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December 18, 2007

U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555-001  
Attention: Document Control Desk

Subject: Duke Power Company LLC d/b/a Duke Energy Carolinas, LLC (Duke)  
Oconee Nuclear Station, Units 1, 2, and 3  
Docket Numbers 50-269, 50-270, and 50-287

Report Pursuant to 10 CFR 50.46, Changes to or Errors in an  
Evaluation Model

10 CFR 50.46 (a)(3)(ii) requires the reporting of changes to or errors in ECCS  
evaluation models (EM). This report covers the time period from January 1, 2006 to  
June 30, 2007.

There was one error in the EM during this time reporting period. The source of the error  
was incorrect gamma energy fractions, which are used as input to calculate the energy  
deposition factor. AREVA determined that only the LBLOCA end of life (EOL) cases  
were affected. The limiting LBLOCA analyses results (beginning of life, or BOL) and the  
SBLOCA analyses results were found to be unaffected.

The corrected EOL peak clad temperature (PCT) results remain non-limiting and the  
impact of this error correction on the limiting PCT is therefore 0°F. The oxidation and  
whole-core hydrogen generation results also remain bounded by the limiting values.

There were no other changes/errors to the EM during this time reporting period.

Included in this report is a summary table of the peak cladding temperatures (PCT) for  
Units 1, 2, and 3.

There are no regulatory commitments associated with this letter.

Please address any comments or questions regarding this matter to L. B. Jones at  
(704) 382-4753.

Sincerely,

Thomas C. Geer  
Vice President, Nuclear Engineering

Attachment

Table 1 – Peak Cladding Temperature Summary – Oconee Units 1, 2, and 3

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Oconee Nuclear Station

**ATTACHMENT**

**Table 1 – Peak Cladding Temperature Summary – Oconee Units 1, 2, and 3**

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<b>LBLOCA</b>	<b>PCT(°F)</b>	<b>Comments</b>
Evaluation model: RELAP5/MOD2-B&W		
Analysis of record PCT	2035 2028	Mark-B11 (M5), 17.7 kW/ft At 6.021 ft elevation Mark-B10T, Estimated based on the OTSG analysis
Prior errors ( $\Delta$ PCT) 1. None	0	
Prior evaluation model changes ( $\Delta$ PCT) 1. None	0	
Errors ( $\Delta$ PCT) 1. Energy Deposition Factor (from incorrect gamma energy fractions)	0	PCT penalty of 15°F for EOL cases only. Limiting BOL cases are unaffected.
Evaluation model changes ( $\Delta$ PCT) 1. None	0	
Absolute value of errors/changes for this report ( $\Delta$ PCT)	0	
Net change in PCT for this report	0	
Final PCT	2035 2028	Mark-B11 Mark-B10T
<b>SBLOCA</b>	<b>PCT(°F)</b>	<b>Comments</b>
Evaluation model: RELAP5/MOD2-B&W		
Analysis of record PCT	1461	Full Power -100% FP (2 HPI Case) 0.15 ft <sup>2</sup> break
Prior errors ( $\Delta$ PCT) 1. None	0	
Prior evaluation model changes ( $\Delta$ PCT) 1. None	0	
Errors ( $\Delta$ PCT) 1. None	0	
Evaluation model changes ( $\Delta$ PCT) 1. None	0	
Absolute value of errors/changes for this report ( $\Delta$ PCT)	0	
Net change in PCT for this report	0	
Final PCT	1461	
<b>SBLOCA</b>	<b>PCT(°F)</b>	<b>Comments</b>
Analysis of record PCT	1774	Reduced Power – 75% FP (1 HPI case) 0.075 ft <sup>2</sup> break
Prior errors ( $\Delta$ PCT) 1. None	0	
Prior evaluation model changes ( $\Delta$ PCT) 1. None	0	
Errors ( $\Delta$ PCT) 1. None	0	
Evaluation model changes ( $\Delta$ PCT) 1. None	0	
Absolute value of errors/changes for this report ( $\Delta$ PCT)	0	
Net change in PCT for this report	0	
Final PCT	1774	