



*Perry Nuclear Power Plant  
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**Rod L. Penfield**  
*Site Vice President, Perry Nuclear*

440-280-5382

February 23, 2021  
L-21-016

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  
2020 Annual Report of Emergency Core Cooling System Errors and Model Changes

Attached is the 2020 Annual Report of Emergency Core Cooling System Errors and Model Changes for the Perry Nuclear Power Plant (PNPP). Energy Harbor Nuclear Corp. is submitting this report to the Nuclear Regulatory Commission (NRC) in accordance with 10 CFR 50.46(a)(3)(ii).

In the previous cycle (within the last 36 months), PNPP's reactor core included both the GE14 and GNF2 fuel types. During the refueling outage that ended in April 2019, PNPP went to a complete core of GNF2 fuel.

There are no regulatory commitments contained in this submittal. If there are any questions or if additional information is required, please contact Mr. Phil H. Lashley, Manager – Fleet Licensing, at (330) 696-7208.

Sincerely,

A handwritten signature in black ink, appearing to read "Rod L. Penfield", written over a printed name.

Rod L. Penfield

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Attachment:  
2020 Annual Report of Emergency Core Cooling System Errors and Model Changes

cc: NRC Region III Administrator  
NRC Resident Inspector  
NRC Project Manager

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**New Errors and Changes:**

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

None.

Errors:

10 CFR 50.46 Notification Letter 2020-01, PRIME Coding Errors for Zircaloy Irradiation Growth and Zr barrier Thermal Conductivity as input to ECCS LOCA Analyses (Condition Report 2020-03249). This notification is applicable to GNF2 fuel in use at Perry.

In the previous cycle (within the last 36 months), PNPP's reactor core included both the GE14 and GNF2 fuel types. During the refueling outage that ended in April 2019, PNPP went to a complete core of GNF2 fuel. The assessment addresses the impact on both the GE14 and GNF2 LOCA analysis.

The error in acceptable evaluation model (Notification 2020-01) was reported to the Nuclear Regulatory Commission (NRC) on May 6, 2020, (Accession No. ML20129H958).

**Report Summary:**

The changes to and errors in the PNPP emergency core cooling system (ECCS) evaluation model in 2020 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 2020		1555°F	1610°F
2020 Activity			
EM errors	Notification 2020-01	0°F	0°F
EM Changes	None	None	None
Licensing Basis PCT at END of 2020		1555°F	1610°F