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MFN 16-067

Docket 52-010

September 23, 2016

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

**Subject: ESBWR Standard Plant Design Annual 10 CFR 50.46 Report for 2016**

Reference:

1. MFN 15-087, Jerry Head to US NRC, ESBWR Standard Plant Design Annual 10 CFR 50.46 Report for 2015 dated September 29, 2015

Pursuant to 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light-water Reactors," GE Hitachi Nuclear Energy (GEH) is submitting this report to document any emergency core cooling system (ECCS) evaluation model changes or errors that affect the peak cladding temperature (PCT) calculation for the ESBWR Standard Plant Design. This is the 2016 annual report for the Certified ESBWR Standard Plant Design, and as detailed in Enclosure 1, no model changes or errors have occurred since the last report (Reference 1) and there are no changes to the PCT values currently used in the ESBWR Standard Plant Design.

The information included in this letter is generic and is expected to apply to all COL applications and licenses referencing the ESBWR Design Certification. By copy of this letter, COL holders and COL applicants are hereby notified of any changes or errors in the ESBWR Standard Design PCT as required by 10 CFR 50.46(a)(3)(iii). There are no changes to the PCT values currently used in the ESBWR Standard Plant Design.

Please contact me if you have any questions regarding this information. Please copy the prospective COL holder and COL applicants included on the cc: list of this letter.

Sincerely,

A handwritten signature in black ink that reads "Jerald Head". The signature is written in a cursive, flowing style.

Jerald G. Head  
Senior Vice President, Regulatory Affairs

No commitments are made in this letter or its enclosures.

Enclosure

1. ESBWR Standard Plant Design 10 CFR 50.46 Annual Report - 2016

cc: Adrian Muniz, (USNRC)  
M. Brandon (DTE Energy)  
J Hegner (Dominion)

Report 003N8706

## ESBWR Standard Plant Design 10 CFR 50.46 Annual Report - 2016

**Plant Name:** ESBWR Standard Plant Design

**Docket Number:** 52-010

**Utility Name:** N/A

**Evaluation Model:** TRACG

**Limiting LOCA:** Isolation Condenser Drain Line Break

<b>PCT Change Item</b>	<b>Net PCT Effect</b>	<b>Absolute PCT Effect</b>
Prior 10 CFR 50.46 Changes or Error Corrections – <b>Previous years</b>	$\Delta PCT = 0 \text{ } ^\circ\text{F (K)}$	$\Delta PCT = 0 \text{ } ^\circ\text{F (K)}$
Prior 10 CFR 50.46 Changes or Error Corrections – <b>This year</b>	$\Delta PCT = 0 \text{ } ^\circ\text{F (K)}$	$\Delta PCT = 0 \text{ } ^\circ\text{F (K)}$
<b>Absolute Sum of 10 CFR 50.46 Changes</b>		$\Delta PCT = 0 \text{ } ^\circ\text{F (K)}$

There is no core uncover and no core heat up in an ESBWR LOCA. The Peak Clad Temperature (PCT) is the same as that during normal operating condition.

The sum of the PCT from the most recent analysis using an acceptable evaluation model and the estimates of PCT effect for changes and errors identified since this analysis is less than 2200 °F (1204 K).