

September 24, 2004

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop P1-137
Washington, DC 20555-0001

ULNRC-05060

Ladies and Gentlemen:

**DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
UNION ELECTRIC CO.
FACILITY OPERATING LICENSE NPF-30
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION ON
AMENDMENT APPLICATION ON MODE CHANGE RELAXATIONS**

Reference: ULNRC-04977, dated April 8, 2004

In the letter referenced above, AmerenUE transmitted an application for amendment to Facility Operating License Number NPF-30 for Callaway Plant. The license amendment request would modify Technical Specification (TS) requirements for MODE change limitations in Limiting Condition for Operation (LCO) 3.0.4 and Surveillance Requirement (SR) 3.0.4, and also modify other specifications accordingly.

In the reference AmerenUE proposed to delete the Note in Condition C of TS 3.3.1, "Reactor Trip System (RTS) Instrumentation," which requires that while the Limiting Condition for Operation (LCO) is not met for RTS Function 19, 20, or 21 in MODE 5, making the Rod Control System capable of rod withdrawal is not permitted. Based on discussions with the NRC staff on July 29, 2004 and August 18, 2004, additional information was requested to support the deletion of the Note in Condition C.

The additional information provided in the attachment does not impact the conclusions of the No Significant Hazards Consideration provided in the reference. In accordance with 10 CFR 50.91, a copy of this submittal is being provided to the designated Missouri State official.



A001
Revised 10/7/04

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There are no commitments associated with this submittal. If you have any questions on this submittal, please contact us.

Very truly yours,

A handwritten signature in black ink that reads "Keith D. Young". The signature is written in a cursive style with a large, stylized "K" and "Y".

Keith D. Young
Manager, Regulatory Affairs

Attachment

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cc: U.S. Nuclear Regulatory Commission (Original and 1 copy)
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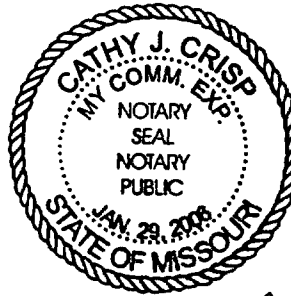
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STATE OF MISSOURI)
)
COUNTY OF CALLAWAY)

SS

Cathy J. Crisp
Notary Public
State of Missouri
Expiration 1-29-08

Keith D. Young, of lawful age, being first duly sworn upon oath says that he is Manager, Regulatory Affairs, 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 *Keith D. Young*
Keith D. Young
Manager, Regulatory Affairs

SUBSCRIBED and sworn to before me this 24th day of September, 2004.

Response to Request for Additional Information

Request:

Industry/Technical Specification Task Force Change Traveler TSTF-359, Revision 9, revises Limiting Condition for Operation (LCO) 3.0.4 so that it now applies to all Technical Specifications (TS) except for those that are specifically excluded. Previously LCO 3.0.4 prevented MODE changes with an LCO not met except for those specifications that had Notes explicitly stating that LCO 3.0.4 was not applicable. Thus, in adopting TSTF-359, those Notes stating that LCO 3.0.4 is not applicable can be removed. However, it does not follow that all Notes that explicitly exclude transitioning into conditions of applicability should be removed (in specific cases dealing with MODES 5 and 6 to which LCO 3.0.4 previously did not apply and the licensee determined that MODE changes should be excluded). In particular, TSTF-359 is not a justification for removing the Note to Condition C in TS 3.3.1, "Reactor Trip System (RTS) Instrumentation," which states: "While this LCO is not met for Function 19, 20, or 21 in MODE 5, making the Rod Control System capable of rod withdrawal is not permitted." Provide additional information to support the deletion of the Note to Condition C in TS 3.3.1.

Response:

AmerenUE's license amendment request (letter ULNRC-04977 dated April 8, 2004) provided the following information concerning the deletion of the Note to TS 3.3.1 Condition C.

"Special LCO 3.0.4 Notes Added during ITS Conversion (Callaway Amendment No. 133)"

Prior to the approval of TSTF-359, STS LCO 3.0.4 and SR 3.0.4 contained a Reviewer's Note which required a plant-specific evaluation and, if necessary, application of specific restrictions on MODE changes or Required Actions in individual LCOs. The Federal Register Notice of Availability (68 FR 16586 dated 4/4/2003) states:

'The notes limiting the applicability of LCO 3.0.4 and SR 3.0.4 are no longer needed and are removed by TSTF-359 Revision 8. The industry owners group analyses would subsequently support adding notes to various TS, as defined by the tables of higher-risk systems, precluding entry into Modes 5 and 6 for PWRs, and Modes 4 and 5 for BWRs. However, the addition of notes in these cases is made unnecessary by action statements that require immediate completion times, which means that entry into the Mode or other specified condition in the Applicability is not allowed and the notes would be superfluous.'

The Federal Register Notice (68 FR 16588) further states:

'In addition, mode transitions for Modes 5 and 6 for PWRs, and Modes 4 and 5 for BWRs, will be addressed by administrative controls.'

NEI 03-10, "Risk-Informed Technical Specifications Initiative 3, Increased Flexibility in Mode Restraints (TSTF-359), Industry Implementation Guidance," August 2003 (page A-9) and TSTF-359 Revision 9 (Proposed Change section of the traveler justification) both indicate that any plant-specific Notes restricting MODE changes added as a result of the evaluation required by the STS 3.0.4 Reviewer's Note are to be deleted.

AmerenUE added five special LCO 3.0.4 Notes to the TS during our ITS conversion (Callaway Amendment No. 133). The following discussions provide additional justification for deleting these five Notes:

- In TS 3.3.1, "Reactor Trip System (RTS) Instrumentation," the Note in Condition C is deleted. The Note requires that while the LCO is not met for Function 19, 20, or 21 in MODE 5, making the Rod Control System capable of rod withdrawal is not permitted. Prior to enabling the Rod Control System or allowing any control or shutdown rod to be other than fully inserted in MODES 3, 4, or 5, plant procedures currently provide controls to maintain RCS boron concentration sufficient to preclude criticality with all control and shutdown rods fully withdrawn. These administrative controls, including immediate actions (in the event a MOSCA [defined in ULNRC-04977 as "MODE or other specified condition in the Applicability"] change has occurred) to borate or insert all rods and disable rod control whenever RCS temperature is below 500°F, would mitigate any inadvertent rod withdrawal from subcritical transient. This plant-specific Condition C Note is superfluous and is therefore deleted."

Initiation of Note to Condition C in TS 3.3.1

As noted above, the Note to Condition C was added by Amendment No. 133 (AmerenUE conversion to the Improved Technical Specifications). NUREG-1431, Rev. 1, LCO 3.0.4 had a Reviewer's Note which stated:

"LCO 3.0.4 has been revised so that changes in MODES or other specified conditions in the Applicability that are part of a shutdown of the unit shall not be prevented. In addition, LCO 3.0.4 has been revised so that it is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, 3, and 4. The MODE change restrictions in LCO 3.0.4 were previously applicable in all MODES. Before this

version of LCO 3.0.4 can be implemented on a plant specific basis, the licensee must review the existing technical specifications to determine where specific restrictions on MODE changes or Required Actions should be included in individual LCOs to justify this change; such an evaluation should be summarized in a matrix of all existing LCOs to facilitate NRC staff review of a conversion to the STS.”

In Attachment 6 of the AmerenUE conversion application (ULNRC-3578 dated May 15, 1997), Description of Change (DOC) 1-02 LS-1 documented the change to TS LCO 3.0.4 and 50.92 NSHC evaluation LS-1 specifically provided a matrix of the evaluation per the Reviewer’s Note. As mentioned in LS-1, the methodology for preparing an LCO 3.0.4 matrix was described in Industry Traveler BWR-26. The methodology of BWR-26 involved a review of all LCOs in the plant-specific Improved Technical Specifications (ITS) to determine which MOSCA changes would represent a new allowance in flexibility over that provided in the current TS (those TS at the time of conversion). Where an increase in flexibility was identified, further review was necessary to determine the safety significance of the new flexibility. Using the BWR-26 methodology, each ITS LCO was reviewed for any increased flexibility. For the transition of MODE 5 to MODE 5(b) (where the (b) footnote is from ITS Table 3.3.1-1 reading as follows: “with Rod Control System capable of rod withdrawal or one or more rods not fully inserted”) for RTS Functions 19, 20, and 21, the plant-specific evaluation conservatively identified that a Note should be added to Condition C even though an argument could be made that it was acceptable to enter the MOSCA since one train is still OPERABLE and trip capability is still available. As identified in the plant specific matrix in LS-1, AmerenUE chose to apply a Note to Condition C consistent with the plant-specific evaluation performed per BWR-26 with the significance being that the transition would not be allowed to occur with all rods not fully inserted or with the Rod Control System capable of rod withdrawal while the RTS function is degraded.

WOG Qualitative Risk Assessment

Attachment 4 to TSTF-359 provided the Westinghouse Owners Group (WOG) Qualitative Risk Assessment Supporting Increased Flexibility in MODE Restraints. In this assessment for MODES 4, 5, and 6, rod withdrawal was not considered since it was assumed that the reactor trip breakers are open in these MODES. This assessment did however look at rod withdrawal in MODE 3 and determined that there were no high risk systems/equipment for transitioning from MODE 4 to MODE 3 with all rods not fully inserted or with the Rod Control System capable of rod withdrawal. Therefore, no LCO 3.0.4.b exceptions were required by TSTF-359 Revision 9 for enabling the Rod Control System in MODE 3.

Risk Significance

Administrative controls, that address reactivity restrictions below 500°F, have been implemented in procedures by requiring all control and shutdown rods to be fully inserted and the Rod Control System to be rendered incapable of rod withdrawal and by requiring RCS boration to the all rods out (ARO) condition until Safety Injection has been unblocked at P-11 ascending.

If risk is defined qualitatively as:

Risk = Probability (events per reactor year) X Consequences (latent fatalities or latent cancers per event),

then the MODE 5 to MODE 5(b) MOSCA transition risk covered by the TS 3.3.1 Condition C Note is a low risk transition since the probability of enabling rod control and pulling rods is insignificant in MODE 5 and administrative controls are in place to limit the potential consequences in the form of reactivity control limitations.

Additionally, control room operators are capable of identifying an uncontrolled rod withdrawal condition, based on the overlapping Nuclear Instrumentation System channels (source range, intermediate range, and power range) and would take the necessary action to either terminate the withdrawal or initiate a manual reactor trip in sufficient time to prevent unacceptable consequences.

Additional Consideration

Maintaining the existing Note to TS 3.3.1 Condition C with the revised LCO 3.0.4 would result in an inconsistency within the Technical Specifications. The existing Note would not allow utilizing the provisions of LCO 3.0.4.b for transitioning from MODE 5 to MODE 5(b) with one channel or train of Function 19, 20, or 21 inoperable. However, for transitioning from MODE 4 to MODE 4(b) or from MODE 3 to MODE 3(b), the provisions of LCO 3.0.4.b could be utilized with one channel or train of Function 19, 20, or 21 inoperable.

Conclusion

Based on the above discussions, it should be acceptable to delete the Note from Condition C and utilize the LCO 3.0.4.b allowances as specified in the proposed amendment.