



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

November 30, 2016

Mr. Thomas A. Vehec  
Vice President  
NextEra Energy  
Duane Arnold Energy Center  
3277 DAEC Road  
Palo, IA 52324-9785

SUBJECT: DUANE ARNOLD ENERGY CENTER - CORRECTION OF ERRORS IN  
SAFETY EVALUATION ASSOCIATED WITH LICENSE AMENDMENT NO. 298  
(CAC NO. MF6807)

Dear Mr. Vehec:

By letter dated October 17, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16263A245), the U.S. Nuclear Regulatory Commission (NRC) issued Amendment No. 298 to Renewed Facility Operating License No. DPR-49 for the Duane Arnold Energy Center (DAEC). The amendment revised the DAEC technical specifications (TSs) Section 5.5.6, "Inservice Testing [IST] Program," to provide consistency with the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(f)(4) for IST of pumps and valves and remove requirements that are redundant to the requirements of 10 CFR Section 50.55a.

On November 3, 2016, the NRC was notified by NextEra Energy Duane Arnold, LLC (the licensee), that errors had been identified in the safety evaluation (SE) enclosed in the October 17, 2016, letter. Specifically, in the SE at the bottom of page 2 and the top of page 3 there appeared to be some words that are missing or cut off. Page 2 ends with "Since the," and Page 3 starts with "being updated in Section XI."

We compared the SE which was prepared and submitted for entry into ADAMS, and realized that during the dispatch process, a sentence was inadvertently deleted.

The NRC staff has determined that these were inadvertent typographical errors and were entirely editorial in nature. The corrections do not change any of the conclusions in the SE associated with the issuance of Amendment No. 298 for DAEC, and do not affect the associated notice to the public.

T. Vehec

- 2 -

Please find enclosed the replacement SE associated with this amendment. If you have any questions regarding this matter, please contact me at (301) 415-8371.

Sincerely,



Mahesh Chawla, Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-331

Enclosure:  
Corrected Safety Evaluation Associated with  
License Amendment No. 298

cc w/encl: Distribution via Listserv

**ENCLOSURE**

DUANE ARNOLD ENERGY CENTER

DOCKET NO. 50-331

CORRECTED SAFETY EVALUATION ASSOCIATED WITH

LICENSE AMENDMENT NO. 298



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 298 TO FACILITY OPERATING LICENSE NO. DPR-49

NEXTERA ENERGY DUANE ARNOLD, LLC

DUANE ARNOLD ENERGY CENTER

DOCKET NO. 50-331

1.0 INTRODUCTION

By application dated October 14, 2015, (Agencywide Documents Access and Management System Accession No. ML15289A233), NextEra Energy Duane Arnold, LLC (the licensee) requested to amend the operating license of Duane Arnold Energy Center (DAEC). This license amendment request proposed changes to revise technical specification (TS) 5.5.6, "Inservice Testing [IST] Program," to provide consistency with the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR)50.55a(f)(4) for the IST of pumps and valves and remove requirements that are redundant to the requirements of 10 CFR, Section 50.55a.

Specifically, the proposed changes would revise DAEC TS 5.5.6 to be consistent with U.S. Nuclear Regulatory Commission (NRC or Commission)-approved Technical Specification Task Force (TSTF) travelers TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a," and TSTF-497, Revision 0, "Limit Inservice Testing Program SR [surveillance requirement] 3.0.2 Application to Frequencies of 2 Years or Less." TSTF-479 changes references in the IST program to the latest approved edition and addenda of the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code). TSTF-497 adds an editorial change to clarify that the provisions of SR 3.0.2 are applicable to pumps and valves with IST intervals of 2 years or less.

2.0 REGULATORY EVALUATION

The Commission's regulatory requirements related to the content of the TS are contained in 10 CFR 50.36. That regulation requires that the TS 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, (4) design features, and (5) administrative controls.

The NRC staff reviewed the proposed changes for compliance with 10 CFR 50.36, "Technical specifications," and consistency with the precedent as established in NUREG-1433, "Standard Technical Specifications [STS], General Electric BWR/4 Plants," Revision 4, including changes incorporated via TSTF-479 and TSTF-497. These TSTF travelers affect changes to NUREG-1433 in STS 5.5.7, "Inservice Testing Program."

Enclosure

By letter dated December 6, 2005 (ADAMS Accession No. ML053460302), the NRC approved Revision 0 of TSTF-479, "Changes to Reflect Revisions of 10 CFR 50.55a." TSTF-479, Revision 0, revises references in the STS Administrative Controls IST Program and STS Bases to reflect the current edition of the ASME Code specified in 10 CFR 50.55a(b). The NRC concluded that the revision was acceptable because the requirements of 10 CFR 50.55a adequately provide for IST.

By letter dated October 4, 2006 (ADAMS Accession No. ML1062780321), the NRC approved Revision 0 of TSTF-497, "Limit Inservice Testing Program SR 3.0.2 Application to Frequencies of 2 Years or Less." TSTF-497, Revision 0, revises the STS IST program by clarifying that the application of the 25 percent IST interval extension allowed by SR 3.0.2 was for IST frequencies of 2 years or less. The NRC concluded that the revision was acceptable because it was an editorial change that clarified that the provisions of SR 3.0.2 (i.e., the 25 percent interval extension) are applicable to pumps and valves with IST intervals of two years or less.

The changes were also reviewed for compliance with the requirements for IST as contained in 10 CFR 50.55a(f)(4) for ASME Code Class 1, 2, and 3 pumps and valves. They are also consistent with the guidance in NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants."

### 3.0 TECHNICAL EVALUATION

The licensee requested this amendment to TS 5.5.6, "Inservice Testing Program," for DAEC. TS 5.5.6 would be revised to update references to the source of requirements for the IST of the ASME Code Class 1, 2, and 3 pumps and valves, and to address the applicability of SR 3.0.2 to some non-standard pump and valve testing frequencies.

The licensee stated that the proposed changes to the TS are consistent with NRC-approved TSTF Travelers TSTF-479-A, Revision 0, as modified by TSTF-497-A, Revision 0.

#### 3.1 TSTF-479, Revision 0, "Changes to Reflect Revision of 10 CFR 50.55a"

The purposes of the IST programs are to assess the operational readiness of pumps and valves, to detect degradation that might affect component OPERABILITY, and to maintain safety margins with provisions for increased surveillance and corrective action. NRC regulation 10 CFR 50.55a defines the requirements for applying industry codes to each licensed nuclear powered facility. Licensees are required by 10 CFR 50.55a(f)(4)(i) to initially prepare programs to perform the IST of certain ASME Section III, Code Class 1, 2, and 3 pumps and valves during the initial 120-month interval. 10 CFR 50.55a(f)(5)(ii) requires licensees to update their IST program to the latest approved edition and addenda of the ASME OM Code incorporated by reference into 10 CFR 50.55a(b).

Section XI of the ASME Code has been revised on a continuing basis over the years to provide updated requirements for the in-service inspection and IST of components. Until 1990, the ASME Code requirements addressing the IST of pumps and valves were contained in Section XI, Subsections IWP (pumps) and IWV (valves). In 1990, the ASME published the initial edition of the OM Code that provides the rules for the IST of pumps and valves. Since the

establishment of the 1990 Edition of the OM Code, the rules for the IST of pumps are no longer being updated in Section XI.

The TS change does not eliminate any tests and does not relinquish the licensee of its responsibility to seek relief from Code test requirements when they are impractical. The proposed change of the ASME Code reference from "ASME Section XI" to "ASME OM Code," eliminates the ASME Code inconsistency between the IST program and the TS as required by 10 CFR 50.55a(f)(4)(ii). Therefore, the NRC staff finds these proposed changes to be acceptable because they are consistent with the NRC's basis for approval of TSTF-479 in that the requirements of 10 CFR 50.55a adequately provide for IST.

### 3.2 TSTF-497, Revision 0, "Limit In-service Testing Program SR 3.0.2 Application to Frequencies of 2 Years or Less"

TSTF-479, Revision 0, revised the IST program located in Chapter 5 of the STS to reflect the latest approved version of the ASME Code. TSTF-479 also revised paragraph b of NUREG-1433 STS 5.5.7, "In-service Testing Program," by adding, "The provisions of SR 3.0.2 are applicable to the above required Frequencies and other normal and accelerated Frequencies specified in the In-service Testing Program for performing in-service testing activities." This requirement referred to the valves in the table above it which only lists valves with a test frequency interval of 2 years or less.

In order to enhance the 2 years or less test frequency requirement, TSTF-497 revised the sentence in paragraph b to state: "The provisions of SR 3.0.2 are applicable to the above required Frequencies and to other normal and accelerated Frequencies specified as 2 years or less in the In-service Testing Program for performing In-service testing activities." Without this limitation, some components, such as safety and relief valves that may be tested at surveillance intervals significantly greater than 2 years, could have extensions applied which would be much greater than needed for operational flexibility. This is an editorial change to clarify that SR 3.0.2 is applicable to pumps and valves with IST intervals of 2 years or less.

The NRC staff reviewed the licensee's application and determined that the proposed changes are consistent with the bases of the NRC's approval of TSTF-479 and TSTF-497. Therefore, the NRC staff finds the proposed changes acceptable because they are consistent with the relevant portions of 10 CFR 50.55a.

### 4.0 STATE CONSULTATION

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

### 5.0 ENVIRONMENTAL CONSIDERATIONS

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 (80 FR 79621). The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 (80 FR 79621 dated December 22, 2015). 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.

## 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) there is reasonable assurance that 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: Khadijah N. West, NRR/DSS

Date of issuance: October 17, 2016

T. Vehec

- 2 -

Please find enclosed the replacement SE associated with this amendment. If you have any questions regarding this matter, please contact me at (301) 415-8371.

Sincerely,

*/RA/*

Mahesh Chawla, Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-331

Enclosure:  
Corrected Safety Evaluation Associated with  
License Amendment No. 298

cc w/encl: Distribution via Listserv

DISTRIBUTION:

PUBLIC  
LPL3-1 R/F  
RidsNrrDorLpl3-1 Resource  
RidsNrrPMDuaneArnold Resource  
RidsNrrLASRohrerResource

RidsAcrs\_MailCTR Resource  
RidsRgn3MailCenterResource  
RidsOgcMailCenter  
RecordsAmend Resource

**ADAMS Accession No.: ML16313A475**

OFFICE	NRR/DORL/LPL3-1/PM	NRR/DORL/LPL3-1/LA	NRR/DORL/LPL3-1/BC
NAME	MChawla	SRohrer	DWrona
DATE	11/16/2016	11/09/2016	11/30/2016

**OFFICIAL RECORD COPY**