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10 CFR 50.90

GNRO-2018/00051

October 23, 2018

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

SUBJECT: Supplement to Revise Technical Specifications to Adopt Technical Specification Task Force Traveler TSTF-542, "Reactor Pressure Vessel Water Inventory Control"

Grand Gulf Nuclear Station, Unit 1
Docket No. 50-416
License No. NPF-29

REFERENCES: 1. Entergy Operations Inc. (EOI) letter to the Nuclear Regulatory Commission (NRC) dated April 10, 2018, "Application to Revise Technical Specifications to Adopt Technical Specification Task Force Traveler TSTF-542, 'Reactor Pressure Vessel Water Inventory Control'" (NRC ADAMS Accession No. ML18100B304)

Dear Sir or Madam:

In Reference 1, Entergy Operations Inc. (EOI) requested an amendment to Facility Operating License No. NPF-29 for Grand Gulf Nuclear Station, Unit 1 (GGNS). The proposed change will replace existing Technical Specification (TS) requirements related to Operations with a Potential for Draining the Reactor Vessel (OPDRV) with new requirements on Reactor Pressure Vessel Water Inventory Control to protect Safety Limit 2.1.1.3. This supplement provides corrected pages that supplant equivalent pages provided in Reference 1, and corrects minor editorial discrepancies that were subsequently identified. In order to implement this TS change, EOI requests a 120 day implementation period.

Attachment 1 of this letter provides the mark-up editorial corrections to previously submitted GGNS Technical Specifications (TS). Attachment 2 of this letter provides clean-typed, corrected pages to previously submitted GGNS TS. Attachment 3 of this letter provides the editorial correction to previously submitted GGNS TS Bases, these are provided to the NRC for information purposes only.

No new regulatory commitments are made in this submittal. The editorial corrections provided in this supplement do not impact the No Significant Hazards Consideration analysis that was performed in the Reference 1 submittal.

In accordance with 10 CFR 50.91, "Notice for Public Comment; State Consultation," paragraph (b), a copy of this supplement, with attachment, is being provided to the designated State Officials.

If you should have any questions regarding this submittal, please contact Douglas A. Neve, Manager Regulatory Assurance, at 601-437-2103.

I declare under penalty of perjury that the foregoing is true and correct. Executed on October 23, 2018.

Sincerely,

A handwritten signature in black ink, appearing to read "E. A. Larson", with a long horizontal flourish extending to the right.

Eric A. Larson
EAL/rws

- Attachments:
1. Editorial Corrections Made to Original Submittal Technical Specifications (Mark-up Pages)
 2. Editorial Corrections Made to Original Submittal Technical Specifications (Clean-Typed Pages)
 3. Correct Technical Specification Bases (For Information Purposes Only)

cc: NRC Region IV - Regional Administrator
NRC Senior Resident Inspector, Grand Gulf Nuclear Station
Dr. Mary Currier, State Health Officer, Mississippi Department of Health
NRR Project Manager

Attachment 1 to GNRO-2018/00051

Editorial Corrections Made to Original Submittal Technical Specifications (Mark-Up Pages)

- Page 1 is a revision of Technical Specification (TS) 3.3.5.1 (TS page 3.3-32)
- Page 2 is a revision of Technical Specification (TS) 3.3.5.2 (TS page 3.3-43d)
- Page 3 is a revision of Technical Specification (TS) 3.3.5.2 (TS page 3.3-43e)
- Page 4 is a revision of Technical Specification (TS) 3.5.2 (TS page 3.5-8)

3.3 INSTRUMENTATION

3.3.5.1 Emergency Core Cooling System (ECCS) Instrumentation

LCO 3.3.5.1 The ECCS instrumentation for each Function in Table 3.3.5.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.5.1-1.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each channel.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channels inoperable.	A.1 Enter the Condition referenced in Table 3.3.5.1-1 for the channel.	Immediately
B. As required by Required Action A.1 and referenced in Table 3.3.5.1-1.	<p>B.1</p> <p>-----NOTES----- 1. Only applicable in MODES 1, 2, and 3. 2. Only applicable for Functions 1.a, 1.b, 2.a and 2.b.</p> <p>-----</p> <p>Declare supported feature(s) inoperable when its redundant feature ECCS initiation capability is inoperable.</p> <p><u>AND</u></p>	<p>1 hour from discovery of loss of initiation capability for feature(s) in both divisions</p> <p>(continued)</p>

This is a new page

Table 3.3.5.2-1 (page 1 of 2)
RPV Water Inventory Control Instrumentation

<u>FUNCTION</u>	<u>APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS</u>	<u>REQUIRED CHANNELS PER FUNCTION</u>	<u>CONDITIONS REFERENCED FROM REQUIRED ACTION A.1</u>	<u>SURVEILLANCE REQUIREMENTS</u>	<u>ALLOWABLE VALUE</u>
<u>1. Low Pressure Coolant Injection-A (LPCI) and Low Pressure Core Spray (LPCS) Subsystems</u>					
a. <u>Reactor Vessel Pressure - Low (Injection Permissive)</u>	<u>4, 5</u>	<u>3^(a)</u>	<u>C</u>	<u>SR 3.3.5.2.1 SR 3.3.5.2.2</u>	<u>≥ 452 psig and ≤ 534 psig</u>
b. <u>LPCS Pump Discharge Flow - Low (Bypass)</u>	<u>4, 5</u>	<u>1^(a)</u>	<u>E</u>	<u>SR 3.3.5.2.1 SR 3.3.5.2.2</u>	<u>≥ 1285 gpm</u>
c. <u>LPCI Pump A Discharge Flow - Low (Bypass)</u>	<u>4, 5</u>	<u>1^(a)</u>	<u>E</u>	<u>SR 3.3.5.2.1 SR 3.3.5.2.2</u>	<u>≥ 1133 gpm</u>
d. <u>Manual Initiation</u>	<u>4, 5</u>	<u>1^(a)</u>	<u>E</u>	<u>SR 3.3.5.2.3</u>	<u>NA</u>
<u>2. LPCI B and LPCI C Subsystems</u>					
a. <u>Reactor Vessel Pressure - Low (Injection Permissive)</u>	<u>4, 5</u>	<u>3^(a)</u>	<u>C</u>	<u>SR 3.3.5.2.1 SR 3.3.5.2.2</u>	<u>≥ 452 psig and ≤ 534 psig</u>
b. <u>LPCI Pump B and LPCI Pump C Discharge Flow - Low (Bypass)</u>	<u>4, 5</u>	<u>1 per pump^(a)</u>	<u>E</u>	<u>SR 3.3.5.2.1 SR 3.3.5.2.2</u>	<u>≥ 1133 gpm</u>
c. <u>Manual Initiation</u>	<u>4, 5</u>	<u>1^(a)</u>	<u>E</u>	<u>SR 3.3.5.2.3</u>	<u>NA</u>

(continued)

(a) Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.2, "Reactor Pressure Vessel (RPV) Water Inventory Control."

Table 3.3.5.2-1 (page 2 of 2)
RPV Water Inventory Control Instrumentation

<u>FUNCTION</u>	<u>APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS</u>	<u>REQUIRED CHANNELS PER FUNCTION</u>	<u>CONDITIONS REFERENCED FROM REQUIRED ACTION A.1</u>	<u>SURVEILLANCE REQUIREMENTS</u>	<u>ALLOWABLE VALUE</u>
<u>3. High Pressure Core Spray (HPCS) System</u>					
<u>a. Condensate Storage Tank Level - Low</u>	<u>4^(b), 5^(b)</u>	<u>1^(a)</u>	<u>D</u>	<u>SR 3.3.5.2.1 SR 3.3.5.2.2</u>	<u>≥ 4.7 ft</u>
<u>b. HPCS Pump Discharge Pressure - High (Bypass)</u>	<u>4, 5</u>	<u>1^(a)</u>	<u>E</u>	<u>SR 3.3.5.2.1 SR 3.3.5.2.2</u>	<u>≥ 108 psig and ≤ 1282 psig</u>
<u>c. HPCS System Flow Rate - Low (Bypass)</u>	<u>4, 5</u>	<u>1^(a)</u>	<u>E</u>	<u>SR 3.3.5.2.1 SR 3.3.5.2.2</u>	<u>≥ 1124 gpm and ≤ 1327 gpm</u>
<u>4. RHR System Isolation</u>					
<u>a. Reactor Vessel Water Level - Low, Level 3</u>	<u>(c)</u>	<u>2 in one trip system</u>	<u>B</u>	<u>SR 3.3.5.2.1 SR 3.3.5.2.2</u>	<u>≥ 10.8 inches</u>
<u>5. Reactor Water Cleanup (RWCU) System Isolation</u>					
<u>a. Reactor Vessel Water Level - Low, Level 2</u>	<u>(c)</u>	<u>2 in one trip system</u>	<u>B</u>	<u>SR 3.3.5.2.1 SR 3.3.5.2.2</u>	<u>≥ -43.8 inches</u>

(a) Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.2, "Reactor Pressure Vessel (RPV) Water Inventory Control."

(b) When HPCS is OPERABLE for compliance with LCO 3.5.2, "Reactor Pressure Vessel (RPV) Water Inventory Control," and aligned to the condensate storage tank.

(c) When automatic isolation of the associated penetration flow path(s) is credited in calculating DRAIN TIME.

RPV Water Inventory Control

→ ECCS Shutdown
3.5.2

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.5.2.2</p> <p>Verify, for the required High Pressure Core Spray (HPCS) System, the:</p> <p>a. Suppression pool water level is \geq 12 ft 8 inches; or</p> <p>b. Condensate storage tank water level is \geq 18 ft.</p>	<p>12 hours</p>
<p>SR 3.5.2.3</p> <p>Verify, for each required ECCS injection/spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water.</p>	<p>31 days</p>
<p>SR 3.5.2.4</p> <p>-----NOTE----- Not required to be met for system vent flow paths opened under administrative control. -----</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>	<p>31 days</p>

(continued)

Attachment 2 to GNRO-2018/00051

Editorial Corrections Made to Original Submittal Technical Specifications (Clean Typed Pages)

Page 1 is a revision of Technical Specification (TS) 3.3.5.2 (TS page 3.3-43d)

Page 2 is a revision of Technical Specification (TS) 3.3.5.2 (TS page 3.3-43e)

Page 3 is a revision of Technical Specification (TS) 3.5.2 (TS page 3.5-8)

Table 3.3.5.2-1 (page 1 of 2)
RPV Water Inventory Control Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Low Pressure Coolant Injection-A (LPCI) and Low Pressure Core Spray (LPCS) Subsystems					
a. Reactor Vessel Pressure - Low (Injection Permissive)	4, 5	3 ^(a)	C	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 452 psig and ≤ 534 psig
b. LPCS Pump Discharge Flow - Low (Bypass)	4, 5	1 ^(a)	E	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 1285 gpm
c. LPCI Pump A Discharge Flow - Low (Bypass)	4, 5	1 ^(a)	E	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 1133 gpm
d. Manual Initiation	4, 5	1 ^(a)	E	SR 3.3.5.2.3	NA
2. LPCI B and LPCI C Subsystems					
a. Reactor Vessel Pressure - Low (Injection Permissive)	4, 5	3 ^(a)	C	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 452 psig and ≤ 534 psig
b. LPCI Pump B and LPCI Pump C Discharge Flow - Low (Bypass)	4, 5	1 per pump ^(a)	E	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 1133 gpm
c. Manual Initiation	4, 5	1 ^(a)	E	SR 3.3.5.2.3	NA

(continued)

(a) Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.2, "Reactor Pressure Vessel (RPV) Water Inventory Control."

Table 3.3.5.2-1 (page 2 of 2)
RPV Water Inventory Control Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER FUNCTION	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
3. High Pressure Core Spray (HPCS) System					
a. Condensate Storage Tank Level - Low	4 ^(b) , 5 ^(b)	1 ^(a)	D	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 4.7 ft
b. HPCS Pump Discharge Pressure - High (Bypass)	4, 5	1 ^(a)	E	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 108 psig and ≤ 1282 psig
c. HPCS System Flow Rate - Low (Bypass)	4, 5	1 ^(a)	E	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 1124 gpm and ≤ 1327 gpm
4. RHR System Isolation					
a. Reactor Vessel Water Level - Low, Level 3	(c)	2 in one trip system	B	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ 10.8 inches
5. Reactor Water Cleanup (RWCU) System Isolation					
a. Reactor Vessel Water Level - Low, Level 2	(c)	2 in one trip system	B	SR 3.3.5.2.1 SR 3.3.5.2.2	≥ -43.8 inches

- (a) Associated with an ECCS subsystem required to be OPERABLE by LCO 3.5.2, "Reactor Pressure Vessel (RPV) Water Inventory Control."
- (b) When HPCS is OPERABLE for compliance with LCO 3.5.2, "Reactor Pressure Vessel (RPV) Water Inventory Control," and aligned to the condensate storage tank.
- (c) When automatic isolation of the associated penetration flow path(s) is credited in calculating DRAIN TIME.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.5.2.3 Verify, for the required High Pressure Core Spray (HPCS) System, the:</p> <p> a. Suppression pool water level is \geq 12 ft 8 inches; or</p> <p> b. Condensate storage tank water level is \geq 18 ft.</p>	12 hours
<p>SR 3.5.2.4 Verify, for the required ECCS injection/ spray subsystem, locations susceptible to gas accumulation are sufficiently filled with water.</p>	31 days
<p>SR 3.5.2.5 -----NOTE-----</p> <p> Not required to be met for system vent flow paths opened under administrative control.</p> <p> -----</p> <p> Verify, for the required ECCS injection/spray subsystem, each 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)

Attachment 3 to GNRO-2018/00051

(Correct Technical Specification Bases (For Information Purposes Only)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.5.2.5 (continued)

initiation signal is allowed to be in a nonaccident position provided the valve will automatically reposition in the proper stroke time. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of potentially being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves. The 31 day Frequency is appropriate because the valves are operated under procedural control and the probability of their being mispositioned during this time period is low.

In MODES 4 and 5, the RHR System may operate in the shutdown cooling mode, or be aligned to allow alternate means to remove decay heat and sensible heat from the reactor. Therefore, RHR valves that are required for LPCI subsystem operation may be aligned for decay heat removal. One LPCI subsystem of the RHR System may be considered OPERABLE for the ECCS function if all the required valves in the LPCI flow path can be manually realigned (remote or local) to allow injection into the RPV and the system is not otherwise inoperable. This will ensure adequate core cooling if an inadvertent vessel draindown should occur.

The Surveillance is modified by a Note which exempts system vent flow paths opened under administrative control. The administrative control should be proceduralized and include stationing a dedicated individual at the system vent flow path who is in continuous communication with the operators in the control room. This individual will have a method to rapidly close the system vent flow path if directed.

SR 3.5.2.6

Verifying that the required ECCS injection/spray subsystem can be manually started and operate for at least 10 minutes demonstrates that the subsystem is available to mitigate a draining event. Testing the ECCS injection/spray subsystem through the test return line is necessary to avoid overfilling the refueling cavity. The minimum operating time of 10 minutes was based on engineering judgement. The performance frequency of 92 days is consistent with similar at-power testing required by SR 3.5.1.7.

SR 3.5.2.7

Verifying that each valve credited for automatically isolating a penetration flow path actuates to the isolation position on an actual or simulated RPV water level isolation signal is required to prevent RPV water inventory from dropping below the TAF should an unexpected draining event occur. The 24 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown these components usually pass the Surveillance when performed at the 24