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C. K. McCoy  
Vice President, Nuclear  
Vogtle Project



Georgia Power  
the southern electric system  
LCV-0818

May 10, 1996

Docket Nos. 50-424

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

Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT  
LICENSEE EVENT REPORT  
ACCUMULATOR CROSSTIE COULD HAVE PREVENTED  
FUFILLMENT OF A SAFETY FUNCTION

In accordance with the requirements of 10 CFR 50.73, Georgia Power Company (GPC) hereby submits the enclosed report associated with an event which was discovered on April 25, 1996.

Sincerely,

*C.K. McCoy*  
C. K. McCoy

CKM/HWM/gmb

Enclosure: LER-1-96-03

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

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**LICENSEE EVENT REPORT (LER)**

PAGE 13

5	0	0	0	4	2	4	1	OF		3
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## ACCUMULATOR CROSSTIE COULD HAVE PREVENTED FULFILLMENT OF A SAFETY FUNCTION

LICENSEE CONTACT FOR THIS LER (12)

TELEPHONE NUMBER (include area code)

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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

SUPPLEMENTAL REPORT EXPECTED (14)

EXPECTED  
SUBMISSION  
DATE (15)

MONTH	DAY	YEAR

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

On April 25, 1996, a review of nuclear network entries and vendor information determined that plant procedures allowed a condition that alone could prevent the fulfillment of the safety function of a system needed to mitigate the consequences of an accident.

Plant procedures allowed the nitrogen supply for the emergency core cooling system (ECCS) accumulators to be cross connected to equalize pressure and this has been performed in the past. Under large break LOCA conditions, cross connection of the nitrogen supply for the accumulators could result in the pressure from two connected accumulators being bled off thru the faulted reactor coolant system loop. Plant procedures have been changed to limit the use of cross connections.

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	96	- 003	- 00	2	OF	3

TEXT (If more space is required, use additional copies of NRC Form 365A)(17)

## A. REQUIREMENT FOR REPORT

This report is required per 10 CFR 50.73 (a)(2)(v)(D) because a condition has existed in the past that alone could have prevented the fulfillment of the safety function of a system needed to mitigate the consequences of an accident.

## B. UNIT STATUS AT TIME OF EVENT

At the time of the discovery of this condition, Unit 1 was operating in Mode 1 (power operation) at 95 percent of rated thermal power (RTP). Unit 2 was operating in Mode 1 at 100 percent RTP. There was no inoperable equipment that contributed to the occurrence of this event and the accumulators were not cross connected.

## C. DESCRIPTION OF EVENT

On April 25, 1996, at 1350 EDT, a review of nuclear network entries and vendor information determined that plant procedures allowed a condition that alone could prevent the fulfillment of the safety function of a system needed to mitigate the consequences of an accident. The NRC Operations Center was contacted at 1613 EDT and advised of the determination.

Plant procedures allowed the nitrogen supply for the emergency core cooling system (ECCS) accumulators to be cross connected to equalize pressure and this has been performed in the past. Under large break LOCA conditions, cross connection of the nitrogen supply for the accumulators could result in the pressure from two connected accumulators being bled off thru the faulted reactor coolant system loop. This would result in a reduction in the amount of water injected from the accumulators during the initial stages of a large break LOCA.

## D. CAUSE OF EVENT

The cause of this condition is inadequate procedures that allowed the concurrent opening of more than one accumulator nitrogen fill valve. This was found to be the most efficient method of equalizing pressure across accumulators employing the use of the common nitrogen header.

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## E. ANALYSIS OF EVENT

The accumulators are four pressure vessels filled with borated water and pressurized with nitrogen gas through a common gas header. In an emergency, when the reactor coolant system (RCS) pressure drops below the accumulator tank pressure, the accumulators discharge into the RCS cold legs, providing rapid core cooling. In the event of a large break LOCA, it is assumed that the contents of one accumulator will be lost through the break opening and the contents of the other three accumulators will provide core cooling. However, if two accumulators are concurrently open to the common nitrogen header and one of these is connected to the faulted RCS loop, part or all of the other accumulator's contents might also be unavailable for core cooling. Under these assumptions, the contents of two instead of three accumulators would be injected into the reactor.

Nonetheless, the incident rate for a large break LOCA is postulated to be only  $3.42 \text{ E-8}$  per hour and the occurrence rate of cross connecting accumulators is on the order of several minutes per month. Therefore, the likelihood of a large break LOCA occurring while the accumulators are connected is minimal. Furthermore, no such event has occurred during the life of the plant. Based on these considerations, there was no adverse affect on plant safety or the health and safety of the public as a result of this event.

## F. CORRECTIVE ACTIONS

Procedures 13105- 1/2, "Safety Injection System", have been changed, limiting operators to opening only one accumulator tank nitrogen fill valve at a time.

## G. ADDITIONAL INFORMATION

- 1) Failed Components:  
None
- 2) Previous Similar Events:  
None
- 3) Energy Industry Identification System Code:  
Reactor Coolant System - AB  
Safety Injection System - BJ