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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Edwin I. Hatch Nuclear Plant Units 1 and 2
Joseph M. Farley Nuclear Plant Units 1 and 2
Vogtle Electric Generating Plant Units 1 and 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2019

Ladies and Gentlemen:

Southern Nuclear Operating Company (SNC) is the licensed operator for the Edwin I. Hatch Nuclear Plant (HNP) Units 1 & 2, the Joseph M. Farley Nuclear Plant (FNP) Units 1 and 2, and the Vogtle Electric Generating Plant (VEGP), Units 1 and 2. The requirements of 10 CFR 50.46(a)(3)(ii) include an annual report by licensees of changes to, or errors in, acceptable emergency core cooling system (ECCS) models that affect the temperature calculation and the estimated effect of changes or errors on the limiting ECCS analysis. Accordingly, the reports required by 10 CFR 50.46(a)(3)(ii) for HNP Unit 2 and FNP Unit 1 are provided in Enclosures 1 and 2, respectively.

There were no changes or errors to report for 2019 for the HNP Unit 1, FNP Unit 2, and VEGP Units 1 and 2 ECCS models; thus, no reports are required for those units.

The resulting peak cladding temperatures (PCT) for HNP Units 1 and 2, FNP Units 1 and 2, and VEGP Units 1 and 2 continue to meet the criterion of 10 CFR 50.46(b)(1) (i.e., $\leq 2200^{\circ}\text{F}$).

This letter contains no NRC commitments. If you have any questions, please contact Jamie Coleman at 205.992.6611.

Respectfully submitted,


Cheryl A. Gayheart
Regulatory Affairs Director

CAG/TLE/scm

Enclosures: 1. Edwin I. Hatch Nuclear Plant Unit 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2019
2. Joseph M. Farley Nuclear Plant Unit 1
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2019

cc: Regional Administrator, Region II
NRR Project Manager – HNP, FNP, VEGP 1 & 2
Senior Resident Inspector – HNP, FNP, VEGP 1 & 2
NRR Project Manager – HNP, FNP, VEGP 1 & 2
RType: CGA02.001

**Edwin I. Hatch Nuclear Plant Units 1 and 2
Joseph M. Farley Nuclear Plant Units 1 and 2
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10 CFR 50.46 ECCS Evaluation Model Annual Report for 2019**

Enclosure 1

**Edwin I. Hatch Nuclear Plant Unit 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2019**

Edwin I. Hatch Nuclear Plant Unit 2

Table 1-1a – TRACG-LOCA Summary of Changes / Errors (2019) (GNF2, GNF3, GNF3 LUAs)	
Description	Estimated Effect (Δ PCT, °F)
Incorrect Radiation Heat Transfer Coefficient.	+35

Table 1-1b – Cumulative Impact of Changes / Errors			
Description	GNF2 Δ PCT (°F)	GNF3 Δ PCT (°F)	GNF3 (LUAs) Δ PCT (°F)
Changes/Errors Previously Reported (See Note)	0	0	0
Summary of Changes/Errors (2019) (Reference 1)	35	35	35
Cumulative Total	35	35	35

Note: Unit 2 Cycle 26, which started in early 2019, is the first use of TRACG-LOCA methodology for Hatch. The base PCT for TRACG-LOCA is documented in Reference 2. For Unit 2 Cycle 25, there were no changes to report for 2019 in regard to the previous SAFER methodology reported in Reference 3.

References:

1. GE Hitachi 10 CFR 50.46 Notification Letter 2019-02, dated March 21, 2019
2. Global Nuclear Fuel 004N5055, "Supplemental Reload Licensing Report for Hatch 2 Reload 25 Cycle 26," Revision 0, dated November 2018
3. Letter from Cheryl A. Gayheart to USNRC (NL-19-0650), ML19156A245, "Edwin I. Hatch Nuclear Plant Units 1 and 2, Joseph M. Farley Nuclear Plant Units 1 and 2, Vogtle Electric Generating Plant Units 1 and 2, 10 CFR 50.46 ECCS Evaluation Model Annual Report for 2018," dated June 5, 2019

**Edwin I. Hatch Nuclear Plant Units 1 and 2
Joseph M. Farley Nuclear Plant Units 1 and 2
Vogtle Electric Generating Plant Units 1 and 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2019**

Enclosure 2

**Joseph M. Farley Nuclear Plant Unit 1
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2019**

**Joseph M. Farley Nuclear Plant – Unit 1
 ASTRUM Best Estimate Large Break LOCA Evaluation**

Table 1-1a – Summary of Changes/Errors (2019)	
Description	Estimated Effect (Δ PCT °F)
PBOT/PMID Violation.	0

Table 1-1b – Cumulative Impact of Changes/Errors	
Description	ΔPCT (°F)
Changes/Errors Previously Reported (Reference 1)	0
Summary of Changes/Errors (2019) (Reference 2)	0
Cumulative Total	0

References:

1. Letter from Cheryl A. Gayheart to USNRC (NL-19-0650), ML19156A245, “Edwin I. Hatch Nuclear Plant Units 1 and 2, Joseph M. Farley Nuclear Plant Units 1 and 2, Vogtle Electric Generating Plant Units 1 and 2, 10 CFR 50.46 ECCS Evaluation Model Annual Report for 2018,” dated June 5, 2019
2. Westinghouse Letter LTR-LIS-20-12, “J. M. Farley Units 1 and 2, 10 CFR 50.46 Annual Notification and Reporting for 2019,” dated February 11, 2020