ATTACHMENT A

NIAGARA MOHAWK POWER CORPORATION
LICENSE NO. NPF-69
DOCKET NO. 50-410

Proposed Change to the Technical Specifications

Replace page 3/4 6-4 with the attached revised page. This page has been retyped in its entirety with marginal markings to indicate changes to the text.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The primary containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50 using the methods and provisions of ANSI N45.4-1972:

a. Three Type A overall integrated containment leakage rate tests shall be conducted at 40 ± 10-month intervals during shutdown at Pa, 39.75 psig or at Pt, 20.0 psig, during each 10-year service period.* The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection.

b. If any periodic Type A test fails to meet 0.75 La or 0.75 Lt, as applicable, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet 0.75 La or 0.75 Lt, as applicable, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet 0.75 La or 0.75 Lt, as applicable, at which time the above test schedule may be resumed.

c. The accuracy of each Type A test shall be verified by a supplemental test which:

   1. Confirms the accuracy of the test by verifying that the difference between the supplemental data and the Type A test data is within 0.25 La or 0.25 Lt, as applicable.

   2. Has duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test.

   3. Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be equivalent to at least 25% of the total measured leakage at Pa, 39.75 psig, or Pt, 20.0 psig, as applicable.

d. Type B and C tests shall be conducted with gas at Pa, 39.75 psig, at intervals no greater than 24 months except for tests involving:

   1. Air locks,

   2. Main steam line isolation valves and the remainder of the valves specified in Table 3.6.1.2-1.

   3. Containment isolation valves in hydrostatically tested lines which penetrate the primary containment, and

   4. Purge supply and exhaust isolation valves with resilient seals.

* Exemption to 10CFR50 Appendix J
The test interval for conducting the second Type A test of the first 10-year service period shall be extended to 72 months to allow the Type A test to be performed during the 5th refueling outage. This extension expires upon completion of the 5th refueling outage.

ATTACHMENT B

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Supporting Information and No Significant Hazards Consideration Analysis

INTRODUCTION

The purpose of Appendix J leak test requirements, as stated in the introduction to 10CFR50 Appendix J, is to "assure that (a) leakage through the primary reactor containment and systems and components penetrating primary containment shall not exceed allowable leakage rate values as specified in the Technical Specifications or associated bases and (b) periodic surveillance of reactor containment penetrations and isolation valves is performed so that proper maintenance and repairs are made during the service life of the containment and systems and components penetrating primary containment." "Type A Tests" are defined in 10CFR50 Appendix J, Section II.F as "tests intended to measure the primary reactor containment overall integrated leakage rate (1) after the containment has been completed and ready for operation, and (2) at periodic intervals thereafter."

The proposed change would allow for an extension of the interval between the first and second Type A test during the first ten-year service period. The extension would allow the Type A Integrated Leak Rate Test (ILRT) to be performed at the fifth refueling outage (RF-05) instead of the fourth refueling outage (RF-04) as currently scheduled.

DESCRIPTION

This amendment proposes to extend the interval between the first and second Type A test, as specified in Surveillance Requirement 4.6.1.2.a, from the fourth refueling outage (RF-04) until the fifth refueling outage (RF-05) or 72 months after the first Type A test. This requires an exemption to 10CFR50 Appendix J. Niagara Mohawk has submitted an exemption request by letter dated March 9, 1995 (NMP2L 1531).

EVALUATION

The NMP2 primary containment structure consists of the drywell, the pressure suppression chamber which stores a large volume of water, and the drywell floor which separates the drywell and suppression chamber. The drywell is a steel-lined, reinforced concrete vessel in the shape of a frustum of a cone, closed by a dome with a torispherical head. The pressure suppression chamber is a cylindrical stainless steel clad steel-lined, reinforced concrete vessel located below the drywell. The primary containment structure houses the reactor vessel, the reactor recirculation system, and other branch connections of the reactor coolant pressure boundary (RCPB). This structure was designed as Class I safety related, imposing all requirements of 10CFR50 Appendix B. The primary containment is designed to permit testing in accordance with 10CFR50 Appendix J.

The purpose of primary containment leak testing is to detect any containment leakage resulting from degradation of isolation boundaries. The major containment leakage paths include:

Penetration Seal Leakage: Air lock door seals, doors with resilient seals or gaskets except for seal welded doors, and penetrations whose design incorporates resilient seals, gaskets, or sealant compounds, piping penetrations fitted with expansion bellows, and electrical penetrations fitted with flexible metal seal assemblies may all exhibit leakage. Type B tests would identify this type of leakage. Type B test schedules will not be affected by the proposed change in the ILRT test schedule.

Containment Isolation Valves: These valves provide either a potential or direct connection between the inside and outside atmospheres of the primary reactor containment under normal operation. They are required to close automatically upon receipt of a containment isolation signal in response to controls intended to effect containment isolation, and some selected valves may be required to operate intermittently under post-accident conditions. Leakage through these valves can be caused by leaking valve seals or isolation valve closure failure. This type of leakage is detectable by Type C local leak rate testing. Following any maintenance on a containment isolation valve which could impact its leak tightness, an LLRT is performed followed by an independent valve alignment verification to ensure that leakage remains within acceptable levels. Type C test schedules will not be affected by the proposed change in the ILRT test schedule.

Primary Containment Structure: Degradation of the primary containment structure is a low probability event and is detected by Type A tests.

10CFR50 Appendix J Section II.K defines the acceptable leakage limit La as "the maximum allowable leakage rate at pressure Pa (calculated design basis accident peak containment pressure) as specified for pre-operational tests in the Technical Specifications or associated bases and as specified for periodic tests in the operating license."

The preoperational (initial) Type A test was performed in accordance with 10CFR50 Appendix J, ANS N45.4/ANSI 56.8-1981. This method employs:

4 hours (minimum) stabilization period

24 hours (minimum) ILRT test period (utilizing total time analysis of BN-TOP-1 and mass point analysis technique of ANSI 56.8)

1 to 4 hours (minimum) verification period

This 24-hour Type A test provided a baseline for post-operational tests. This program is equivalent to the inservice test program which will be used for subsequent refueling outage Type A tests. These Type A tests will be performed using total time analysis which provides the bases for a Type A test duration of 8 hr. (minimum) with 20 data sets (minimum) (BN-TOP-1).

The test procedure, test equipment and facilities, period of testing, and verification of leak test accuracy follow the recommendations of BN-TOP-1, Rev. 1, 1972.

The allowable as-found leakage rate for NMP2 is 1.1%/day at test pressure 39.75 psig. The pre-operational Type A test performed on April 14, 1986 resulted in an as-found integrated leakage rate of 0.2903%/day. For NMP2, the Type A test identifies leakage that is attributable to CRD insert and withdrawal lines, drywell and suppression chamber instrumentation, and the containment liner. Similarly, the Type A test performed on January 14, 1991 resulted in an as-found integrated leakage rate of 0.623%/day of which 0.312%/day was due to leaking through the high side bleed and vent valve on 2RCS-PT84A. These test results show that little or no degradation has occurred during the 57 months between the pre-operational test and the first inservice test. Hence, the 72-month interval between the first and second Type A tests would not jeopardize the ability of the containment to maintain the leakage rate at or below the required Type A limits.

There have been no temporary or permanent modifications to the containment structure, liner, or penetrations since the last Type A test that could adversely affect the Type A test results. Any unplanned modifications to the containment prior to the next scheduled Type A test would be subject to the special testing requirements of Section IV.A of Appendix J. In addition, there have been no pressure or temperature excursions in the containment which could have adversely affected containment integrity.

Actual testing at Nine Mile Point Unit 2 has shown that the majority of the total leakage from the primary containment is from penetrations that receive Type B and C Local Leak Rate Tests. These Type B and C tests will continue to be performed at the frequency required by Nine Mile Point Unit 2's Technical Specifications with repairs being performed as necessary. Demonstrated operability of these penetrations and components will provide added assurance that overall containment leakage remains satisfactory.

RISK ASSESSMENT

A risk evaluation of the NMP2 primary containment shows that there is an extremely low safety impact resulting from deferral of the Type A ILRT. The ILRT is designed to assure a high degree of primary containment "leak-tightness." However, the safety benefit of this test is negligible from three perspectives: 1) limited risk significance of containment leakage, 2) alternate indicators of containment leakage are available, 3) unique design features and inspection practices make it unlikely that abnormal leakage will develop.

As concluded in the NMP2 Individual Plant Examination (IPE), 74% of reactor accident risk is dominated by low-probability, high consequence scenarios in which the containment is failed or bypassed. In these types of accidents, there is little benefit derived from a high degree of containment leak-tightness. Also, these types of accidents are beyond Design Basis, and therefore, not the purpose of ILRT.

In the other 26% of the scenarios where the primary containment remains intact, there are two factors that significantly reduce the consequences of any leakage out of containment: 1) suppression pool scrubbing which reduces potential source terms prior to entering the reactor building, and 2) a large portion of these fission products would be entrained in secondary containment and removed by the standby gas treatment system prior to release.

Furthermore, even without a Type A ILRT, there are design and operational features that assure a leak-tight containment. They provide adequate assurance that the assumed leakage or probability of undetected leakage will not increase above what has already been assumed in the NMP2 IPE. These features are as follows:

1. **Nitrogen inerting** - Technical specifications require containment pressure be maintained between 14.2 and 15.45 psia during normal operation. Primary containment pressure is monitored at least once per 12 hours in accordance with technical specification surveillance requirements. Normally this pressure is maintained between .3 to .7 psi above atmospheric pressure. This provides the capability to detect abnormal containment leakage during normal operation, by monitoring containment pressure decay. Normally, primary containment pressure decays at a rate approximately 0.1 psi per day. However, a leak equivalent to a 5/8 inch diameter hole will result in a pressure decay rate of approximately 0.1 psi per hour. This hole size is equivalent to approximately 14% per day containment leakage rate, which during a severe accident would result in an EAB thyroid dose still within the 10CFR100 guidelines of 300 Rem. These factors assure that no significant containment mechanical or structural leakage would go undetected before the next Type A ILRT test.

2. **Type B and C leak rate tests** - These tests check the integrity of containment penetrations, resilient seals, and drywell head O-ring seals. The ILRT with the exception of checking for mechanical and structural failures of the containment shell is confirmatory to the Type B and C tests.

3. **Visual inspection** - A thorough and comprehensive internal and external inspection of the mechanical and structural integrity of the containment shell is completed during every refuel outage.

4. **Containment drywell head design** - NMP2 containment drywell head is pinned in place and uses double O-ring seals. This design is superior to the bolted flange type used in other containments, which often cause warping of the head during flange bolt torquing.

5. **Continuously pressurized penetrations** - Type B electrical penetrations are continuously pressurized and monitored routinely. Annunciation is provided in the control room on low penetration pressure.

6. **Drywell to Suppression Chamber bypass leakage test** - This test checks for leakage from the drywell to the suppression pool by pressurizing the drywell to 3 psig for at least 30 minutes. The results of this test would indicate any degradation of the drywell volume containment shell. This test is performed every refuel outage and results have been well within the acceptance criteria.

Based on the above, deferral of the Type A ILRT will not increase the probability of any accident. Therefore, this deferral will not impose additional risk to public health and safety. This conclusion is consistent with the findings of draft NUREG-1493, Performance-Based Containment Leak Test Program.

CONCLUSION

Technical Specification Surveillance Requirement 4.6.1.2.a schedule requires that the second Type A test be performed during RF-04. The proposed change to perform the second Type A test at RF-05 extends the interval to 72 months. The pre-operational Type A test resulted in an as-found and as-left leakage rate of 0.2903%/day. The first inservice Type A test resulted in an as-found integrated leakage rate of 0.623%/day of which 0.312%/day was attributable to 2RCS-PT84A. These results are significantly less than the as-found limit of 1.1%/day and as-left of 0.825%/day. Type B and C tests will continue to be performed at the frequency required by Nine Mile Point Unit 2's Technical Specifications, with repairs being performed as necessary. The absence of degradation of the primary containment and performance of Type B and C testing provides reasonable assurance that an extension of the test interval to 72 months between the first and second Type A periodic test will not jeopardize the ability of the containment to maintain the leakage rate at or below the required Type A limits.

NO SIGNIFICANT HAZARDS CONSIDERATION ANALYSIS

Therefore, there is reasonable assurance that operation of Nine Mile Point Unit 2 in the proposed manner will not endanger the public health and safety.

10CFR50.91 requires that at the time a licensee requests an amendment, it must provide to the Commission its analysis using the standards in 10CFR50.92 concerning the issue of no significant hazards consideration. Therefore, in accordance with 10CFR50.91, the following analysis has been performed:

The operation of Nine Mile Point Unit 2, in accordance with the proposed amendment, will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change for performance of the second Type A test until RF-05 does not increase the probability of a previously analyzed accident occurring. Primary containment leakage is not the precursor to any analyzed event. Type A testing is done to confirm the ability of the primary containment to limit leakage consistent with the safety analysis assumptions. Therefore, a change in the test interval will not result in an increase in the probability of an accident previously analyzed. This has also been confirmed by the risk assessment described above.

Extension of the second Type A test will not affect the containment's ability to maintain leakage below that assumed in the safety analysis. The previous Type A test was completed successfully, and there have been no plant modifications (other than those that required Type B or C testing) since the last test which could directly affect the test results. Type B and C testing of individual penetrations has been satisfactory and will continue to be performed in accordance with the Technical Specifications. There have been no pressure or temperature excursions in the containment which could have adversely affected containment integrity. Hence, the ability of the containment to maintain leakage within the Type A test limits will be maintained. This testing provides assurance that the consequences of radioactive leakage are within 10CFR100 and GDC-19 limits. Therefore, the proposed change will not involve a significant increase in the consequences of an accident previously evaluated.

The operation of Nine Mile Point Unit 2, in accordance with the proposed amendment, will not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change for performance of the second Type A test until RF-05 will not affect the test methodology or acceptance criteria nor does it alter the physical containment structure or boundary in any way. There will be no addition or removal of plant hardware. No new plant operating modes are being introduced. The primary containment will continue to perform its accident mitigation function of minimizing leakage of radioactivity to the secondary containment. Results of the previous Type A tests are well below allowable limits, and there have been no plant modifications since the last test nor are any planned that could directly impact the previous Type A test results. The primary containment performs a mitigation function and is not an initiator of any analyzed event. A risk assessment was performed which indicates that deferral of the Type A ILRT will not result in any new accident scenarios.

Therefore, the proposed change will not create the possibility of a new or different accident from any previously evaluated.

The operation of Nine Mile Point Unit 2, in accordance with the proposed amendment, will not involve a significant reduction in a margin of safety,.

Safety margins are established through the Nine Mile Point Unit 2 safety analyses as reflected in the Technical Specification Limiting Conditions for Operation. Containment leak rates assumed in the safety analyses are not increased by the proposed change to the surveillance interval. The acceptance criteria which must be met to verify that leak rates remain within assumed values will also not be changed.

Although the interval between the first and second Type A tests is 72 months, no plant modifications have been made nor are planned which would invalidate past leak test results which confirm acceptable containment integrity. Furthermore, Type B and C testing of individual penetrations has been satisfactory and will continue to be performed in accordance with the Technical Specifications to assure that containment integrity is maintained.

Therefore, the proposed change will not involve a significant reduction in a margin of safety.