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RBG-48039

September 16, 2020

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

Subject: Report of Changes and Errors to 10CFR50.46

River Bend Station - Unit 1
NRC Docket No. 50-458
Renewed Facility Operating License No. NPF-47

Reference: Letter RBG-47971, "Report of Changes and Errors to 10CFR50.46" dated September 19, 2019

There has been two notice of changes or errors associated with the River Bend Station (RBS) Emergency Core Cooling Systems (ECCS) analysis since the last 10CFR50.46 report provided to the NRC as documented in the reference of this letter. The Table on Page 2 of this letter summarizes the effects on the current ECCS analysis performed by General Electric – Hitachi Nuclear Energy (GEH) for GNF2 bundles using their NRC approved SAFER/GESTR ECCS-Loss of Coolant Accident (LOCA) methodology supplemented by implementation of the PRIME model per 10CFR50.46 Notification Letter 2012-01. The ECCS-LOCA GNF3 Lead Use Assembly (LUA) and GNF3 analysis are based on the NRC approved SAFER/PRIME ECCS-LOCA methodology, with GNF2 ECCS-LOCA Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) limits applied to the four GNF3 LUA bundles.

Since the last 10 CFR 50.46 report provided to the NRC, RBS is currently in Cycle 21 with the RBS core composed of the GNF2, GNF3 LUA, and GNF3 fuel types. The GNF3 fuel loaded for Cycle 21 is the limiting fuel type with a peak cladding temperature (PCT) of 1850°F. The PCT for the GNF3 fuel remains well below the 2200°F acceptance criteria of 10 CFR 50.46.

Notification Letter	Nature Of Change / Error	Estimated PCT Effect (°F)		
		GNF2	GNF3 LUA	GNF3
Previous Periods				
NL-2020-01	PRIME coding errors for zircaloy irradiation growth and zirconium barrier thermal conductivity	0	0	0
NL-2019-05	Bypass leakage modeling for control rod guide tube to control rod guide housing interface	0	0	0
NL-2017-02	Fuel rod plenum temperature modeling update, 10x10 geometry and getter removal	0	0	N/A
NI-2017-01	GNF2 Lower Tie Plate-Finger Spring Removal and Bypass Flow Hole Change	0	N/A	N/A
NL-2014-04	SAFER04A E4 – Bundle / Lower Plenum CCFL Head	0	N/A	N/A
NL-2014-03	SAFER04A E4 – Minimum Core DP Model	-15	N/A	N/A
NL-2014-02	SAFER04A E4 – Mass Non-Conservatism	0	N/A	N/A
NL-2014-01	SAFER04A E4 – Maintenance Update Changes	0	N/A	N/A
NL-2012-01	PRIME Fuel Properties Implementation for Fuel Rod T/M Performance, replacing GESTR Fuel Properties	+45	N/A	N/A
NL-2011-03	Impact of updated formulation for gamma heat deposition to channel wall for 9x9 and 10x10 fuel bundles	-40	N/A	N/A
NL-2011-02	Impact of database error for heat deposition on the Peak Cladding Temperature (PCT) for 10x10 fuel bundles	+25	N/A	N/A
Net of errors / changes		+15	0	N/A
Sum of absolute magnitude of changes / errors		125	0	N/A

This letter does not contain any commitments.

If you have any questions or require additional information, please contact Mr. Tim Schenk at (225) 381-4177 or tschenk@entergy.com.

Respectfully,

Tim Schenk Digitally signed by Tim Schenk
Date: 2020.09.16 17:50:48 -05'00'

Tim Schenk

TAS/baj

cc: NRC Regional Administrator - Region IV
NRC Project Manager - River Bend Station
NRC Senior Resident Inspector - River Bend Station
Louisiana Department of Environmental Quality
Public Utility Commission of Texas