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March 6, 1990

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Senior Vice President  
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U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
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ULNRC-2167

Gentlemen:

DOCKET NUMBER 50-483  
CALLAWAY PLANT  
REVISION TO TECHNICAL SPECIFICATION 3/4.7.1.2  
AUXILIARY FEEDWATER SYSTEM

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

This amendment application adds additional conditions to the Limiting Conditions for Operation to address flowpath requirements for the motor-driven and steam turbine-driven auxiliary feedwater pumps. It also imposes additional requirements to the ACTION Statements if any of the Essential Service Water (ESW) system valves to the steam turbine-driven auxiliary feedwater pump are inoperable or if one ESW loop is inoperable.

Attachments 1, 2, and 3 contain the Safety Evaluation, the Significant Hazards Evaluation, and the Proposed Technical Specification Changes in support of this amendment request. The proposed changes will become effective for Union Electric implementation upon NRC approval.

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PDR ADDCK 050004B3  
PNU

Very truly yours,

A handwritten signature in black ink, appearing to read "Al Paswath". Below the signature, the name "Donald F. Schnell" is printed in a smaller, standard font.  
for

JMC/dls

Attachments

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STATE OF MISSOURI )  
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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 sixth day  
of March, 1990.

Barbara J. Pfaff  
BARBARA J. PFAFF  
NOTARY PUBLIC, STATE OF MISSOURI  
MY COMMISSION EXPIRES APRIL 22, 1993  
ST. LOUIS COUNTY

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SAFETY EVALUATION

This amendment request revises Technical Specification 3/4.7.1.2 Auxiliary Feedwater (AFW) System. The proposed revision adds additional conditions to the Limiting Conditions for Operation to address flowpath requirements for the motor-driven and steam turbine-driven auxiliary feedwater pumps. It also imposes additional requirements to the ACTION Statements to clarify the action to be taken in the event any of the Essential Service Water (ESW) system valves to the steam turbine-driven auxiliary feedwater pump are inoperable or if one ESW loop is inoperable. Union Electric's compliance with the current technical specification has been consistent with the proposed additions to the ACTION Statements. These additional requirements provide clarity and consistency to assure proper compliance is being maintained.

The proposed additions to the ACTION Statements provide direction in the event that any one of the ESW supply valves to the steam turbine-driven auxiliary feedwater pump (AL-HV-32, AL-HV-33, AL-V-11, and AL-V-14 as shown on FSAR Figure 10.4-9) is inoperable. It also clarifies the required action to be taken in the event that one ESW loop is inoperable. This clarification is needed to provide a balance between single failure, seismic design, and pipe break criteria for Callaway Plant.

From a single failure perspective, AL-HV-32, AL-HV-33, AL-V-11, or AL-V-14, could be inoperable indefinitely since the turbine-driven AFW pump would still have two suction sources available, i.e. via the unaffected ESW train as well as from the Condensate Storage Tank (CST) through AL-HV-36. The latter is the normal and preferred source. However, our seismic design commitment to Regulatory Guide 1.29 in FSAR Table 3.2-3 requires that all plant items needed to cope with a secondary side pipe break inside containment be seismically designed. Further, the secondary systems break criteria discussed in FSAR Table 3.6-4 (Table Note D.4) states that no non-safety related equipment is required for safe shutdown after a secondary side pipe break. Since the CST is non-seismic and has no safety design basis, it can not be assumed to mitigate this pipe break. If the CST suction source is non-mechanistically assumed to be unavailable due to these licensing commitments, then both ESW trains must be available to satisfy single failure criteria in support of AFW functional requirements in the mitigation of a secondary side pipe break. We consider the CST unavailability in this scenario to be non-mechanistic since, as discussed in FSAR Section 10.4.9.3 (Safety Evaluation Two), breaks in seismic Category I piping (e.g. secondary side pipe breaks inside containment) are not postulated during a seismic event. As such, we would not declare the turbine-driven AFW pump inoperable due to the failure of one ESW supply valve since the other ESW train and the CST source are available after a secondary side break, absent a seismic event. Therefore, this additional ACTION Statement is needed to satisfy our licensing commitments, clarify operability requirements, and to provide a comparable level of plant protection as given by Technical Specification 3.7.1.2 and 3.7.4.

This same logic can be used in the event that the steam turbine-driven AFW pump and one motor-driven AFW pump have an associated ESW train inoperable. The steam turbine-driven AFW pump would still be operable since the other ESW train and the CST source are available, however the affected motor-driven AFW pump would be declared inoperable and the associated ACTION Statement for one AFW pump being inoperable would be entered. Even though the inoperability of one ESW train to the steam turbine-driven AFW

pump would not actually render the pump inoperable, since the other ESW suction path and the CST source are available after a secondary sidebreak absent a seismic event, a clarification of the existing ACTION Statement is needed to insure consistency with the 72 hour allowed outage time for the ESW System. Since a single failure does not have to be postulated during a technical specification allowed outage time, the additional ACTION Statements do not adversely affect the steam turbine-driven AFW pump's ability to perform as designed. Therefore the loss of one train of ESW would result in the declaration of only one AFW pump inoperable, and that one would be the inoperable train's associated motor-driven AFW pump.

Based on the above discussions and the considerations presented in Attachment 2, the proposed revisions to Technical Specification 3/4.7.1.2 do not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety equipment important to safety previously evaluated in the safety analysis report; or create a possibility for an accident or malfunction of a different type than any previously evaluated in the safety analysis report; or reduce the margin of safety as defined in the basis for any technical specification. Therefore, the proposed revisions 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 Specification 3/4.7.1.2 Auxiliary Feedwater (AFW) System. The proposed revision adds additional conditions to the Limiting Conditions for Operation to address flowpath requirements for the motor-driven and steam turbine-driven auxiliary feedwater pumps. It also imposes additional requirements to the ACTION Statements to clarify the action to be taken in the event any of the Essential Service Water (ESW) system valves to the steam turbine-driven auxiliary feedwater pump are inoperable or if one ESW loop is inoperable. Union Electric's compliance with the current technical specification has been consistent with the proposed additions to the ACTION Statements. These additional requirements provide clarity and consistency to assure proper compliance is being maintained.

1. The proposed additional ACTION Statements do not involve a significant increase in the probability or consequences of an accident previously evaluated. This change constitutes an additional limitation, restriction, or control not presently included in the technical specifications which is consistent with operability requirements of the AFW and ESW systems. The change provides a balance between single failure, seismic design, and pipe break criteria while satisfying our licensing commitments. The credit given to the non-seismic condensate storage tank is appropriately restricted. It does not affect the ability of the AFW System to perform its intended safety function. The change clarifies the operability determination for the existing ACTION Statements, and provides additional conditions for the Limiting Conditions for Operation.
2. The proposed additional ACTION Statements do not create the possibility of a new or different kind of accident from any previously evaluated. This is based on the fact that the method and manner of plant operation remains unchanged. The allowable outage time for an inoperable ESW supply valve to the turbine-driven AFW pump is consistent with that of Technical Specifications 3.7.1.2 and 3.7.4. There are no new failure modes or mechanisms associated with the proposed change. The change clarifies the operability determination for the existing ACTION Statements to remove confusion when an ACTION Statement is entered, and adds additional conditions to the existing Limiting Conditions for Operation.
3. The proposed additional ACTION Statements do not involve a significant reduction in a margin of safety. This is based on the fact that no plant design changes are involved. The change provides clarification for operability determination to the existing ACTION Statements, and adds additional conditions to the Limiting Conditions for Operation.

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.