

M. License Condition Changes

18 Pages Attached

Replace the current Callaway Plant Unit 1 fire protection operating license (OL) condition 2.C(5) with the standard operating license condition in Regulatory Position C.3.1 of Regulatory Guide 1.205, "Risk-Informed, Performance-Based Fire Protection for Light-Water Nuclear Power Plants," Revision 1, as modified by FAQ 06-0008 Revision 9 (ML073380976), as described below.

It is Ameren Missouri's understanding that implicit in the superseding of these license conditions, prior fire protection SERs and commitments have been superseded in their entirety by the revised license condition. However, Revision 056 to the Callaway Plant Unit 1 Operating License dated June 26, 2007, added OL condition C.15 "Mitigation Strategy License Condition" in response to Section B.5.b of the February 25, 2002, "Interim Compensatory Measures Order" (EA-02-026) (TAC No.4518). This order requires that strategies for addressing large fires and explosions be maintained for key areas. This OL condition will remain in effect.

No other license conditions need to be superseded or revised. Ameren Missouri implemented the following process for determining that OL condition 2.C(5) is the only license condition required to be superseded to implement the new fire protection program which meets the requirements of 10 CFR 50.48(a) and 50.48(c):

A review of the Callaway Plant OL NPF 30, Revision 056 (which incorporated OL Condition C.15) and the current Revision 068 was performed by the Callaway Plant licensing staff and the NFPA 805 Transition Team. The review was performed by reviewing the OL and performing electronic searches using the Callaway Plant Licensing Research System (LRS). The Callaway Plant LRS contains Callaway Plant licensing documents, correspondence, and regulatory and guidance materials, including those documents pertaining to the operating license, the Technical Specifications, the fire protection program, the FSAR and subsequent revisions, correspondence sent to the NRC, and correspondence received from the NRC. The correspondence sent to the NRC includes any outstanding license amendment request submittals.

Supersede the following license condition 2.C(5):

- (5) *Fire Protection (Section 9.5.1.7 SER and Section 9.5.1.8, SSER #3)*
- (a) *Deleted per Amendment No. 169.*
 - (b) *Deleted per Amendment No. 169.*
 - (c) *The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the SNUPPS Final Safety Analysis Report for the facility through Revision 15, the Callaway site addendum through Revision 8, and as approved in the SER through Supplement 4, subject to provision d below.*
 - (d) *The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.*
 - (e) *Deleted (see Amendment No. 30, January 13, 1988).*

New License Condition:

Union Electric shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the license amendment request dated MM/DD/YYYY (and supplements dated MM/DD/YYYY) and as approved in the safety evaluation report dated MM/DD/YYYY (and supplements dated MM/DD/YYYY). Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.

Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.

- (a) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.
- (b) Prior NRC review and approval is not required for individual changes that result in a risk increase less than 1×10^{-7} /year (yr) for CDF and less than 1×10^{-8} /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

Other Changes that May Be Made Without Prior NRC Approval**(1) Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program**

Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. The licensee may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure or physical arrangement, using a relevant technical requirement or standard.

The licensee may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- "Fire Alarm and Detection Systems" (Section 3.8);
- "Automatic and Manual Water-Based Fire Suppression Systems" (Section 3.9);
- "Gaseous Fire Suppression Systems" (Section 3.10); and
- "Passive Fire Protection Features" (Section 3.11).

(2) Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to the licensee's fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation report dated MM/DD/YYYY to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.

Transition License Conditions

- (1) Before achieving full compliance with 10 CFR 50.48(c), as specified by (2) below, risk-informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in (2) above.
- (2) The licensee shall implement the modifications described in the August ##, 2011 submittal of the Callaway Plant NFPA 805 Transition Report Table S-2, "Plant Modifications Committed," to complete the transition to full compliance with 10 CFR 50.48(c) by June 30, 2013.

- (3) The licensee shall maintain appropriate compensatory measures in place until completion of the modifications delineated above.

Operating License Markup

4 Pages Attached

LDCN 11-0012

OPERATING LICENSE MARKUP

License Condition 2.C.5

LDCN 11-0012

Operating License
Revision 068

- 4 -

- (4) Surveillance of Hafnium Control Rods (Section 4.2.3.1(10), SER and SSER #2)

Deleted per Amendment No. 169

- (5) Fire Protection (Section 9.5.1.7 SER and Section 9.5.1.8, SSER #3)

OL
INSERT

- (a) Deleted per Amendment No. 169.
- (b) Deleted per Amendment No. 169.
- (c) The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the SNUPPS Final Safety Analysis Report for the facility through Revision 15, the Callaway site addendum through Revision 8, and as approved in the SER through Supplement 4, subject to provision d below.
- (d) The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.
- (e) Deleted (see Amendment No. 30, January 13, 1988)

- (6) Qualification of Personnel (Section 13.1.2, SSER #3, Section 18, SSER #1)

Deleted per Amendment No. 169.

- (7) NUREG-0737 Conditions (Section 22, SER)

Deleted per Amendment No. 169.

- (8) Post-Fuel-Loading Initial Test Program (Section 14, SER)

Deleted per Amendment No. 169.

- (9) Inservice Inspection Program (Sections 5.2.4 and 6.6, SER)

Deleted per Amendment No. 169.

- (10) Emergency Planning

Deleted per Amendment No. 169.

Amendment 169

A140.0001

LDCN 11-0012**OL INSERT****(5) Fire Protection**

Union Electric shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the license amendment request dated MM/DD/YYYY (and supplements dated MM/DD/YYYY) and as approved in the safety evaluation report dated MM/DD/YYYY (and supplements dated MM/DD/YYYY). Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.

Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.

- (a) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.
- (b) Prior NRC review and approval is not required for individual changes that result in a risk increase less than 1×10^{-7} /year (yr) for CDF and less than 1×10^{-8} /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

Other Changes that May Be Made Without Prior NRC Approval

- (1) Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program

Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. The licensee may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified

LDCN 11-0012**OL INSERT (page 2)**

fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

The licensee may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is “adequate for the hazard.” Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- “Fire Alarm and Detection Systems” (Section 3.8);
- “Automatic and Manual Water-Based Fire Suppression Systems” (Section 3.9);
- “Gaseous Fire Suppression Systems” (Section 3.10); and
- “Passive Fire Protection Features” (Section 3.11).

(2) Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to the licensee’s fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation report dated MM/DD/YYYY to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.

Transition License Conditions

- (1) Before achieving full compliance with 10 CFR 50.48(c), as specified by (2) below, risk-informed changes to the licensee’s fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in (2) above.
- (2) The licensee shall implement the modifications described in the August ##, 2011 submittal of the Callaway Plant NFPA 805 Transition Report Table S-2, “Plant Modifications Committed,” to complete the transition to full compliance with 10 CFR 50.48(c) by June 30, 2013.
- (3) The licensee shall maintain appropriate compensatory measures in place until completion of the modifications delineated above.

Operating License Retype

8 Pages Attached

- 4 -

- (4) Surveillance of Hafnium Control Rods (Section 4.2.3.1(10), SER and SSER #2)

Deleted per Amendment No. 169

- (5) Fire Protection

Union Electric shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the license amendment request dated MM/DD/YYYY (and supplements dated MM/DD/YYYY) and as approved in the safety evaluation report dated MM/DD/YYYY (and supplements dated MM/DD/YYYY). Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.

Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.

- (a) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

Amendment ###

- 5 -

- (b) Prior NRC review and approval is not required for individual changes that result in a risk increase less than 1×10^{-7} /year (yr) for CDF and less than 1×10^{-8} /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

Other Changes that May Be Made Without Prior NRC Approval

- (1) Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program

Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. The licensee may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

The licensee may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- "Fire Alarm and Detection Systems" (Section 3.8);
- "Automatic and Manual Water-Based Fire Suppression Systems" (Section 3.9);
- "Gaseous Fire Suppression Systems" (Section 3.10); and
- "Passive Fire Protection Features" (Section 3.11).

Amendment ###

- 6 -

(2) Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to the licensee's fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation report dated MM/DD/YYYY to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.

Transition License Conditions

- (1) Before achieving full compliance with 10 CFR 50.48(c), as specified by (2) below, risk-informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in (2) above.
- (2) The licensee shall implement the modifications described in the August ##, 2011 submittal of the Callaway Plant NFPA 805 Transition Report Table S-2, "Plant Modifications Committed," to complete the transition to full compliance with 10 CFR 50.48(c) by June 30, 2013.
- (3) The licensee shall maintain appropriate compensatory measures in place until completion of the modifications delineated above.

(6) Qualification of Personnel (Section 13.1.2, SSER #3, Section 18, SSER #1)

Deleted per Amendment No. 169.

(7) NUREG-0737 Conditions (Section 22, SER)

Deleted per Amendment No. 169.

(8) Post-Fuel-Loading Initial Test Program (Section 14, SER)

Deleted per Amendment No. 169.

Amendment ###

- 7 -

(9) Inservice Inspection Program (Sections 5.2.4 and 6.6. SER)

Deleted per Amendment No. 169.

(10) Emergency Planning

Deleted per Amendment No. 169.

(11) Steam Generator Tube Rupture (Section 15.4.4. SSER #3)

Deleted per Amendment No. 169.

(12) Low Temperature Overpressure Protection (Section 15. SSER #3)

Deleted per Amendment No. 169.

(13) LOCA Reanalysis (Section 15. SSER #3)

Deleted per Amendment No. 169.

(14) Generic Letter 83-28

Deleted per Amendment No. 169.

(15) Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

- (a) Fire fighting response strategy with the following elements:
1. Pre-defined coordinated fire response strategy and guidance
 2. Assessment of mutual aid fire fighting assets
 3. Designated staging areas for equipment and materials
 4. Command and control
 5. Training of response personnel
- (b) Operations to mitigate fuel damage considering the following:
1. Protection and use of personnel assets
 2. Communications
 3. Minimizing fire spread
 4. Procedures for implementing integrated fire response strategy
 5. Identification of readily-available, pre-staged equipment
 6. Training on integrated fire response strategy
 7. Spent fuel pool mitigation measures

Amendment ###

- 8 -

(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

(16) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 190, are hereby incorporated into this license. UE shall operate the facility in accordance with the Additional Conditions.

- D. An Exemption from certain requirements of Appendix J to 10 CFR Part 50, are described in the October 9, 1984 staff letter. This exemption is authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Therefore, this exemption is hereby granted pursuant to 10 CFR 50.12. With the granting of this exemption the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.
- E. UE shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 10 CFR 73.21, are entitled: "Callaway Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 0" submitted by letter dated October 20, 2004, as supplemented by the letter May 11, 2006.
- F. Deleted per Amendment No. 169.
- G. UE shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- H. This license is effective as of the date of issuance and shall expire at Midnight on October 18, 2024.

FOR THE NUCLEAR REGULATORY COMMISSION

ORIGINAL SIGNED BY H. R. DENTON

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Amendment ###

- 9 -

Attachments/Appendices:

1. Attachment 1 (Deleted per Amendment No. 169)
2. Attachment 2 (Deleted per Amendment No. 169)
3. Appendix A - Technical Specifications (NUREG-1058, Revision 1)
4. Appendix B - Environmental Protection Plan
5. Appendix C - Additional Conditions

Date of Issuance: October 18, 1984

Amendment ###

- 10 -
ATTACHMENT 1

Deleted per Amendment No. 169.

Amendment ###

- 11 -
ATTACHMENT 2

Deleted per Amendment No. 169.

Amendment ###