

Charles R. Pierce
Regulatory Affairs Director

Southern Nuclear
Operating Company, Inc.
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, Alabama 35201
Tel 205.992.7872
Fax 205.992.7601

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50-366 50-425

NL-13-2576

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

Edwin I. Hatch Nuclear Plant Units 1 and 2
Vogtle Electric Generating Plant Units 1 and 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2012

Ladies and Gentlemen:

Southern Nuclear Operating Company (SNC) is the licensed operator for the Edwin I. Hatch Nuclear Plant (Hatch) and Vogtle Electric Generating Plant (Vogtle). 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 Hatch and Vogtle is provided in Enclosures 1 and 2, respectively. The resulting peak cladding temperature (PCT) for Hatch and Vogtle 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 Ken McElroy at (205) 992-7369.

Respectfully submitted,

A handwritten signature in cursive script that reads "C. R. Pierce".

C. R. Pierce
Regulatory Affairs Director

CRP/RMJ/lac

- Enclosures: 1. Edwin I. Hatch Nuclear Plant Units 1 and 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2012
2. Vogtle Electric Generating Plant Units 1 and 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2012

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cc: Southern Nuclear Operating Company
Mr. S. E. Kuczynski, Chairman, President & CEO
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer
Mr. D. R. Vineyard, Vice President – Hatch
Mr. T. E. Tynan, Vice President – Vogtle
Mr. D. R. Madison, Vice President – Fleet Operations
Mr. B. L. Ivey, Vice President – Regulatory Affairs
RType: CHA02.004; CVC7000

U. S. Nuclear Regulatory Commission
Mr. V. M. McCree, Regional Administrator
Mr. E. D. Morris, Senior Resident Inspector – Hatch
Mr. L. M. Cain, Senior Resident Inspector – Vogtle
Mr. R.E. Martin, NRR Project Manager – Hatch, Vogtle

**Edwin I. Hatch Nuclear Plant Units 1 and 2
Vogtle Electric Generating Plant Units 1 and 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2012**

Enclosure 1

**Edwin I. Hatch Nuclear Plant Units 1 and 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2012**

**Edwin I. Hatch Nuclear Plant Unit 1
SAFER/GESTR-LOCA Analysis Model**

Table 1-1a – Summary of Changes/Errors (2012)	
Description	Estimated Effect (Δ PCT)
PRIME code implementation for fuel rod T/M performance, replacing GESTR	10

Table 1-1b – Cumulative Impact of Changes/Errors	
Description	GE14
	ΔPCT (°F)
• Changes/Errors Previously Reported (Reference 1)	0
• Current Year – 2012 (Reference 2)	10
Cumulative Total	10

**Edwin I. Hatch Nuclear Plant Unit 2
SAFER/GESTR-LOCA Analysis Model**

Table 1-2a – Summary of Changes/Errors (2012)	
Description	Estimated Effect (Δ PCT)
PRIME code implementation for fuel rod T/M performance, replacing GESTR	10

Table 1-2b – Cumulative Impact of Changes/Errors	
Description	GE14
	Δ PCT (°F)
• Changes/Errors Previously Reported (Reference 1)	0
• Current Year – 2012 (Reference 3)	10
Cumulative Total	10

Enclosure 1 to NL-13-2576
Edwin I. Hatch Nuclear Plant Units 1 and 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2012

References:

1. Letter from Mark J. Ajluni to USNRC (NL-12-2567), "Edwin I. Hatch Nuclear Plant 10 CFR 50.46 ECCS Evaluation Model Annual Report for 2011," dated December 18, 2012.
2. GNF Supplemental Reload Licensing Report 00N0481-SRLR Revision 0 Class I December 2013, "Supplemental Reload Licensing Report for Edwin I. Hatch Nuclear Power Plant Unit 1 Reload 26 Cycle 27".
3. GNF Supplemental Reload Licensing Report 0000-0145-7166-SRLR Revision 0 Class I December 2012, "Supplemental Reload Licensing Report for Edwin I. Hatch Nuclear Power Plant Unit 2 Reload 22 Cycle 23".

**Edwin I. Hatch Nuclear Plant Units 1 and 2
Vogtle Electric Generating Plant Units 1 and 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2012**

Enclosure 2

**Vogtle Electric Generating Plant Units 1 and 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2012**

**Vogtle Electric Generating Plant – Unit 1
BASH Large Break LOCA Evaluation**

Table 1-1a – Summary of Changes/Errors (2012)	
Description	Estimated Effect (Δ PCT)
None affecting PCT*	N/A

Table 1-1b - Cumulative Impact of Changes/Errors	
Description	ΔPCT (°F)
• Changes/Errors Previously Reported (Reference 1)*	0*
• Summary of Changes/Errors (2012) (Reference 2)*	0*
Cumulative Total	0

* On October 18, 2012, a Significant Change/Error Report for Vogtle was submitted (Reference 1). This “reset” the baseline PCT for reporting purposes. There were no additional changes/errors in 2012 from those reported in Reference 1.

**Vogtle Electric Generating Plant – Unit 1
Appendix K Small Break LOCA Evaluation**

Table 1-1c – Summary of Changes/Errors (2012)	
Description	Estimated Effect (Δ PCT)
None affecting PCT	N/A

Table 1-1d – Cumulative Impact of Changes/Errors	
Description	ΔPCT (°F)
• Changes/Errors Previously Reported (Reference 1)	0
• Changes/Errors 2012 Calendar Year (Reference 2)	0
Cumulative Total	0

**Vogtle Electric Generating Plant – Unit 2
BASH Large Break LOCA Evaluation**

Table 1-2a – Summary of Changes/Errors (2012)	
Description	Estimated Effect (Δ PCT)
None affecting PCT*	N/A

Table 1-2b - Cumulative Impact of Changes/Errors	
Description	ΔPCT (°F)
• Changes/Errors Previously Reported (Reference 1)*	0*
• Summary of Changes/Errors (2012) (Reference 2)*	0*
Cumulative Total	0

* On October 18, 2012, a Significant Change/Error Report for Vogtle was submitted (Reference 1). This “reset” the baseline PCT for reporting purposes. There were no additional changes/errors in 2012 from those reported in Reference 1.

**Vogtle Electric Generating Plant – Unit 2
Appendix K Small Break LOCA Evaluation**

Table 1-2c – Summary of Changes/Errors (2012)	
Description	Estimated Effect (Δ PCT)
None affecting PCT	N/A

Table 1-2d – Cumulative Impact of Changes/Errors	
Description	Δ PCT (°F)
• Changes/Errors Previously Reported (Reference 1)	0
• Changes/Errors 2012 Calendar Year (Reference 2)	0
Cumulative Total	0

Enclosure 2 to NL-13-2576
Vogtle Electric Generating Plant Units 1 and 2
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2012

References:

1. Letter from Mark J. Ajluni to USNRC (NL-12-1957), "Vogtle Electric Generating Plant 10 CFR 50.46 ECCS Evaluation Model Annual Report for 2011 and Significant Change/Error Report," dated October 18, 2012.
2. Westinghouse letter LTR-LIS-13-68, "A. W. Vogtle Units 1 and 2 10 CFR 50.46 Annual Notification and Reporting for 2012," dated March 1, 2013.