

March 9, 1993

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Gentlemen:

ULNRC- 2775

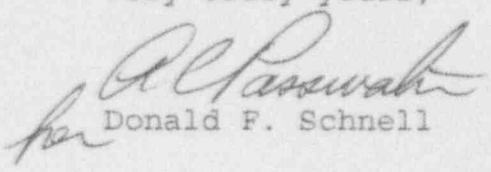
DOCKET NUMBER 50-483
CALLAWAY PLANT
REVISION TO TECHNICAL SPECIFICATION 4.8.1.1.2.h(2)
A. C. SOURCES

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

This amendment application deletes the requirements of Technical Specification Surveillance Requirement 4.8.1.1.2.h(2) that requires a pressure test of those portions of the diesel fuel-oil system that are designed to Section III, Subsection ND of the ASME Code. This system pressure test is to be performed at a pressure equal to 110% of the system design pressure at least once per 10 years. This technical specification may be deleted since Technical Specification 4.0.5 imposes the equivalent surveillance requirements for inservice inspection and testing of ASME Code Class 1, 2, and 3 components.

Attachments 1, 2, 3 and 4 contain the Safety Evaluation, the Significant Hazards Evaluation, the Environmental Consideration, 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.

Very truly yours,


Donald F. Schnell

JMC/plh

Attachments: 1) Safety Evaluation
2) Significant Hazards Evaluation
3) Environmental Consideration
4) Proposed Technical Specification Changes

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STATE OF MISSOURI)
) S S
CITY OF ST. LOUIS)

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

SUBSCRIBED and sworn to before me this 9th day
of March, 1993.

Barbara J. Pfaff
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MY COMMISSION EXPIRES APRIL 22, 1993
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SAFETY EVALUATION

Proposed Change

This amendment request deletes the requirements of Technical Specification (T/S) Surveillance Requirement 4.8.1.1.2.h(2) that requires a pressure test of those portions of the diesel fuel oil system that are designed to Section III, Subsection ND of the ASME Code, (i.e. Class 3, which applies to all components of the diesel fuel oil system except fill and test connection piping beyond isolation valves and vent piping). This system pressure test is to be performed at a pressure equal to 110% of the system design pressure at least once per 10 years. This T/S may be deleted since T/S 4.0.5 imposes the equivalent surveillance requirements for inservice inspection and testing of ASME Code Class 1, 2, and 3 components.

Background

Appendix 3A of the Callaway Plant FSAR states that Callaway Plant conforms to the requirements of Regulatory Guide (RG) 1.137 Revision 0, dated January 1978, "Fuel-Oil Systems for Standby Diesel Generators", as described in FSAR Table 9.5.4-3. RG 1.137 adopts Standard ANSI N195-1976, "Fuel-Oil Systems for Standby Diesel Generators," as an acceptable method for complying with the pertinent requirements of General Design Criterion 17 of Appendix A to 10 CFR Part 50. This standard provides the design requirements for the fuel-oil system for standby diesel generators and states that arrangement for the fuel-oil system shall provide for inservice inspection and testing in accordance with the ASME Code, Section XI. RG 1.137 also states that, although Section XI of the ASME Code does not specify whether its provisions apply to fuel-oil systems, they should be applied for the inservice inspection and testing program for those portions of the system that are designed to Section III, Subsection ND of the Code, (i.e. Class 3 systems), and since portions of the diesel fuel-oil system at Callaway Plant are Class 3 components, the provisions of the ASME Code, Section XI are applicable.

Section XI of the ASME Code requires that class 3 systems subject to hydrostatic testing be tested in accordance with the requirements of Article IWA-5000, Article IWD-5000 and Subarticle IWD-2600. Article IWD-5000, System Pressure Tests allows the following in Subarticle IWD-5223, System Hydrostatic Test:

- a) The system hydrostatic test pressure shall be at least 1.10 times the system design pressure for systems with design temperature of 200°F or less.
- b) In the case of atmospheric storage tanks, the hydrostatic head developed with the tank filled to its design capacity shall be acceptable as the test pressure.

Since portions of the diesel fuel-oil system are not designed for pressure testing, e.g., the storage tanks have atmospheric vents that cannot be isolated, the provisions of Subarticle IWD-5223 paragraph(b) would be applicable in lieu of the pressure test of 110% of system design pressure as specified in T/S 4.8.1.1.2.h(2).

Evaluation

The provisions of T/S Surveillance Requirement 4.0.5 are adequate as a replacement for T/S 4.8.1.1.2.h(2) since it requires inservice inspection and testing of ASME Code Class 3 components in accordance with Section XI of the ASME Code. The T/S requirement to perform a system pressure test of the class 3 fuel-oil piping at 110% of the system design pressure is not feasible since the fuel-oil system includes above ground and buried tanks and some piping that are designed for and operate at atmospheric conditions, (i.e., no isolation valves on the atmospheric vents). The requirements of Section XI, Subarticle IWD-5223, paragraph (b) of the ASME Code recognizes this fact in allowing the system pressure test for storage tanks to be the nominal hydrostatic pressure developed with the tank filled to its design capacity. This system pressure test satisfies the requirements of T/S 4.0.5 but does not satisfy the requirements of T/S 4.8.1.1.2.h(2), hence the need for deletion of the latter T/S.

In reviewing the history of T/S 4.8.1.1.2.h(2) requirements, it appears it is a direct result of Revision 1 of RG 1.137. Regulatory Position C.1.e.(1) introduced the concept of pressure testing the fuel-oil system to a pressure 1.10 times the system design pressure at 10-year intervals. This Regulatory Position was not present in Revision 0 of RG 1.137 which Callaway Plant's diesel fuel-oil system complies with according to FSAR Table 9.5.4-3. Therefore, since Callaway Plant's diesel fuel-oil system was not designed to the Regulatory Positions of Revision 1 of RG 1.137, the deletion of this T/S requirement is warranted.

The proposed deletion of T/S 4.8.1.1.2.h(2) would remove the duplication addressed in T/S 4.0.5 and allow more flexibility for use of the base document requirements for both specifications (i.e., the ASME Code, Section XI), 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 T/S will not adversely impact plant safety since the requirements of Section XI of the ASME Code are still implemented by the provisions of T/S 4.0.5 to pressure test the Class 3 portions of the diesel fuel-oil system.

- 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 inservice inspection and testing program required by ASME Section XI will still be implemented under the provisions of T/S 4.0.5. The class 3 portions of the fuel-oil system will be inspected and tested using the more practical Section XI alternative methods which are more appropriate for the design and operation of the Callaway Plant diesel fuel-oil system.
- c) Reduce the margin of safety as defined in the basis for any technical specification. The deletion of T/S 4.8.1.1.2.h(2) does not reduce the margin of safety assumed in any accident analysis. The diesel generators will still perform their intended safety function following a loss of offsite power, to achieve and maintain the plant in a safe shutdown condition.

Conclusion

Given 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 or the general public or involve a significant safety hazard.

SIGNIFICANT HAZARDS CONSIDERATION

This amendment request deletes the requirements of Technical Specification (T/S) Surveillance Requirements 4.8.1.1.2.h(2) that requires a pressure test of those portions of the diesel fuel-oil system that are designed to Section III, Subsection ND of the ASME Code, (i.e., Class 3, which applies to all components of the diesel fuel oil system except fill and test connection piping beyond isolation valves and vent piping). The system pressure test is to be performed at a pressure of 110% of the design pressure, at least once per 10 years. This T/S imposes the equivalent requirements as T/S 4.0.5, thus it can be deleted.

The proposed deletion of T/S 4.8.1.1.2.h(2) does not involve a significant hazards consideration because operation of Callaway Plant with this change would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated. The configuration of the diesel fuel-oil system as currently installed and operated is such that a pressure test of 110% of design pressure would be impractical to perform. The system contains tanks designed for atmospheric pressure and isolation of them and their vent lines from the specified pressure test is not practical. The ASME Code, Section XI, provides alternate test methods to use when storage tanks are involved in a system pressure test. By deleting this T/S requirement the provisions of T/S 4.0.5 can be utilized as an equivalent testing requirement to ensure the integrity of the diesel fuel-oil system to perform its intended safety function.
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. This T/S requirement is not needed since T/S 4.0.5 provides an equivalent surveillance requirement for the diesel fuel-oil system using methods acceptable to Section XI of the ASME Code and RG 1.137 Revision 0.
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 intended requirements of this T/S are provided for in T/S 4.0.5, utilizing methods more appropriate for testing the functionality of the diesel fuel-oil system to perform its intended safety function following a loss of offsite power.

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 deletes the requirements of Technical Specification 4.8.1.1.2.h(2) that requires a pressure test of those portions of the diesel fuel-oil system that are designed to Section III, Subsection ND of the ASME Code.

The proposed amendment involves changes with respect to the use of facility components located within the restricted area, as defined in 10 CFR 20 and revises a surveillance requirement. 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 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 this amendment.