

David B. Hamilton  
Vice President

440-280-5382

March 20, 2018  
L-18-036

10 CFR 50.46

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001**SUBJECT:**Perry Nuclear Power Plant  
Docket No. 50-440, License No. NPF-58  
2017 Annual Report of Emergency Core Cooling System Errors and Model Changes

Attached is the 2017 Annual Report of Emergency Core Cooling System Errors and Model Changes for the Perry Nuclear Power Plant. FirstEnergy Nuclear Operating Company (FENOC) is submitting this report to the Nuclear Regulatory Commission (NRC) in accordance with 10 CFR 50.46(a)(3)(ii).

There are no regulatory commitments contained in this submittal. If there are any questions or if additional information is required, please contact Mr. Thomas A. Lentz, Manager – Fleet Licensing, at (330) 315-6810.

Sincerely,



David B. Hamilton

Attachment:  
2017 Annual Report of Emergency Core Cooling System Errors and Model Changescc: NRC Region III Administrator  
NRC Resident Inspector  
NRC Project Manager

2017 Annual Report of Emergency Core Cooling System Errors and Model Changes  
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**New Errors and Changes:**

**Change in an acceptable evaluation model or application of such model:**

Global Nuclear Fuel - Americas, LLC (GNF) provided 10 CFR 50.46 Notification Letter 2017-02, "Fuel Rod Plenum Temperature Update," to the Perry Nuclear Power Plant (PNPP) in August 2017. The notification identified a change in the evaluation model (EM) that is applicable to both the GE14 and GNF2 fuel types used at PNPP. This change was reported to the Nuclear Regulatory Commission (NRC) by FirstEnergy Nuclear Operating Company (FENOC) Letter, dated August 21, 2017 (ADAMS No. ML17233A279). As stated in the letter, the effect on licensing basis peak cladding temperature (PCT) is 0°F.

**Errors:**

GNF provided 10 CFR 50.46 Notification Letter 2017-01, "GNF2 Lower Tie Plate Leakage," to the PNPP in June 2017. The notification identified an error in the evaluation model that is applicable to the GNF2 fuel type used at PNPP. The effect on the licensing basis PCT is -20°F. This was not previously reported to the NRC, since the summation of absolute values of the changes and errors applicable to GNF2 fuel does not meet the definition of a significant change.

**Report Summary:**

The changes to and errors in the PNPP emergency core cooling system (ECCS) evaluation model in 2017 are summarized in the following table:

Perry Nuclear Power Plant, Unit 1		GE14 Fuel	GNF2 Fuel
		PCT or PCT Change	PCT or PCT Change
Licensing Basis PCT at BEGINNING of 2017		1555°F	1630°F
<b>2017 Activity</b>			
EM Errors	Notification Letter 2017-01: GNF2 Lower Tie Plate Leakage	NONE	- 20°F
EM Changes	Notification Letter 2017-02: Fuel Rod Plenum Temperature Update	0°F	0°F
Licensing Basis PCT at END of 2017		1555°F	1610°F