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10CFR50.73

GNRO-2019/00035

August 7, 2019

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

SUBJECT:

Supplemental Licensee Event Report 2018-001-01, Reactor Manual Shutdown due to Turbine Pressure Control Valve Position Changes Grand Gulf Nuclear Station, Unit 1 Docket No. 50-416 License No. NPF-29

Dear Sir or Madam:

Attached is Supplemental Licensee Event Report 2018-001-01, Reactor Manual Shutdown due to Turbine Pressure Control Valve Changes. This report is being submitted in accordance with 10CFR50.73(a)(2)(iv)(A) for any event or condition that resulted in a manual or automatic actuation of any of the systems listed in 10CFR50.73(a)(2)(iv)(B).

This letter contains no new commitments. If you have any questions or require additional information, please contact Jim Shaw at 601-437-2103.

Sincerely,

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Eric A. Larson EAL/rtw

Attachment: Supplemental Licensee Event Report 2018-001-01

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NRC Region IV – Regional Administrator NRC Senior Resident Inspector, Grand Gulf Nuclear Station NRR Project Manager Attachment

Supplemental Licensee Event Report 2018-001-01

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U.S. NUCLEAR REGULATORY COMMISSION							APPROVED BY	OMB: NO. 3150	D-0104 E	XPIRES	: 03/31/2020		
(04-2018) LICENSEE EVENT REPORT (LER) (See Page 2 for required number of digits/characters for each I (See NUREG-1022, R.3 for instruction and guidance for completing http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022							this form	Reported lessons lea industry. Send comm (T-2 F43), U.S. Nucle to Infocollects.Resoun Regulatory Affairs, Washington, DC 205 display a currently val	response to comply wi rned are incorporated ents regarding burden ar Regulatory Commiss ce@nrc.gov, and to NEOB-10202, (3150-0 03. If a means used id OMB control numbe	into the licensir estimate to the sion, Washington, the Desk Office 104), Office of to impose an ini- r, the NRC may r	ng process Information DC 20555-0 , Office of Manageme ormation co	and fed back to Services Branch 0001, or by e-mail Information and ent and Budget, ollection does not	
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Grand Gulf Nucl	ear Station. Unit 1	05000-416	• • •	YEAR	SEQUENTIAL NUMBER	REV NO.	

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NARRATIVE

A. PLANT CONDITIONS PRIOR TO THE EVENT

Grand Gulf Nuclear Station (GGNS) Unit 1 was operating at 91% power in Mode 1 and increasing power. There were no Structures, Systems, or Components that were inoperable that contributed to the event.

B. DESCRIPTION

At 1739 hours CST on January 30, 2018, while the plant was operating at approximately 91% reactor power/1322 megawatts electric power (mwe), operators observed a 20 mwe electrical oscillation (peak to peak) with a periodicity of approximately 3 seconds. Concurrent oscillations of between 3 and 5% were noted on all four turbine control valves.

At 1822 hours on January 30, 2018, operators performed a manual shutdown of the reactor by moving the reactor mode switch from RUN to SHUTDOWN. Upon reactor shutdown all systems performed as designed and no subsequent safety system actuations occurred.

C. REPORTABILITY

This report is made pursuant to 10CFR50.73(a)(2)(iv)(A) for any event or condition that resulted in a manual or automatic actuation of any of the systems listed in 10CFR50.73(a)(2)(iv)(B). This event was reported under 10CFR50.72(b)(3)(iv)(B)(1) in ENS notification 53115.

D. CAUSE

The cause of the reactor scram was a manual shutdown of the reactor due to operator concerns about main generator output variations, caused by unanticipated turbine pressure control valve (TCV) motion.

The turbine pressure control system controls turbine speed, operates the steam bypass system to keep reactor pressure within limits and avoid transients, and controls main turbine inlet pressure.

The unanticipated TCV motion was caused by an inappropriately high gain setting in the main steam line resonance compensator circuit. Investigation revealed that the high gain setting of the Resonance Compensator circuitry occurred because the work order steps used to calibrate the card when it was installed in June of 2016 were incorrect. The incorrect setting did not create an error of such magnitude as to be automatically excluded from the circuit internal diagnostics, but did create enough compensatory response from the TCV to be discernable by the operating crew.

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NARRATIVE

E. CORRECTIVE ACTIONS

Grand Gulf Nuclear Station, Unit 1

The following corrective actions are completed or planned.

Completed:

• The main steam line resonance compensator circuit was recalibrated.

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• Work instructions to setup steam line compensator were revised to provide corrected work steps.

F. SAFETY SIGNIFICANCE

The safety significance of this event is low because all systems operated as designed and the TCV changes did not challenge any safety parameters. The manual scram was performed as a conservative measure. There were no actual nuclear safety consequences or radiological consequences during the event.

G. PREVIOUS SIMILAR EVENTS

Entergy conducted a three-year review of the relevant licensee event reports and determined that there was one similar known event reported as GGNS Licensee Event Report 2016-05-00 "Automatic Reactor SCRAM." The failure in that event was a failed amplifier card, which is different from this event which was an incorrect potentiometer setting. Therefore, the corrective actions for the previous event would not have prevented this event.

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