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NL-15-2276

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

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 2014

Ladies and Gentlemen:

Southern Nuclear Operating Company (SNC) is the licensed operator for the Joseph M. Farley Nuclear Plant (Farley) Units 1 and 2, and the Vogtle Electric Generating Plant (Vogtle), 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 Farley and Vogtle are provided in Enclosures 1 and 2, respectively. The resulting peak cladding temperature (PCT) for Farley and Vogtle continue to meet the criterion of 10 CFR 50.46(b)(1) (i.e.,  $\leq 2200^{\circ}\text{F}$ ). Please note that the 2014 annual report for the Edwin I. Hatch Nuclear Plant, Units 1 and 2, was previously sent by letter dated April 8, 2015.

This letter contains no NRC commitments. If you have any questions, please contact Ken McElroy at (205) 992-7369.

Respectfully submitted,

C. R. Pierce  
Regulatory Affairs Director

CRP/RMJ/lac

- Enclosures: 1. Joseph M. Farley Nuclear Plant Units 1 and 2  
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2014  
2. Vogtle Electric Generating Plant Units 1 and 2  
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2014

cc: Southern Nuclear Operating Company

Mr. S. E. Kuczynski, Chairman, President & CEO  
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer  
Ms. C. A. Gayheart, Vice President - Farley  
Mr. D. R. Madison, Vice President – Fleet Operations  
Mr. B. K. Taber, Vice President – Vogtle 1 & 2  
Mr. M. D. Meier, Vice President – Regulatory Affairs  
Mr. B. J. Adams, Vice President – Engineering  
Ms. B. L. Taylor, Regulatory Affairs Manager - Farley  
Mr. G. W. Gunn, Regulatory Affairs Manager – Vogtle 1 & 2  
RType: Farley=CFA04.054; Vogtle=CVC7000

U. S. Nuclear Regulatory Commission

Mr. L. D. Wert, Regional Administrator (Acting)  
Mr. S. A. Williams, NRR Project Manager – Farley  
Mr. L. M. Cain, Senior Resident Inspector – Vogtle 1 & 2  
Mr. P. K. Niebaum, Senior Resident Inspector - Farley  
Mr. R.E. Martin, NRR Project Manager – Vogtle 1 & 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 2014**

**Enclosure 1**

**Joseph M. Farley Nuclear Plant Units 1 and 2  
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2014**

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

<b>Table 1-1a – Summary of Changes/Errors (2014)</b>	
<b>Description</b>	<b>Estimated Effect (<math>\Delta</math> PCT °F)</b>
None affecting PCT	0

<b>Table 1-1b – Cumulative Impact of Changes/Errors</b>	
<b>Description</b>	<b><math>\Delta</math> PCT  (°F)</b>
• Changes/Errors Previously Reported (Reference 1)	0
• Summary of Changes/Errors (2014) (Reference 2)	0
<b>Cumulative Total</b>	0

**Joseph M. Farley Nuclear Plant – Unit 1  
 NOTRUMP Appendix K Small Break LOCA Evaluation**

<b>Table 1-1c – Summary of Changes/Errors (2014)</b>	
<b>Description</b>	<b>Estimated Effect (<math>\Delta</math> PCT °F)</b>
None affecting PCT	N/A

<b>Table 1-1d – Cumulative Impact of Changes/Errors</b>	
<b>Description</b>	<b><math>\Delta</math> PCT  (°F)</b>
• Changes/Errors Previously Reported (Reference 1)	0
• Summary of Changes/Errors (2014) (Reference 2)	0
<b>Cumulative Total</b>	0

**Joseph M. Farley Nuclear Plant – Unit 2  
 ASTRUM Best Estimate Large Break LOCA Evaluation**

<b>Table 1-2a – Summary of Changes/Errors (2014)</b>	
<b>Description</b>	<b>Estimated Effect (<math>\Delta</math> PCT °F)</b>
None affecting PCT	0

<b>Table 1-2b – Cumulative Impact of Changes/Errors</b>	
<b>Description</b>	<b><math>\Delta</math> PCT  (°F)</b>
• Changes/Errors Previously Reported (Reference 1)	0
• Summary of Changes/Errors (2014) (Reference 2)	0
<b>Cumulative Total</b>	<b>0</b>

**Joseph M. Farley Nuclear Plant – Unit 2  
 NOTRUMP Appendix K Small Break LOCA Evaluation**

<b>Table 1-2c – Summary of Changes/Errors (2014)</b>	
<b>Description</b>	<b>Estimated Effect (<math>\Delta</math> PCT °F)</b>
None affecting PCT	N/A

<b>Table 1-2d – Cumulative Impact of Changes/Errors</b>	
<b>Description</b>	<b><math>\Delta PCT </math> (°F)</b>
• Changes/Errors Previously Reported (Reference 1)	0
• Summary of Changes/Errors (2014) (Reference 2)	0
<b>Cumulative Total</b>	<b>0</b>

Enclosure 1 to NL-15-2276  
Joseph M. Farley Nuclear Plant Units 1 and 2  
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2014

**References:**

1. Letter from C. R. Pierce to USNRC (NL-14-1899), "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 2013," dated December 8 2014
2. Westinghouse Letter LTR-LIS-15-59, "J. M. Farley Units 1 and 2, 10 CFR 50.46 Annual Notification and Reporting for 2014," dated February 17, 2015



**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 2014**

**Enclosure 2**

**Vogtle Electric Generating Plant Units 1 and 2  
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2014**

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

<b>Table 1-1a – Summary of Changes/Errors (2014)</b>	
<b>Description</b>	<b>Estimated Effect (<math>\Delta</math> PCT) (<math>^{\circ}</math>F)</b>
None affecting PCT	N/A

<b>Table 1-1b - Cumulative Impact of Changes/Errors</b>	
<b>Description</b>	<b><math>\Delta</math> PCT  (<math>^{\circ}</math>F)</b>
• Changes/Errors Previously Reported (Reference 1)	0
• Summary of Changes/Errors (2014) (Reference 2)	29
<b>Cumulative Total</b>	<b>29</b>

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

<b>Table 1-1c – Summary of Changes/Errors (2014)</b>	
<b>Description</b>	<b>Estimated Effect (<math>\Delta</math> PCT)</b>
None affecting PCT	N/A

<b>Table 1-1d – Cumulative Impact of Changes/Errors</b>	
<b>Description</b>	<b><math>\Delta</math> PCT  (°F)</b>
• Changes/Errors Previously Reported (Reference 1)	0
• Changes/Errors 2014 Calendar Year (Reference 2)	0
<b>Cumulative Total</b>	<b>0</b>

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

<b>Table 1-2a – Summary of Changes/Errors (2014)</b>	
<b>Description</b>	<b>Estimated Effect (<math>\Delta</math> PCT)</b>
None affecting PCT	N/A

<b>Table 1-2b - Cumulative Impact of Changes/Errors</b>	
<b>Description</b>	<b><math>\Delta PCT </math> (°F)</b>
• Changes/Errors Previously Reported (Reference 1)	0
• Summary of Changes/Errors (2014) (Reference 2)	29
<b>Cumulative Total</b>	<b>29</b>

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

<b>Table 1-2c – Summary of Changes/Errors (2014)</b>	
<b>Description</b>	<b>Estimated Effect (<math>\Delta</math> PCT)</b>
None affecting PCT	N/A

<b>Table 1-2d – Cumulative Impact of Changes/Errors</b>	
<b>Description</b>	<b><math>\Delta PCT </math> (<math>^{\circ}F</math>)</b>
• Changes/Errors Previously Reported (Reference 1)	0
• Changes/Errors 2014 Calendar Year (Reference 2)	0
<b>Cumulative Total</b>	0

Enclosure 2 to NL-15-2276  
Vogtle Electric Generating Plant Units 1 and 2  
10 CFR 50.46 ECCS Evaluation Model Annual Report for 2014

**References:**

1. Letter from C. R. Pierce to USNRC (NL-14-1899), "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 2013," dated December 8 2014
2. Westinghouse letter LTR-LIS-15-37, "A. W. Vogtle Units 1 and 2 10 CFR 50.46 Annual Notification and Reporting for 2014," dated February 19, 2015.