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Docket Nos. 50-425

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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

**VOGTLE ELECTRIC GENERATING PLANT
LICENSEE EVENT REPORT 2-2002-002
STEAM GENERATOR LEVEL CONTROL
PROBLEMS LEAD TO MANUAL REACTOR TRIP**

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73, Southern Nuclear Operating Company hereby submits a Vogtle Electric Generating Plant licensee event report for a condition that occurred on November 13, 2002.

Please contact this office if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Jeffrey T. Gasser". The signature is written in a cursive style with a long, sweeping underline.

Jeffrey T. Gasser

JTG/NJS

Attachment: LER 2-2002-002

cc: Southern Nuclear Operating Company
Mr. G. R. Frederick
Mr. M. Sheibani
Document Services – RTYPE CVC7000

U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator
Mr. F. Rinaldi, Vogtle Project Manager, NRR
Mr. J. Zeiler, Senior Resident Inspector, Vogtle

IE 22

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 50 hrs Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503 If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to,

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4 TITLE
STEAM GENERATOR LEVEL CONTROL PROBLEMS LEAD TO MANUAL REACTOR TRIP

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER(S)
11	13	2002	2002	002	00					05000
									FACILITY NAME	DOCKET NUMBER(S)
										05000

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5 : (Check all that apply)									
10. POWER LEVEL 21	20 2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50 73(a)(2)(ix)(A)			
	20 2201(d)		20 2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)			
	20 2203(a)(1)		50.36(c)(1)(i)(A)		X 50.73(a)(2)(iv)(A)		73 71(a)(4)			
	20 2203(a)(2)(i)		50 36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)		73 71(a)(5)			
	20-2203(a)(2)(ii)		50 36(c)(2)		50.73(a)(2)(v)(B)		OTHER			
	20-2203(a)(2)(iii)		50 46(a)(3)(ii)		50.73(a)(2)(v)(C)		Specify in Abstract below or in NRC Form 366A			
	20 2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)					
	20.2203(a)(2)(v)		50.73(a)(2)(i)(B)		50.73(a)(2)(vii)					
20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)						
20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50 73(a)(2)(viii)(B)						

12. LICENSEE CONTACT FOR THIS LER

NAME Mehdi Sheibani, Nuclear Safety and Compliance	TELEPHONE NUMBER (Include Area Code) (706) 826-3209
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13 COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED				15. EXPECTED SUBMISSION DATE		
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO			MONTH	DAY	YEAR

16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On November 13, 2002, power ascension was in progress following a refueling outage. At approximately 0354 EST, the licensed operator designated as the steam generator water level control operator (SGWLCO) began to transfer steam generator feedwater control from the bypass feedwater regulating valves (BFRVs) to the main feedwater system regulating valves (MFRVs). A series of water level transients commenced in each of the four steam generators (SGs) that culminated in the SG #3 water level increasing to its Hi-Hi level setpoint at 0405 EST. The main feedwater system isolated, the main feedwater pump tripped, and the auxiliary feedwater system actuated, as designed. As SG water levels decreased to their low level setpoints, a manual reactor trip was initiated at 0405 EST, and SG water levels were stabilized in Mode 3 (hot standby).

The root cause of this event was the failure of the SGWLCO to follow procedure by having all BFRVs and MFRVs open simultaneously. A secondary cause of this event was less than adequate supervisory oversight by the Unit Shift Supervisor in verifying procedure compliance during feedwater control operations. The policy for implementing unit operating procedures is being reviewed to determine if the level of flexibility and/or interpretation is appropriate. Expectations of command and control issues are also being evaluated.

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

A. REQUIREMENT FOR REPORT

This event is reportable per 10 CFR 50.73 (a)(2)(iv) because unplanned engineered safety feature and unplanned reactor protection system actuations occurred.

B. UNIT STATUS AT TIME OF EVENT

At the time of this event, Unit 2 was in power ascension in Mode 1 (power operations) at 21 percent of rated thermal power. The main feedwater system was in service to all four steam generators feeding through the bypass feedwater regulating valves (BFRVs). Personnel were making preparations to synchronize the generator to the grid. There was no inoperable equipment that contributed to the occurrence of this event.

C. DESCRIPTION OF EVENT

On November 13, 2002, power ascension was in progress following a refueling outage. At approximately 0354 EST, the licensed operator designated as the steam generator water level control operator (SGWLCO) began to transfer steam generator feedwater control from the BFRVs to the main feedwater system regulating valves (MFRVs). The SGWLCO incorrectly implemented the procedure for this transfer of control, initiating a series of water level transients in each of the four steam generators (SGs). In response, the SGWLCO closed and re-opened the MFRVs and decreased and increased the main feedwater pump speed. At 0403 EST, the last of the BFRVs was closed. At 0404 EST, the SG #3 water level was rising rapidly and MFRV #3 was closed. However, at 0405 EST, the SG #3 water level increased to greater than the 86% Hi-Hi level setpoint, initiating a main feedwater system isolation, a main feedwater pump trip, and an auxiliary feedwater system (AFW) actuation, as designed. As SG water levels decreased to their low level setpoints, a manual reactor trip was initiated at 0405 EST, and SG water levels were stabilized in Mode 3 (hot standby).

D. CAUSE OF EVENT

The root cause of this event was the failure of the SGWLCO to follow procedure 12004-C, "Power Operation (Mode 1)." Procedure step 4.1.26 requires that feedwater control from BFRVs to MFRVs be transferred one loop at a time. The SGWLCO interpreted this to allow all BFRVs and MFRVs to be opened simultaneously and under manual control prior to closing the four BFRVs one at a time. Also contributing to the difficulty in controlling water levels was the

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

SGWLCO's use of the main feedwater pump speed to control water input. At a given power level, pump speed should remain constant. These factors resulted in the inability to adequately control SG water levels.

A secondary cause of this event was less than adequate supervisory oversight by the Unit Shift Supervisor (USS) in verifying procedure compliance during feedwater control operations.

There were no characteristics of the work location that contributed to the occurrence of these errors by the control room personnel involved.

E. ANALYSIS OF EVENT

The main feedwater system isolated, the operating main feedwater pump tripped, and the auxiliary feedwater system actuated as designed following the receipt of the SG high water level signal. With the main feedwater system isolated, the main feedwater pump tripped, and reactor power at 21%, control room personnel acted appropriately to manually trip the reactor and prevent a challenge to the automatic trip actuation circuitry. Based on these considerations, there was no adverse effect on plant safety or on the health and safety of the public as a result of this event.

This event does not represent a safety system functional failure.

F. CORRECTIVE ACTIONS

- 1) This event was reviewed with the operating crew assigned to re-start the plant and the unit was successfully returned to power.
- 2) This event will be addressed in licensed operator continuing training by March 1, 2003, emphasizing the effects of over-controlling feed flows via changes in pump speed, and the need to monitor steamflow/feedflow mismatch in this situation. Expectations of command and control issues will also be addressed.
- 3) By March 1, 2003, the Operations department will review its policy for implementing unit operating procedures to determine if the level of flexibility and/or interpretation is appropriate. Additionally, operating experience of similar events will be reviewed to determine if enhancements should be made to operating procedures.
- 4) The SGWLCO and the USS are no longer employed with Southern Nuclear Operating Company.

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

G. ADDITIONAL INFORMATION

1) Failed Components:
None

2) Previous Similar Events:
LER 50-424/2002-003 dated June 13, 2002. The corrective actions for this June 13, 2002, LER were specific for preventing a recurrence of the April 20, 2002, reactor trip. These corrective actions were not general enough to prevent the reactor trip of November 13, 2002.

3) Energy Industry Identification System Code:
Main Feedwater System – SJ
Auxiliary Feedwater System – BA