



HITACHI

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M170244

Docket 52-010
10 CFR 50.46
10 CFR 50.46(a)(3)(iii)
10 CFR Part 52, Appendix E

October 30, 2017

US Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Subject: ESBWR Design Certification Annual 10 CFR 50.46 Report for 2017

Reference:

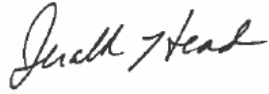
1. Letter, J. G. Head (GEH) to Document Control Desk (NRC), MFN 16-067, ESBWR Standard Plant Design Annual 10 CFR 50.46 Report for 2016, September 23, 2016.

GE Hitachi Nuclear Energy (GEH), as the applicant for the ESBWR Design Certification (10 CFR Part 52, Appendix E), submits this annual report under 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light-Water Reactors." Specifically, Enclosure 1 is the 2017 annual report for the ESBWR Design Certification for emergency core cooling system (ECCS) evaluation model changes or errors that affect the peak cladding temperature (PCT) calculation. Since the 2016 report (Reference 1), one evaluation model change has occurred, but it does not result in a change to the PCT values for the ESBWR Design Certification during this period.

By this letter, GEH also notifies the licensees, DTE Electric Company for Enrico Fermi Nuclear Plant Unit 3, and Dominion Virginia Power for North Anna Unit 3, in accordance with 10 CFR 50.46(a)(3)(iii), because the licenses for these units reference the ESBWR Design Certification.

Please contact me if you have any questions regarding this information.

Sincerely,



Jerald G. Head
Senior Vice President, Regulatory Affairs

Commitments: No additional commitments are made.

Enclosure:

1. ESBWR Design Certification 10 CFR 50.46 Annual Report – 2017

cc: J. Colaccino, NRC
M. Brandon, DTE
R. Westmoreland, DTE
D. Aitken, Dominion
C. Sly, Dominion
DBR-0033424

Enclosure 1

M170244

ESBWR Design Certification 10 CFR 50.46 Annual Report – 2017

ESBWR Design Certification

2017 Annual Report Under 10 CFR 50.46(a)(3)(iii)

Emergency Core Cooling System Model

Plant Name:	ESBWR Design Certification (Docket 52-010; 10 CFR Part 52, Appendix E)			
Utility Name:	GE Hitachi (as applicant for the ESBWR Design Certification)			
Reporting Year: <u>2017*</u>				
Evaluation Model: TRACG				
		<u>LBPCT</u>	<u>Net PCT Effect</u>	<u>Absolute PCT Effect</u>
	Analysis of Record Licensing Basis PCT (LBPCT), with prior updates	600°F		
A.	Prior 10 CFR 50.46 Changes or Error Corrections – Previous years	Δ PCT =	+ 0°F	+ 0°F
B.	Prior 10 CFR 50.46 Changes or Error Corrections – This year (itemized below):	Δ PCT =	+ 0°F	+ 0°F
	2017-02: Fuel Rod Plenum Temperature Update**	Δ PCT =	+ 0°F	+ 0°F
C.	Absolute Sum of 10 CFR 50.46 Changes	Δ PCT =	+ 0°F	+ 0°F
	Projected LBPCT based on these changes	600°F		

*The reporting period is 10/01/2016 through 09/30/2017. The sum of the peak cladding temperature (PCT) from the most recent analysis using an acceptable evaluation model and the estimates of PCT impact for changes and errors identified since this analysis is less than 2,200°F.

**Removes “getter” as a model commitment going forward for consistency between model and fuel products as installed (0°F impact on PCT).

Most Recent Previous Report (2016): Letter, J. G. Head (GEH) to Document Control Desk (NRC), MFN 16-067, ESBWR Standard Plant Design Annual 10 CFR 50.46 Report for 2016, September 23, 2016.