



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

May 12, 2015

Vice President, Operations
Entergy Operations, Inc.
Grand Gulf Nuclear Station
P.O. Box 756
Port Gibson, MS 39150

**SUBJECT: GRAND GULF NUCLEAR STATION, UNIT 1 - ISSUANCE OF AMENDMENT
RE: ADOPTION OF TECHNICAL SPECIFICATIONS TASK FORCE
STANDARD TECHNICAL SPECIFICATIONS CHANGE TRAVELER TSTF-523,
REVISION 2, "GENERIC LETTER 2008-01, MANAGING GAS
ACCUMULATION" (TAC NO. MF4976)**

Dear Sir or Madam:

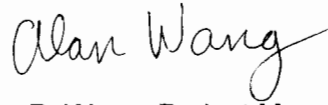
The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 202 to Facility Operating License No. NPF-29 for the Grand Gulf Nuclear Station, Unit 1. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 7, 2014, as supplemented by letter dated January 6, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML14280A092 and ML15006A229, respectively).

The amendment revises Surveillance Requirements (SRs) related to gas accumulation for the emergency core cooling system and reactor core isolation cooling system. The amendment also adds new SRs related to gas accumulation for the residual heat removal, shutdown cooling, and containment spray systems. The NRC staff has concluded that the TS changes are consistent with NRC-approved Technical Specifications Task Force (TSTF) Standard Technical Specifications change traveler TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation" (ADAMS Accession No. ML13053A075), dated February 21, 2013, as part of the consolidated line item improvement process. The TS Bases changes associated with these SRs were also changed as proposed by TSTF-523, Revision 2.

- 2 -

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

Sincerely,

A handwritten signature in black ink that reads "Alan Wang". The signature is written in a cursive, flowing style.

Alan B. Wang, Project Manager
Plant Licensing IV-2 and Decommissioning
Transition Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosures:

1. Amendment No. 202 to NPF-29
2. Safety Evaluation

cc w/encls: Distribution via Listserv



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

ENTERGY OPERATIONS, INC.

SYSTEM ENERGY RESOURCES, INC.

SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

ENTERGY MISSISSIPPI, INC.

DOCKET NO. 50-416

GRAND GULF NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 202
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 October 7, 2014, as supplemented by letter dated January 6, 2015, 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.

Enclosure 1

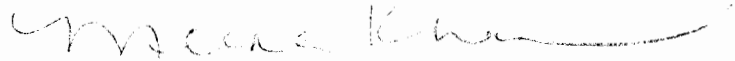
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-29 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 202 are hereby incorporated in the 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



Meena K. Khanna, Chief
Plant Licensing IV-2 and Decommissioning
Transition Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

Date of Issuance: May 12, 2015

ATTACHMENT TO LICENSE AMENDMENT NO. 202

FACILITY OPERATING LICENSE NO. NPF-29

DOCKET NO. 50-416

Replace the following pages of the 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

<u>Remove</u>	<u>Insert</u>
4	4

Technical Specifications

<u>Remove</u>	<u>Insert</u>
3.4-23	3.4-23
3.4-25	3.4-25
3.5-4	3.5-4
3.5-8	3.5-8
3.5-11	3.5-11
3.6-23	3.6-23
3.6-32	3.6-32
3.9-11	3.9-11
3.9-14	3.9-14

- (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 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. 202 are hereby incorporated into this 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.

RHR Shutdown Cooling System—Hot Shutdown
3.4.9

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.9.1	<p>-----NOTE-----</p> <p>Not required to be met until 2 hours after reactor steam dome pressure is less than the RHR cut in permissive pressure.</p> <p>-----</p> <p>Verify one RHR shutdown cooling subsystem or recirculation pump is operating.</p>	12 hours
SR 3.4.9.2	<p>-----NOTE-----</p> <p>Not required to be performed until 12 hours after reactor steam dome pressure is < the RHR cut in permissive pressure.</p> <p>-----</p> <p>Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water</p>	31 days

RHR Shutdown Cooling System—Cold Shutdown
3.4.10

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. No RHR shutdown cooling subsystem in operation. <u>AND</u> No recirculation pump in operation.	B.1 Verify reactor coolant circulating by an alternate method.	1 hour from discovery of no reactor coolant circulation <u>AND</u> Once per 12 hours thereafter
	<u>AND</u> B.2 Monitor reactor coolant temperature and pressure.	Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.10.1 Verify one RHR shutdown cooling subsystem or recirculation pump is operating.	12 hours
SR 3.4.10.2 Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE			FREQUENCY												
SR 3.5.1.1	Verify, for each ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water.		31 days												
SR 3.5.1.2	-----NOTE----- Not required to be met for system vent flow paths opened under administrative control. ----- Verify each ECCS injection/spray subsystem manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.		31 days												
SR 3.5.1.3	Verify ADS accumulator supply pressure is ≥ 150 psig.		31 days												
SR 3.5.1.4	Verify each ECCS pump develops the specified flow rate with the specified total developed head. <table><thead><tr><th><u>SYSTEM</u></th><th><u>FLOW RATE</u></th><th><u>TOTAL DEVELOPED HEAD</u></th></tr></thead><tbody><tr><td>LPCS</td><td>≥ 7115 gpm</td><td>≥ 290 psid</td></tr><tr><td>LPCI</td><td>≥ 7450 gpm</td><td>≥ 125 psid</td></tr><tr><td>HPCS</td><td>≥ 7115 gpm</td><td>≥ 445 psid</td></tr></tbody></table>	<u>SYSTEM</u>	<u>FLOW RATE</u>	<u>TOTAL DEVELOPED HEAD</u>	LPCS	≥ 7115 gpm	≥ 290 psid	LPCI	≥ 7450 gpm	≥ 125 psid	HPCS	≥ 7115 gpm	≥ 445 psid		In accordance with the Inservice Testing Program
<u>SYSTEM</u>	<u>FLOW RATE</u>	<u>TOTAL DEVELOPED HEAD</u>													
LPCS	≥ 7115 gpm	≥ 290 psid													
LPCI	≥ 7450 gpm	≥ 125 psid													
HPCS	≥ 7115 gpm	≥ 445 psid													

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.2.2	<p>Verify, for the required High Pressure Core Spray (HPCS) System, the:</p> <p>a. Suppression pool water level is ≥ 12 ft 8 inches; or</p> <p>b. Condensate storage tank water level is ≥ 18 ft.</p>	12 hours
SR 3.5.2.3	<p>Verify, for each required ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water.</p>	31 days
SR 3.5.2.4	<p>-----NOTE-----</p> <p>Not required to be met for system vent flow paths opened under administrative control.</p> <p>-----</p> <p>Verify each required ECCS injection/spray subsystem manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	31 days

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.3.1	Verify the RCIC System locations susceptible to gas accumulation are sufficiently filled with water.	31 days
SR 3.5.3.2	<p>-----NOTE----- Not required to be met for system vent flow paths opened under administrative control. -----</p> <p>Verify each RCIC System manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	31 days
SR 3.5.3.3	<p>-----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. -----</p> <p>Verify, with RCIC steam supply pressure ≤ 1045 psig and ≥ 945 psig, the RCIC pump can develop a flow rate ≥ 800 gpm against a system head corresponding to reactor pressure.</p>	92 days
SR 3.5.3.4	<p>-----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. -----</p> <p>Verify, with RCIC steam supply pressure ≤ 165 psig and ≥ 150 psig, the RCIC pump can develop a flow rate ≥ 800 gpm against a system head corresponding to reactor pressure.</p>	24 months

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.6.1.7.1 -----NOTE-----</p> <ol style="list-style-type: none"> 1. RHR containment spray subsystems may be considered OPERABLE during alignment and operation for decay heat removal when below the RHR cut in permissive pressure in MODE 3 if capable of being manually realigned and not otherwise inoperable. 2. Not Required to be met for system vent flow paths opened under administrative control. <p>-----</p> <p>Verify each RHR containment spray subsystem manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.</p>	<p>31 days</p>
<p>SR 3.6.1.7.2 Verify RHR containment spray subsystem locations susceptible to gas accumulation are sufficiently filled with water.</p>	<p>31 days</p>
<p>SR 3.6.1.7.3 Verify each RHR pump develops a flow rate of ≥ 7450 gpm on recirculation flow through the associated heat exchanger to the suppression pool.</p>	<p>In accordance with the Inservice Testing Program</p>
<p>SR 3.6.1.7.4 Verify each RHR containment spray subsystem automatic valve in the flow path actuates to its correct position on an actual or simulated automatic initiation signal.</p>	<p>24 months</p>
<p>SR 3.6.1.7.5 Verify each spray nozzle is unobstructed.</p>	<p>At first refueling AND 10 years</p>

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.3 Initiate action to restore one standby gas treatment subsystem to OPERABLE status.	Immediately
	<u>AND</u> B.4 Initiate action to restore isolation capability in each required secondary containment penetration flow path not isolated.	Immediately
C. No decay heat removal subsystem in operation.	C.1 Verify reactor coolant circulation by an alternate method.	1 hour from discovery of no reactor coolant circulation
	<u>AND</u> C.2 Monitor reactor coolant temperature.	<u>AND</u> Once per 12 hours thereafter Once per hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.9.8.1 Verify one decay heat removal subsystem is operating.	12 hours
SR 3.9.8.2 Verify required RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.9.1	Verify one decay heat removal subsystem is operating.	12 hours
SR 3.9.9.2	Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.2.3.1 Verify each RHR suppression pool cooling subsystem manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position or can be aligned to the correct position.	31 days
SR 3.6.2.3.2 Verify RHR suppression pool cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.	31 days
SR 3.6.2.3.3 Verify each RHR pump develops a flow rate ≥ 7450 gpm through the associated heat exchangers to the suppression pool.	In accordance with the Inservice Testing Program



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 202 TO

FACILITY OPERATING LICENSE NO. NPF-29

ENTERGY OPERATIONS, INC., ET AL.

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

1.0 INTRODUCTION

By application dated October 7, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14280A092), as supplemented by letter dated January 6, 2015 (ADAMS Accession No. ML15006A229), Entergy Operations, Inc. (the licensee), requested changes to the Technical Specifications (TSs) for Grand Gulf Nuclear Station, Unit 1 (GGNS).

The proposed changes would revise Surveillance Requirements (SRs) related to gas accumulation for the emergency core cooling system (ECCS) and reactor core isolation cooling (RCIC) system. The proposed changes will also add new SRs related to gas accumulation for the residual heat removal (RHR), shutdown cooling (SDC), and containment spray (CS) systems. The TS changes are consistent with U.S. Nuclear Regulatory Commission (NRC)-approved Technical Specifications Task Force (TSTF) Standard Technical Specifications (STS) change traveler TSTF-523, Revision 2, "Generic Letter 2008-01, Managing Gas Accumulation" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13053A075), dated February 21, 2013. The TS Bases changes associated with these SRs were also changed as proposed by the TSTF. The availability of this TS improvement was announced in the *Federal Register* on January 15, 2014 (79 FR 2700) as part of the consolidated line item improvement process.

2.0 REGULATORY EVALUATION

2.1 Background

Gas accumulation in reactor systems can result in water hammer, pump cavitation, and pumping of non-condensable gas into the reactor vessel. These effects may result in the subject system being unable to perform its specified safety function. The NRC issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, [DHR] and Containment Spray Systems," in January 2008 to address the issue of gas accumulation in ECCS, DHR, and CS systems (ADAMS Accession No. ML072910759). The industry and NRC staff agreed that a change to the STS and plant-specific TS would be necessary to address some issues discussed in GL 2008-01. TSTF-523, Revision 2, contains changes to the TS SRs and TS Bases to address some of the concerns in GL 2008-01. The licensee proposed amending the GGNS TS using a plant-specific adoption of the TSTF-523, Revision 2, changes.

2.2 Technical Specification Changes

Changes were proposed for SRs 3.5.1.1, 3.5.1.2, 3.5.2.3, 3.5.2.4, 3.5.3.1, 3.5.3.2, and 3.6.1.7.1 as well as the addition of new SRs 3.4.9.2, 3.4.10.2, 3.6.1.7.2, 3.6.1.7.5, 3.6.2.3.2, 3.9.8.2, and 3.9.9.2 to TS 3.4.9, "RHR Shutdown Cooling System – Hot Shutdown," TS 3.4.10, "RHR Shutdown Cooling System – Cold Shutdown," TS 3.5.1, "ECCS - Operating," TS 3.5.2, "ECCS – Shutdown," TS 3.5.3, "RCIC System," TS 3.6.1.7, "RHR Containment Spray System," TS 3.6.2.3, "RHR Suppression Pool Cooling," TS 3.9.8, "RHR - High Water Level," and TS 3.9.9, "RHR – Low Water Level," respectively. Associated Bases changes were proposed for the respective limiting conditions for operation (LCOs), SR changes, and SR additions.

2.3 Regulatory Review

The regulations in Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "General Design Criteria [GDC] for Nuclear Power Plants," or similar plant-specific principal design criteria provide design requirements. Appendix B to 10 CFR Part 50, "Quality Assurance Criteria for Nuclear power Plants and Fuel Reprocessing Plants," the TSs, and the licensee quality assurance programs provide operating requirements. The regulatory requirements of 10 CFR Part 50, Appendix A, that are applicable to gas management in the subject systems include:

- GDC 1, "Quality standards and records,"
- GDC 34, "Residual heat removal,"
- GDC 35, "Emergency core cooling,"
- GDC 36, "Inspection of emergency core cooling system,"
- GDC 37, "Testing of emergency core cooling system,"
- GDC 38, "Containment heat removal,"
- GDC 39, "Inspection of containment heat removal system," and
- GDC 40, "Testing of heat removal system."

GDC 34 requires an RHR system designed to maintain specified acceptable fuel design limits and to meet design conditions that are not exceeded if a single failure occurs and specified electrical power systems fail. GDC 35, 36, and 37 require an ECCS design that meets performance, inspection, and testing requirements. Additionally, the regulations in 10 CFR 50.46, provide specified ECCS performance criteria. GDC 38, 39, and 40 require a containment heat removal system design that meets performance, inspection, and testing requirements.

Quality assurance criteria provided in 10 CFR Part 50, Appendix B, that apply to gas management in the subject systems include:

- Criterion III, "Design Control,"
- Criterion V, "Instruction, Procedures, and Drawings,"
- Criterion XI, "Test Control,"
- Criterion XVI, "Corrective Actions," and
- Criterion XVII, "Quality Assurance Records."

Criteria III and V require measures to ensure that applicable regulatory requirements and the design basis, as defined in 10 CFR 50.2, "Definitions," and as specified in the license application, are correctly translated into controlled specifications, drawings, procedures, and instructions. Criterion XI requires a test program to ensure that the subject systems will perform satisfactorily in service and requires that test results shall be documented and evaluated to ensure that test requirements have been satisfied. Criterion XVI requires measures to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances, are promptly identified and corrected, and that significant conditions adverse to quality are documented and reported to management. Criterion XVII requires maintenance of records of activities affecting quality.

The NRC's regulatory requirements related to the content of the TSs are contained in 10 CFR 50.36(c). The regulations at 10 CFR 50.36 require that the TSs include items in the following categories: (1) safety limits, limiting safety systems settings, and limiting control settings; (2) LCOs; (3) SRs; (4) design features; and (5) administrative controls. SRs are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met. Typically, Section 5 of the TSs, requires that licensees establish, implement, and maintain written procedures covering the applicable procedures recommended in Appendix A to Regulatory Guide (RG) 1.33, Revision 3 "Quality Assurance Program Requirements (Operation)," June 2013 (ADAMS Accession No. ML13109A458). Appendix A to RG 1.33 identifies instructions for filling and venting the ECCS and DHR system, as well as for draining and refilling heat exchangers. Standard TSs and most licensee TSs include SRs to verify that at least some of the subject systems piping is filled with water.

The NRC's guidance for the format and content of licensee TSs can be found in NUREG-1434, "Standard Technical Specifications - General Electric Plants, BWR/6," Revision 4, Volume 1 (STS) (ADAMS Accession No. ML12104A195).

Regulatory guidance for the NRC staff's review of containment heat removal systems, ECCS, and RHR systems is provided in the following revisions and sections of NUREG-0800,

“Standard Review Plan [SRP] for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition” during the review.

- SRP, Section 6.2.2, “Containment Heat Removal Systems,” Revision 5, dated March 2007 (ADAMS Accession No. ML070160661), provides the procedures concerning the review of containment heat removal under post-accident conditions to help ensure compliance with GDC 38, 39, and 40.
- SRP, Section 6.3, “Emergency Core Cooling System,” Revision 3, dated March 2007 (ADAMS Accession No. ML070550068), provides the procedures concerning the review of the ECCS to help ensure compliance with GDC 35, 36, and 37.
- SRP, Section 5.4.7, “Residual Heat Removal (RHR) System,” Revision 5, dated May 2010 (ADAMS Accession Number ML100680577), provides the procedures concerning the review of the RHR system as it is used to cool the reactor coolant system (RCS) during and following shutdown to help ensure compliance with GDC 34.

3.0 TECHNICAL EVALUATION

The proposed changes adopted the TS format and content, to the extent practicable, contained in the changes made to STSs, by TSTF-523. The NRC staff evaluated the licensee's proposed changes against the applicable regulatory guidance in the STSs, as modified by TSTF-523. The NRC staff concluded that the proposed changes are consistent with the guidance in the STS, as modified by TSTF-523.

The NRC staff compared the proposed changes to the existing SRs, as well as the regulatory requirements of 10 CFR 50.36, “Technical specifications.”

3.1 Proposed TS SR Changes

New SRs 3.4.9.2, 3.4.10.2, 3.6.1.7.2, 3.6.1.7.5, 3.6.2.3.2, 3.9.8.2, and 3.9.9.2

The licensee has proposed the following new SRs:

SR 3.4.9.2, which states,

----- NOTE -----
Not required to be performed until 12 hours after reactor steam dome pressure is
< the RHR cut in permissive pressure.

Verify RHR shutdown cooling subsystem locations susceptible to gas
accumulation are sufficiently filled with water”

The frequency for SR 3.4.9.2 will be 31 days.

SR 3.4.10.2, which states,

Verify RHR shutdown cooling subsystem locations susceptible to gas
accumulation are sufficiently filled with water.

The frequency for SR 3.4.10.2 will be 31 days.

SR 3.6.1.7.2, which states,

Verify RHR containment spray subsystem locations susceptible to gas accumulation are sufficiently filled with water.

The frequency for SR 3.6.1.7.2 will be 31 days.

SR 3.6.1.7.5, which states,

Verify each spray nozzle is unobstructed.

The frequency for SR 3.6.1.7.5 will be at first refueling and 10 years.

SR 3.6.2.3.2, which states,

Verify RHR suppression pool cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.

The frequency for SR 3.6.2.3.2 will be 31 days.

SR 3.9.8.2, which states,

Verify required RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.

The frequency for SR 3.9.8.2 will be 31 days.

SR 3.9.9.2, which states,

Verify RHR shutdown cooling subsystem locations susceptible to gas accumulation are sufficiently filled with water.

The frequency for SR 3.9.9.2 will be 31 days.

Revised SRs

The licensee has proposed to revise the following TSs:

SR 3.5.1.1 from:

Verify, for each ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.

to:

Verify, for each ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water.

SR 3.5.2.3 from:

Verify, for each ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.

to:

Verify, for each required ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water.

SR 3.5.3.1 from:

Verify the RCIC System piping is filled with water from the pump discharge valve to the injection valve.

to:

Verify the RCIC System locations susceptible to gas accumulation are sufficiently filled with water.

New "Note" to SR 3.5.1.2, SR 3.5.2.4, SR 3.5.3.2, and SR 3.6.1.7.1

A new "Note" will be added to SR 3.5.1.2, SR 3.5.2.4, SR 3.5.3.2, and SR 3.6.1.7.1 which states:

Not required to be met for system vent flow paths opened under administrative control.

Editorial changes – Renumbered SRs

In several cases, because new SRs were added, the following SRs needed to be renumbered.

With inclusion of new SR 3.6.1.7.2, current SRs 3.6.1.7.2 and SR 3.6.1.7.3 have been renumbered to SRs 3.6.1.7.3 and SR 3.6.1.7.4, respectively.

With the inclusion of new SR 3.6.2.3.2 current SR 3.6.2.3.2 has been renumbered to SR 3.6.2.3.3.

BASES Changes

The associated TS SR Bases language for the above are revised to state the purpose of the SR, discuss methods of identifying locations susceptible to gas accumulation, discuss gas volume acceptance criteria, discuss methods for performing the SR consistent with licensee actions and on-going programs related to GL 2008-01, and describe the SR frequency. In addition, the TS LCO Bases language are revised to describe what is required for Operability of the systems and reiterate the importance of gas management.

3.2 Evaluation

The new language for the SRs was developed using licensee responses to GL 2008-01 and the NRC discussion contained in Task Interface Agreement (TIA) 2008-03, "Emergency Core Cooling System (ECCS) Voiding Relative To Compliance With Surveillance Requirements (SR) 3.5.1.1, 3.5.2.3, and 3.5.3.1" (ADAMS Accession No. ML082560209). Many of the GL 2008-01 responses stated that licensees identified system locations susceptible to gas accumulation. In the TIA, the NRC stated that the intent of the TS SRs, which state "full of water," may be met if the licensee can establish, through an Operability Determination, that there is a reasonable expectation that the system in question will perform its specified safety function. Therefore the phrase, "sufficiently filled with water," was recommended for the proposed TS changes. In the TS, "sufficiently filled with water" is understood to mean "sufficiently filled with water to support Operability." The regulation at 10 CFR 50.36(c)(3), Surveillance requirements," states, in part, that one of the purposes of the SR is to verify that the LCO is met. Therefore, the new SR language, "Verify the [system name] locations susceptible to gas accumulation are sufficiently filled with water," is acceptable since this language will allow the licensee to make a conclusion as to whether or not a system is operable.

The NRC staff has concluded that the proposed SRs meet the regulatory requirements of 10 CFR 50.36 because they provide assurance that the necessary quality of systems and components will be maintained and that the LCOs will be met. Therefore, the NRC staff concludes the proposed changes are acceptable.

The language for the notes that state that the SR does not have to be performed until 12 hours after reactor steam dome pressure < the RHR cut in permissive pressure is acceptable because the note provides a limited time to perform the Surveillance after entering the Applicability of the LCO; however, under the STS usage rules (STS Section 1.4), the requirement to manage gas accumulation is not affected. Licensees must have confidence that the SR can be met or the LCO must be declared not met.

The language for the notes that allow the SRs to not be met for system vent flow paths opened under administrative control is necessary to allow the licensee to credit administratively controlled manual action, to close the system vent flow path, in order to maintain system Operability during system venting and performance of the proposed gas accumulation SR. Therefore the NRC staff has concluded that the addition of the proposed note is acceptable.

The NRC staff has concluded that the renumbering of the SRs to reflect the addition of new SRs are editorial in nature, and therefore, are acceptable.

The regulation at 10 CFR 50.36(a)(1) states, in part: "A summary statement of the bases or reasons for such specifications ... shall also be included in the application, but shall not become part of the technical specifications." The licensee may make changes to the TS Bases without prior NRC staff review and approval in accordance with the TS Bases Control Program TS 5.5.11. Accordingly, along with the proposed TS changes, the licensee also submitted TS Bases changes corresponding to the proposed TS changes. The NRC staff determined that TS Bases changes are consistent with the proposed TS changes and provide the purpose for each requirement in the specification consistent with the Commission's Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors dated July 22, 1993 (58 FR 39132).

Based on the above, the NRC staff has concluded that the proposed TS, SR, and Bases changes are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Mississippi State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves 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 amendment involves no significant hazards consideration, and there has been no public comment on such finding published in the *Federal Register* on February 17, 2015 (80 FR 8360). Accordingly, the amendment meets 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 amendment.

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: M. Hamm

Date: May 12, 2015

- 2 -

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

Sincerely,

/RA/

Alan Wang, Project Manager
Plant Licensing IV-2 and Decommissioning
Transition Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosures:

1. Amendment No. 202 to NPF-29
2. Safety Evaluation

cc w/encls: Distribution via Listserv

DISTRIBUTION:

PUBLIC

LPL4-2 r/f

RidsAcrsAcnw_MailCTR Resource

RidsNrrDssStsb Resource

RidsNrrDorIDpr Resource

RidsNrrDorLpl4-2 Resource

RidsNrrPMGrandGulf Resource

RidsRgn4MailCenter Resource

MHamm, NRR

RidsNrrLAPBlechman Resource

RidsOgcMailCenter Resource

ADAMS Accession No. ML15104A623

OFFICE	NRR/DORL/LPL4-2/PM	NRR/DORL/LPL4-2/LA	NRR/DSS/STSB/BC
NAME	AWang	PBlechman	RElliott
DATE	4/23/15	4/20/15	4/30/15
OFFICE	OGC - NLO	NRR/DORL/LPL4-2/BC	NRR/DORL/LPL4-2/PM
NAME	STurk	MKhanna	AWang
DATE	4/29/15	5/4/15	5/12/15

OFFICIAL RECORD COPY