



**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. 295
(CAC NO. MF6618)**

Dear Mr. Vehec:

By letter dated August 18, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16153A091), the U.S. Nuclear Regulatory Commission (NRC) issued Amendment No. 295 to Renewed Facility Operating License No. DPR-49 for the Duane Arnold Energy Center (DAEC).

The amendment revised the value of reactor steam dome pressure specified within DAEC technical specifications (TSs) Section 2.1.1, "Reactor Core SLs [Safety Limits]," to resolve a Title 10 of the *Code of Federal Regulations* (CFR), Part 21 condition. The Part 21 condition was concerning a potential to momentarily violate TSs 2.1.1.1 and 2.1.1.2 during a pressure regulator failure maximum demand (open) transient.

On September 15, 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 August 18, 2016, letter. The following corrections were made in the SE on page 3.

SE Section	Previous Version	Revised Version	Description of the change
2.2	THERMAL POWER shall be < 21.7 percent RTP	THERMAL POWER shall be ≤ 21.7 percent RTP	Replaced < with ≤ symbol
2.2	2.1.1.2 MCPR -With the reactor steam dome pressure >686 psig and core flow >10% rated coreflow: MCPR shall be >1.10 for two recirculation loop operation or >1.12 for single recirculation loop operation	2.1.1.2 MCPR -With the reactor steam dome pressure ≥ 686 psig and core flow ≥ 10% rated coreflow: MCPR shall be ≥ 1.10 for two recirculation loop operation or ≥ 1.12 for single recirculation loop operation	Replaced > with ≥ symbol

T. Vehec

- 2 -

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. 295 for DAEC and do not affect the associated notice to the public.

Please find enclosed the replacement page 3 of the SE associated with this amendment. If you have any questions regarding this matter, please contact me at (301) 415-8371.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mahesh Chawla', written in a cursive style.

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. 295

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ENCLOSURE

DUANE ARNOLD ENERGY CENTER

DOCKET NO. 50-331

CORRECTED SAFETY EVALUATION, PAGE 3, ASSOCIATED WITH
LICENSE AMENDMENT NO. 295

2.2 Proposed TS Changes

The proposed changes would reduce the reactor steam dome pressure from 785 psig to 686 psig, specified in TS SLs 2.1.1.1 and 2.1.1.2. As a result of this change, the TS SLs 2.1.1.1 and 2.1.1.2, would read:

- 2.1.1.1 Fuel Cladding Integrity - With the reactor steam dome pressure < 686 psig or core flow < 10 percent rated core flow:

THERMAL POWER shall be \leq 21.7 percent RTP.

- 2.1.1.2 MCPR [minimum critical power rate] - With the reactor steam dome pressure \geq 686 psig and core flow \geq 10% rated core flow:

MCPR shall be \geq 1.10 for two recirculation loop operation or \geq 1.12 for single recirculation loop operation.

The licensee's application also provided revised TS Bases pages to be implemented with the associated TS changes. These pages were provided for information only. Changes to the TS Bases would be made in accordance with the TS Bases Control Program.

2.3 Regulatory Requirements and Guidance

The NRC staff considered the following regulatory requirements and guidance documents in its review of the proposed amendment.

10 CFR 50.36, "Technical specifications," provides the regulatory requirements for the content required in the TSs. As stated in 10 CFR 50.36(c)(1)(i)(A),

Safety limits for nuclear reactors are limits upon important process variables that are found to be necessary to reasonably protect the integrity of certain of the physical barriers that guard against the uncontrolled release of radioactivity. If any safety limit is exceeded, the reactor must be shut down. The licensee shall notify the Commission, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence. Operation must not be resumed until authorized by the Commission."

Compliance with the fuel licensing criteria of 10 CFR 50, Appendix A, General Design Criterion (GDC) 10, "Reactor design," is achieved by preventing the violation of fuel design limits. GDC 10 states:

The reactor core and associated coolant, control, and protection systems shall be designed with appropriate margin to assure that specified acceptable fuel design limits [SAFDLs] are not exceeded during any condition of normal operation, including the effects of anticipated operational occurrences.

NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," provides guidance on the acceptability of the reactivity control systems, the

T. Vehec

- 2 -

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Please find enclosed the replacement page 3 of the 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

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Corrected Safety Evaluation Associated with
License Amendment No. 295

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DATE	11/8/16	11/8/16	11/10/16	11/10/16	11/30/16

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