NRC Form 386
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
PLANT VOGTLE - UNIT 1	0 5 0 0 0 4 2 4	1 OF 0 4

TITLE (4)

EXCESSIVE VALVE WEIGHT COULD HAVE PREVENTED FULFILLMENT OF SAFETY SYSTEM FUNCTION

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 NAMES	DOCKET NUMBER(S)
0 5	0 5	8 7	8 7	0 8 1	0 0	0 4	0 5	8 9		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
1	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 0 7 5	20.405(a)(1)(i)	50.36(c)(1)	X 50.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
	20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
	20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	10CFR21

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
R. M. ODOM, NUCLEAR SAFETY COMPLIANCE MANAGER	4 0 4 8 2 6 - 3 2 0 1 1

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
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On 5-5-87, two valves supplied by Anchor Darling Valve (A/DV) on the sludge mixing recirculation line of the Refueling Water Storage Tank (RWST) were found to weigh significantly more than shown on the A/DV drawings. The initial analysis from an employee of Bechtel Power Corporation indicated that the valves weighed in excess of the seismic design capacity of their associated pipe supports and that if a line failure had occurred in the non-safety related portion of the sludge mixing line during a seismic event, the valves could have been closed and allowed the RWST water volume to be available for plant shutdown. On 3-6-89, the Project Field Engineering-Office advised plant personnel that there was an error in the application of the potential failure point and that the potential failure point was actually between the valves and the RWST. Thus, if a seismic event caused a line failure to occur, the broken line could have potentially drained the RWST to a level below minimum requirements for plant shutdown.

The cause of this condition was determined to be the failure of A/DV to advise Bechtel of a change in valve weights from those originally shown on the valve drawings and an error by a Bechtel Power employee in the initial review of this condition. Corrective actions included adding an additional pipe support and reviewing other safety related valves for weight discrepancies.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

A. REQUIREMENT FOR REPORT

This report is required per 10CFR50.73(a)(2)(v) because a condition existed that alone could have prevented the fulfillment of the safety function of a system needed to shut down the reactor and maintain it in a safe shutdown condition and to mitigate the consequences of an accident. This event did not require a four-hour report per 10CFR50.72(b)(2)(iii) because the condition had been corrected when its reportability determination was made on 3-6-89. This report is also being submitted per 10CFR21 because basic components, which included vendor information used in design and an engineering analysis, supplied to the facility contained defects which could have created a substantial safety hazard.

B. UNIT STATUS AT TIME OF EVENT

At the time the valve weights were found to be excessive on 5-5-87, Unit 1 was operating in Mode 1 (Power Operations) at 75% rated thermal power. There was no inoperable equipment which contributed to the occurrence of this event.

C. DESCRIPTION OF EVENT

On 5-5-87, as a result of a review of as-built conditions, Bechtel Power Corporation discovered that Anchor-Darling valves (1HV-10957 and 1HV-10958) on a recirculation water line; which runs from the Refueling Water Storage Tank (RWST), through the sludge mixing pump and electric circulating heater, and back to the RWST, weighed in excess of the seismic design capacity of the associated pipe supports. The initial evaluation from Bechtel was based on the probable failure point being located in the non-safety related portion of the recirculation line. If a line failure had occurred in this location, the valves could have been closed and allowed the RWST water volume to be available for plant shutdown. On 3-6-89, the Project Field Engineering-Office advised plant personnel that there was an error in the application of the potential failure point and that the potential failure point was actually between the valves and the RWST. Thus, had a line failure occurred during a seismic event, the broken line could have potentially drained the RWST to a level below minimum requirements for plant shutdown.

D. CAUSE OF EVENT

The root cause for this condition was determined to be the failure of the valve vendor (Anchor Darling Valve) to advise design engineering (Bechtel) of a change in valve weights from those originally shown on valve drawings. Additionally, there was an error in the initial analysis of this condition. The error caused Bechtel personnel to conclude that a safety concern did not exist.

E. ANALYSIS OF EVENT

Valves 1HV-10957 and 1HV-10958 are located in the recirculation water line which runs from the RWST, through the sludge mixing pump and electric circulating heater, and back to the RWST. The heater maintains a minimum water temperature of 54°F per TS 3.5.4c. These valves close upon receipt of a low water level signal from the RWST. If the pipe support had not been added on January 18,1988, the seismic piping stresses would be higher than code allowables at the nozzle end of the valve 1HV-10958 and at the elbows upstream of valve 1HV-10958. This could potentially have lead to failure of the piping between the RWST and these valves during a seismic event. Failure of this three inch pipe could have allowed the RWST water to drain to a level below the minimum requirements for plant shutdown before plant personnel could isolate it. This could result in insufficient water volume in the RWST for safety injection and containment spray system operation, should they be needed in the event of an accident. However, no seismic event occurred prior to installation of the additional pipe support, and no overstressing of piping has occurred. Based on this latter consideration, this condition had no actual adverse effect on plant safety or public health and safety.

F. CORRECTIVE ACTIONS

1. A pipe support was added on January 18, 1988 to compensate for the additional valve weight.

2. Other safety-related valves from Anchor Darling Valve, and other valve vendors, were evaluated for weight discrepancies. No weight discrepancies were found which resulted in the piping exceeding the allowable stresses.

3. Additional training on performing design reviews involving a mirror image plant will be completed by the Southern Company Services and Bechtel engineering organizations by May 31, 1989.

G. ADDITIONAL INFORMATION

1. Component Discrepancies:
   Valves manufactured by Anchor/Darling Valve Company

2. Previous Similar Events:
   None

3. Energy Industry Identification System Code:
   Safety Injection System - BQ
   Containment Spray System - BE

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the southern electric system

W. G. Hairston, III
Senior Vice President
Nuclear Operations

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April 5, 1989

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

PLANT VOGTLE - UNIT 1
NRC DOCKET 50-424
OPERATING LICENSE NPF-68
LICENSEE EVENT REPORT
EXCESS VALVE WEIGHT COULD HAVE PREVENTED
FULFILLMENT OF SAFETY SYSTEM FUNCTION

Gentlemen:

In accordance with 10 CFR 50.73 and 10 CFR 21, Georgia Power Company hereby submits the enclosed report related to an event which was discovered on March 6, 1989.

Sincerely,

W. G. Hairston, III

TEW/PAH/gm

Enclosure: LER 50-424/1987-081

xc: Georgia Power Company
Mr. P. D. Rice
Mr. C. K. McCoy
Mr. G. Bockhold, Jr
Mr. M. Sheibani
Mr. J. P. Kane
NORMS

U. S. Nuclear Regulatory Commission
Mr. S. Ebneter, Regional Administrator
Mr. J. B. Hopkins, Licensing Project Manager, NRR (2 copies)
Mr. J. F. Rogge, Senior Resident Inspector, Vogtle

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