December 5, 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: TECHNICAL SPECIFICATION 5.6.6 ON THE PRESSURE AND TEMPERATURE LIMITS REPORT (TAC NOS. MD3053)

Dear Mr. Naslund:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 177 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 September 20, 2006 (ULNRC-05315), as supplemented by letter dated November 20, 2006 (ULNRC-05346).

The amendment revises (1) the definition of the Pressure and Temperature Limits Report (PTLR) in TS 1.1, "Definitions," and (2) TS 5.6.6, "Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)."

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. 177 to NPF-30
2. Safety Evaluation

cc w/encls: See next page

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UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 177
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 September 20, 2006, as supplemented by letter dated November 20, 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. 177 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, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility
Operating License and
the Technical Specifications

Date of Issuance: December 5, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 177

FACILITY OPERATING LICENSE NO. NPF-30

DOCKET NO. 50-483

Replace the following page of the Facility Operating License with the attached revised page. The revised page is identified by an amendment number and contains a marginal line indicating the area of change.

REMOVE	INSERT
- 3 -	- 3 -

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	INSERT
1.1-5	1.1-5
5.0-23	5.0-23

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 177 TO

FACILITY OPERATING LICENSE NO. NPF-30

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

1.0 INTRODUCTION

By application dated September 20, 2006, as supplemented by letter dated November 20, 2006 (Agencywide Documents Access and Management System Accession Nos. ML062710354 and ML063320558, respectively), Union Electric Company (the licensee) requested changes to Facility Operating License No. NPF-30 for the Callaway Plant, Unit 1 (Callaway). The licensee is proposing to revise (1) the definition of the Pressure and Temperature Limits Report (PTLR) in Technical Specification (TS) 1.1, "Definitions," and (2) TS 5.6.6, "Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR)."

The licensee is adopting the NRC-approved Technical Specification Task Force Traveler (TSTF)-419, Revision 0, “Revise PTLR Definition and References in ISTS [Improved Standard Technical Specification] 5.6.6, RCS PTLR.” TSTF-419 has been approved generically for the improved Westinghouse Standard Technical Specifications, NUREG-1431, Revision 2. The TSs for Callaway are based on NUREG-1431.

The supplemental letter dated November 20, 2006, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff’s original proposed no significant hazards consideration determination published in the *Federal Register* on October 6, 2006 (71 FR 59136).

2.0 REGULATORY EVALUATION

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to include technical specifications 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 Nuclear Regulatory Commission’s (NRC) 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 (LCO); (3) surveillance requirements;

(4) design features; and (5) administrative controls. In accordance with 10 CFR 50.36(c)(5), administrative controls are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the plant in a safe manner.

NRC Generic Letter (GL) 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits," dated January 31, 1996, allows licensees to relocate the pressure temperature (P/T) curves from their plant TSs to a PTLR or similar document. The low temperature overpressure protection (LTOP) system limits were also allowed to be relocated to the same document. The methodology used to determine the P/T and LTOP system limits must comply with the specific requirements of Appendices G and H to 10 CFR Part 50, be documented in an NRC-approved topical report or an NRC-approved plant-specific submittal, and be incorporated by reference into the TSs. Subsequent changes in the methodology must be approved by a license amendment. In the Callaway plant and TSs, the cold overpressure mitigation system (COMS) is the plant LTOP system.

3.0 EVALUATION

3.1 Proposed TS Changes

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

1. Revise the definition of the PTLR in TS 1.1 to delete the sentence stating "Plant operation within these operating limits is addressed in LCO 3.4.3, 'RCS Pressure and Temperature (P/T) Limits,' and LCO 3.4.12, 'Cold Overpressure Mitigation System (COMS).' "

2. Revise TS 5.6.6 in the reporting requirements section of the TSs on the PTLR to:

    a. Delete the reference to Document 1, "NRC letter, Callaway Plant Unit 1 - Issuance of Amendment Re: Pressure Temperature Limits Report (TAC Nos. MA5631 and MA7287), dated March 24, 2000."

    b. Delete the phrase "the following documents:" and the item numbers "1" and "2".

    c. Delete the revision number and date of Document 2.

3.2 Changes to the TS Definition of PTLR

The existing definition in TS 1.1 of the PTLR is the following:

> The PTLR is the unit document that provides the reactor vessel pressure and temperature limits, including heat and REPORT (PTLR) cooldown rates, the power operated relief valve (PORV) lift settings, and the Cold Overpressure Mitigation System (COMS) arming temperature, for the current reactor vessel fluence period. These pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.6. Plant operation

within these operating limits is addressed in LCO 3.4.3, RCS Pressure and Temperature (P/T) Limits," and LCO 3.4.12, "Cold Overpressure Mitigation System (COMS)."

As discussed in Section 3.1 of this safety evaluation (SE), the licensee has proposed to delete the last sentence of the above definition. This sentence identifies the two specifications in the TSs in which the P/T and COMS limits are addressed. The remaining part of the definition will be unchanged.

In its application, the licensee stated that TS 5.6.6.a lists the same two specifications in the TSs in which the P/T and COMS limits (hereafter referred to as the PTLR limits) are addressed. The licensee concluded that the PTLR definition duplicated the list of specifications that exists in TS 5.6.6.a and should, therefore, be deleted from the TSs.

The definition of PTLR includes the identification of the specifications in which the pressure and temperature limits are addressed. Specification 5.6.6.a requires that the individual specifications that address RCS pressure and temperature limits be referenced. The NRC staff concludes that the proposed change to the definition of the PTLR will eliminate the duplicative language in the definition of PTLR that is also in TS 5.6.6.a.

3.3 Changes to TS 5.6.6.b

Deletion of Document 1

The existing TS 5.6.6.b lists the following NRC-approved analytical methods used to determine the RCS pressure and temperature, and COMS PORV limits:

1. NRC letter, Callaway Plant Unit 1 - Issuance of Amendment Re: Pressure Temperature Limits Report (TAC Nos. MA5631 and MA7287), dated March 24, 2000 ("Document 1").

2. WCAP-14040-NP-A, Revision 2, "Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves," dated January 1996 ("Document 2").

Both documents were approved as PTLR methodology and added to TS 5.6.6 as NRC-approved PTLR methodology in Amendment No. 134 issued March 24, 2000. Document 1 consists of the letter and safety evaluation that approved Amendment No. 134. Document 2 is WCAP-14040-NP-A, Revision 2, which also contains the NRC-approved safety evaluations with all NRC conditions and/or requirements on the use of the WCAP-14040 topical report.

The licensee has proposed to delete Document 1 listed above from TS 5.6.6.b. In its supplemental letter dated November 20, 2006, the licensee stated that Document 1 is not needed to identify the NRC-approved methods to determine the appropriate RCS pressure and temperature, and COMS PORV limits for Callaway. Rather, Document 2 listed above is sufficient to identify the NRC-approved analytical methods. The NRC safety evaluation in Document 1 states that "the methodology described in WCAP-14040-NP-A, Revision 2," satisfies the criteria in GL 96-03 and is acceptable for the licensee to determine the PTLR

limits. Based on this review, the NRC staff concludes that Document 1 is not needed in TS 5.6.6.b and, therefore, it is acceptable to delete the document from TS 5.6.6.b.

Delete Phrase and Itemized Numbers

With Document 1 deleted from TS 5.6.6.b, there would be only one document listed in the specification. Therefore, the licensee has proposed to delete the phrase "the following documents:" and the item numbers "1" and "2". With these changes, TS 5.6.6.b would read as follows: "The analytical methods used to determine the RCS pressure and temperature and COMS PORV limits shall be those previously reviewed and approved by the NRC, specifically those described in WCAP-14040-NP-A, 'Methodology Used to Develop Cold Overpressure Mitigating System Setpoints and RCS Heatup and Cooldown Limit Curves.' " As discussed in the previous paragraph, the NRC staff has concluded that the proposed deletion of Document 1 from TS 5.6.6.b is acceptable. The NRC staff concludes that the proposed deletions constitute an appropriate conforming change within the format of the TSs. Based on this conclusion, the NRC staff also concludes that these proposed changes to TS 5.6.6.b are acceptable.

Modification of Citation of Document 2

The requirements to operate within the limits in the PTLR are specified in and controlled by TS 5.6.6. The figures, values, and parameters associated with the P/T limits and the LTOP setpoints are in the plant PTLR. The methodology for their development must be reviewed and approved by the NRC and the NRC-approved methodology is listed in TS 5.6.6.b. The proposed changes to delete the reference to Document 1 and revise the reference to Document 2 do not change the requirements associated with the review and approval of the methodology or the requirements to operate within limits specified in the PTLR because, as addressed above, these requirements are contained entirely in Document 2.

The requirement in TS 5.6.6.b to identify the NRC staff-approved document is being revised to allow the identification of (1) NRC-approved topical reports by number and title, and (2) NRC safety evaluations for an approved plant PTLR methodology by NRC letter and date. The complete citation of each topical report listed in TS 5.6.6.b, including the revision number and date, and any supplements, would be made in the plant PTLR.

Therefore, the licensee has proposed to modify the reference to Document 2 in TS 5.6.6.b as an NRC-approved analytical method used to determine the PTLR limits. The revision number and date of the topical report would be deleted. The purpose is to list the references to the approved topical reports in TS 5.6.6.b using the report number and title with the complete citation identification of the reports (i.e., report number, title, revision, date, and any supplements) listed in the PTLR. The licensee stated in its application that this will be done in the Callaway PTLR. Pursuant to TS 5.6.6.c, which is not being changed in this amendment, the PTLR shall be provided to the NRC upon issuance for each reactor vessel fluence period and any revision or supplement thereto.

This proposed change would allow the licensee to use the current, or latest revision, of an NRC-approved topical report to determine the PTLR limits without having to request NRC approval to use the topical report. TS 5.6.6.b requires that the methodology used by the licensee to determine the PTLR limits shall be approved by the NRC and this requirement is not

being changed by this amendment. Therefore, with this change, the licensee would be allowed to use the latest NRC-approved version of the topical report listed in TS 5.6.6.b.

The NRC safety evaluation that approves a topical report may contain NRC conditions and/or requirements on the use of the topical report. To provide the assurance that the licensee will meet those conditions and requirements as it goes from revision to revision without NRC staff review and approval, the NRC-approved vendor topical report (designated with "-A" in its title) will contain NRC conditions and/or requirements on the use of the topical report that are specified in the NRC approving safety evaluation, which is included in the topical report. Therefore, when adopting a later NRC-approved revision of a topical report, the licensee must address the NRC conditions and/or requirements included in the topical report. If the licensee cannot meet the NRC conditions and/or requirements in the NRC-approved topical report, then the topical report will not be considered approved for the use of the licensee and cannot be used as an acceptable methodology for the PTLR limits for the plant.

The revision to TS 5.6.6.b to allow NRC-approved PTLR methodology to be identified by only report number and title will allow the licensee to use current topical reports to support limits in the PTLR without having to submit an amendment to facility operating license every time the topical report is revised. The PTLR would provide the specific information identifying the particular approved topical report(s) used to determine the PTLR limits. As discussed above, this continues to provide reasonable assurance that only NRC-approved versions of the referenced topical reports or plant-specific methodologies will be used for the determination of the PTLR limits. On this basis, the NRC staff concludes that the proposed change to remove the revision number and date of Document 2 is acceptable.

The Westinghouse Owners Group (WOG) submitted WCAP-14040, Revision 3, for NRC staff review and approval in its letter dated May 23, 2002. This topical report was developed to define a methodology for RCS P/T limit curves that was consistent with guidance provided by NRC in GL 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits," dated January 31, 1996. The NRC SE approving the use of WCAP-14040, Revision 3, for nuclear power plants is dated February 27, 2004. With the NRC approval of WCAP-14040, Revision 3, the WOG republished Revision 3 as WCAP-14040-NP-A, Revision 4, which is the latest NRC-approved version of WCAP-14040-NP.

In its November 20, 2006 supplement, the licensee explained that it is not adopting WCAP-14040-NP-A, Revision 4, as part of its amendment request and, therefore, it will continue to meet its current licensing basis (i.e., WCAP-14040-NP-A, Revision 2). It stated that it plans to eventually adopt Revision 4, but before it does, it must determine that it meets the NRC conditions and/or requirements specified in the NRC approving safety evaluation in Revision 4. This is acceptable to the NRC staff because, as stated above, if the licensee can meet the NRC conditions and/or requirements in the NRC-approved topical report, then the topical report can be considered approved for the use of the licensee and can be used to provide acceptable methodology for the PTLR limits for the plant. Therefore, this amendment does not approve the licensee's use of WCAP-14040-NP-A, Revision 4.

3.4 Conclusion

The NRC staff has reviewed the licensee's proposed changes to TS 1.1 on definitions and TS 5.6.6 on the PTLR. Based on the evaluation given above, the NRC staff concludes the following:

1. The change to TS 1.1 is acceptable because it deletes a reference to specifications that is duplicated in TS 5.6.6.a. Removing the reference in TS 1.1 is consistent with the format of the TSs.

2. The deletion of Document 1 in TS 5.6.6.b is acceptable because this document is not needed in the specification since Document 2, which will remain in the specification, meets the criteria of GL 96-03 and provides the methodology needed by the licensee to determine the PTLR limits for Callaway.

3. The revision of TS 5.6.6.b to account for the deletion of Document 1 is acceptable because the change is an appropriate conforming change within the format of the TSs.

4. The deletion of revision number and date from Document 2 in TS 5.6.6.b is acceptable because this deletion does not remove the requirement in the TSs that the licensee must follow the NRC-approved PTLR methodology to determine the PTLR limits for the plant.

Based on the conclusions stated above, the NRC staff further concludes that the proposed amendment meets 10 CFR 50.36 and is, therefore, acceptable.

4.0 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.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes recordkeeping, reporting, or administrative procedures or requirements for the facility. 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 59136, published on October 6, 2006). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). 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.

6.0 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 Contributors: Peter Hearn
Jack Donohew

Date: December 5, 2006