



South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

December 6, 2021  
NOC-AE-21003858  
10 CFR 50.46 (a)(3)(i)  
10 CFR 50.46 (a)(3)(ii)  
STI: 35252800

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

South Texas Project  
Unit 1  
Docket No. STN 50-498  
10 CFR 50.46 Thirty-Day Report of Significant ECCS Model Changes

References:

1. Letter from M. Page to NRC Document Control Desk, "South Texas Project Units 1 & 2 10 CFR 50.46 Annual Report of ECCS Model Revisions," March 4, 2019, NOC-AE-19003627, ML19063D875.
2. Letter from D. Roland to NRC Document Control Desk, "South Texas Project Unit 1 10 CFR 50.46 Thirty-Day Report of Significant ECCS Model Changes," June 17, 2020, NOC-AE-20003738, ML20169A859.
3. Letter from Dennis J. Galvin (NRC) to G.T. Powell, "South Texas Project, Unit 1 - Issuance of Amendment No. 219 to Revise Technical Specifications to Reduce Safety Injection Accumulators Minimum Pressures (Exigent Circumstances) (EPID L-2020-LLA-0108)," May 28, 2020, AE-NOC-20003255, ML20141L612.

In accordance with the requirements of 10 CFR 50.46(a)(3)(ii), STP Nuclear Operating Company (STPNOC) is submitting a 30-day report for a significant change in the South Texas Unit 1 Emergency Core Cooling Model.

In Unit 1 Cycle 23, South Texas Project Unit 1 had reduced the Technical Specification minimum accumulator cover gas pressure to 500 psig to mitigate the effects of check valve leakage into the Low Head Safety Injection / Residual Heat Removal Header. This resulted in an estimated 3°F increase in Peak Clad Temperature (PCT) to the previous value of 2123°F as reported in Reference 1 for the limiting Emergency Core Cooling System (ECCS) analysis for the large break loss-of-coolant-accident (LBLOCA). The PCT value for Unit 1 Cycle 23 was 2126°F as stated in References 2 and 3.

For Unit 1 Cycle 24, the check valve leakage issue was remedied and the Technical Specification minimum nitrogen cover-pressure limit of all three Safety Injection Accumulators has been changed back to 590 psig. As a result, the PCT value for Unit 1 Cycle 24 is restored to 2123°F. The sum of the absolute magnitudes of all the individual changes is 93°F as listed in the enclosed table (Delta PCT column). Since the sum of the absolute magnitudes of the PCT changes from the analysis of record for Unit 1 Cycle 23 exceeds 50°F, the change is considered significant in accordance with 10 CFR 50.46(a)(3)(i).

No schedule for reanalysis is proposed since the Unit 1 Cycle 24 PCT remains below the 10 CFR 50.46(b)(1) limit of 2200°F.

There are no commitments in this letter.

If there are any questions regarding this information, please contact Tim Hammons at 361-972-7347 or me at 361-972-7806.

  
Christopher H. Georgeson  
General Manager, Engineering

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Enclosure: Unit 1 Cycle 24 Westinghouse LOCA Peak Clad Temperature Summary

cc:

Regional Administrator, Region IV  
U.S. Nuclear Regulatory Commission  
1600 E. Lamar Boulevard  
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**Unit 1 Cycle 24 Westinghouse LOCA Peak Clad Temperature Summary**

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<b>Plant Name:</b>	SOUTH TEXAS 1
<b>Utility Name:</b>	STPNOC
<b>EM:</b>	BASH
<b>AOR Description:</b>	Appendix K Large Break
<b>Summary Sheet Status</b>	Cycle 24

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<b>ANALYSIS-OF-RECORD</b>	<b>PCT (°F)</b>
	<b>2090</b>
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<b>ASSESSMENTS</b>	<b>Delta PCT (°ΔF)</b>
1. IMP Database Error Corrections	<b>0</b>
2. PAD Version 4.0 Implementation	<b>-30</b>
3. LOCBART Pellet Volumetric Heat Generation Rate	<b>6</b>
4. PWROG TCD Evaluation - Rebaseline of AOR	<b>5</b>
5. PWROG TCD Evaluation - Effect of TCD and Assembly Power/Peaking Factor Burndown	<b>0</b>
6. Effect of Containment Purge	<b>6</b>
7. Rebaseline of AOR	<b>46</b>
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<b>AOR + ASSESSMENTS</b>	<b>PCT = 2123 °F</b>