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GNRO-2012/00024

April 18, 2012

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: Supplemental Information
Extended Power Uprate
Grand Gulf Nuclear Station, Unit 1
Docket No. 50-416
License No. NPF-29

REFERENCES:
1. Entergy Operations, Inc. letter to the NRC (GNRO-2010/00056), *License Amendment Request - Extended Power Uprate*, September 8, 2010 (ADAMS Accession No. ML102660403)
2. NRC letter to Entergy Operations, Inc. dated March 28, 2012, Grand Gulf Nuclear Station, Unit 1 – Issuance of Amendment Re: Power Range Neutron Monitoring System Replacement (TAC NO. ME2531) (Amendment 188)

Dear Sir or Madam:

Entergy submitted a license amendment request (LAR) for an extended power uprate (EPU) for Grand Gulf Nuclear Station, Unit 1 (GGNS) in Reference 1. The mark-up of the Technical Specification (TS) pages included in the EPU LAR was based on the then current GGNS TSs and acknowledged that certain pages were affected by changes addressed in the proposed GGNS Power Range Neutron Monitoring System (PRNMS) LAR, which was under review at the time. Based on the recent issuance of Amendment 188 for the PRNMS (Reference 2), an update of the EPU TS mark-up for certain pages affected by the PRNMS LAR is required. Attachment 1 provides the revised marked up pages.

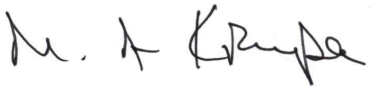
This is an administrative change. Based on the approved PRNMS LAR, the revised EPU TS mark-up reflects the re-alignment of text on certain pages, includes a revision to the page numbering associated with TS Table 3.3.1.1-1, adds the title on the page 2 of Table 3.3.1.1-1, and corrects a typographical error in Function 1.a., “Neutron Flux C High” of Table 3.3.1.1-1 replacing “C” with a hyphen. No changes to the technical content originally proposed in the EPU LAR TS mark-ups are proposed.

No change is needed to the no significant hazards consideration included in the initial LAR (Reference 1) as a result of the administrative revision to certain pages of the TS mark-up. There are no new commitments in this letter.

If you have any questions or require additional information, please contact Jerry Burford at 601-368-5755.

I declare under penalty of perjury that the foregoing is true and correct. Executed on April 18, 2012.

Sincerely,



MAK/FGB

Attachments:
1. Revised Technical Specification Changes (Mark-up)

cc: Mr. Elmo E. Collins, Jr.
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U. S. Nuclear Regulatory Commission
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NRC Senior Resident Inspector
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U. S. Nuclear Regulatory Commission
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Attachment 1

GNRO-2012/00024

Grand Gulf Nuclear Station Extended Power Uprate

Revised Technical Specification Changes (Mark-up)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more Functions with RPS trip capability not maintained.	C.1 Restore RPS trip capability.	1 hour
D. Required Action and associated Completion Time of Condition A, B, or C not met.	D.1 Enter the Condition referenced in Table 3.3.1.1-1 for the channel.	Immediately
E. As required by Required Action D.1 and referenced in Table 3.3.1.1-1.	E.1 Reduce THERMAL POWER to < ~~40%~~ 35.4% RTP.	4 hours
F. As required by Required Action D.1 and referenced in Table 3.3.1.1-1.	F.1 Reduce THERMAL POWER to < ~~25%~~ 21.8% RTP.	4 hours
G. As required by Required Action D.1 and referenced in Table 3.3.1.1-1.	G.1 Be in MODE 2.	6 hours
H. As required by Required Action D.1 and referenced in Table 3.3.1.1-1.	H.1 Be in MODE 3.	12 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
I. As required by Required Action D.1 and referenced in Table 3.3.1.1-1.	I.1	Initiate action to fully insert all insertable control rods in core cells containing one or more fuel assemblies.	Immediately
J. As required by Required Action D.1 and referenced in Table 3.3.1.1-1.	J.1	Initiate alternate method to detect and suppress thermal hydraulic instability oscillations.	12 hours
	AND		
	J. 2	---------- NOTE ---------- LCO 3.0.4 is not applicable. ----------	
		Restore required channels to OPERABLE.	120 days
K. Required Action and associated Completion Time of Condition J not met.	K.1	Reduce THERMAL POWER to < ~~24%~~ RTP. 21%	4 hour

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.1.20	----------NOTE---------- 1. For Function 2.a, not required to be performed when entering MODE 2 from MODE 1 until 12 hours after entering MODE 2. 2. For Functions 2.a, 2.b, and 2.c, the APRM/OPRM channels and the 2-Out-Of-4 Voter channels are included in the CHANNEL FUNCTIONAL TEST. 3. For Functions 2.d and 2.f, the APRM/OPRM channels and the 2-Out-Of-4 Voter channels plus the flow input function, excluding the flow transmitters, are included in the CHANNEL FUNCTIONAL TEST. ---------- Perform CHANNEL FUNCTIONAL TEST.	184 days
SR 3.3.1.1.21	Perform LOGIC SYSTEM FUNCTIONAL TEST.	24 months
SR 3.3.1.1.22	----------NOTE---------- For Function 2.e, “n” equals 8 channels for the purpose of determining the STAGGERED TEST BASIS Frequency. Testing APRM and OPRM outputs shall alternate. ---------- Verify the RPS RESPONSE TIME is within limits.	24 months on a STAGGERED TEST BASIS
SR 3.3.1.1.23	Verify OPRM is not bypassed when APRM Simulated Thermal Power is greater than or equal to ~~29%~~ 26% RTP and recirculation drive flow is less than ~~60%~~ of rated recirculation drive flow.	24 months

Table 3.3.1.1-1 (page 1 of ~~3~~ 4)
Reactor Protection System Instrumentation

	FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION D.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1.	Intermediate Range Monitors					
	a. Neutron Flux ~~C~~ - High	2	3	H	SR 3.3.1.1.1 SR 3.3.1.1.3 SR 3.3.1.1.12 SR 3.3.1.1.13	≤ 122/125 divisions of full scale
		5(a)	3	I	SR 3.3.1.1.1 SR 3.3.1.1.4 SR 3.3.1.1.12 SR 3.3.1.1.13	≤ 122/125 divisions of full scale
	b. Inop	2	3	H	SR 3.3.1.1.3 SR 3.3.1.1.13	NA
		5(a)	3	I	SR 3.3.1.1.4 SR 3.3.1.1.13	NA
2.	Average Power Range Monitors					
	a. Neutron Flux — High, Setdown	2	3(c)	H	SR 3.3.1.1.7 SR 3.3.1.1.10(d)(e) SR 3.3.1.1.19 SR 3.3.1.1.20	≤ 20% RTP
	b. Fixed Neutron Flux — High	1	3(c)	G	SR 3.3.1.1.2 SR 3.3.1.1.7 SR 3.3.1.1.10(d)(e) SR 3.3.1.1.19 SR 3.3.1.1.20	≤ ~~120%~~ 119.3% RTP
	c. Inop	1,2	3(c)	H	SR 3.3.1.1.20	NA
	d. Flow Biased Simulated Thermal Power - High	1	3(c)	G	SR 3.3.1.1.2 SR 3.3.1.1.7 SR 3.3.1.1.10(d)(e) SR 3.3.1.1.17 SR 3.3.1.1.19 SR 3.3.1.1.20	(b)
	e. 2-Out-Of-4 Voter	1,2	2	H	SR 3.3.1.1.19 SR 3.3.1.1.20 SR 3.3.1.1.21 SR 3.3.1.1.22	NA
	f. OPRM Upscale	≥ ~~24%~~ 21% RTP	3(c)	J	SR 3.3.1.1.7 SR 3.3.1.1.10(d)(e) SR 3.3.1.1.19 SR 3.3.1.1.20 SR 3.3.1.1.23	(f)

(continued)

(a) With any control rod withdrawn from a core cell containing one or more fuel assemblies.

0.58W + 59.1% RTP

(b) Two-Loop Operation ~~0.65W + 62.9% RTP~~ and ≤ 113% RTP
Single–Loop Operation ~~0.65W + 42.3% RTP~~

0.58W + 37.4% RTP

(c) Each channel provides inputs to both trip systems.

(d) If the as-found channel setpoint is outside its pre-defined as-found tolerance, then the channel shall be evaluated to verify that it is functioning as required before returning the channel to service.

(e) The instrument channel setpoint shall be reset to a value that is within the as-left tolerance around the Nominal Trip Setpoint (NTSP) at the completion of the surveillance; otherwise, the channel shall be declared inoperable. Setpoints more conservative than the NTSP are acceptable provided the as-found and as-left tolerances apply to the actual setpoint implemented in the Surveillance procedures to confirm channel performance. The NTSP and the methodologies used to determine the as-found and as-left tolerances are specified in the Technical Requirements Manual.

(f) The setpoint for the OPRM Upscale Period-Based Detection algorithm is specified in the COLR.

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Table 3.3.1.1-1 (page ~~2 of 3~~)
Reactor Protection System Instrumentation

	FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION D.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
3.	Reactor Vessel Steam Dome Pressure — High	1,2	2	H	SR 3.3.1.1.1 SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.15	≤ 1079.7 psig
4.	Reactor Vessel Water Level — Low, Level 3	1,2	2	H	SR 3.3.1.1.1 SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.15	≥ 10.8 inches
5.	Reactor Vessel Water Level — High, Level 8	≥ ~~25%~~ 21.8% RTP	2	F	SR 3.3.1.1.1 SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.15	≤ 54.1 inches
6.	Main Steam Isolation Valve — Closure	1	8	G	SR 3.3.1.1.8 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.15	≤ 7% closed
7.	Drywell Pressure — High	1,2	2	H	SR 3.3.1.1.1 SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.12 SR 3.3.1.1.13	≤ 1.43 psig
8.	Scram Discharge Volume Water Level — High					
	a. Transmitter/Trip Unit	1,2	2	H	SR 3.3.1.1.1 SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.12 SR 3.3.1.1.13	≤ 63% of full scale
		5(a)	2	I	SR 3.3.1.1.1 SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.12 SR 3.3.1.1.13	≤ 63% of full scale
	b. Float Switch	1,2	2	H	SR 3.3.1.1.8 SR 3.3.1.1.12 SR 3.3.1.1.13	≤ 65 inches
		5(a)	2	I	SR 3.3.1.1.8 SR 3.3.1.1.12 SR 3.3.1.1.13	≤ 65 inches

(continued)

(a) With any control rod withdrawn from a core cell containing one or more fuel assemblies.

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Table 3.3.1.1-1 (page ~~3 of 3~~)
Reactor Protection System Instrumentation

	FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION D.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
9.	Turbine Stop Valve Closure, Trip Oil Pressure — Low	≥ ~~40%~~ 35.4% RTP	4	E	SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.14 SR 3.3.1.1.15	≥ 37 psig
10.	Turbine Control Valve Fast Closure, Trip Oil Pressure — Low	≥ ~~40%~~ 35.4% RTP	2	E	SR 3.3.1.1.8 SR 3.3.1.1.9 SR 3.3.1.1.12 SR 3.3.1.1.13 SR 3.3.1.1.14 SR 3.3.1.1.15	≥ 42 psig
11.	Reactor Mode Switch — Shutdown Position	1,2	2	H	SR 3.3.1.1.11 SR 3.3.1.1.13	NA
		5(a)	2	I	SR 3.3.1.1.11 SR 3.3.1.1.13	NA
12.	Manual Scram	1,2	2	H	SR 3.3.1.1.4 SR 3.3.1.1.13	NA
		5(a)	2	I	SR 3.3.1.1.4 SR 3.3.1.1.13	NA

(a) With any control rod withdrawn from a core cell containing one or more fuel assemblies.