

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

February 22, 2021

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Serial No.: NA3-21-001
NRA/SS R0
Docket No.: 52-017
License No.: NPF-103

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA UNIT 3
REPORT OF 10 CFR 50.46 EMERGENCY CORE COOLING SYSTEM
(ECCS) MODEL CHANGES

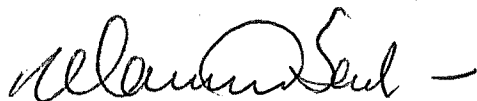
General Electric Hitachi Nuclear Energy (GEH) reported no changes to the ECCS model for the Certified Economic Simplified Boiling Water Reactor (ESBWR) Design in letter M200131 from Michelle P. Catts (GEH) to U. S. Nuclear Regulatory Commission, "ESBWR Design Certification Annual 10 CFR 50.46 Report for 2020," dated September 25, 2020.

The ECCS evaluation model change conclusion provided by GEH is applicable to the North Anna Unit 3 (NA3) Combined Operating License. Therefore, in accordance with 10 CFR 50.46 (a)(3)(ii), this report is being submitted on the NA3 docket.

Attachment 1 provides the Report of Changes in the GEH ECCS Evaluation Model. Attachment 2 provides the 2020 Annual Reporting of 10 CFR 50.46 Margin Utilization for North Anna Unit 3.

If you have any questions regarding this submittal, please contact Mr. Shayan Sinha at (804) 273-4687.

Very truly yours,



Mark D. Sartain
Vice President – Nuclear Engineering and Fleet Support

Commitments made in this letter: None

Attachments:

1. Report of Changes in GEH ECCS Evaluation Model
2. 2020 Annual Reporting of 10 CFR 50.46 Margin Utilization – North Anna Unit 3

cc: (electronic distribution, except where noted)

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Attachment 1

**2020 ANNUAL REPORT OF EMERGENCY CORE COOLING SYSTEM (ECCS)
MODEL CHANGES PURSUANT TO THE REQUIREMENTS OF 10 CFR 50.46**

REPORT OF CHANGES IN GEH ECCS EVALUATION MODEL

**VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA UNIT 3**

REPORT OF CHANGES IN
GEH ECCS EVALUATION MODEL

North Anna Unit 3

General Electric Hitachi Nuclear Energy (GEH) identified no changes or errors applicable to the ECCS Loss of Coolant Accident (LOCA) TRACG Evaluation Model for North Anna Unit 3 during 2020.

Attachment 2

**2020 ANNUAL REPORT OF EMERGENCY CORE COOLING SYSTEM (ECCS)
MODEL CHANGES PURSUANT TO THE REQUIREMENTS OF 10 CFR 50.46**

2020 ANNUAL REPORTING OF 10 CFR 50.46 MARGIN UTILIZATION

**VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA UNIT 3**

Report of Changes in GEH ECCS Evaluation Model

Plant Name		North Anna Unit 3 (Docket 52-017)		
Utility Name		Virginia Electric and Power Company		
Reporting Year: 2020				
Evaluation Model: TRACG				
Vendor: GE Hitachi				
		LBPCT	Net PCT Effect	Absolute PCT Effect
	Analysis of Record Licensing Basis PCT (LBPCT), with prior updates	600°F		
I.	Prior 10 CFR 50.46 Changes or Error Corrections			
	2019-01 - TRACG Channel Inlet Subcooling Calculation	$\Delta PCT =$	+ 0°F	+ 0°F
	2019-02 - TRACG Radiation Heat Transfer Calculation	$\Delta PCT =$	+ 0°F	+ 0°F
	2017-02 - Fuel Rod Plenum Temperature Update	$\Delta PCT =$	+ 0°F	+ 0°F
II.	10 CFR 50.46 Changes or Error Corrections for 2020			
	None	$\Delta PCT =$	+ 0°F	+ 0°F
	Sum of 10 CFR 50.46 Changes	$\Delta PCT =$	+ 0°F	+ 0°F
	Projected LBPCT based on these changes	600°F		