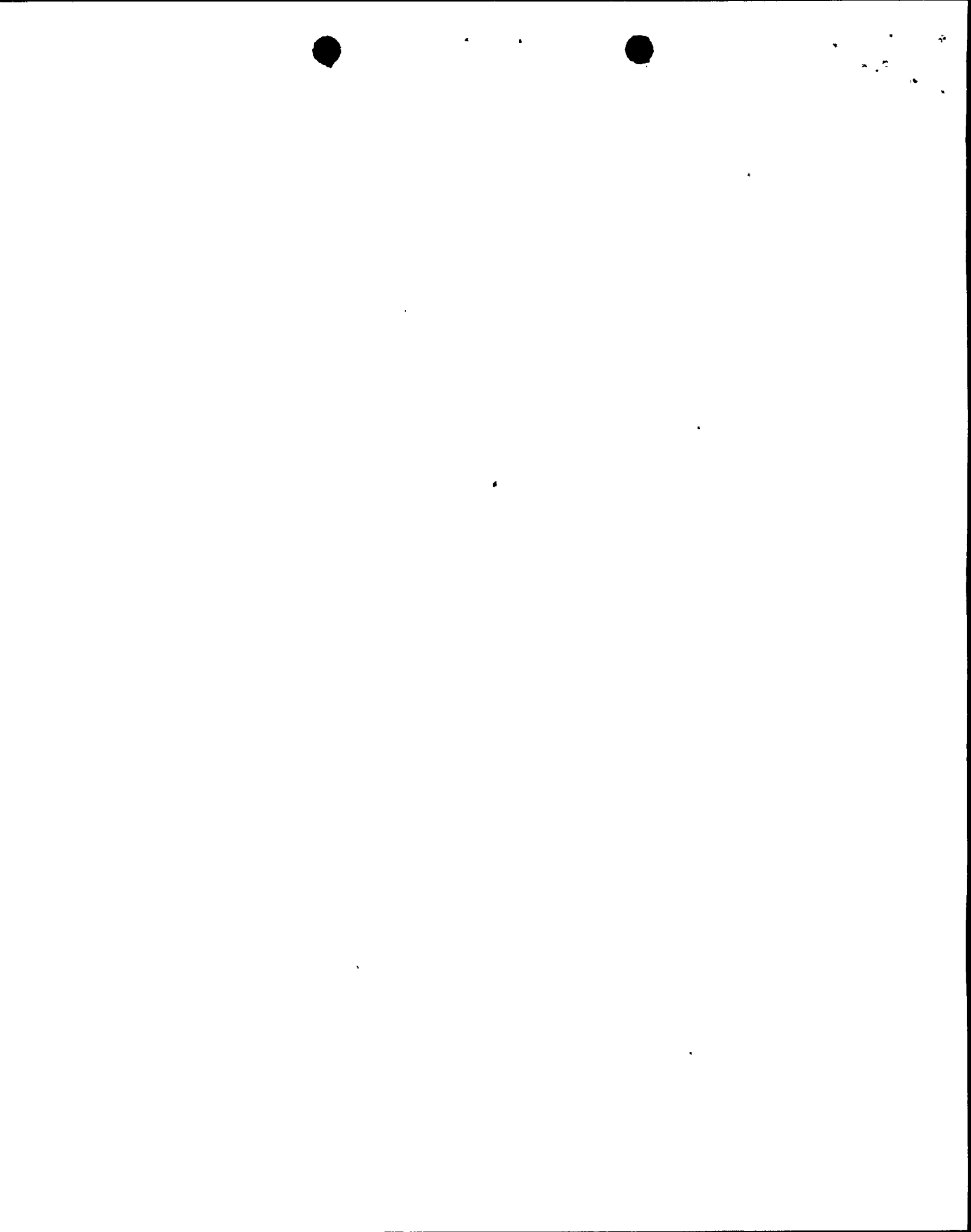
We further note that the proposed changes are consistent with the NRC staff's Standard Technical Specifications for General Electric Boiling Water Reactors (GE-STs) in that the GE-STs do not require operability of either of these scram functions when the Reactor Mode Switch is in the Refuel position.

### 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 (57 FR 48821). 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.

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Date: January 8, 1993

