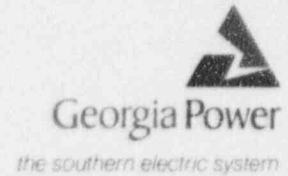


Georgia Power Company  
40 Inverness Center Parkway  
Post Office Box 1295  
Birmingham, Alabama 35201  
Telephone 205 877-7122

C. K. McCoy  
Vice President, Nuclear  
Vogtle Project



October 19, 1995

LCV-0685

Docket No. 50-424

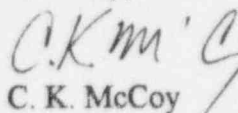
U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555

Ladies and Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT  
LICENSEE EVENT REPORT 1-95-4  
FEEDWATER PUMP SPEED CONTROL FAILURE  
RESULTS IN REACTOR OVERPOWER

In accordance with the requirements of Vogtle Electric Generating Plant Unit 1 Facility Operating License No. NPF-68, Section 2.H, Georgia Power Company (GPC) hereby submits the enclosed report associated with a violation of operating license condition Section 2.C(1). The violation occurred on September 24, 1995, when Unit 1 reactor core power level briefly rose above the maximum operating power limit.

Sincerely,

  
C. K. McCoy

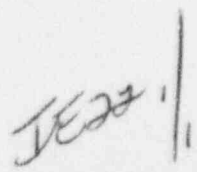
CKM/TEW/AFS  
Enclosure: LER 1-95-04

cc: Georgia Power Company  
Mr. J. B. Beasley, Jr.  
Mr. M. Sheibani  
NORMS

U. S. Nuclear Regulatory Commission  
Mr. S. D. Ebnetter, Regional Administrator  
Mr. L. L. Wheeler, Licensing Project Manager, NRR  
Mr. C. R. Ogle, Senior Resident Inspector, Vogtle

240126

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PDR ADDOCK 05000424  
S PDR



NRC FORM 366 (4-95)		U.S. NUCLEAR REGULATORY COMMISSION				APPROVED OMB NO. 3150-0104 EXPIRES: 04/30/98 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REQUIRED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.					
LICENSEE EVENT REPORT (LER)											
FACILITY NAME (1) Vogtle Electric Generating Plant - Unit 1						DOCKET NUMBER (2) 5000424		PAGE (3) 1 OF 4			
TITLE (4) FEEDWATER PUMP SPEED CONTROL FAILURE RESULTS IN REACTOR OVERPOWER											
EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER(S)	
09	24	95	95	004	00	10	19	95		05000	
OPERATING MODE (9) 1			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
POWER LEVEL (10) 100			20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)		
			20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)		
			20.2203(a)(2)(i)		20.2033(a)(3)(ii)		50.73(a)(2)(iii)		73.71		
			20.2203(a)(2)(ii)		20.2033(c)(1)		50.73(a)(2)(iv)		X OTHER (Specify in Abstract below or in NRC Form 366A)		
			20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		License Violation		
			20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vi)				
LICENSEE CONTACT FOR THIS LER (12)											
NAME Mehdi Sheibani, Nuclear Safety and Compliance						TELEPHONE NUMBER (include area code) 706 826-1320					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
B	S	J	S	C	W120	Y					
SUPPLEMENTAL REPORT EXPECTED (14)						EXPECTED SUBMISSION DATE (15)		MONTH		DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)						X NO					
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-space typewritten lines) (16)											
<p>On September 24, 1995, at 1756 EDT, the "A" main feedwater pump (MFPA) speed controller malfunctioned, causing the pump to slowdown and speedup erratically. The reactor operator (RO) took manual control but was unable to stop the oscillations. He then switched MFPA speed control to an alternate controller which resulted in the stabilization of feedwater flow. The balance of plant operator (BOP) restored steam generator (SG) water levels to normal and MFPA was locally verified to be operating properly.</p> <p>Based on computer information of the secondary plant heat balance, reactor thermal power peaked at 3639.5 MWt, or approximately 102.1 percent. This represented a violation of the plant's operating license requirements.</p> <p>The cause of this event is a failure of the speed controller's tracker driver circuit card. A failure analysis of the card was performed by technicians who found a microchip with a malfunctioning not/and (NAND) gate. The failed circuit card was replaced and a newer version of the card is scheduled to be installed during the next refueling outages for both main feedwater pumps in Unit 1 and Unit 2.</p>											

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL YEAR	REVISION NUMBER			
Vogtle Electric Generating Plant - Unit 1	05000424	95	-004	-00	2	OF	4

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

## A. REQUIREMENT FOR REPORT

This report is required per the Vogtle Electric Generating Plant Unit 1 Facility Operating License No. NPF-68, Section 2.H, which states that violations of Section 2.C of the license are reportable by both 24-hour notification and a 30-day report. Section 2.C(1) stipulates that the licensee shall not operate with reactor core power levels in excess of 3565 megawatts thermal (MWt). On September 24, 1995, the reactor core power level briefly rose to 3639.5 MWt, or approximately 102.1 percent based on plant computer indication of the secondary plant heat balance. Although neither the power range nuclear instruments nor the reactor coolant temperature data retrieved after the event from the plant computer indicated that 102 percent power was exceeded, this report is conservatively being made based on the one indication of reactor core power that did exceed 102% percent.

## B. UNIT STATUS AT TIME OF EVENT

At the time of this event, Unit 1 had been operating at 100 percent of rated thermal power. Other than that described herein, there was no inoperable equipment that contributed to the occurrence of this event.

## C. DESCRIPTION OF EVENT

On September 24, 1995, at 1756 EDT, the "A" main feedwater pump (MFPA) speed controller malfunctioned, causing the pump to slowdown and speedup erratically. The reactor operator (RO) took manual control but was unable to stop the oscillations. He then switched MFPA speed control to an alternate controller which resulted in the stabilization of feedwater flow by 1802 EDT. The balance of plant operator (BOP) restored steam generator (SG) water levels to normal and MFPA was locally verified to be operating properly.

Based on computer information of the secondary plant heat balance, reactor thermal power peaked at 3639.5 MWt, or approximately 102.1 percent. On September 25, 1995, at 1649 EDT, the NRC Operations Center was notified of this event.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL YEAR	REVISION NUMBER			
Vogtle Electric Generating Plant - Unit 1	05000424	95	-004	-00	3	OF	4

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

## D. CAUSE OF EVENT

The cause of this event is a failure of the speed controller's tracker driver circuit card. A failure analysis of the card was performed by technicians who found a microchip with a malfunctioning not/and (NAND) gate.

The mode of the circuit card failure led to erratic output from the speed controller that resulted in oscillations in MFPA. This led to rising water level in the SGs and a lowering of the reactor coolant system temperature. As a result, the unit experienced an increase in reactor power due to the negative moderator temperature coefficient of reactivity.

## E. ANALYSIS OF EVENT

Operators responded properly to stabilize feedwater flows and SG water levels. These actions prevented a further water level transient that could have led to a reactor trip. Had reactor power risen to 109 percent, an automatic reactor trip would have occurred on high neutron flux. In addition, main feedwater isolation would have occurred had SG water levels risen to the high-high level. This would have been followed by an automatic reactor trip due to a trip of both main feedwater pumps and a turbine trip. Based on these considerations, there was no adverse affect to plant safety or to the health and safety of the public as a result of this event.

## F. CORRECTIVE ACTIONS

- 1) The failed tracker driver circuit card was replaced.
- 2) A newer version of the circuit card is scheduled to be installed during the next refueling outages for both main feedwater pumps in Unit 1 and Unit 2.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL YEAR	REVISION NUMBER			
Vogtle Electric Generating Plant - Unit 1	0 5 0 0 0 4 2 4	9 5	- 0 0 4	- 0 0	4	OF	4

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

## G. ADDITIONAL INFORMATION

## 1) Failed Components:

Speed controller tracker driver card manufactured by Westinghouse Electric Corp.  
Part No. 2838A45G01

## 2) Previous Similar Events:

LER 50-424/1992-008, dated September 25, 1992.

This LER describes a speed controller tracker driver card failure that led to a reactor trip. It was determined to be an isolated occurrence and no actions were taken to prevent recurrence.

## 3) Energy Industry Identification System Code:

Main Feedwater System - SJ  
Reactor Core System - AC  
Reactor Coolant System - AB