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June 16, 1992

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
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Gentlemen:

ULNRC-2650

DOCKET NUMBER 50-483
CALLAWAY PLANT
REVISION TO TECHNICAL SPECIFICATION 3/4.6.1.2
CONTAINMENT LEAKAGE

References: 1) ULNRC-2648, dated June 16, 1992
2) ULNRC-2378, dated March 15, 1991

Union Electric Company herewith transmits an application for amendment to Facility Operating License No. NPP-30 for Callaway Plant.

This amendment application is a one-time schedular exemption to Technical Specification 4.6.1.2.a, that requires three Type A tests (Containment Integrated Leakage Rate Test or CILRT) be performed at 40 ± 10 month intervals during each 10-year service period. This one-time schedular exemption would allow the third test of the first 10-year service period to be performed during Refuel 7 at approximately a 53 month interval instead of the current maximum interval of 50 months and would exceed the first 10-year service period by approximately 14 months.

Attachments 1, 2, 3 and 4 contain the Safety Evaluation, the Significant Hazards Evaluation, the Environmental Evaluation, and the Proposed Technical Specification Changes in support of this amendment request. This change request has been approved by the Callaway Onsite Review Committee and the Nuclear Safety Review Board.

We are requesting that the NRC Staff please expedite their review of this submittal so that the requested amendment will be issued by October 1992 to facilitate our planning for future CILRTs.

Very truly yours,

Donald F. Schnell

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Attachments

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STATE OF MISSOURI)
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Donald F. Schnell, of lawful age, being first duly sworn upon oath says that he is Senior Vice President-Nuclear and an officer of 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 Donald F. Schnell
Donald F. Schnell
Senior Vice President
Nuclear

SUBSCRIBED and sworn to before me this 16th day
of June, 1992.

Barbara J. Pfaff
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NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 22, 1993
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SAFETY EVALUATION

Proposed Change

This amendment request is a one-time schedular exemption to Technical Specification (T/S) Surveillance Requirement 4.6.1.2.a and its associated Flashes, that requires three Type A tests (Containment Integrated Leakage Rate Test or CILRT) be performed at 40 ± 10 month intervals during each 10-year service period. This one-time schedular exemption would allow the third test of the first 10-year service period to be performed during Refuel 7 at approximately a 53 month interval instead of the current maximum interval of 50 months and would exceed the first 10-year service period by approximately 14 months.

Background

Type A tests are defined in Section II.F of 10 CFR 50, Appendix J as those tests intended to measure the primary reactor containment overall integrated leakage rate at periodic intervals. The time required to perform the CILRTs necessitates that they be performed during refueling outages. The time interval between CILRTs should be about 40 months based on performing three such tests at approximately equal intervals during each 10-year service period. Since refueling outages do not necessarily occur coincident with a 40-month interval, a permissible variation of 10 months (i.e., a 25 percent variation) is authorized in the T/S to permit flexibility in scheduling the CILRTs.

The first and second CILRTs, of the set of three tests for the first 10-year service period for Callaway Plant, were conducted in April 1987 and October 1990, respectively. This represents testing intervals of 40 and 41 months from the initial preoperational CILRT performed in January 1984. This would indicate that the third of the first set of three CILRTs be performed at Refuel 6 scheduled for September 1993 which will be 35 months after the preceding test and within the first 10-year service period. The result of this testing sequence would cause an extra CILRT to be performed over the course of the next 10-year service period based on the 40 ± 10 month testing interval coincident with the 18-month fuel cycle utilized at Callaway Plant. In order to prevent performing this fourth CILRT in the second 10-year service period, we are proposing that the third CILRT for the first 10-year service period be performed during Refuel 7 scheduled for March 1995. Therefore, the one time schedular exemption is needed to allow this test interval to exceed the 40 ± 10 month requirement and the three tests within the first 10-year service period requirement. An exemption to exceed the 10-year interval of 10CFR Appendix J, Section III.D 1(a) is being submitted by Reference 1. This request is consistent with the changes requested to T/S 3/4.6.1.2 under Reference 2.

A benefit of this one-time exemption is to eliminate the need to perform an extra CILRT over the next 10-year service period, thus a reduction in personnel radiation exposure is realized. The elimination of setup and restoration of 1 CILRT during the first 20-year period provides a dose savings from the elimination of contamination, the reduction of exposure for venting and draining and from setup and restoration of the instrumentation during and after the test.

Evaluation

Data from past tests at Callaway Plant and from NUMARC indicates that the majority of the leakage that is measured during the CILRT is from the containment penetrations and not from the containment barrier itself. Since the Type B and C tests (Local Leakage Rate Test or LLRT) program, which measures penetration and valve leakage, is not altered, assurance that containment integrity is maintained can also be verified by the performance of the LLRTs. In addition to the LLRTs indication of containment integrity the data from the first and second CILRT illustrates that the "as-left" leakage rate was well below the limit established for acceptance in 10 CFR 50, Appendix J and Technical Specifications. The allowable leakage rate, L_a is 0.2 wt.%/day, however Appendix J and T/S requires that the leakage rate be less than 75% of this value to allow for deterioration in leakage paths between tests. Therefore, the acceptance limit is 0.15 wt.%/day and the "as-left" leakage rates for the first two CILRTs were 0.083 and .0505 wt.%/day which is well below the acceptance limit.

The proposed one-time scheduler exemption to T/S 4.6.1.2.a that would allow the third test of the first 10-year service period to be performed beyond the 10-year service period and past the 50 month maximum interval 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. This one-time exemption to extend the CILRT interval 3 months beyond the maximum T/S allowance and into the 2nd 10-year service period will not adversely impact plant safety. The schedule for performing the Type B and C LLRTs is not affected and the majority of leakage from the containment is through penetrations and isolation valves. The leakage rates assumed by accident analyses are unchanged and past CILRTs have produced leakage rates well below the maximum allowed by T/S and Appendix J.
- 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 a one-time exemption to exceed the T/S maximum interval for performing a CILRT. The purpose of the CILRT is to provide periodic verification by tests of the leak-tight integrity of the primary reactor containment, and systems and components which penetrate containment. The tests assure that leakage through the containment, and systems and components penetrating containment shall not exceed allowable leakage rate values associated with the conditions resulting from any loss-of-coolant accident. The additional 3-month period added to the interval since the last CILRT was performed would not adversely affect the containment integrity in the event of a loss-of-coolant accident.

- c. Reduce the margin of safety as defined in the basis for any technical specification. The change is a one-time request to extend a surveillance interval and does not reduce the margin of safety assumed in accident analysis for release of radioactive materials from the containment atmosphere into the environment.

Conclusion

Give the above discussions as well as those 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.

SIGNIFICANT HAZARDS CONSIDERATION

This amendment request is a one-time scheduler exemption to Technical Specification (T/S) Surveillance Requirement 4.6.1.2.a and its associated Bases, that requires three Type A tests (Containment Integrated Leakage Rate Test or CILRT) be performed during each 10-year service period at 40 ± 10 month intervals. This one-time exemption would allow the third CILRT to be performed during Refuel 7 at approximately 53 months elapsed time since the previous one was performed. This would exceed the 50 month maximum interval in the current T/S and would also extend the third test approximately 14 months past the first 10-year service period. This exemption would prevent the need to perform a fourth CILRT in the second 10-year service period, thus a reduction in personnel exposure is realized.

The proposed exemption to Technical Specification Surveillance Requirement 4.6.1.2.a does not involve a significant hazards consideration because operation of Callaway Plant with this exemption would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated. This exemption applies to the integrated leak rate test and does not affect the local leak rate testing of containment penetrations and isolation valves where the majority of the leakage occurs. The allowable containment leakage used in accident analysis for offsite doses, L_a is 0.2 wt.%/day and for conservatism the leakage is limited to 75% L_a to account for possible degradation of the containment leakage barriers between tests. Based on the "as-left" leakage data from the past two CILRTs, the additional time period added to the testing interval would not adversely impact the containment leakage barriers to where degradation would cause leakage to exceed that assumed in accident analysis.
2. 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 is a one-time exemption to extend the surveillance interval for performance of the third CILRT.
3. 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 is a one-time exemption to extend the time interval for performing a CILRT approximately 3 months beyond the current maximum interval. This change does not reduce any technical specification margin of safety.

Based on the above discussions, it has been determined that the requested Technical Specification change does 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.

ENVIRONMENTAL CONSIDERATION

This amendment application is a one-time scheduler exemption to Technical Specification Surveillance Requirement 4.6.1.2.a and its associated Bases, that would allow the third test of the first 10-year service period to be performed at approximately a 53 month interval instead of the current maximum interval of 50 months.

The proposed amendment involves changes with respect to the use of facility components located within the restricted area, as defined in 10CFR20, and changes surveillance requirements. Union Electric has determined that the proposed amendment does not involve:

- (1) A significant hazard consideration, as discussed in Attachment 2 of this amendment application;
- (2) A significant change in the types or significant increase in the amounts of any effluents that may be released offsite;
- (3) A significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10CFR51.22(c)(9). Pursuant to 10CFR51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.