

**Omaha Public Power District (OPPD)**  
**Supplement to License Amendment Request 10-07;**  
**Adopt National Fire Protection Association Standard 805**  
**Performance-Based Standard for Fire Protection for Light Water**  
**Reactor Generating Plants**  
**At Fort Calhoun Station, Unit 1 (TAC No. ME7244)**

**Attachments:**

- 1. NFPA 805 Transition Report Supplemental Page**
- 2. Attachment M License Condition Changes**
- 3. Attachment N Facility Operating License and Technical Specifications – Retyped “Clean” Pages**
- 4. Attachment S Plant Modifications and Items to be Completed During Implementation**

**Note: Attachment S contains sensitive security-related information to be withheld from public disclosure pursuant to 10 CFR 2.390. Enclosure 1 of LIC-14-0042 is decontrolled upon removal of Attachment S.**

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**NFPA 805 Transition Report Supplemental Page**

1 Page Attached

- Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- Involve a significant reduction in a margin of safety.

This evaluation is contained in Attachment Q.

Based on the considerations discussed above, (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. OPPD has evaluated the proposed amendment and determined that it involves no significant hazards consideration.

### **5.3.2 Environmental Consideration**

Pursuant to 10 CFR 51.22(b), an evaluation of the LAR has been performed to determine whether it meets the criteria for categorical exclusion set forth in 10 CFR 51.22(c). That evaluation is discussed in Attachment R. The evaluation confirms that this LAR meets the criteria set forth in 10 CFR 51.22(c)(9) for categorical exclusion from the need for an environmental impact assessment or statement.

### **5.4 Transition Implementation Schedule**

The following schedule for transitioning FCS to the new FP licensing basis requires NRC approval of the LAR in accordance with the following schedule:

- Implementation of new NFPA 805 FP program to include procedure changes, process updates, and training to affected plant personnel. This will occur twelve (12) months after NRC approval.
- OPPD will complete modifications necessary to support the new FP licensing basis for transitioning to NFPA 805 by the end of the second Refueling Outage following NRC approval. Appropriate compensatory measures will be maintained until modifications are complete.

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**M. License Condition Changes**

3 Pages Attached

Supersede the current FCS fire protection license condition 3.D with the standard license condition in Regulatory Position 3.1 of RG 1.205, modified as shown below.

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D. Omaha Public Power District 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 licensee amendment request dated \_\_\_\_\_ and as approved in the safety evaluation report dated \_\_\_\_\_. 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.

(1) 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  $1 \times 10^{-7}$ /year (yr) for CDF and less than  $1 \times 10^{-8}$ /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.

(2) Other Changes that May Be Made Without Prior NRC Approval

(a) 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).

This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.

(b) **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 \_\_\_\_\_ 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.

(3) **Transition License Conditions**

- (a) Before achieving full compliance with 10 CFR 50.48(c), as specified by D.(3)(b) and D.(3)(c) 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 D.(2)(b) above.
- (b) The licensee shall implement the modifications to its facility, as described in Enclosure 1, Attachment S, Table S-2, "Plant Modifications Committed," of OPPD letter LIC-14-0042, dated April 10, 2014, to complete the transition to full compliance with 10 CFR 50.48(c) by the end of the second refueling outage following issuance of the license amendment. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications.
- (c) The licensee shall implement the items listed in Enclosure 1, Attachment S, Table S-3, "Implementation Items," of OPPD letter LIC-14-0042, dated April 10, 2014, no later than 12 months after issuance of the license amendment.

License Condition 3.D shall be superseded in its entirety.

"D. Fire Protection Program

Omaha Public Power District shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Updated Safety Analysis Report for the facility and as approved in the NRC safety evaluation reports (SERs) dated February 14 and August 23, 1978; November 17, 1980; April 8 and August 12, 1982; July 3 and November 5, 1985; July 1, 1986; December 20, 1988; November 14, 1990; March 17, 1993; and January 14, 1994, subject to the following provision:

Omaha Public Power District 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."

OPPD implemented the following process for determining that these are the only license conditions required to be either revised or superseded to implement the new FPP which meets the requirements in 10 CFR 50.48(a) and 50.48(c): A review was conducted of the FCS Facility Operating License DPR-40 by FCS licensing staff and the NFPA 805 transition team. The review was performed by reading the Operating License and performing electronic searches. Outstanding LARs that have been submitted to the NRC were also reviewed for potential impact on the license conditions.

In support of this change, the FCS FPRA received a formal industry peer review against the Section IV requirements of ASME/ANS RA-Sa-2009 and in accordance with the peer review guidelines of NEI 07-12. The peer review was conducted September 27<sup>th</sup> through October 1<sup>st</sup>, 2010 by a diverse group of industry experts, collectively representing all skill sets required to critically review a FPRA. The review covered all aspects of the FCS FPRA model and the administrative processes used to maintain and update the model. The review generated specific recommendations for model, documentation, and process improvements, and these recommendations are documented in the form of Facts and Observations (F&Os) in the peer review report. All F&Os have been addressed as documented in the letter from Westinghouse Electric Company (C. M. Burton) to OPPD (J. L. McManis), "Omaha Public Power District, Fort Calhoun Station, NFPA 805 Fire PRA, NFPA-805 - Task 7.17 PRA Peer Review History," dated April 1, 2011 (CFTC-11-95). The peer review report documents that the FCS FPRA model meets the requirements of Capability Category II or III for all requirements, with the exception of those identified and dispositioned in FC07883.

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**N. Facility Operating License and Technical Specifications – Retyped “Clean” Pages**  
6 Pages Attached



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E. Updated Final Safety Analysis Report

The Omaha Public Power District Updated Final Safety Analysis Report supplement, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to the period of extended operation. The Omaha Public Power District shall complete these activities no later than August 9, 2013, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.

The Updated Final Safety Analysis Report supplement, as revised, shall be included in the next scheduled update to the Updated Final Safety Analysis Report required by 10 CFR 50.71(e)(4) following issuance of this renewed license. Until that update is complete, the Omaha Public Power District may make changes to the programs and activities described in the supplement without prior Commission approval, provided that the Omaha Public Power District evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

F. Appendix B

The Additional Conditions contained in Appendix B, as revised through Amendment No. 261, are hereby incorporated into this license. Omaha Public Power District shall operate the facility in accordance with the Appendix B Additional Conditions.

G. 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
  
- (c) Actions to minimize release to include consideration of:
  - 1. Water spray scrubbing
  - 2. Dose to onsite responders

4. This renewed license is effective as of the date of issuance and shall expire at midnight on August 9, 2033.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by:  
J.E. Dyer

J. E. Dyer, Director  
Office of Nuclear Reactor Regulation

Attachments: 1. Appendix A - Technical Specifications  
2. Appendix B - Additional Conditions

Date of Issuance: November 4, 2003

Renewed Operating License No. DPR-40  
Revised by letter dated July 26, 2007

## TECHNICAL SPECIFICATIONS

### 5.0 ADMINISTRATIVE CONTROLS

#### 5.2 Organization (Continued)

- b. An Operator or Technician qualified in Radiation Protection Procedures shall be onsite when fuel is in the reactor.
- c. All core alterations shall be directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator limited to fuel handling who has no other concurrent responsibilities during the operation.
- d. DELETED
- e. The Manager - Shift Operations, the Shift Managers, and the Control Room Supervisors shall hold a senior reactor operator license. The Licensed Operators shall hold a reactor operator license.

#### 5.3 Facility Staff Qualification

- 5.3.1 Each member of the plant staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, with the exception of the Manager – Radiation Protection (MRP) and the Shift Technical Advisor (STA), the senior reactor operator licensees, and the reactor operator licensees, who shall meet the requirements set forth in Regulatory Guide 1.8, Revision 3, dated May 2000, entitled "Qualification and Training of Personnel for Nuclear Power Plants."

## TECHNICAL SPECIFICATIONS

### 5.0 ADMINISTRATIVE CONTROLS

5.7 Not used.

### 5.8 Procedures

5.8.1 Written procedures and administrative policies shall be established, implemented and maintained covering the following activities:

- a. The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, 1978;
- b. The emergency operating procedures required to implement the requirements of NUREG-0737 and to NUREG-0737, Supplement 1, as stated in Generic Letter 82-33; and
- c. Not used.
- d. All programs specified in Specification 5.11 through 5.24.

5.8.2 Temporary changes to procedures of 5.8.1 above may be made provided:

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant supervisory staff, at least one of whom holds a Senior Reactor Operator's License.