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ULNRC-2378

Gentlemen:

TAC No. 79970

DOCKET NUMBER 50-483
CALLAWAY PLANT
REVISION TO TECHNICAL SPECIFICATION 3/4.6.1.1, 3/4.6.1.2
CONTAINMENT INTEGRITY AND CONTAINMENT LEAKAGE,
AND PARTIAL EXEMPTION FROM 10CFR50, APPENDIX J

Union Electric Company herewith transmits an application for amendment to Facility Operating License No. NPF-30 for Callaway Plant. Also accompanying the transmittal is a partial exemption request, pursuant to the provisions of 10CFR50.12, from the existing requirements of 10CFR50, Appendix J.

This amendment application adds the words "manual and closed", to Technical Specification Surveillance 4.6.1.1a, revises the ACTION Statements in Technical Specification 3/4.6.1.2, removes the tie between integrated leak rate testing and inservice inspection testing, and revises the surveillance interval to be more consistent with 10CFR50, Appendix J.

The approval of the proposed exemption requests would be beneficial in removing areas of uncertainty associated with as found versus as left acceptance criteria when performing a containment integrated leakage rate test as was the case in the test recently performed at Refuel-4 (Reference ULNRC-2351, dated January 28, 1991).

Attachments 1, 2, and 3 contain the Safety Evaluations and 10CFR50.12 special circumstances, the Significant Hazards Evaluation, and the Proposed Technical Specification Changes in support of this amendment request.

Very truly yours,


Donald F. Schnell

JMC/dls
Attachments

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Alan C. Passwater, of lawful age, being first duly sworn upon oath says that he is Manager, Licensing and Fuels (Nuclear) for Union Electric Company; that he has read the foregoing document and knows the content thereof; that he has executed the same for and on behalf of said company with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By Alan Passwater
Alan C Passwater
Manager, Licensing and Fuels
Nuclear

SUBSCRIBED and sworn to before me this fifteenth day
of March, 1991.

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SAFETY EVALUATION

This amendment request addresses the following items:

1. A change to Technical Specification (T/S) 3/4.6.1.1 which addresses Containment Integrity.
2. A partial exemption from the 10CFR50, Appendix J, Section III.A.1(a) requirement to stop the Type A test (Containment Integrated Leakage Rate Test or CILRT) if excessive leakage is determined.
3. A partial exemption from the 10CFR50, Appendix J, section III.A.5(b) acceptance criteria for Type A tests (CILRT), and associated change to T/S 4.6.1.2b.
4. A partial exemption from the 10CFR50, Appendix J, Section III.D.1(a) requirement to perform the third Type A test (CILRT) during each 10-year service period when the plant is shutdown for the 10-year plant in-service inspections, and associated change to T/S 4.6.1.2a.
5. A change to T/S 3/4.6.1.2, which addresses Containment Leakage, to revise the ACTION Statements and clarify the Surveillance Requirements.

These changes to the T/S and exemption requests with their respective safety evaluations and 10CFR50.12 special circumstances are discussed individually hereinafter.

ITEM 1

The proposed change to T/S 4.6.1.1a consists of adding the following two words to the surveillance to be consistent with T/S Definition 1.7 for Containment Integrity. "Manual" is added to describe the valves that are required to be closed for penetrations not capable of being closed by OPERABLE containment automatic isolation valves, and "closed" is added to describe the position they are secured in during accident conditions. This change is administrative in nature in that no requirements are being altered and the operation of Callaway Plant with this change would not:

- a. Increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report. The additional words added to the Surveillance Requirement are for clarity to be more consistent with the description of containment integrity and are administrative in nature.
- b. Create the possibility for an accident or malfunction of equipment of a different type than any previously evaluated in the safety analysis report. There are no design changes being made that would create the possibility for an accident or malfunction of equipment. The change is merely an administrative change.

- c. Reduce the margin of safety as defined in the basis for any technical specification. The change provides clarification and is an administrative change.

Given the above discussion as well as that presented in the Significant Hazards Consideration, the proposed change does not adversely affect or endanger the health or safety of the general public or involve a significant safety hazard.

ITEM 2

This proposed exemption deals with the 10CFR50, Appendix J, Section III.A.1(a) requirement to stop the Type A test (CILRT) if excessive leakage is determined. The exemption would allow the satisfactory completion of the Type A test if the leakage can be isolated and appropriately factored into the results.

Appendix J, Section III.A.1(a) requires that if during a Type A test potentially excessive leakage paths are identified which will interfere with satisfactory completion of the test, the Type A test shall be terminated and local leakage testing performed on the paths of concern. Repairs and/or adjustments shall be made to affected equipment and a Type A test performed.

Our proposed alternative approach to follow to ensure the technical adequacy of Type A testing is as follows: When excessive leakage is experienced during a Type A test, significant leaks will be identified and isolated from the test. Penetrations so isolated will be capable of local leakage rate testing. Once these leaks have been isolated, the Type A test will be continued. Following the Type A test, local leakage rates will be measured before and after repairs to each isolated leakage path. The results of the Type A test will then be back-corrected using the "minimum pathway" leakage rate for each penetration. The local leakage measurements before the repair are added to the Type A results to determine the "as found" condition and possible "as found" Type A test failure, which could increase future Type A test frequency as required by Section III.A.6 to Appendix J. The after-repair measurements (the Type A test measurement plus the "as left" local leakage rates) determine the final acceptability of the test. For a satisfactory Type A test, the corrected Type A results (the sum of the appropriate local leakages and the Type A test results) must be less than 75% of the maximum allowable leakage rate L_a .

This exemption will not pose any undue risk to the health and safety of the public or involve a significant safety hazard. Special circumstances, as provided in 10CFR50.12(a)(2)(ii), are present justifying the partial exemption from Appendix J. Namely, application of the regulation in the particular circumstances is not necessary to achieve its underlying purpose, which is to ensure that accurate and conservative methods are used to assess the results of containment leak rate tests. This is similar to an exemption request which has been previously approved at Carolina Power & Light Company's H.B. Robinson Plant.

ITEM 3

This proposed exemption and changes to T/S 4.6.1.2b deals with the 10CFR50, Appendix J, Section III.A.5(b) acceptance criteria for Type A tests (CILRT). The exemption requests that the acceptance criterion for "as found" Type A tests be set at the same values as the maximum allowable leakage rate, L_a .

The objective of the Appendix J Type A test is to determine both the "as found" containment leakage condition and the final "as left" condition, if repairs are made. First, a satisfactory completion of a Type A test essentially ensures that actual leakage rates ("as left") do not exceed those rates assumed by accident analyses. Second, the "as found" condition of containment must be measured to obtain an indication of the ability of the containment to remain leaktight throughout the period between tests and for purpose of determining subsequent testing frequency.

Our exemption request proposes to use L_a as the acceptance criterion for the "as found" Type A test results. L_a is the actual leakage rate used in the plant safety analysis to determine the offsite radiological consequences of an accident. The "as left" test limit of $0.75 L_a$ was specified in Appendix J in order to provide a margin of $0.25 L_a$ for possible deterioration of the containment leak-tightness between Type A tests. Since L_a is the actual number assumed in the offsite dose analysis, and the "as found" test measures leakage rate at the end of the period between tests so that margin for deterioration is no longer needed, it is technically acceptable to use L_a as the "as found" Type A test acceptance criterion. The proposed changes to Surveillance Requirement T/S 4.6.1.2b specifies that L_a will be used as the acceptance criterion for the "as found" Type A test results and $0.75 L_a$ will be used as the "as left" leakage rate. The T/S acceptance criterion of 4.6.1.2b remains $0.75 L_a$ which represents the allowable operational leakage rate which shall be met before placing the containment into service prior to resumption of power operation following a test.

These T/S changes are consistent with our proposed partial exemption request to 10CFR50, Appendix J, Section III.A.1(a) and do not involve an unreviewed safety question because operation of Callaway Plant with these changes would not:

- a. Increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report. The Surveillance Requirement has been clarified to be more consistent with the intended objectives of Appendix J. These changes do not impact the leakage rates assumed by accident analysis.

- b. Create the possibility for an accident or malfunction of equipment of a different type than any previously evaluated in the safety analysis report. There are no design changes being made that would create the possibility for an accident or malfunction of equipment. The changes provide clarification to the Surveillance Requirement.
- c. Reduce the margin of safety as defined in the basis for any technical specification. The changes provide more direction and clarity to the Surveillance Requirement for performing the Type A tests required by Appendix J.

Given the above discussions, as well as those presented in the Significant Hazards Consideration, the proposed changes do not adversely affect or endanger the health or safety of the general public or involve a significant safety hazard.

This exemption will not pose any undue risk to the health and safety of the public or involve a significant safety hazard. Special circumstances, as provided in 10CFR50.12(a)(2)(ii), are present justifying the partial exemption from Appendix J. Namely, application of the regulation in the particular circumstances is not necessary to achieve its underlying purpose, which is to ensure that accurate and conservative methods are used to assess the results of containment leak rate tests. This is consistent with the proposed changes to 10CFR50, Appendix J (Reference 51FR209, dated 10/29/86) and the T/S change and exemption request previously approved at Carolina Power & Light Company's H.B. Robinson Plant.

ITEM 4

This proposed exemption and changes to T/S 4.6.1.2a deals with the 10CFR50, Appendix J, Section III.D.1(a) requirement to perform the third Type A test (CILRT) during each 10-year service period when the plant is shutdown for the 10-year plant inservice inspections. Section III.D.1(b) gives permissible periods for testing as periods when the plant facility is nonoperational and secured in the shutdown condition under the administrative control and in accordance with the safety procedures defined in the license. These permissible periods for testing would normally occur during a refueling shutdown.

Throughout the service life of a water-cooled nuclear power facility, 10CFR50.55a(g)(4) requires that components which are classified as American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Class 1, Class 2, and Class 3 meet the requirements set forth in the ASME Code Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. This section of the regulations also requires that inservice examinations of components and system pressure tests be conducted in 10-year intervals. For Callaway Plant this first

10-year interval runs from December 18, 1984 through December 18, 1994 with subsequent intervals to follow throughout the life of the plant. The inservice volumetric, surface, and visual examinations of components and system pressure tests are performed during the 10-year inspection intervals with the majority being done during the refueling shutdowns that occur approximately every 18 months. At the conclusion of the first 10-year interval and at the conclusion of the following 10-year intervals all of the inservice inspection program plan examination requirements required by 10CFR50.55a(g)(4) will have been completed.

Callaway Plant will not be shutting down at the end of the 10-year intervals for an extended outage to perform plant inservice inspections. Therefore, the performance of the third Type A test (CILRT) at the 10-year plant inservice inspection shutdown is impractical. Our proposed alternative to this Appendix J requirement is to perform the three Type A tests at approximately equal intervals within each 10-year period, with the third test of each set conducted as close as practical to the end of the 10-year period. There would be no connection between the Appendix J 10-year interval and the inservice inspection 10-year interval.

The proposed change to Surveillance Requirement T/S 4.6.1.2a deletes the requirement to perform the third test of each set during the shutdown for the 10-year plant inservice inspection. The deletion of when the third test is performed is consistent with our proposed partial exemption request to 10CFR50, Appendix J, Section III.D.1(a) and does not involve an unreviewed safety question because operation of Callaway Plant with this change would not:

- a. Increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report. The deletion of this requirement from the T/S does not impact plant safety since the underlying purpose of the requirement to perform 3 containment leak rate tests at approximately equal intervals within each 10-year period remains consistent with Appendix J objectives.
- b. Create the possibility for an accident or malfunction of equipment of a different type than any previously evaluated in the Safety Analysis Report. There are no design changes being made that would create the possibility for an accident or malfunction of equipment. The change deletes an unnecessary tie between two regulations, but is consistent with the requirements of the two regulations (Appendix J and 10CFR50.55a(g)(4)).
- c. Reduce the margin of safety as defined in the basis for any technical specification. This change deletes an unnecessary requirement that does not impact the margin of safety provided by the technical specifications.

Given the above discussions, as well as those presented in the Significant Hazards Consideration, the proposed changes do not adversely affect or endanger the health or safety of the general public or involve a significant safety hazard.

This exemption will not pose any undue risk to the health and safety of the public or involve a significant safety hazard. Special circumstances, as provided in 10CFR50.12(a)(2)(ii), are present justifying the partial exemption from Appendix J. Namely, application of the regulation in the particular circumstances is not necessary to achieve its underlying purpose, which is to ensure that accurate and conservative methods are used in performing three containment leak rate tests at approximately equal intervals within each 10-year interval throughout the life of the plant.

ITEM 5

The proposed changes to T/S 3/4.6.1.2 revise the existing ACTION Statement into three ACTION Statements in lieu of one to be more compatible with the Limiting Condition for Operation, (LCO), and clarify the Surveillance Requirements to be more consistent with the intended requirements of 10CFR50, Appendix J.

The expansion of the ACTION Statement from one into three provides more direction on what to do when the LCOs for containment leakage rates are not being met. Proposed ACTION Statement a. provides the corrective measures to be taken when the overall containment integrated leakage rate exceeds the allowable leakage rate, L_a . Proposed ACTION Statement b. modifies the existing ACTION Statement to specify what Action to take when the "as left" overall containment integrated leakage rate exceeds $0.75 L_a$ prior to increasing the Reactor Coolant System (RCS) temperature above 200°F . Proposed ACTION Statement c. provides the corrective measures to be taken when the combined leakage rate for all penetrations and valves subject to Type B and C tests exceeds $0.60 L_a$ if the tests are performed while at power (i.e. RCS above 200°F).

By dividing the existing ACTION Statement into three, more direction is provided for corrective action to be taken when the LCO is not being met. The existing ACTION Statement is unclear as to whether or not the $0.75 L_a$ is the "as found" or "as left" leakage rate and does not provide direction on what to do when Type B and C tests are not satisfied or a failure to satisfy the Type B and C criteria is uncovered when the RCS temperature is above 200°F .

The proposed change to Surveillance Requirement T/S 4.6.1.2a removes the "40 \pm 10 month intervals" that the three Type A tests (CILRT) shall be conducted at and replaces it with "approximately equal intervals". The removal from the T/S of the schedule for conducting the three Type A tests will not result in any loss of regulatory control since the requirements of Appendix J

10CFR50 provide a schedule for conducting these test. The removal of the 40 +10 month time frame for test performance is also justifiable since it does not coincide with an 18-month refueling outage schedule. Callaway Plant refuels on approximately an 18-month cycle and the 40 +10 month maximum interval could cause a fourth test to be performed in a future 10-year service period. Therefore, because this duplication is unnecessary, the removal of this T/S schedule as a line-item improvement is consistent with the Commission Policy Statement on T/S improvements. This approach is consistent with that taken in Generic Letter 91-01 in which the reactor vessel material specimen withdrawal schedule has been removed from Technical Specifications because it is also contained in 10CFR50, Appendix H.

The proposed changes to T/S 3/4.6.1.2 do not involve an unreviewed safety question because operation of Callaway Plant with these changes would not:

- a. Increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report. The expansion of the ACTION Statements provides more definitive corrective action to take when an LCO is not in compliance, and the Surveillance Requirements have been clarified to be more consistent with the intended objectives of Appendix J. These changes do not impact the leakage rates assumed by accident analyses.
- b. Create the possibility for an accident or malfunction of equipment of a different type than any previously evaluated in the safety analysis report. There are no design changes being made that would create the possibility for an accident or malfunction of equipment. The changes provide clarification to the ACTION Statements and Surveillance Requirements.
- c. Reduce the margin of safety as defined in the basis for any technical specification. The changes provide more direction on what corrective measures to take when an LCO is not met and clarifies the Surveillance Requirements for performing the Type A tests required by Appendix J.

Given the above discussions as well as those presented in the Significant Hazards Consideration, the proposed changes do not adversely affect or endanger the health or safety of the general public or involve a significant safety hazard.

SIGNIFICANT HAZARDS CONSIDERATION

This amendment request revises Technical Specifications (T/S) 3/4.6.1.1 and 3/4.6.1.2 which address Containment Integrity and Containment Leakage. Two words, "manual and closed", are to be added to T/S 4.6.1.1a to be consistent with T/S Definition 1.7 for Containment Integrity. The changes to T/S 3/4.6.1.2 are to expand the existing ACTION Statement into three ACTION Statements, remove the tie between CILRT testing and inservice inspection testing, and revises the surveillance interval to be more consistent with 10CFR50, Appendix J.

1. The proposed change to T/S 4.6.1.1a does not:

Involve a significant increase in the probability or consequences of an accident previously evaluated. The change provides clarification and is administrative in nature.

Create the possibility of a new or different kind of accident from any accident previously evaluated. There are no design changes being made that would create a new type of accident or malfunction and the method and manner of plant operation remains unchanged. This change is merely an administrative change.

Involve a significant reduction in a margin of safety. The change provides clarification and is an administrative only change. Therefore, the margin of safety is unaffected.

2. The proposed change to T/S 4.6.1.2b does not:

Involve a significant increase in the probability or consequences of an accident previously evaluated. The Surveillance Requirement has been clarified to be more consistent with the objectives of Appendix J and the offsite radiological consequences of an accident assumed in the Safety Analysis have not been altered.

Create the possibility of a new or different kind of accident from any accident previously evaluated. There are no design changes being made that would create a new type of accident or malfunction and the method and manner of plant operation remain unchanged. The change to the Surveillance Requirement provides clarification consistent with regulatory requirements.

Involve a significant reduction in a margin of safety. There are no changes being made to the safety limits or safety system settings that would adversely impact plant safety. The change to the Surveillance Requirement is in conformance with the requirements specified in Appendix J.

3. The proposed change to T/S 4.6.1.2a to delete the requirement to perform the third test of each set during the shutdown for the 10-year plant in-service inspection does not:

Involve a significant increase in the probability or consequences of an accident previously evaluated. The deletion of this requirement from the T/S does not impact plant safety since the requirements of Appendix J to perform the Type A tests (CILRT) must still be complied with.

Create the possibility of a new or different kind of accident from any accident previously evaluated. There are no design changes being made that would create a new type of accident or malfunction and the method and manner of plant operation remains unchanged. The change deletes an unnecessary tie between two regulations, but still meets the intent of the regulations.

Involve a significant reduction in a margin of safety. There are no changes being made to the safety limits or safety system settings that would adversely impact plant safety. The change deletes an unnecessary requirement that does not impact the margin of safety.

4. The proposed changes to T/S 3/4.6.1.2 do not:

Involve a significant increase in the probability or consequences of an accident previously evaluated. These proposed changes clarify an existing technical specification to provide more definitive corrective actions to take if the LCOs for containment leakage rates are not being met. Also, the demonstration that containment leakage rates are in conformance with Appendix J, 10CFR50, has been clarified, however the intent has not been changed nor the offsite radiological consequences of an accident assumed in the safety analysis altered.

Create the possibility of a new or different kind of accident from any accident previously evaluated. There are no design changes being made that would create a new type of accident or malfunction and the method and manner of plant operation remains unchanged. These changes merely provide clear guidance to accomplish actions commiserate with the existing situation and Surveillance Requirements that are consistent with regulatory requirements.

Involve a significant reduction in a margin of safety. There are no changes being made to the safety limits or safety system settings that would adversely impact plant safety. These changes impose corrective actions consistent with other Containment System Technical Specifications and changes to the Surveillance Requirements are in conformance with the requirements specified in Appendix J. Therefore the margin of safety is unaffected.

Based on the above discussions, it has been determined that the requested Technical Specification revisions do not involve a significant increase in the probability or consequences of an accident or other adverse condition over previous evaluations; or create the possibility of a new or different kind of accident or condition over previous evaluations; or involve a significant reduction in a margin of safety. Therefore, the requested license amendment does not involve a significant hazards consideration.