

November 4, 2013

TO: TECHNICAL SPECIFICATION DISTRIBUTION

Attached are Amendments No. 286 and 287 to the Duane Arnold Energy Center Technical Specifications.

Amendment No. 286 {TSCR No. 128} adopts a new fire protection licensing basis which complies with 10 CFR 50.48 (a) and (c), i.e., NFPA 805.

Amendment No. 287 {TSCR No. 141} revises Operating License Condition C.12.

Please update your copy of the Technical Specifications as indicated in the attached Update Instructions.

**THIS AMENDMENT BECOMES EFFECTIVE 11/7/2013.**

IMPORTANT: Holders of Technical Specification Copies are required to sign and date the Notice of Receipt Form below, detach it at the dotted line and:

**RETURN IT TO THE ADDRESSEE ALONG WITH THE SHEETS REMOVED FROM THE TECHNICAL SPECIFICATIONS.**

Laura Swenzinski

Licensing Engineer

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**NOTICE OF RECEIPT OF TECHNICAL SPECIFICATION REVISION**

To: Pat Vandersee, Licensing Department  
Duane Arnold Energy Center, 3277 DAEC Road, Palo, IA 52324

This acknowledges receipt of Amendments #286 and 287 to the Duane Arnold Energy Center Technical Specifications.

Signature: \_\_\_\_\_ DATE \_\_\_\_\_

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NRC

DUANE ARNOLD ENERGY CENTER TECHNICAL SPECIFICATIONS  
UPDATE INSTRUCTIONS

REMOVE

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- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I; Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

NextEra Energy Duane Arnold, LLC is authorized to operate the Duane Arnold Energy Center at steady state reactor core power levels not in excess of 1912 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 287, are hereby incorporated in the license. NextEra Energy Duane Arnold, LLC shall operate the facility in accordance with the Technical Specifications.

- (a) For Surveillance Requirements (SRs) whose acceptance criteria are modified, either directly or indirectly, by the increase in authorized maximum power level in 2.C.(1) above, in accordance with Amendment No. 243 to Facility Operating License DPR-49, those SRs are not required to be performed until their next scheduled performance, which is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment No. 243.

(b) Deleted.

(3) Fire Protection Program

NextEra Energy Duane Arnold, LLC 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 August 5, 2011 (and supplements dated October 14, 2011, April 23, 2012, May 23, 2012, July 9, 2012, October 15, 2012, January 11, 2013, February 12, 2013, March 6, 2013, May 1, 2013, May 29, 2013, two supplements dated July 2, 2013, and supplements dated August 5, 2013 and August 28, 2013) and as approved in the safety evaluation report dated September 10, 2013. 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  $1 \times 10^{-7}$ /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.

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 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.

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 September 10, 2013 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) and (3) 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 to its facility, as described in Enclosure 2, Attachment S, Table S-1, "Plant modifications Committed," of DAEC letter NG-13-0287, dated July 2, 2013, to complete the transition to full compliance with 10 CFR 50.48(c) by December 31, 2014. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications.
  - (3) The licensee shall implement the items listed in Enclosure 2, Attachment S, Table S-2, "Implementation Items," of DAEC letter NG-13-0287, dated July 2, 2013, by March 9, 2014.
- (4) The licensee is authorized to operate the Duane Arnold Energy Center following installation of modified safe-ends on the eight primary recirculation system inlet lines which are described in the licensee letter dated July 31, 1978, and supplemented by letter dated December 8, 1978.
- (5) Physical Protection

NextEra Energy Duane Arnold, LLC 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 contains Safeguards Information protected under 10 CFR 73.21, is entitled: "Duane Arnold Energy Center Physical Security Plan," submitted by letter dated May 16, 2006.

NextEra Energy Duane Arnold, LLC shall fully implement and maintain in effect all provisions of the Commission-approved Duane Arnold Energy Center/NextEra Energy Duane Arnold, LLC Cyber Security Plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Duane Arnold Energy Center/NextEra Energy Duane Arnold, LLC CSP was approved by License Amendment No. 278, as supplemented by a change approved by license Amendment No. 284.

(6) Deleted

(7) Additional Conditions

The Additional Conditions contained in Appendix B, as revised through Amendment No. 279, are hereby incorporated into this license. NextEra Energy Duane Arnold, LLC shall operate the facility in accordance with the Additional Conditions.

(8) The licensee is authorized to revise the Updated Final Safety Analysis Report by deleting the footnote for Section 9.1.4.4.5 which states: "\*\*The NRC has not endorsed the reactor building crane as single-failure proof (Reference 9)," and by deleting Reference 9 of the references for Section 9.1.

(9) 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

(10) The licensee shall implement and maintain all Actions required by Attachment 2 to NRC Order EA-06-137, issued June 20, 2006, except the last action that requires incorporation of the strategies into the site security plan, contingency plan, emergency plan and/or guard training and qualification plan, as appropriate.

- (11) The information in the UFSAR supplement, as revised, submitted pursuant to 10 CFR 54.21(d), shall be incorporated into the UFSAR no later than the next scheduled update required by 10 CFR 50.71(e) following the issuance of this renewed operating license. Until this update is complete, the licensee may not make changes to the information in the supplement. Following incorporation into the UFSAR, the need for prior Commission approval of any changes will be governed by 10 CFR 50.59.
- (12) The UFSAR supplement, as revised, submitted pursuant to 10 CFR 54.21(d), and as supplemented by Appendix A of NUREG-1955, "Safety Evaluation Report Related to the License Renewal of Duane Arnold Energy Center," dated November 2010, as supplemented by letter from the licensee to the NRC dated November 23, 2010, describes certain programs to be implemented and activities to be completed before the period of extended operation.
- a. NextEra Energy Duane Arnold, LLC shall implement those new programs and enhancements to existing programs no later than February 21, 2014.
  - b. NextEra Energy Duane Arnold, LLC shall complete those activities no later than February 21, 2014.

The licensee shall notify the NRC in writing within 30 days after having accomplished item (a) above and include the status of those activities that have been or remain to be completed in item (b) above.

- (13) The licensee shall implement the most recent staff-approved version of the Boiling Water Reactor Vessels and Internals Project (BWRVIP) Integrated Surveillance Program (ISP) as the method to demonstrate compliance with the requirements of 10 CFR Part 50, Appendix H. Any changes to the BWRVIP ISP capsule withdrawal schedule must be submitted for staff review and approval. Any changes to the BWRVIP ISP capsule withdrawal schedule which affects the time of withdrawal of any surveillance capsules must be incorporated into the licensing basis. If any surveillance capsules are removed without the intent to test them, these capsules must be stored in a manner which maintains them in a condition which would support re-insertion into the reactor pressure vessel if necessary.
- D. This license is effective as of the date of issuance and shall expire at midnight February 21, 2034.

FOR THE NUCLEAR REGULATORY COMMISSION

*Original signed by Eric J. Leeds*

Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation

Enclosures:

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

Date of Issuance: December 16, 2010

Renewed License No. DPR-49  
Amendment 287

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3.10-12	04/27/12	280						
3.10-13	08/01/98	223						
3.10-14	04/27/12	280						
3.10-15	04/27/12	280						
3.10-16	08/01/98	223						
3.10-17	04/27/12	280						
3.10-18	08/01/98	223						
3.10-19	08/01/98	223						
3.10-20	08/01/98	223						
3.10-21	08/01/98	223						
3.10-22	04/27/12	280						
3.10-23	04/27/12	280						
4.0-1	08/01/98	223						
4.0-2	07/16/99	226						
4.0-3	08/01/98	223						
5.0-1	08/01/98	223						
5.0-2	08/01/98	223						
5.0-3	10/01/09	274						
5.0-4	11/22/02	248						
5.0-5	08/01/98	223						
5.0-6	11/07/13	286						
5.0-7	10/30/00	234						
5.0-8	07/11/05	258						
5.0-9	08/01/98	223						
5.0-10	11/22/02	248						
5.0-11	10/30/00	234						
5.0-12	08/22/13	285						
5.0-13	08/22/13	285						
5.0-14	08/22/13	285						
5.0-15	10/30/00	234						
5.0-16	10/12/01	241						
5.0-17	4/16/10	276						

## 5.0 ADMINISTRATIVE CONTROLS

### 5.4 Procedures

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- 5.4.1 Written procedures shall be established, implemented, and maintained covering the following activities:
- a. The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 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;
  - c. Quality assurance for effluent and environmental monitoring;
  - d. [Deleted]; and
  - e. All programs specified in Specifications 5.5.
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