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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 87 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 November 8, 1999, Niagara Mohawk Power Corporation (NMPC or the licensee) proposed a license amendment to change the Technical Specifications (TSs) for Nine Mile Point Nuclear Station, Unit No. 2 (NMP2). The amendment would change the "Restore" provisions of ACTION statement "d" of TS 3.6.1.2, titled "Primary Containment Leakage," and ACTION statement "b" of TS 3.6.1.7, titled Primary Containment Purge System," to provide an alternative approach to the existing requirements contained in these TSs. The alternative approach would allow isolation of a bypass leakage path and/or a purge system line by using one closed and de-activated automatic valve, closed manual valve, or blind flange in lieu of restoring inoperable isolation valve(s) identified in TS Table 3.6.1.2-1, titled "Allowable Leak Rates Through Valves in Potential Bypass Leakage Paths," and/or isolation valve(s) listed in TS 3.6.1.7 to OPERABLE status. Consistent with the proposed alternative approach, NMPC also proposed changes to Definition 1.31, titled "Primary Containment Integrity" and footnote (*) of TS Table 3.6.1.2-1.

Specifically, NMPC proposes the following changes (new text below is shown in italics):

1. Definition 1.31.d would read: "The primary containment leakage rates are within the limits of Specification 3.6.1.2, *except as provided by Specification 3.6.1.2.*"

2. ACTION statement "d" of TS 3.6.1.2 would call for the restoration of "The leakage rate to less than or equal to that specified in Table 3.6.1.2-1 for any valve that is part of a potential bypass leakage path. *Alternatively, in lieu of restoring the inoperable valve to OPERABLE status, isolate the affected bypass leakage path by use of one closed and de-activated automatic valve, closed manual valve, or blind flange. The isolation device must meet the leakage limit of Table 3.6.1.2-1 associated with the inoperable valve. Enter applicable ACTION statement(s) for system(s) made inoperable by isolating a bypass leakage path.*"

3. Footnote (*) of TS Table 3.6.1.2-1 would read: "The combined leakage of these six penetrations shall not exceed 3.6 SCFH. The leakage through each penetration shall be that of the valve with the highest rate in that penetration. *However, if a penetration is isolated by one closed and de-activated automatic valve, closed manual valve, or blind flange, the leakage through the penetration shall be that of the isolation device.*"

4. ACTION statement "b" of TS 3.6.1.7 would read: "With a drywell and suppression chamber purge supply and/or exhaust isolation valve(s) with resilient material seals having a measured leakage rate exceeding the limit of Surveillance Requirement 4.6.1.7.2, restore the inoperable valve(s) to OPERABLE status within 24 hours *or isolate the affected purge system line by use of one closed and de-activated automatic valve, closed manual valve, or blind flange within 24 hours*, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. *If a valve with resilient seals is utilized to satisfy the requirement of this ACTION statement, it must have been demonstrated to meet the leakage requirement of SR 4.6.1.7.2. In addition, SR 4.6.1.7.2 must be performed once per 92 days for the resilient seal valve closed to comply with this ACTION statement. Enter the applicable ACTION statement(s) for system(s) made inoperable by isolating the affected purge system line.*"

2.0 EVALUATION

For a typical bypass leakage path and/or purge system line, two isolation valves are provided. With one inoperable isolation valve, continued operation is allowed provided the bypass leakage path and/or purge system line is isolated by the OPERABLE isolation valve as provided in the applicable ACTION statement. If both isolation valves were inoperable, the proposed TS change would allow continued operation if the affected bypass leakage path and/or purge system line was isolated in accordance with the revised ACTION statements. The proposed changes to the ACTION statements of TS 3.6.1.2 and TS 3.6.1.7 and TS Definition 1.31.d, in effect, allows continued operation if a potential bypass leakage path and/or a purge system line is reduced within specified leakage limits by (1) one closed and de-activated automatic valve, (2) a closed manual valve, or (3) a blind flange. The proposed changes to the ACTION statements also address the effects of isolating a bypass leakage path and/or a purge system line by requiring entry into applicable ACTION statements for the affected limiting conditions for operation (LCOs).

The proposed change to the "Restore" provisions of ACTION statement "d" of TS 3.6.1.2 allows the use of at least one isolation barrier that cannot be adversely affected by a single failure (i.e., allows the use of a closed and de-activated automatic valve, a closed manual valve, or a blind flange). Since these isolation barriers do not need to change state to perform their safety function, they are not affected by a single active failure, and thus, they provide reasonable assurance that a gross breach of a potential bypass leakage pathway will not occur. In accordance with existing TS 4.6.1.1.b, the licensee will verify every 31 days that all primary containment penetrations not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or de-activated automatic valves secured in position. The proposed change to the "Restore" provisions of ACTION "d" of TS 3.6.1.2 and referenced TS Table 3.6.1.2-1 specify the leak test criteria to be met by the isolation.

To be consistent with the "Restore" provisions of ACTION statement "d" of TS 3.6.1.2, the phrase "except as provided in Specification 3.6.1.2" is added to the definition of "Primary Containment Integrity" (TS 1.31.d). This addition clarifies the definition by indicating that continued operation of NMP2 is permissible when the isolation method is in accordance with the "Restore" provision of ACTION statement "d." Since the isolation provided by that statement satisfies the leakage requirements of TS Table 3.6.1.2-1 for the affected bypass leakage path,

isolation in accordance with the "Restore" provision of ACTION statement "d" satisfies "Primary Containment Integrity." Therefore, the NRC staff finds the change to the definition to be acceptable.

Footnote (*) of TS Table 3.6.1.2-1 states that for certain specified valves in potential bypass leakage paths, "[t]he leakage through each penetration shall be that of the valve with the highest rate in that penetration." In accordance with the change to the "Restore" provisions of ACTION statement "d" of TS 3.6.1.2, the change to the footnote would allow the leakage through the penetration to be the pathway leakage of the isolation device if the penetration is isolated by one closed and de-activated automatic valve, closed manual valve, or blind flange. The pathway is assumed to be at the maximum pathway leakage in order to account for a single failure whereby one of the two valves in the penetration fails to close. However, if the penetration is already isolated by a closed and de-activated automatic valve, closed manual valve, or blind flange, then a single active failure will not occur (i.e., while the leakage through an individual valve in a penetration can be exceeding the leakage assumed in the safety analyses of the Final Safety Analysis Report, the penetration is isolated by a single active failure proof method). Therefore, the leakage through the isolated penetration is the actual leakage through the valve or blind flange used to isolate the penetration, not the leakage through the valve with the maximum leakage. The leakage of the affected isolated penetration, when combined with remaining applicable potential bypass leakage paths, will continue to meet the existing leakage limits of 3.6 standard cubic feet per hour as stated in footnote (*) of TS Table 3.6.1.2-1 and the applicable leakage limits of TS 3.6.1.2. Therefore, the NRC staff finds the change to the footnote to be acceptable.

Like the change to the "Restore" provision of ACTION statement "d," the change to ACTION statement "b" of TS 3.6.1.7, which addresses the primary containment purge system, would also permit the use of at least one isolation barrier that cannot be adversely affected by a single failure (i.e., use of a closed and de-activated automatic valve, closed manual valve, or blind flange). TS 4.6.1.1.b requires that such isolation be verified every 31 days and the proposed change to ACTION statement "b" of TS 3.6.1.7 requires that the purge valve leak rate test be performed every 92 days if a purge valve with a resilient seal is used to perform the isolation. The alternative isolation provision would continue to satisfy the resilient seal testing requirements of TS 4.6.1.7.2 if the isolation valve contained resilient seals. Thus, surveillance testing would continue to provide early indication of resilient material seal degradation. Therefore, the NRC staff finds the change to ACTION statement "b" to be acceptable.

The use of the alternate isolation barrier, as provided by the change to ACTION statements "b" and "d" include entering applicable ACTION statements for those systems made inoperable by isolating an affected bypass leakage path and/or purge system line. This aspect of the proposed changes clarifies the intent of the allowed isolation barriers for a system made inoperable by isolating a penetration. This is consistent with the existing NMP2 TSs.

Accordingly, the proposed changes continue to ensure that the containment boundary, isolation of potential bypass leakage paths and isolation of purge system lines with a valve containing resilient seals are maintained by appropriate methods and appropriate actions are entered for applicable LCOs. Therefore, the proposed changes to the NMP2 TS are 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 comment.

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 (64 FR 62228). 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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