UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 1, 2021

Mrs. Mandy Halter
Vice President, Regulatory
Assurance Licensing
Entergy Services, LLC
M-ECH-29
1340 Echelon Parkway
Jackson, MS 39213

SUBJECT: GRAND GULF NUCLEAR STATION, UNIT 1 AND RIVER BEND STATION, UNIT 1 – ISSUANCE OF AMENDMENTS RE: ADOPTION OF TECHNICAL SPECIFICATIONS TASK FORCE (TSTF) TRAVELER TSTF-566, REVISION 0, "REVISE ACTIONS FOR INOPERABLE RHR SHUTDOWN COOLING SUBSYSTEMS" (EPID L-2020-LLA-0010)

Dear Mrs. Halter:

The U.S. Nuclear Regulatory Commission (NRC, the Commission) has issued amendments consisting of changes to the Technical Specifications (TSs) in response to your application dated January 24, 2020, for Grand Gulf Nuclear Station, Unit 1 (Grand Gulf) and River Bend Station, Unit 1 (River Bend). The following amendments are enclosed:

- Amendment No. 225 to Renewed Facility Operating License No. NPF-29 for Grand Gulf.
- Amendment No. 204 to Renewed Facility Operating License No. NPF-47 for River Bend.

The amendments revise the Grand Gulf and River Bend TS actions for inoperable residual heat removal (RHR) shutdown cooling subsystems in the RHR shutdown cooling system limiting conditions for operation. The proposed changes are based on Technical Specifications Task Force (TSTF) Traveler TSTF-566, Revision 0, "Revise Actions for Inoperable RHR Shutdown Cooling Subsystems," dated January 19, 2018. The NRC issued a final safety evaluation approving TSTF-566, Revision 0, on February 21, 2019.

The licensee did not propose any variations from the TS changes described in TSTF-566 or the applicable parts of the NRC staff's model safety evaluation for TSTF-566.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's monthly *Federal Register* notice.

Sincerely,

/RA/

Siva P. Lingam, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-416 and 50-458

Enclosures:
1. Amendment No. 225 to NPF-29
2. Amendment No. 204 to NPF-47
3. Safety Evaluation

cc: Listserv

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ENTERGY OPERATIONS, INC.

SYSTEM ENERGY RESOURCES, INC.

COOPERATIVE ENERGY, A MISSISSIPPI ELECTRIC COOPERATIVE

ENTERGY MISSISSIPPI, LLC

DOCKET NO. 50-416

GRAND GULF NUCLEAR STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 225
Renewed License No. NPF-29

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Entergy Operations, Inc. (the licensee), dated January 24, 2020, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-29 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 225 are hereby incorporated into this renewed license. Entergy Operations, Inc. shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Jennifer L. Dixon-Herrity

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Date: 2021.02.01 09:22:33 -05'00'

Jennifer L. Dixon-Herrity, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility
Operating License No. NPF-29 and
the Technical Specifications

Date of Issuance: February 1, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 225

RENEWED FACILITY OPERATING LICENSE NO. NPF-29

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

Replace the following pages of Renewed Facility Operating License No. NPF-29 and the Appendix A, Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Facility Operating License

REMOVE	INSERT
-4-	-4-

Technical Specifications

REMOVE	INSERT
3.4-21	3.4-21
3.4-22	3.4-22
3.4-25	3.4-25

amended, are fully applicable to the lessors and any successors in interest to those lessors, as long as the renewed license of GGNS Unit 1 remains in effect.

(b) SERI is required to notify the NRC in writing prior to any change in (i) the terms or conditions of any new or existing sale or lease agreements executed as part of the above authorized financial transactions, (ii) the GGNS Unit 1 operating agreement, (iii) the existing property insurance coverage for GGNS Unit 1 that would materially alter the representations and conditions set forth in the Staff's Safety Evaluation Report dated December 19, 1988 attached to Amendment No. 54. In addition, SERI is required to notify the NRC of any action by a lessor or other successor in interest to SERI that may have an effect on the operation of the facility.

C. The renewed license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

Entergy Operations, Inc. is authorized to operate the facility at reactor core power levels not in excess of 4408 megawatts thermal (100 percent power) in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 225 are hereby incorporated into this renewed license. Entergy Operations, Inc. shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

During Cycle 19, GGNS will conduct monitoring of the Oscillation Power Range Monitor (OPRM). During this time, the OPRM Upscale function (Function 2.f of Technical Specification Table 3.3.1.1-1) will be disabled and operated in an "indicate only" mode and technical specification requirements will not apply to this function. During such time, Backup Stability Protection measures will be implemented via GGNS procedures to provide an alternate method to detect and suppress reactor core thermal hydraulic instability oscillations. Once monitoring has been successfully completed, the OPRM Upscale function will be enabled and technical specification requirements will be applied to the function; no further operating with this function in an "indicate only" mode will be conducted.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.9 Residual Heat Removal (RHR) Shutdown Cooling System — Hot Shutdown

LCO 3.4.9 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

----------NOTES----------
1. Both RHR shutdown cooling subsystems and recirculation pumps may not be in operation for up to 2 hours per 8 hour period.

2. One RHR shutdown cooling subsystem may be inoperable for up to 2 hours for performance of Surveillances.

APPLICABILITY: MODE 3 with reactor steam dome pressure less than the RHR cut in permissive pressure.

ACTIONS

----------NOTE----------
Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two RHR shutdown cooling subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each inoperable RHR shutdown cooling subsystem.	1 hour AND Once per 24 hours thereafter

(continued)

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met.	B.1	Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately
C. No RHR shutdown cooling subsystem in operation. AND No recirculation pump in operation.	C.1	Initiate action to restore one RHR shutdown cooling subsystem or one recirculation pump to operation.	Immediately
	AND		
	C.2	Verify reactor coolant circulation by an alternate method.	1 hour from discovery of no reactor coolant circulation AND Once per 12 hours thereafter
	AND		
	C.3	Monitor reactor coolant temperature and pressure.	Once per hour

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately
C. No RHR shutdown cooling subsystem in operation. AND No recirculation pump in operation.	C.1 Verify reactor coolant circulating by an alternate method. AND C.2 Monitor reactor coolant temperature and pressure.	1 hour from discovery of no reactor coolant circulation AND Once per 12 hours thereafter Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.10.1	Verify one RHR shutdown cooling subsystem or recirculation pump is operating.	In accordance with the Surveillance Frequency Control Program
SR 3.4.10.2	Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

UNITED STATES
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WASHINGTON, D.C. 20555-0001

ENTERGY LOUISIANA, LLC

AND

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-458

RIVER BEND STATION, UNIT 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 204
License No. NPF-47

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Entergy Operations, Inc. (the licensee), dated January 24, 2020, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. NPF-47 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 204 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. EOI shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Jennifer L. Dixon-Herrity

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Date: 2021.02.01 09:23:07 -05'00'

Jennifer L. Dixon-Herrity, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to Renewed Facility Operating
License No. NPF-47 and
the Technical Specifications

Date of Issuance: February 1, 2021

ATTACHMENT TO LICENSE AMENDMENT NO. 204

RENEWED FACILITY OPERATING LICENSE NO. NPF-47

RIVER BEND STATION, UNIT 1

DOCKET NO. 50-458

Replace the following pages of Renewed Facility Operating License No. NPF-47 and the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change.

Renewed Facility Operating License

REMOVE	INSERT
-3-	-3-

Technical Specifications

REMOVE	INSERT
3.4-22	3.4-22
3.4-23	3.4-23
3.4-26	3.4-26

(2) EOI, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use and operate the facility at the above designated location in accordance with the procedures and limitations set forth in this renewed license;

(3) EOI, pursuant to Section 103 of the Act and 10 CFR Part 70, to receive, possess and to use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

(4) EOI, pursuant to Section 103 of the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(5) EOI, pursuant to Section 103 of the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(6) EOI, pursuant to Section 103 of the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This renewed license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

EOI is authorized to operate the facility at reactor core power levels not in excess of 3091 megawatts thermal (100% rated power) in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 204 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. EOI shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.9 Residual Heat Removal (RHR) Shutdown Cooling System–Hot Shutdown

LCO 3.4.9 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

----------NOTES----------

1. Both RHR shutdown cooling subsystems and recirculation pumps may be removed from operation for up to 2 hours per 8 hour period.

2. One RHR shutdown cooling subsystem may be inoperable for up to 2 hours for performance of Surveillances.

APPLICABILITY: MODE 3 with reactor steam dome pressure less than the RHR cut in permissive pressure.

ACTIONS

----------NOTE----------

Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two RHR shutdown cooling subsystems inoperable.	A.1 Verify an alternate method of decay heat removal is available for each inoperable RHR shutdown cooling subsystem.	1 hour AND Once per 24 hours thereafter

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately
C. No RHR shutdown cooling subsystem in operation. AND No recirculation pump in operation.	C.1 Initiate action to restore one RHR shutdown cooling subsystem or one recirculation pump to operation. AND	Immediately
	C.2 Verify reactor coolant circulation by an alternate method. AND	1 hour from discovery of no reactor coolant circulation AND Once per 12 hours thereafter
	C.3 Monitor reactor coolant temperature and pressure.	Once per hour

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPELETION TIME
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status.	Immediately
C. No RHR shutdown cooling subsystem in operation. AND No recirculation pump in operation.	C.1 Verify reactor coolant circulating by an alternate method. AND C.2 Monitor reactor coolant temperature and pressure.	1 hour from discovery of no reactor coolant circulation AND Once per 12 hours thereafter Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.10.1	Verify one RHR shutdown cooling subsystem or recirculation pump is operating.	In accordance with the Surveillance Frequency Control Program
SR 3.4.10.2	Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 225 TO

RENEWED FACILITY OPERATING LICENSE NO. NPF-29 AND AMENDMENT NO. 204 TO

RENEWED FACILITY OPERATING LICENSE NO. NPF-47

ENTERGY OPERATIONS, INC.

GRAND GULF NUCLEAR STATION, UNIT 1

RIVER BEND STATION, UNIT 1

DOCKET NOS. 50-416 AND 50-458

1.0 INTRODUCTION

By letter dated January 24, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20024F216), Entergy Operations, Inc. (the licensee) submitted a license amendment request (LAR) for Grand Gulf Nuclear Station, Unit 1 (Grand Gulf) and River Bend Station, Unit 1 (River Bend). The amendments revise technical specification (TS) actions for inoperable residual heat removal (RHR) shutdown cooling subsystems in the RHR shutdown cooling system limiting conditions for operation (LCOs).

The proposed changes are based on Technical Specifications Task Force (TSTF) Traveler TSTF-566, Revision 0, "Revise Actions for Inoperable RHR Shutdown Cooling Subsystems," dated January 19, 2018 (ADAMS Accession No. ML18019B187). The U.S. Nuclear Regulatory Commission (NRC, the Commission) issued a final safety evaluation approving TSTF-566, Revision 0, on February 21, 2019 (ADAMS Accession No. ML19028A287).

The licensee is not proposing any variations from the TS changes described in TSTF-566 or the applicable parts of the NRC staff's safety evaluation of TSTF-566.

2.0 REGULATORY EVALUATION

2.1 Description of Residual Heat Removal Shutdown Cooling System

Irradiated fuel in the shutdown reactor core generates heat during the decay of fission products and increases the temperature of the reactor coolant. This decay heat must be removed to reduce the temperature of the reactor coolant to less than or equal to 200 degrees Fahrenheit.

This decay heat is removed by the RHR shutdown cooling system in preparation for performing refueling or maintenance operations, or for keeping the reactor in the hot shutdown condition.

The two redundant, manually controlled shutdown cooling subsystems of the RHR system provide decay heat removal. Each loop consists of a motor-driven pump, two heat exchangers in series, and associated piping and valves. Both loops have a common suction from the same recirculation loop. Each pump discharges the reactor coolant, after circulation through the respective heat exchanger, to the reactor via separate feedwater lines or to the reactor via the low-pressure coolant injection path. The RHR heat exchangers transfer heat to the RHR service water system.

Grand Gulf and River Bend TS 3.4.9, "Residual Heat Removal (RHR) Shutdown Cooling System – Hot Shutdown," are applicable in Mode 3 with reactor steam dome pressure lower than the RHR cut-in permissive pressure. Grand Gulf and River Bend TS 3.4.10, "Residual Heat Removal (RHR) Shutdown Cooling System – Cold Shutdown," are applicable in Mode 4. They both require two operable RHR shutdown cooling subsystems and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem in operation.

2.2 Proposed Changes to the TSs

The licensee proposed to revise TS LCO actions for inoperable RHR shutdown cooling subsystems consistent with TSTF-566, Revision 0.

The proposed changes would revise TSs 3.4.9 and 3.4.10 for Grand Gulf and River Bend. The proposed changes are described below.

2.2.1 Proposed Changes to Grand Gulf and River Bend TS 3.4.9

Required actions for one or two RHR shutdown cooling subsystems inoperable (Condition A) of Grand Gulf and River Bend TS 3.4.9, require the operators to initiate action to restore RHR shutdown cooling subsystem(s) to operable status (Required Action A.1) immediately, verify an alternate method of decay heat removal is available for each inoperable RHR shutdown cooling subsystem (Required Action A.2) within 1 hour, and be in Mode 4 (Required Action A.3) within 24 hours.

The licensee's proposed changes to Grand Gulf and River Bend TS 3.4.9 would move Required Action A.1 to new Condition B (as Required Action B.1) and delete Required Action A.3. The LAR also proposed to add a recurring completion time (CT) to current Required Action A.2 of "once per 24 hours thereafter." The licensee's proposed changes also renumber current Required Action A.2 as A.1 since Required Actions A.1 and A.3 are removed from Condition A.

The licensee's proposed changes add a new Condition B for when the required action and associated CT of Condition A are not met. New Condition B's Required Action B.1 is moved from current Required Action A.1 and requires operators to initiate action to restore RHR shutdown cooling subsystems(s) to operable status immediately.

Current Required Action A.2 is renumbered as A.1, since Required Actions A.1 and A.3 were deleted. Current Condition B and its required actions would be renamed "C," "C.1," "C.2," and "C.3," respectively, since new Condition B is added.

2.2.2 Proposed Changes to Grand Gulf and River Bend TS 3.4.10

Required actions for one or two RHR shutdown cooling subsystems inoperable (Condition A) of Grand Gulf and River Bend TS 3.4.10 require the operators to verify an alternate method of decay heat removal is available for each inoperable RHR shutdown cooling subsystem (Required Action A.1) within 1 hour and once per 24 hours thereafter.

The licensee's proposed changes to Grand Gulf and River Bend TS 3.4.10 add a new Condition B for when the required action and associated CT of Condition A are not met, which has a required action (new Required Action B.1) for operators to initiate action to restore RHR shutdown cooling subsystems(s) to operable status immediately.

Current Condition B and its required actions are renamed "C," "C.1," and "C.2," respectively, since new Condition B is added.

2.3 Applicable Regulatory Requirements and Guidance

Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36(a)(1) requires each applicant for a license authorizing operation of a utilization facility to include in the application proposed TSs. The regulation at 10 CFR 50.36(a)(1) states, in part: "A summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the technical specifications."

The regulation at 10 CFR 50.36(b) states:

> Each license authorizing operation of a . . .utilization facility . . . will include technical specifications. The technical specifications will be derived from the analyses and evaluation included in the safety analysis report, and amendments thereto, submitted pursuant to [10 CFR] 50.34 ["Contents of applications; technical information"]. The Commission may include such additional technical specifications as the Commission finds appropriate.

The regulation at 10 CFR 50.40(a) states, in part, that the TS shall provide reasonable assurance that the health and safety of the public will not be endangered.

The NRC staff's guidance for the review of TSs is in Chapter 16.0, "Technical Specifications," of NUREG-0800, Revision 3, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, LWR [Light-Water Reactor] Edition" (SRP), dated March 2010 (ADAMS Accession No. ML100351425). As described therein, as part of the regulatory standardization effort, the NRC staff has prepared Standard Technical Specifications (STS) for each of the LWR nuclear designs. Accordingly, the NRC staff's review includes consideration of whether the proposed changes are consistent with the applicable reference STS (i.e., the current STS), as modified by NRC-approved travelers.

The STS applicable to the licensee's proposed changes are provided in NUREG-1434, "Standard Technical Specifications, General Electric BWR [Boiling Water Reactor] /6 Plants," Volume 1, "Specifications," and Volume 2, "Bases," Revision 4.0, dated April 2012 (ADAMS Accession Nos. ML12104A195 and ML12104A196, respectively).

3.0 TECHNICAL EVALUATION

3.1 Proposed Changes to Grand Gulf and River Bend TS 3.4.9

The licensee proposed changes to revise TS 3.4.9 for Grand Gulf and River Bend. The NRC staff's evaluation of the proposed changes to Grand Gulf and River Bend TS 3.4.9 is described below in the following sections.

3.1.1 Evaluation of Changes to Condition A

The licensee's proposed changes would add a recurring CT to current Required Action A.2 of "once per 24 hours thereafter," to Grand Gulf and River Bend TS 3.4.9, Condition A. Current Required Action A.2 requires verification that an alternate method of decay heat removal is available for each inoperable RHR shutdown cooling subsystem within 1 hour. The NRC staff finds this change is acceptable, since it requires continuous verification of alternate methods of decay heat removal every 24 hours and provides assurance of continued heat removal capability.

The licensee also proposed to delete current Required Action A.3 from the Grand Gulf and River Bend TSs. Required Action A.3 requires the plants to be in Mode 4 within 24 hours when one or two RHR shutdown cooling subsystems are inoperable. Current Required Action A.3 requires operators to reduce the reactor coolant system temperature to the point where Mode 4 is entered, due to the potentially reduced reliability of the alternate methods of decay heat removal. However, if there is no operable RHR shutdown cooling subsystem and the plant is in a period of high decay heat load, it may not be possible to reduce the reactor coolant system temperature to the Mode 4 entry condition (typically less than 200 degrees Fahrenheit) within the CT. In addition, in a typical BWR design, the RHR shutdown cooling system has a heat rejection capability many times greater than alternate methods available. Therefore, for periods in which there is high decay heat load, the BWR design does not include any system, which can satisfy Required Action A.3. The NRC staff finds the deletion of current Required Action A.3 is acceptable because, at below the RHR cut in permissive pressure, the remaining required action will continue to transfer fission product decay heat and other residual heat from the reactor core at a rate such that specified acceptable fuel design limits and the design conditions of the reactor coolant pressure boundary are not exceeded.

Current Required Action A.2 would be renumbered as A.1, since Required Actions A.1 and A.3 are removed from Condition A. The NRC staff finds this change is acceptable since it provides the correct number sequence.

3.1.2 Evaluation of New Condition B

The licensee proposed the addition of a new Condition B to Grand Gulf and River Bend TSs for when the required action and associated CT of Condition A is not met. New Condition B's Required Action, B.1 would be moved from current Required Action A.1 and would require operators to initiate action to restore RHR shutdown cooling subsystems(s) to operable status immediately. The NRC staff finds that relocating the required action from A.1 to new Required Action B.1 is acceptable because other ways of removing decay heat are available, such as natural circulation, the spent fuel pool cooling system, the reactor water cleanup system and an inoperable, but functional, RHR shutdown cooling subsystem.

If an alternate method cannot be established (Condition A), new Condition B requires the licensee to immediately initiate action to restore the inoperable RHR shutdown cooling subsystem(s) to operable status. The CT "immediately" is defined in Section 1.3 of the Grand Gulf and River Bend TSs as, "the Required Action should be pursued without delay and in a controlled manner." New Required Action B.1 continues to apply until the inoperable RHR shutdown cooling subsystems are restored to operable status, an alternate decay heat removal method is established, or the specification is exited.

The NRC staff finds this change is acceptable because new Condition B, with its Required Action B.1, provides an appropriate terminal action for when an alternate method cannot be established within the CT. In addition, new Required Action B.1 will restore redundant decay heat removal paths and the immediate CT reflects the importance of maintaining the availability of two paths for heat removal.

3.1.3 Evaluation of Changes to Existing Condition B

Current Condition B and its required actions would be renamed "C," "C.1," "C.2," and "C.3," respectively, since new Condition B is added. The NRC staff finds this change is acceptable since it provides the correct number sequence.

3.1.4 Conclusion of Proposed Changes to Grand Gulf and River Bend TS 3.4.9

The NRC staff concludes that the proposed changes are acceptable because the TSs continue to meet the requirements of 10 CFR 50.40(a) by providing reasonable assurance the health and safety of the public will not be endangered.

3.2 Proposed Changes to Grand Gulf and River Bend TS 3.4.10

In the LAR, the licensee proposed changes to revise TS 3.4.10 for Grand Gulf and River Bend. The NRC staff's evaluation of the licensee's changes to Grand Gulf and River Bend TS 3.4.10 is described below in the following sections.

3.2.1 Evaluation of New Condition B

The licensee proposed a new Condition B to Grand Gulf and River Bend TS 3.4.10 for when the required action and associated CT of Condition A are not met.

If an alternate method cannot be established (Condition A), new Condition B requires the licensee to immediately initiate action to restore the inoperable RHR shutdown cooling subsystem(s) to operable status. The CT "immediately" is defined in Section 1.3 of the Grand Gulf and River Bend TSs as, "the Required Action should be pursued without delay and in a controlled manner." New Required Action B.1 continues to apply until the inoperable RHR shutdown cooling subsystems are restored to operable status, an alternate decay heat removal method is established, or the specification is exited.

The NRC staff finds that this change is acceptable because new Condition B with its Required Action B.1 provides an appropriate terminal action for when an alternate method cannot be established within the CT. In addition, new Required Action B.1 will restore redundant decay heat removal paths and the immediate CT reflects the importance of maintaining the availability of two paths for heat removal.

3.2.2 Evaluation of Changes to Existing Condition B

Current Condition B and its required actions would be renamed “C,” “C.1,” and “C.2,” respectively, since new Condition B is added. The NRC staff finds this change is acceptable since it provides the correct number sequence.

3.2.3 Conclusion of Proposed Changes to Grand Gulf and River Bend TS 3.4.10

The NRC staff concludes that the proposed changes are acceptable and continue to meet the requirements of 10 CFR 50.40(a) by providing reasonable assurance that the health and safety of the public will not be endangered.

4.0 STATE CONSULTATION

In accordance with the Commission’s regulations, the Mississippi and Louisiana officials were notified of the proposed issuance of the amendments on January 11, 2021. The State officials had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to the installation or use of facility components located within the restricted areas as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration published in the *Federal Register* on May 5, 2020 (85 FR 26730), and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission’s regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: C. Tilton, NRR

Date: February 1, 2021

SUBJECT: GRAND GULF NUCLEAR STATION, UNIT 1 AND RIVER BEND STATION, UNIT 1 – ISSUANCE OF AMENDMENTS RE: ADOPTION OF TECHNICAL SPECIFICATIONS TASK FORCE (TSTF) TRAVELER TSTF-566, REVISION 0, "REVISE ACTIONS FOR INOPERABLE RHR SHUTDOWN COOLING SUBSYSTEMS" (EPID L-2020-LLA-0010) DATED FEBRUARY 1, 2021

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