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10 CFR 50.46

Serial: RA-26-0079  
April 30, 2026

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

Brunswick Steam Electric Plant, Unit Nos. 1 and 2  
Renewed Facility Operating License Nos. DPR-71 and DPR-62  
Docket Nos. 50-325 and 50-324

Catawba Nuclear Station, Unit Nos. 1 and 2  
Renewed Facility Operating License Nos. NPF-35 and NPF-52  
Docket Nos. 50-413 and 50-414

Shearon Harris Nuclear Power Plant, Unit 1  
Renewed Facility Operating License No. NPF-63  
Docket No. 50-400

McGuire Nuclear Station, Unit Nos. 1 and 2  
Renewed Facility Operating License Nos. NPF-9 and NPF-17  
Docket Nos. 50-369 and 50-370

Oconee Nuclear Station, Unit Nos. 1, 2 and 3  
Renewed Facility Operating License Nos. DPR-38, DPR-47 and DPR-55  
Docket Nos. 50-269, 50-270 and 50-287

H. B. Robinson Steam Electric Plant, Unit 2  
Renewed Facility Operating License No. DPR-23  
Docket No. 50-261

**SUBJECT: Annual Report of Changes Pursuant to 10 CFR 50.46**

Ladies and Gentlemen:

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 period from January 1, 2025 to December 31, 2025 for the Brunswick Steam Electric Plant (BNP), Catawba Nuclear Station (CNS), Shearon Harris Nuclear Power Plant (HNP), McGuire Nuclear Station (MNS), Oconee Nuclear Station (ONS), and H.B. Robinson Steam Electric Plant (RNP) and are provided in Enclosures 1 through 6, respectively.

No regulatory commitments are contained in this submittal.


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Should you have any questions concerning this letter and its enclosures, please contact Ryan Treadway, Director - Nuclear Fleet Licensing at (980) 373-5873.

Sincerely,

A handwritten signature in black ink, appearing to be 'KEVIN M. ELLIS', written in a cursive style.

Kevin M. Ellis

General Manager – Nuclear Regulatory Affairs, Policy & Emergency Preparedness

Enclosures:

1. BNP 10 CFR 50.46 Annual Report
2. CNS 10 CFR 50.46 Annual Report
3. HNP 10 CFR 50.46 Annual Report
4. MNS 10 CFR 50.46 Annual Report
5. ONS 10 CFR 50.46 Annual Report
6. RNP 10 CFR 50.46 Annual Report

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cc:

USNRC Region II Regional Administrator  
USNRC NRR Project Manager for BNP  
USNRC NRR Project Manager for CNS  
USNRC NRR Project Manager for HNP  
USNRC NRR Project Manager for MNS  
USNRC NRR Project Manager for ONS  
USNRC NRR Project Manager for RNP  
USNRC Senior Resident Inspector for BNP  
USNRC Senior Resident Inspector for CNS  
USNRC Senior Resident Inspector for HNP  
USNRC Senior Resident Inspector for MNS  
USNRC Senior Resident Inspector for ONS  
USNRC Senior Resident Inspector for RNP

**ENCLOSURE 1: [BNP 10 CFR 50.46 Annual Report](#)**

**Brunswick Steam Electric Plant, Units 1 and 2  
Docket Nos. 50-325 and 50-324 / Renewed License Nos. DPR-71 and DPR-62**

## **Summary of Errors Reported**

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

During this reporting period there were no error reports on the EXEM BWR-2000 evaluation model for ATRIUM 10XM and the AURORA-B LOCA evaluation model for ATRIUM 11.

There were no revisions to the Licensing Basis AOR for A10XM nor to the ATRIUM 11 LOCA evaluations for this reporting period.

**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, 2025 – December 31, 2025	
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	1923 °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)	1925 °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)	1925 °F	

**ATRIUM 11 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, 2025 – December 31, 2025	
LOCA Analysis Type (if applicable):		
Evaluation Model:	ANP-10332P-A, Revision 0 AURORA-B LOCA Evaluation Model, March 2019	
Fuel:	ATRIUM 11 (A11)	
A. Analysis of Record PCT	1897 °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)	1897 °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)	1897 °F	

**ENCLOSURE 2: [CNS 10 CFR 50.46 Annual Report](#)**

**Catawba Nuclear Station, Units 1 and 2  
Docket Nos. 50-413 and 50-414 / Renewed License Nos. NPF-35 and NPF-52**

## Summary of Errors Reported

### 10 CFR 50.46 Report for Catawba Units 1 and 2

#### Evaluation of PRIME Bottom Nozzle for 17x17 RFA-2 Fuel

Westinghouse evaluated the use of the PRIME bottom nozzle with RFA-2 fuel (Reference 1). Catawba Unit 1 included the PRIME bottom nozzle with RFA-2 fuel in 2024 and the impact of that implementation was included in the PCT for the year 2024 for that unit. Catawba Unit 2 has included the PRIME bottom nozzle with RFA-2 fuel in 2025. The impact of this implementation is included in the PCT for the 2025 year.

The Westinghouse PRIME Bottom Nozzle is a change to the standard fuel assembly features for 17x17 RFA-2 fuel. The key changes with respect to the loss-of-coolant accident (LOCA) analyses relate to small increases in modeled metal mass in the lower plenum and a small decrease in the overall fuel assembly loss coefficient. These changes were qualitatively evaluated for impact on the LOCA analyses. The differences in metal mass and fuel assembly losses were evaluated to be small and have a negligible effect on the large and small break LOCA analysis results, leading to an estimated Peak Cladding Temperature (PCT) impact of 0°F.

#### Evaluation of HFP Tave Change at Catawba Unit 2

An increase in Reactor Coolant system HFP Tave from 587.5 °F to 589.0 °F at Catawba Unit 2 was previously reported in the 10 CFR 50.46 reporting for the 2022 calendar year. Westinghouse performed an evaluation of impacts to the Small Break LOCA (SBLOCA) analysis. The analysis was performed assuming a Tave of 587.5 °F, and inherently included a Tave uncertainty of  $\pm 4$  °F as part of the NOTRUMP evaluation model. Tave sensitivities performed with the NOTRUMP Evaluation Model demonstrated that minor changes in Tave itself have an insignificant impact on PCT results. Westinghouse concluded that the increase in Tave from 587.5 °F to 589.0 °F was acceptable with respect to the Catawba Unit 2 SBLOCA analysis of record, and that the estimated impact of this change was 0 °F for the SBLOCA PCT.

Westinghouse also performed an evaluation of impacts to the Large Break LOCA (LBLOCA) analysis results considering an increase in Reactor Coolant system HFP Tave from 587.5 °F to 589.0 °F at Catawba Unit 2. The Reflood 2 transient phase had the highest PCT, and the increase in Reflood 2 PCT was 42 °F.

Tave was decreased back to 587.5°F for Catawba Unit 2 Cycle 28 after the Fall 2025 outage. Therefore, for the 2025 year, this results in a 0 °F impact for the SBLOCA PCT and a 42 °F decrease for the LBLOCA PCT.

#### References

1. Westinghouse Letter DME-LOCA-TM-A5-000003, "Catawba Units 1 and 2 and McGuire Units 1 and 2 - 10 CFR 50.46 Annual Notification and Reporting for 2023."

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

Plant:	Catawba Nuclear Station, Unit 1	
Reporting Period:	January 1, 2025 – December 31, 2025	
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, 2025 – December 31, 2025	
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, 2025 – December 31, 2025	
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 +84 °F	Absolute PCT Effect 404 °F
C. Baseline PCT for assessing new changes for significance (A + B)	2112 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period		
1. Use of PRIME bottom nozzle	+0 °F	
2. Tave decrease from 589 °F to 587.5 °F.	-42 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect -42 °F	Absolute PCT Effect 42 °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, 2025 – December 31, 2025	
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. Use of PRIME bottom nozzle	+0 °F	
2. Tave decrease from 589 °F to 587.5 °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)	1243 °F	

**ENCLOSURE 3: [HNP 10 CFR 50.46 Annual Report](#)**

**Shearon Harris Nuclear Power Plant, Unit 1  
Docket No. 50-400 / Renewed License No. NPF-63**

## Summary of Errors Reported

### 10 CFR 50.46 Report for Shearon Harris Unit 1

An error in the embedded fuel models within the S-RELAP5 code affecting realistic large break loss-of-coolant accident (RLBLOCA) and small break loss-of-coolant accident (SBLOCA) was identified in 2025 (References 1 and 2). The error incorrectly accounted for the transient oxidation layer thickness when adjusting the cladding thermal conductivity, leading to a slight overestimation of the cladding thermal conductivity during a LOCA. The error has been corrected, and an evaluation determined the PCT impact to be +5 °F.

#### References

1. Framatome Document FS1-0082783-1.0, "Harris Nuclear Plant, Evaluation of Condition Report 2025-2735 for Potential Reporting Under 10 CFR 50.46 Transmittal", December 15, 2025.
2. Framatome Letter NRC:26:004, "2025 – Annual Reporting of Changes and Errors in Emergency Core Cooling Systems (ECCS) Evaluation Models", January 23, 2026 [NRC ADAMS Accession No. ML26023A204]

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

Plant:	Shearon Harris, Unit 1	
Reporting Period:	January 1, 2025 – December 31, 2025	
LOCA Analysis Type (if applicable):	Large Break	
Evaluation Model:	EMF-2103(P)(A), Revision 3 Realistic Large Break LOCA for PWRs	
Fuel:	17x17 GAIA	
A. Analysis of Record PCT	1820 °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)	1820 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. Error in treatment of oxide layer thermal conductivity	+5 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect +5 °F	Absolute PCT Effect 5 °F
F. Licensing Basis PCT (C + E)	1825 °F	

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

Plant:	Shearon Harris, Unit 1	
Reporting Period:	January 1, 2025 – December 31, 2025	
LOCA Analysis Type (if applicable):	Small Break	
Evaluation Model:	EMF-2328(P)(A), Rev. 0, and EMF-2328(P)(A), Rev. 0, Supplement 1, Rev. 0 PWR Small Break LOCA Evaluation Model	
Fuel:	17x17 GAIA	
A. Analysis of Record PCT	1832 °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)	1832 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. Error in treatment of oxide layer thermal conductivity	+5 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect +5 °F	Absolute PCT Effect 5 °F
F. Licensing Basis PCT (C + E)	1837 °F	

**ENCLOSURE 4: [MNS 10 CFR 50.46 Annual Report](#)**

**McGuire Nuclear Station, Units 1 and 2  
Docket Nos. 50-369 and 50-370 / Renewed License Nos. NPF-9 and NPF-17**

## Summary of Errors Reported

### 10 CFR 50.46 Report for McGuire Units 1 and 2

#### Evaluation of PRIME Bottom Nozzle for 17x17 RFA-2 Fuel

Westinghouse evaluated the use of the PRIME bottom nozzle with RFA-2 fuel (Reference 1). McGuire Unit 2 included the PRIME bottom nozzle with RFA-2 fuel in 2024 and the impact of that implementation was included in the PCT for the year 2024 for that unit. McGuire Unit 1 has included the PRIME bottom nozzle with RFA-2 fuel in 2025. The impact of this implementation is included in the PCT for the 2025 year.

The Westinghouse PRIME Bottom Nozzle is a change to the standard fuel assembly features for 17x17 RFA-2 fuel. The key changes with respect to the loss-of-coolant accident (LOCA) analyses relate to small increases in modeled metal mass in the lower plenum and a small decrease in the overall fuel assembly loss coefficient. These changes were qualitatively evaluated for impact on the LOCA analyses. The differences in metal mass and fuel assembly losses were evaluated to be small and have a negligible effect on the large and small break LOCA analysis results, leading to an estimated Peak Cladding Temperature (PCT) impact of 0°F.

#### References

1. Westinghouse Letter DME-LOCA-TM-A5-000003, "Catawba Units 1 and 2 and McGuire Units 1 and 2 - 10 CFR 50.46 Annual Notification and Reporting for 2023."

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

Plant:	McGuire Nuclear Station, Units 1 & 2	
Reporting Period:	January 1, 2025 – December 31, 2025	
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. Use of PRIME bottom nozzle for MNS Unit 1 Only	+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, 2025 – December 31, 2025	
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. Use of PRIME bottom nozzle for MNS Unit 1 Only	+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: [ONS 10 CFR 50.46 Annual Report](#)**

**Oconee Nuclear Station, Units 1, 2 and 3  
Docket Nos. 50-269, 50-270 and 50-287  
Renewed License Nos. DPR-38, DPR-47 and DPR-55**

## **Summary of Errors Reported**

### **10 CFR 50.46 Report for Oconee Units 1, 2, & 3**

There are no new errors or changes that affect the Oconee large break loss-of-coolant accident (LBLOCA) nor small break LOCA analyses of record for the 2025 calendar year.

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

Plant:	Oconee Nuclear Station, Units 1, 2, & 3	
Reporting Period:	January 1, 2025 – December 31, 2025	
LOCA Analysis Type (if applicable):	Large Break	
Evaluation Model:	BAW-10192P-A, Revision 0, BWNT LOCA Evaluation Model for Once-Through Steam Generator Plants and BAW-10192PA, Revision 0, Supplement 1P-A, Revision 0	
Fuel:	15x15 Mark-B-HTP	
A. Analysis of Record PCT	1988 °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)	1988 °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)	1988 °F	

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

Plant:	Oconee Nuclear Station, Units 1, 2, & 3	
Reporting Period:	January 1, 2025 – December 31, 2025	
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 <b>Full Power – 100% FP</b>	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. 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)	1598 °F	
A. Analysis of Record PCT <b>Reduced Power – 50% FP</b>	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. 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)	1480 °F	

**ENCLOSURE 6: [RNP 10 CFR 50.46 Annual Report](#)**

**H. B. Robinson Steam Electric Plant, Unit 2  
Docket No. 50-261 / Renewed License No. DPR-23**

## Summary of Errors Reported

### 10 CFR 50.46 Report for H.B. Robinson Unit 2

An error in the embedded fuel models within the S-RELAP5 code affecting realistic large break loss-of-coolant accident (RLBLOCA) and small break loss-of-coolant accident (SBLOCA) was identified in 2025 (References 1 and 2). The error incorrectly accounted for the transient oxidation layer thickness when adjusting the cladding thermal conductivity, leading to a slight overestimation of the cladding thermal conductivity during a LOCA. The error has been corrected, and an evaluation determined the PCT impact to be +5 °F.

#### References

1. Framatome Document FS1-0082782-1.0, "Robinson Nuclear Plant, Evaluation of Condition Report 2025-2735 for Potential Reporting Under 10 CFR 50.46 Transmittal", December 15, 2025.
2. Framatome Letter NRC:26:004, "2025 – Annual Reporting of Changes and Errors in Emergency Core Cooling Systems (ECCS) Evaluation Models", January 23, 2026 [NRC ADAMS Accession No. ML26023A204]

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

Plant:	H.B. Robinson, Unit 2	
Reporting Period:	January 1, 2025 – December 31, 2025	
LOCA Analysis Type (if applicable):	Large Break	
Evaluation Model:	EMF-2103(P)(A), Revision 3 Realistic Large Break LOCA for PWRs	
Fuel:	W15-LC, W15 HTP	
A. Analysis of Record PCT	1771 °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)	1771 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. Error in treatment of oxide layer thermal conductivity	+5 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect +5 °F	Absolute PCT Effect 5 °F
F. Licensing Basis PCT (C + E)	1776 °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, 2025 – December 31, 2025	
LOCA Analysis Type (if applicable):	Small Break	
Evaluation Model:	EMF-2328(P)(A), Rev. 0 and EMF-2328(P)(A), Rev. 0, Supplement 1, Rev. 0 PWR Small Break LOCA Evaluation Model	
Fuel:	W15-LC, W15 HTP	
A. Analysis of Record PCT	1538 °F	
B. Net Cumulative 10 CFR 50.46 Changes and Error Corrections - Previously Reported	Net PCT Effect +3 °F	Absolute PCT Effect 3 °F
C. Baseline PCT for assessing new changes for significance (A + B)	1541 °F	
D. Cumulative 10 CFR 50.46 Changes and Error Corrections – This Reporting Period 1. Error in treatment of oxide layer thermal conductivity	+5 °F	
E. Sum of 10 CFR 50.46 Changes and Error Corrections against Baseline PCT	Net PCT Effect +5 °F	Absolute PCT Effect 5 °F
F. Licensing Basis PCT (C + E)	1546 °F	