



JUN 28 2017

L-2017-118
10 CFR 50.46(a)(3)(ii)

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

NextEra Energy Duane Arnold, LLC
Duane Arnold Energy Center
Docket No. 50-331

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

Reference: Letter from L. Nicholson (Florida Power & Light Company) to USNRC, "10 CFR 50.46 Annual Reporting of Changes to, or Errors in Emergency Core Cooling System Models or Applications," L-2017-014, April 17, 2017.

In accordance with 10 CFR 50.46(a)(3)(ii), Florida Power & Light acting as agent for NextEra Energy Duane Arnold, LLC (NextEra), hereby provides this 30-day special report regarding changes in the calculated peak cladding temperature (PCT) of the GNF2 fuel design currently utilized at the Duane Arnold Energy Center (DAEC).

Our fuel vendor, Global Nuclear Fuels (GNF), has notified NextEra of the potential impact of one newly-identified error in the current Loss-of-Coolant Accident analysis methodology and its application that has occurred subsequent to the referenced annual report. Enclosed is a historical summary of previously reported changes or errors, as well as the potential impact of the new error on the GNF2 fuel design currently utilized at DAEC.

This new error, when combined (sum of the absolute magnitudes) with all the applicable PCT changes previously reported for the GNF2 fuel design, results in a cumulative PCT change for DAEC of greater than the 50 °F reporting threshold under 10 CFR 50.46(a)(3)(i). Although this is defined as a "significant change" under 10 CFR 50.46, the actual impact on nuclear safety is negligible, as DAEC has significant margin, over 450 °F, to the regulatory limit of 2200 °F PCT in 10 CFR 50.46(b)(1). Thus, a full re-analysis for GNF2 fuel design is not currently scheduled for the DAEC as a result of these cumulative changes.

This submittal contains no new commitments or revisions to existing commitments.

Sincerely,



Larry Nicholson
Director, Nuclear Licensing and Regulatory Compliance

Enclosure (1)

cc: Administrator, Region III, USNRC
Project Manager, Duane Arnold Energy Center, USNRC
Resident Inspector, Duane Arnold Energy Center, USNRC

Enclosure 1

Summary Rack-Up Sheet GNF2 Fuel

LOCA Margin Summary Sheet – 30 Day Report

Plant Name: Duane Arnold Energy Center

Utility name: NextEra Energy

Evaluation Model: GE Hitachi Report, "Duane Arnold Energy Center GNF2 ECCS-LOCA Evaluation," GNF Report 0000-0133-6901-R0, DRF 0000-0133-6885-R0, August 2012

Last Acceptable Evaluation Model Analyzed PCT: 1730 °F

| | | | Net PCT Effect | Absolute PCT Effect |
|---|--|--------------|-----------------------|----------------------------|
| A | Prior 10 CFR 50.46 Changes or Error Corrections – up to Year N-1 | Δ PCT | 10 °F | 50 °F |
| B | Prior 10 CFR 50.46 Changes or Errors Corrections – Year N | Δ PCT | None | None |
| C | Current 10 CFR 50.46 Changes | | | |
| | 1. Impact of modeling forward and backward leakage paths through the bottom of the fuel bundle | Δ PCT | -20 °F | 20 °F |
| | | | | |
| | Absolute Sum of 10 CFR 50.46 Changes | Δ PCT | -10 °F | 70 °F |

| | |
|---|-------------------|
| The sum of the <i>PCT</i> from the most recent analysis using an acceptable evaluation model and the estimates of <i>PCT</i> impact for changes and errors identified since this analysis | 1720 °F < 2200 °F |
|---|-------------------|