



August 18, 2011

NG-11-0289  
10 CFR 50.46(a)(3)(ii)

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Duane Arnold Energy Center  
Docket 50-331  
License No. DPR-49

10 CFR 50.46 30-Day Special Report of Changes in Peak Cladding Temperature for the Duane Arnold Energy Center

Reference: Letter from C. Costanzo (NextEra Energy Duane Arnold) to USNRC, "10 CFR 50.46 Annual Report of Changes in Peak Cladding Temperature for the Duane Arnold Energy Center," NG-10-0480, dated September 30, 2010.

In accordance with 10 CFR 50.46(a)(3)(ii), NextEra Energy Duane Arnold, LLC (hereafter NextEra Energy Duane Arnold) hereby provides this 30-day special report regarding changes in the calculated peak cladding temperature (PCT) of the GE14 fuel design currently utilized at the Duane Arnold Energy Center (DAEC).

Our fuel vendor has notified NextEra Energy Duane Arnold of two newly-identified errors in the current Loss-of-Coolant Accident analysis methodology and application that have occurred subsequent to the referenced report. Enclosed is a historical summary of previously reported errors, as well as the addition of these new errors.

These new changes, when combined (sum of the absolute magnitudes) with all the applicable PCT changes previously reported, result in a cumulative PCT change for the DAEC of greater than the 50 °F reporting threshold under §50.46(a)(3)(i). Although this is defined as a "significant change" under §50.46, the actual impact on nuclear safety is negligible, as the DAEC has significant margin, over 500 °F, to the regulatory limit of 2200 °F PCT in §50.46(b)(1). Thus, a re-analysis is not currently scheduled for the DAEC as a result of these cumulative errors.

This letter contains no new commitments.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Wells".

Peter Wells  
Vice President, Duane Arnold Energy Center  
NextEra Energy Duane Arnold, LLC

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Enclosure

**10 CFR 50.46 30-Day Report  
for the DAEC**

Peak Cladding Temperature<sup>(1)</sup>

Last Acceptable Model Results<sup>(2)</sup>: 1510°F

Previously Reported Errors and Changes:

2001 - 2010: + 65°F

New Errors and Changes:

1. Impact of over/under prediction of  
energy deposited in the channel/fuel  
from gamma radiation + 45 °F
2. Impact of minimizing the contribution  
of heat from gamma absorption by  
the channel + 5 °F

Analysis of Record Results: 1625 °F

(1) Licensing Basis PCT (LBPCT), as defined in NEDE-23785-1-P-A, "The GESTR-LOCA and SAFER Models for the Evaluation of the Loss-of-Coolant Accident: Volume III - SAFER/GESTR Application Methodology," February 1985.

(2) General Electric Report, "Safety Analysis Report for Duane Arnold Energy Center Extended Power Uprate," NEDC-32980P, Revision 1, April 2001.