



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 53 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

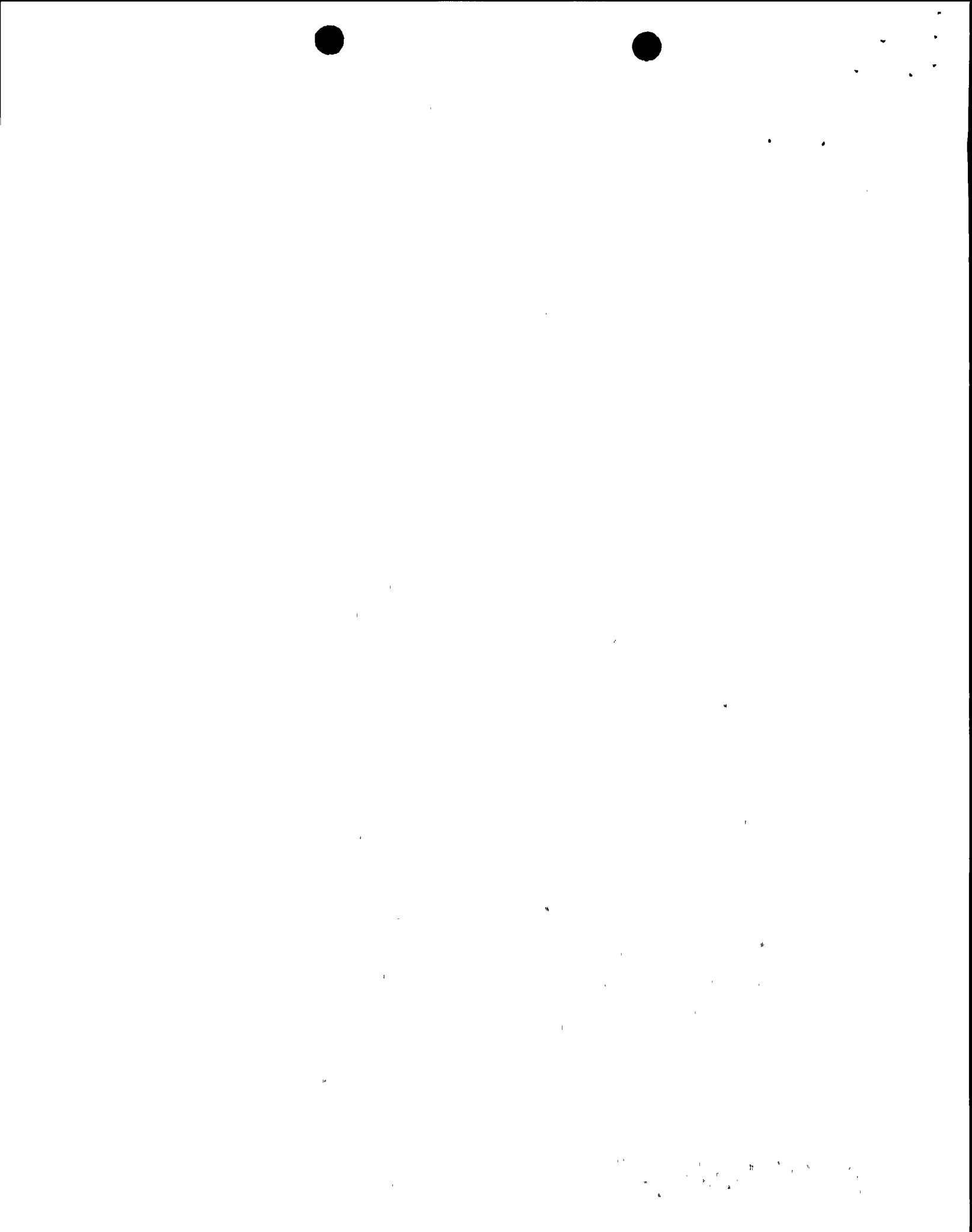
By letter dated May 7, 1993, as superseded September 28, 1993, Niagara Mohawk Power Corporation (the licensee) submitted a request for changes to the Nine Mile Point Nuclear Station, Unit 2 (NMP-2), Technical Specifications (TSs). The requested changes would add a new TS 3/4.10.7, "Inservice Leak and Hydrostatic Testing." The proposed changes would also include corresponding changes to the TS Index, Table 1.2, and provides Bases for TS 3/4.10.7. The proposed changes would permit NMP-2 to remain in OPERATIONAL CONDITION 4 with average reactor coolant temperature being increased above 200 °F during reactor coolant system leak or hydrostatic tests provided the maximum reactor coolant temperature does not exceed 212 °F and the following OPERATIONAL CONDITION 3 TSs are being met: (a) TS 3.3.2, "Isolation Actuation Instrumentation," Functions 1.a.2, 1.b, and 3.a and b of Table 3.3.2-1; (b) TS 3.6.5.1, "Secondary Containment Integrity;" (c) TS 3.6.5.2, "Secondary Containment Automatic Isolation Dampers;" and (d) TS 3.6.5.3, "Standby Gas Treatment System." The September 28, 1993, submittal superseded in its entirety a previously proposed amendment which was similar but would not have included the 212 °F limit.

2.0 EVALUATION

The NMP-2 TS define five OPERATIONAL CONDITIONS. OPERATIONAL CONDITION 4 requires the reactor mode switch to be in the shutdown position (reactor subcritical) and the average reactor coolant temperature to be less than or equal to 200 °F. OPERATIONAL CONDITION 3 also requires the reactor mode switch to be in the shutdown position (reactor subcritical) but with the average reactor coolant temperature greater than 200 °F.

The NMP-2 TS require that various TSs be applicable in one or more of the five OPERATIONAL CONDITIONS. Additional TSs become applicable when NMP-2 enters OPERATIONAL CONDITION 3 from OPERATIONAL CONDITION 4. This change in OPERATIONAL CONDITIONS occurs when the average reactor coolant temperature is increased above 200 °F. Two TSs of particular concern for entry into OPERATIONAL CONDITION 3 are TS 3.5.1 and TS 3.6.1.1. TS 3.5.1 requires ECCS Divisions 1, 2, and 3 to be OPERABLE in OPERATIONAL CONDITION 3 while TS 3.5.2 only requires three of five ECCS systems to be OPERABLE in OPERATIONAL CONDITIONS 4 and 5 thereby permitting outage related maintenance to be performed on the ECCS systems not required to be OPERABLE.

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TS 3.6.1.1 requires PRIMARY CONTAINMENT INTEGRITY to be maintained in OPERATIONAL CONDITION 3 but PRIMARY CONTAINMENT INTEGRITY is not required in OPERATIONAL CONDITION 4. The requirements of TS 3.6.1.1 significantly restrict unobstructed access within the primary containment during operations in OPERATIONAL CONDITION 3. The licensee desires to be able to perform certain outage activities on the ECCS equipment during the performance of the reactor coolant system leak or hydrostatic tests so as to minimize the duration of outages. Unobstructed access within the primary containment is desirable to perform inspections of the reactor coolant system (RCS) during leak or hydrostatic tests of the reactor coolant system.

The RCS is isolated during leak or hydrostatic tests. This isolation makes RCS temperature control difficult since the RCS is isolated from its heat sinks and heat input to the RCS is caused by both decay heat and mechanical heat from the recirculation pumps. TS 3.4.6, "Pressure/Temperature Limits," currently requires the reactor pressure vessel temperature to be above approximately 160 °F when the RCS is pressurized for leak or hydrostatic testing. This minimum temperature for performing leak or hydrostatic tests will increase over time as fast neutron fluence to the reactor vessel increases with operating time. The leak or hydrostatic tests require several hours for completion; operating experience has shown that the RCS temperature slowly increases during these tests and dependent upon the amount of decay heat present, the RCS may approach the 200 °F limit of OPERATIONAL CONDITION 4. Therefore, NMPC has proposed to increase the OPERATIONAL CONDITION 4 temperature limit to provide some additional margin within which to complete the leak or hydrostatic tests.

Permitting the average reactor coolant temperature to be increased above 200 °F and limiting the maximum reactor coolant temperature to 212 °F while performing leak or hydrostatic tests will not substantially affect the results of potential accidents which might occur with the increased average reactor coolant temperature since the leak and hydrostatic tests are performed with the RCS near water solid and with all control rods fully inserted (reactor subcritical). Therefore, the stored energy in the reactor core would be very low and the potential for causing fuel failures with a subsequent increase in coolant activity is minimal. The restrictions provided in the proposed new TS 3.10.7 would require secondary containment integrity as well as OPERABLE automatic isolation dampers, OPERABLE standby gas treatment system, and OPERABLE automatic actuation instrumentation for this equipment. Therefore, any leakage of radioactive materials from the RCS would be filtered by the standby gas treatment system prior to release to the atmosphere. Furthermore, since the maximum reactor coolant temperature would be limited to a maximum of 212 °F, there would be no flashing of coolant to steam and therefore, any releases of radioactive materials from the coolant would be minimized.

In the event of a large loss-of-coolant accident during a leak or hydrostatic test, the RCS would rapidly depressurize thereby permitting the low pressure ECCS equipment, required OPERABLE by TS 3.5.2, to actuate and thereby keep the core flooded. This action would prevent the fuel from overheating and releasing radioactive materials. The RCS inspections required to be performed



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as part of the leak or hydrostatic tests would be expected to detect small leaks before they would develop into large leaks and before a significant inventory of coolant was lost.

Based on the foregoing analyses, we conclude that the proposed TS changes will ensure acceptable consequences of any postulated accidents, are enveloped by the previously accepted analyses, and are, therefore, 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 32386 and renoticed 58 FR 52990). 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: November 12, 1993

