

November 15, 2006

Mr. Charles D. Naslund  
Senior Vice President and Chief Nuclear Officer  
Union Electric Company  
Post Office Box 620  
Fulton, MO 65251

SUBJECT: CALLAWAY PLANT, UNIT 1 - ISSUANCE OF AMENDMENT RE: REMOVAL OF VALVE CLOSURE TIMES FROM THE TECHNICAL SPECIFICATIONS TO THE TECHNICAL SPECIFICATION BASES (TAC NO. MD2030)

Dear Mr. Naslund:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 176 to Facility Operating License No. NPF-30 for the Callaway Plant, Unit 1. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated May 11, 2006 (ULNRC-05280).

The amendment revises TS Surveillance Requirements 3.7.2.1, 3.7.3.1, and 3.7.3.3 on verifying the closure time of the main steam isolation valves, main feedwater regulating valves, main feedwater regulating valve bypass valves, and main feedwater isolation valves in the TSs.

A copy of the related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

*/RA/*

Jack Donohew, Senior Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-483

Enclosures: 1. Amendment No. 176 to NPF-30  
2. Safety Evaluation

cc w/encls: See next page

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OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	NRR/LPL4/PE	ITSB/BC	OGC-NLO w/comments	NRR/LPL4/BC
NAME	JDonohew	LFeizollahi	RCureton	TKobetz	JRund	DTerao
DATE	10/24/06	10/23/06	10/24/06	8/23/06	11/6/06	11/9/06

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UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 176  
License No. NPF-30

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Union Electric Company (UE, the licensee), dated May 11, 2006, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-30 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 176 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This amendment is effective as of its date of issuance, and shall be implemented within 90 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

David Terao, Branch Chief  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: November 15, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 176

RENEWED FACILITY OPERATING LICENSE NO. NPF-30

DOCKET NO. 50-483

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

3 (Table of Contents)  
3.7-7  
3.7-9  
3.7-10 to 3.7-41  
3.7-42

INSERT

3 (Table of Contents)  
3.7-7  
3.7-9  
3.7-10 to 3.7-41  
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 176 TO FACILITY OPERATING LICENSE NO. NPF-30

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

1.0 INTRODUCTION

By application dated May 11, 2006 (Agencywide Documents Access and Management System Accession No. ML061390236), Union Electric Company (UE, the licensee) proposed changes to the technical specifications (TSs) for the Callaway Plant. The proposed changes would revise TS 3.7.2, "Main Steam Isolation Valves (MSIVs)," and TS 3.7.3, "Main Feedwater Isolation Valves (MFIVs), Feedwater Regulating Valves (MFRVs) and Main Feedwater Regulating Valve Bypass Valves (MFRVBVs)." The proposed changes would allow relocating the isolation valve closure times from TSs 3.7.2 and 3.7.3 to the TS Bases.

2.0 REGULATORY EVALUATION

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to include TSs as part of the license. The TSs ensure the operational capability of structures, systems, and components that are required to protect the health and safety of the public. The U.S. Nuclear Regulatory Commission's (NRC's) regulatory requirements related to the content of the TSs are contained in Section 50.36 of Title 10 of the *Code of Federal Regulations* (10 CFR 50.36), which requires that the TSs include items in the following specific categories: (1) safety limits, limiting safety systems settings, and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements per 10 CFR 50.36(c)(3); (4) design features; and (5) administrative controls.

In general, there are two classes of changes to TSs: (1) changes needed to reflect modifications to the plant design basis (TSs are derived from the design basis), and (2) voluntary changes to take advantage of the evolution in policy and guidance as to the required content and preferred format of TSs over time. This amendment deals with the second class of changes. In determining the acceptability of revising the improved Standard Technical Specifications (STSs) 3.7.2 and 3.7.3, the NRC staff used the accumulation of generically approved guidance in NUREG-1431, Revision 3, "Standard Technical Specifications, Westinghouse Plants," dated June 2004. Licensees may revise the TSs to adopt current improved STS format and content provided that plant-specific review supports a finding of continued adequate safety because: (1) the change is editorial, administrative, or provides clarification (i.e., no requirements are materially altered), (2) the change is more restrictive than the licensee's current requirement, or (3) the change is less restrictive than the licensee's

current requirement, but nonetheless still affords adequate assurance of safety when judged against current regulatory standards.

### 3.0 TECHNICAL EVALUATION

#### 3.1 Proposed Changes to Technical Specifications

In its application, the licensee proposed the following changes to TSs 3.7.2 and 3.7.3:

1. TS 3.7.2 - SR 3.7.2.1 currently states "Verify isolation time of each MSIV is  $\leq 5$  seconds." The proposed TS SR 3.7.2.1 states "Verify isolation time of each MSIV is within limits." The MSIV specific isolation time is currently provided in the TS Bases for SR 3.7.2.1; however, it is specified as the MSIV "closure" time.
2. TS 3.7.3 - SR 3.7.3.1 currently states "Verify the closure time of each MFRV and MFRVBV is  $\leq 15$  seconds." The proposed TS SR 3.7.3.1 states "Verify the closure time of each MFRV and MFRVBV is within limits." The MFRV and MFRVBV specific closure times are currently provided in the TS Bases.
3. TS 3.7.3 - SR 3.7.3.3 currently states "Verify the closure time of each MFIV is within the limits of Figure 3.7.3-1." The proposed TS SR 3.7.3.3 states "Verify the closure time of each MFIV is within limits." The proposed change removes the specific reference to Figure 3.7.3-1 from SR 3.7.3.3 and relocates the TS figure to the TS Bases.

The change removes specific isolation or closure times for the isolation or regulating valves from the described SRs and replaces it with a statement to verify the valve isolation or closure time is within limits. Although the SRs for these isolation and regulating valves refer to either an isolation time or a closure time, these times both refer to the maximum time that these valves can close and be considered operable (i.e., capable of performing their safety function).

The specific valve isolation or closure times required to meet the above SRs are to be relocated outside of the TS into the TS Bases. Locating these valve isolation or closure times to the TS Bases will allow the described valve isolation times to be revised by the licensee, if required, in accordance with TS 5.5.14, "Technical Specifications (TS) Bases Control Program."

#### 3.2 Background

##### MSIVs

One MSIV is located in each main steam line outside of the containment. Closing the MSIVs isolates each steam generator from the others and isolates the turbine, steam bypass system, and other auxiliary steam supplies from the steam generator. By isolating the steam flow from the secondary side of the steam generator, the MSIVs prevent over cooling the reactor core following a high energy line break (HELB). By preventing core overcooling, the MSIVs protect the reactor core from being damaged.

## MFIVs, MFRVs and MFRVBVs

The MFIVs or the MFRVs and MFRVBVs isolate the non-safety related portions from the safety-related portions of the system. In the event of a secondary-side pipe rupture inside containment, these valves limit the quantity of high-energy fluid that enters the containment through the break and provide a pressure boundary for the controlled addition of auxiliary feedwater to the intact loops. By isolating the feedwater flow from the affected steam generator, the MFIVs, MFRVs, and MFRVBVs prevent overcooling the reactor core and over-pressurizing of the containment from feedwater pump run-out.

## Conclusion

It is necessary for these valves to close within the specified isolation or closure times for the valves to meet their safety function. Therefore, these times are related to the safe operation of the plant.

### 3.3 NRC Staff Evaluation

The licensee is proposing to relocate the required isolation or closure times for the MSIVs, MFIVs, MFRVs, and MFRVBVs from SRs 3.7.2.1, 3.7.3.1, and 3.7.3.2 to the TS Bases by replacing the times in these SRs with a phrase referring to the valves being within the isolation or closure time limits. The NRC staff concludes that the revised SRs still meet 10 CFR 50.36(c)(3) because the SRs require that the licensee verify that the isolation or closure times of these valves are within the limits and the limits are those required by the safety analyses that take credit for these valves

If these valve isolation or closure times are relocated to the TS Bases, the licensee may change these times, but these changes must be in accordance with TS 5.5.14. The criteria in TS 5.5.14 for the licensee changing the TS Bases without prior NRC review and approval are the following:

1. The change does not require a change to the TSs, and
2. The change does not require NRC approval pursuant to 10 CFR 50.59.

The NRC staff concludes that the 10 CFR 50.59 criteria provide assurance that prior NRC staff review and approval will be requested by the licensee for changes to the TS Bases requirements with the potential to affect the safe operation of the plant. Furthermore, these valves are subject to periodic testing and acceptance criteria in accordance with the Inservice Testing (IST) Program. Compliance with the IST Program is required by 10 CFR 50.55a, and SRs 3.7.2.1, 3.7.3.1, 3.7.3.2.

Because 10 CFR 50.36 requires the inclusion of the periodic testing of the MSIVs, MFIVs, MFRVs, and MFRVBVs in the SRs, and not the actual closure time of the valves, the licensee's proposed change maintains the periodic testing requirements for the above-stated valves in accordance with 10 CFR 50.36. Based on this, the requirements of TS 5.5.14 for the TS Bases control program, and the licensee's IST Program, the NRC staff concludes that the proposed amendment is acceptable.

In changing the TSs, the licensee is removing one page from TS 3.7.3. This is the removal of Figure 3.7.3-1. Because of this, the licensee has decided to re-number the pages for TSs 3.7.4 through 3.7.18. Therefore, the amended TS pages being issued in this amendment include also



(1) the pages for TSs 3.7.4 through 3.7.18, where the only change is the page number, and (2) page 3 of the TS Table of Contents that lists these pages.

#### 4.0 IDENTIFIED TS BASES CHANGES

The NRC Staff reviewed the licensee's identified changes to the TS Bases that are in Attachment 4 to its application. The NRC staff does not disagree with the identified changes to the TS Bases; however, in the TS Bases for SR 3.7.3.1, there currently is a minor inconsistency in that the wording describing the time to close the valves is not the same in SR 3.7.3.1 and the TS Bases for SR 3.7.3.1. The SR uses the phrase "isolation time" and the TS Bases uses the phrase "closure time" for the valves. Although the two phrases have the same meaning, they might be viewed in some way as meaning something different. This inconsistency in the two phrases does not affect the amendment; however, the inconsistency has been discussed with the licensee and the licensee has agreed to consider changing the TS Bases so that the wording is the same in the TS Bases for the SR and the SR. Changes to the TS Bases are controlled by TS 5.5.14.

#### 5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Missouri State official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes SRs. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (71 FR 35461; published on June 20, 2006). Accordingly, the 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 the amendment.

#### 7.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the

Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Peter Hearn

Date: November 15, 2006

Callaway Plant, Unit 1

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