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10 CFR 50.46

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U.S. Nuclear Regulatory
Attn: Document Control Desk
Washington, DC 20555-0001

BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2
DOCKET NOS. 50-325 AND 50-324
RENEWED LICENSE NOS. DPR-71 AND DPR-62

CATAWBA NUCLEAR STATION, UNITS 1 AND 2
DOCKET NOS. 50-413 AND 50-414
RENEWED LICENSE NOS. NPF-35 AND NPF-52

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT 2
DOCKET NO. 50-261
RENEWED LICENSE NO. DPR-23

MCGUIRE NUCLEAR STATION, UNITS 1 AND 2
DOCKET NOS. 50-369 AND 50-370
RENEWED LICENSE NOS. NPF-9 AND NPF-17

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1
DOCKET NO. 50-400
RENEWED LICENSE NO. NPF-63

OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3
DOCKET NOS. 50-269, 50-270, 50-287
LICENSE NOS. DPR-38, DPR-47 AND DPR-55

Subject: CAROLINAS, LLC (DUKE ENERGY)
ANNUAL REPORT OF CHANGES PURSUANT TO 10 CFR 50.46

Pursuant to 10 CFR 50.46 (a)(3)(ii), Duke Energy, hereby submits the enclosed annual reports of changes to or errors in Emergency Core Cooling System (ECCS) evaluation models. These reports cover the time period from January 1, 2017 to December 31, 2017, for the Brunswick Steam Electric Plant, Catawba Nuclear Station, H. B. Robinson Steam Electric Plant, McGuire Nuclear Station, Shearon Harris Nuclear Power Plant and the Oconee Nuclear Station.

This document contains no regulatory commitments. Please refer any questions regarding this submittal to Mr. Art Zaremba at 980-373-2062.

Sincerely,

Joseph Donahue
Vice President - Nuclear Engineering

Enclosures:

1. Brunswick Steam Electric Plant, Units 1 and 2
2. Catawba Nuclear Station, Units 1 and 2
3. H. B. Robinson Steam Electric Plant, Unit 2
4. McGuire Nuclear Station, Units 1 and 2
5. Shearon Harris Nuclear Power Plant, Unit 1
6. Oconee Nuclear Station, Units 1, 2 and 3

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Enclosure 1
Brunswick Steam Electric Plant, Units 1 and 2

A10 Summary

A10XM Summary

Atrium 11 Summary

A10 Summary

10 CFR 50.46 Report for Brunswick Steam Electric Plant Units 1, and 2

Plant:	Brunswick Steam Electric Plant, Unit 1	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):		
Evaluation Model:	EMF-2361(P)(A), Revision 0 EXEM BWR-2000 ECCS Evaluation Model, May 2001	
Fuel:	ATRIUM-10 (A10)	
A. Analysis of Record PCT	1904 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect 1 °F	Absolute PCT Effect 1 °F
C. Baseline PCT for assessing new changes for significance (A + B)	1905 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. None	--	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	1905 °F	

A10XM Summary

10 CFR 50.46 Report for Brunswick Steam Electric Plant Units 1, and 2

Plant:	Brunswick Steam Electric Plant, Units 1 and 2	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):		
Evaluation Model:	EMF-2361(P)(A), Revision 0 EXEM BWR-2000 ECCS Evaluation Model, May 2001	
Fuel:	ATRIUM 10XM (A10XM)	
A. Analysis of Record PCT	1885 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +2 °F	Absolute PCT Effect 2 °F
C. Baseline PCT for assessing new changes for significance (A + B)	1887 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. Transition from the DEC ALPHA computing platform to a new LINUX based computing platform for the LOCA analysis (AREVA Report FS1-0028074,Revision 1.0). 2. Elimination of local peaking history grouping in the HUXY analysis as a result of transitioning from the DEC ALPHA computing platform to a new LINUX based computing platform (AREVA Report FS1-0028074, Revision 1.0).	0 °F 0 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	1887 °F	

ATRIUM 11 Summary

10 CFR 50.46 Report for Brunswick Steam Electric Plant Units 1, and 2

Plant:	Brunswick Steam Electric Plant, Unit 2	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):		
Evaluation Model:	EMF-2361(P)(A), Revision 0 EXEM BWR-2000 ECCS Evaluation Model, May 2001	
Fuel:	ATRIUM 11 (A11)	
A. Analysis of Record PCT	1762 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
C. Baseline PCT for assessing new changes for significance (A + B)	1762 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. None	--	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	1762 °F	

Enclosure 2
Catawba Nuclear Station, Units 1 and 2

General Code Maintenance

Catawba Unit 1, Large Break LOCA
Catawba Unit 1, Small Break LOCA

Catawba Unit 2, Large Break LOCA
Catawba Unit 2, Small Break LOCA

GENERAL CODE MAINTENANCE

Affected Evaluation Model(s):
1996 Westinghouse Best Estimate Large Break LOCA
1985 Westinghouse Small Break LOCA Evaluation Model with NOTRUMP

Various changes have been made to enhance the usability of codes and to streamline future analyses. Examples of these changes include modifying input variable definitions, units and defaults; improving the input diagnostic checks; enhancing the code output; optimizing active coding; and eliminating inactive coding. These changes represent Discretionary Changes that will be implemented on a forward-fit basis in accordance with Section 4.1.1 of WCAP-13451.

The nature of these changes leads to an estimated Peak Cladding Temperature (PCT) impact of 0 °F.

ERROR IN THE UPPER PLENUM FLUID VOLUME CALCULATION

Affected Evaluation Model: 1985 Westinghouse Small Break LOCA Evaluation Model with NOTRUMP

An error was found in the fluid volume calculation in the upper plenum where the support column outer diameter was being used instead of the inner diameter. The correction of this error lead to a reduction in the upper plenum fluid volume used in the Appendix K Small Break LOCA analyses. The corrected values represent a less than 1% change in the total RCS fluid volume and will be incorporated on a forward-fit basis, based on the evaluated impact on the current licensing basis analysis results. These changes represent a Non-Discretionary Change in accordance with Section 4.1.2 of WCAP-13451.

The differences in the upper plenum fluid volume are relatively minor and have been evaluated to have a negligible effect on small break LOCA analysis results, leading to an estimated PCT impact of 0 °F.

INCONSISTENT APPLICATION OF NUMERICAL RAMP APPLIED TO THE ENTRAINED LIQUID / VAPOR INTERFACIAL DRAG COEFFICIENT

Affected Evaluation Model: 1996 Westinghouse Best Estimate Large Break LOCA

A numerical ramp which was used to account for the disappearance of the entrained liquid phase was applied to the entrained liquid / vapor interfacial drag coefficient. The numerical ramp was applied such that the interfacial drag coefficient used in the solution of the entrained liquid and vapor momentum equations was not consistent. WCOBRA/TRAC was updated to apply the numerical ramp prior to usage of the interfacial drag coefficient in the momentum equations, such that a consistent interfacial drag coefficient was used in the entrained liquid and vapor momentum equations. This item represents a Non-Discretionary Change in accordance with Section 4.1.2 of WCAP-13451.

Based on the code validation results, the impact of correcting the error is estimated to have a 0 °F impact on PCT.

INAPPROPRIATE RESETTING OF TRANSVERSE LIQUID MASS FLOW

Affected Evaluation Model: 1996 Westinghouse Best Estimate Large Break LOCA

In the WCOBRA/TRAC routine which evaluates the mass and energy residual error of the time step solution, the transverse liquid mass flow is reset as the liquid phase disappears. The routine is updated to remove the resetting of the transverse liquid mass flow since the routine is to only evaluate the residual error based on the time step solution values. This item represents a Non-Discretionary Change in accordance with Section 4.1.2 of WCAP-13451.

Based on the code validation results and limited applicability of the logic removed, correcting the error is estimated to have a 0 °F impact on PCT.

10 CFR 50.46 Report for Catawba Unit 1 – Large Break LOCA

Plant:	Catawba Nuclear Station, Unit 1	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):	Large Break	
Evaluation Model:	WCAP-12945-P-A, Revision 0 Code Qualification Document for Best Estimate LOCA Analysis	
Fuel:	17x17 RFA	
A. Analysis of Record PCT	2028 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +58 °F	Absolute PCT Effect 378 °F
C. Baseline PCT for assessing new changes for significance (A + B)	2086 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. None	0 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	2086 °F	

10 CFR 50.46 Report for Catawba Unit 1 – Small Break LOCA

Plant:	Catawba Nuclear Station, Unit 1	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):	Small Break	
Evaluation Model:	WCAP-10054-P-A, Revision 0 NOTRUMP	
Fuel:	17x17 RFA	
A. Analysis of Record PCT	1323 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +0 °F	Absolute PCT Effect 0 °F
C. Baseline PCT for assessing new changes for significance (A + B)	1323 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. None	0 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	1323 °F	

10 CFR 50.46 Report for Catawba Unit 2 – Large Break LOCA

Plant:	Catawba Nuclear Station, Unit 2	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):	Large Break	
Evaluation Model:	WCAP-12945-P-A, Revision 0 Code Qualification Document for Best Estimate LOCA Analysis	
Fuel:	17x17 RFA	
A. Analysis of Record PCT	2028 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +42 °F	Absolute PCT Effect 362 °F
C. Baseline PCT for assessing new changes for significance (A + B)	2070 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. None	0 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	2070 °F	

10 CFR 50.46 Report for Catawba Unit 2 – Small Break LOCA

Plant:	Catawba Nuclear Station, Unit 2	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):	Small Break	
Evaluation Model:	WCAP-10054-P-A, Revision 0 NOTRUMP	
Fuel:	17x17 RFA	
A. Analysis of Record PCT	1243 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +0 °F	Absolute PCT Effect 0 °F
C. Baseline PCT for assessing new changes for significance (A + B)	1243 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. None	0 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	1243 °F	

Enclosure 3
H. B. Robinson Unit 2

H. B. Robinson Unit 2 - Large Break LOCA
H. B. Robinson Unit 2 - Small Break LOCA

10 CFR 50.46 Report for H. B. Robinson Unit 2 – Large Break LOCA

Plant:	H. B. Robinson , Unit 2	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):	Large Break	
Evaluation Model:	EMF-2103(P)(A), Revision 0 Realistic Large Break LOCA for PWRs	
Fuel:	15x15 HTP	
A. Analysis of Record PCT	2084 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +4 °F	Absolute PCT Effect 24 °F
C. Baseline PCT for assessing new changes for significance (A + B)	2088 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. None		
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	2088 °F	

10 CFR 50.46 Report for H. B. Robinson Unit 2 – Small Break LOCA

Plant:	H. B. Robinson , Unit 2	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):	Small Break	
Evaluation Model:	EMF-2328(P)(A), Revision 0 PWR Small Break LOCA Evaluation Model	
Fuel:	15x15 HTP	
A. Analysis of Record PCT	1492 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +60 °F	Absolute PCT Effect 98 °F
C. Baseline PCT for assessing new changes for significance (A + B)	1552 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. Estimate of impact due to M5 LOCA swelling and rupture model update 2. Estimate of error in oxidation calculations due to use of cold cladding dimensions	0 °F 0 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	1552 °F	

Enclosure 4
McGuire Nuclear Station, Units 1 and 2

General Code Maintenance

McGuire Units 1 and 2, Large Break LOCA
McGuire Units 1 and 2, Small Break LOCA

GENERAL CODE MAINTENANCE

Affected Evaluation Model(s):
1996 Westinghouse Best Estimate Large Break LOCA
1985 Westinghouse Small Break LOCA Evaluation Model with NOTRUMP

Various changes have been made to enhance the usability of codes and to streamline future analyses. Examples of these changes include modifying input variable definitions, units and defaults; improving the input diagnostic checks; enhancing the code output; optimizing active coding; and eliminating inactive coding. These changes represent Discretionary Changes that will be implemented on a forward-fit basis in accordance with Section 4.1.1 of WCAP-13451.

The nature of these changes leads to an estimated Peak Cladding Temperature (PCT) impact of 0 °F.

ERROR IN THE UPPER PLENUM FLUID VOLUME CALCULATION

Affected Evaluation Model: 1985 Westinghouse Small Break LOCA Evaluation Model with NOTRUMP

An error was found in the fluid volume calculation in the upper plenum where the support column outer diameter was being used instead of the inner diameter. The correction of this error lead to a reduction in the upper plenum fluid volume used in the Appendix K Small Break LOCA analyses. The corrected values represent a less than 1% change in the total RCS fluid volume and will be incorporated on a forward-fit basis, based on the evaluated impact on the current licensing basis analysis results. These changes represent a Non-Discretionary Change in accordance with Section 4.1.2 of WCAP-13451.

The differences in the upper plenum fluid volume are relatively minor and have been evaluated to have a negligible effect on small break LOCA analysis results, leading to an estimated PCT impact of 0 °F.

INCONSISTENT APPLICATION OF NUMERICAL RAMP APPLIED TO THE ENTRAINED LIQUID / VAPOR INTERFACIAL DRAG COEFFICIENT

Affected Evaluation Model: 1996 Westinghouse Best Estimate Large Break LOCA

A numerical ramp which was used to account for the disappearance of the entrained liquid phase was applied to the entrained liquid / vapor interfacial drag coefficient. The numerical ramp was applied such that the interfacial drag coefficient used in the solution of the entrained liquid and vapor momentum equations was not consistent. WCOBRA/TRAC was updated to apply the numerical ramp prior to usage of the interfacial drag coefficient in the momentum equations, such that a consistent interfacial drag coefficient was used in the entrained liquid and vapor momentum equations. This item represents a Non-Discretionary Change in accordance with Section 4.1.2 of WCAP-13451.

Based on the code validation results, the impact of correcting the error is estimated to have a 0 °F impact on PCT.

INAPPROPRIATE RESETTING OF TRANSVERSE LIQUID MASS FLOW

Affected Evaluation Model: 1996 Westinghouse Best Estimate Large Break LOCA

In the WCOBRA/TRAC routine which evaluates the mass and energy residual error of the time step solution, the transverse liquid mass flow is reset as the liquid phase disappears. The routine is updated to remove the resetting of the transverse liquid mass flow since the routine is to only evaluate the residual error based on the time step solution values. This item represents a Non-Discretionary Change in accordance with Section 4.1.2 of WCAP-13451.

Based on the code validation results and limited applicability of the logic removed, correcting the error is estimated to have a 0 °F impact on PCT.

10 CFR 50.46 Report for McGuire Units 1 & 2 – Large Break LOCA

Plant:	McGuire Nuclear Station, Units 1 & 2	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):	Large Break	
Evaluation Model:	WCAP-12945-P-A, Revision 0 Code Qualification Document for Best Estimate LOCA Analysis	
Fuel:	17x17 RFA	
A. Analysis of Record PCT	2028 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +58 °F	Absolute PCT Effect 378 °F
C. Baseline PCT for assessing new changes for significance (A + B)	2086 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. None	0 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	2086 °F	

10 CFR 50.46 Report for McGuire Units 1 & 2 – Small Break LOCA

Plant:	McGuire Nuclear Station, Units 1 & 2	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):	Small Break	
Evaluation Model:	WCAP-10054-P-A, Revision 0 NOTRUMP	
Fuel:	17x17 RFA	
A. Analysis of Record PCT	1323 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +0 °F	Absolute PCT Effect 0 °F
C. Baseline PCT for assessing new changes for significance (A + B)	1323 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. None	0 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	1323 °F	

Enclosure 5
Shearon Harris Unit 1

Shearon Harris Unit 1 - Large Break LOCA
Shearon Harris Unit 1 - Small Break LOCA

10 CFR 50.46 Report for Shearon Harris Unit 1 – Large Break LOCA

Plant:	Shearon Harris , Unit 1	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):	Large Break	
Evaluation Model:	EMF-2103(P)(A), Revision 0 Realistic Large Break LOCA for PWRs	
Fuel:	17x17 HTP	
A. Analysis of Record PCT	1935 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +138 °F	Absolute PCT Effect 138 °F
C. Baseline PCT for assessing new changes for significance (A + B)	2073 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. Estimate of impact due to M5 LOCA swelling and rupture model update 2. Estimate of error in oxidation calculations due to use of cold cladding dimensions	0 °F +22 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect +22 °F	Absolute PCT Effect 22 °F
F. Licensing Basis PCT (C + E)	2095 °F	

10 CFR 50.46 Report for Shearon Harris Unit 1 – Small Break LOCA

Plant:	Shearon Harris , Unit 1	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):	Small Break	
Evaluation Model:	EMF-2328(P)(A), Revision 0 PWR Small Break LOCA Evaluation Model	
Fuel:	17x17 HTP	
A. Analysis of Record PCT	1664 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +49 °F	Absolute PCT Effect 49 °F
C. Baseline PCT for assessing new changes for significance (A + B)	1713 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. Estimate of impact due to M5 LOCA swelling and rupture model update 2. Estimate of error in oxidation calculations due to use of cold cladding dimensions	0 °F +14 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect +14 °F	Absolute PCT Effect 14 °F
F. Licensing Basis PCT (C + E)	1727 °F	

Enclosure 6
Oconee Nuclear Station, Units 1, 2 and 3

Oconee Units 1, 2 and 3, Large Break LOCA
Oconee Units 1, 2 and 3, Small Break LOCA

10 CFR 50.46 Report for Oconee Units 1, 2, & 3 – Large Break LOCA (1 of 2)

Plant:	Oconee Nuclear Station, Units 1, 2, & 3	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):	Large Break	
Evaluation Model:	BAW-10192P-A, Revision 0, BWNT LOCA Evaluation Model for Once-Through Steam Generator Plants	
Fuel:	15x15 Mark-B-HTP	
A. Analysis of Record PCT	1852 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +2 °F	Absolute PCT Effect 858 °F
C. Baseline PCT for assessing new changes for significance (A + B)	1854 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. M5 LOCA Swelling and Rupture Model Update, Estimated	0 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	1854 °F	

10 CFR 50.46 Report for Oconee Units 1, 2, & 3 – Small Break LOCA (2 of 2)

Plant:	Oconee Nuclear Station, Units 1, 2, & 3	
Reporting Period:	January 1, 2017 – December 31, 2017	
LOCA Analysis Type (if applicable):	Small Break	
Evaluation Model:	BAW-10192P-A, Revision 0, BWNT LOCA Evaluation Model for Once-Through Steam Generator Plants	
Fuel:	15x15 Mark-B-HTP	
A. Analysis of Record PCT **Full Power – 100% FP**	1598 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +0 °F	Absolute PCT Effect 0°F
C. Baseline PCT for assessing new changes for significance (A + B)	1598 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. M5 LOCA Swelling and Rupture Model Update, Estimated	0 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	1598 °F	

A. Analysis of Record PCT **Reduced Power – 50% FP**	1480 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +0 °F	Absolute PCT Effect 0°F
C. Baseline PCT for assessing new changes for significance (A + B)	1480 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. M5 LOCA Swelling and Rupture Model Update, Estimated	0 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect 0 °F	Absolute PCT Effect 0 °F
F. Licensing Basis PCT (C + E)	1480 °F	