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January 7, 1991

W. G. Hairston, III
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FLV-02392
0778

Docket Nos. 50-424
50-425

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

Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT
LICENSEE EVENT REPORT
INCORRECT CALCULATION LEADS TO EMERGENCY FILTRATION
SYSTEM INOPERABILITY

In accordance with 10 CFR 50.73, Georgia Power Company hereby submits the enclosed report related to an event which was discovered on December 12, 1990.

Sincerely,

W. G. Hairston, III
W. G. Hairston, III

WGH, III/NJS/gm

Enclosure: LER 50-424/1990-022

xc: Georgia Power Company
Mr. C. K. McCoy
Mr. W. B. Shipman
Mr. P. D. Rushton
Mr. R. M. Odom
NORMS

U. S. Nuclear Regulatory Commission
Mr. S. D. Ebnetter, Regional Administrator
Mr. D. S. Hood, Licensing Project Manager, NRR
Mr. B. R. Bonser, Senior Resident Inspector, Vogtle

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) **VOGTELE ELECTRIC GENERATING PLANT - UNIT 1** DOCKET NUMBER (2) **05000424** PAGE (3) **1** OF **3**

TITLE (4)
INCORRECT CALCULATION LEADS TO EMERGENCY FILTRATION SYSTEM INOPERABILITY

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQ NUM	REV	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
12	12	90	90	022	00	01	07	91	VEGP - UNIT 2	05000425
										05000

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR (11)

OPERATING MODE (9)	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
4				
POWER LEVEL	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
0				
	20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below)
	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)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
R. M. ODOM, NUCLEAR SAFETY AND COMPLIANCE	AREA CODE: 404, 826-3201

COMPLETE ONE LINE FOR EACH FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORT TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORT TO NRPDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

ABSTRACT (16)

As part of a routine quality assurance (QA) investigation, an auditor found a possible discrepancy in a calculation for determining filter unit electrical heater power dissipation. As a result, on 12-12-90, one train of the Unit 2 Piping Penetration Area Filtration and Exhaust System was declared inoperable and both trains of the Unit 1 system were declared inoperable, necessitating an entry into Technical Specification (TS) 3.0.3 for Unit 1.

On 12-13-90, a verbal temporary waiver of compliance from the TS requirement was received from the NRC. The request for this waiver was based on the design basis for heater operation, which is to limit the relative humidity of the air stream through the filters to 70 percent or less, in order to maintain filter efficiency. Although all measured heater dissipation values did not meet the TS requirement of 80 plus or minus 4 kW, they continued to meet the design basis requirement.

The cause of this event is the failure of the architect/engineer to consider the lowest (degraded) terminal voltage at the load when specifying the original TS requirements. Although the heaters are rated for 80 kW at 480 volts, a lower wattage would be expected at lower voltages and the TS requirement should have reflected this. A request for a TS change has been submitted.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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		YEAR	SEQ NUM	REV			
VOGTLE ELECTRIC GENERATING PLANT - UNIT 1	0 5 0 0 0 4 2 4	9 0	0 2 2	0 0	2	OF	3

TEXT

A. REQUIREMENT FOR REPORT

This report is required per 10 CFR 50.73 (a)(2)(1) because a condition prohibited by the Technical Specifications (TS) was discovered to exist. Due to inadequate surveillance test results, one train of the Unit 2 Piping Penetration Area Filtration and Exhaust System and both trains on Unit 1 were discovered to have been inoperable, and the Limiting Condition for Operation (LCO) action requirements were not met in the required time. In addition, since both Unit 1 trains were inoperable, entry into TS 3.0.3 was required.

B. UNIT STATUS AT TIME OF EVENT

At the time of the discovery of this event, Unit 1 was in Mode 4 (Hot Shutdown) at 0% rated thermal power (RTP). Unit 2 was in Mode 1 (Power Operation) at 100% RTP. Other than that described herein, there was no inoperable equipment which contributed to the occurrence of this event.

C. DESCRIPTION OF EVENT

As a part of a routine quality assurance (QA) investigation, an auditor found a possible discrepancy in a calculation for determining the power output of the Control Room Emergency Filtration System electrical heaters. A review of the calculation revealed that the heater output had not been properly corrected for voltage. When the calculations were properly adjusted for voltage, the power output for the Control Room Emergency Filtration System electrical heaters was determined to be within TS limits. However, on 12-12-90, the power output for other heaters, specifically the Piping Penetration Area Filtration and Exhaust System electrical heaters, was found to be outside of the limits of TS 4.7.7.d.4. This TS requires that the heaters dissipate 80 plus or minus 4 kW when tested in accordance with Section 14 of ANSI N510-1980.

After reperforming the calculation using the most recently obtained measured values and adjusting for voltage, it was found that only the Unit 2 Train B heaters were within this limit. The Unit 2 Train A heaters and both trains of Unit 1 heaters were found to have outputs of approximately 73 to 75 kW, which is lower than the limit of 76 kW. The Unit Shift Supervisors were advised and at 1830 CST, Unit 2 entered the TS 3.7.7 LCO Action Statement and Unit 1 entered the TS 3.0.3 and TS 3.7.7 LCO Action Statements.

On 12-13-90, a verbal temporary waiver of compliance from the requirements of TS 4.7.7.d.4 was received from the NRC. The request for this waiver was based on the design basis for heater operation, which is to limit the relative humidity of the airstream through the filters to 70 percent or less, in order to maintain filter efficiency. Calculations were performed by the architect/engineer to determine the capacity required to meet this design basis requirement. Although all heater dissipation values did not meet the TS requirement of 80 plus or minus 4 kW, they continued to meet the design basis requirement.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (5)			PAGE (3)		
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VOGTLE ELECTRIC GENERATING PLANT - UNIT 1	05000424	90	022	00	3	OF	3

TEXT

At 1639 CST, the Unit 2 Train A Piping Penetration Area Filtration and Exhaust System filter unit was returned to service and its LCO converted to an "Information Only" LCO until a formal TS change is granted. The Unit 1 Train A and B piping penetration filter units were returned to service at 1701 CST. The TS 3.0.3 LCO was terminated and the TS 3.7.7 LCO was also converted to an "Information Only" LCO until a formal TS change is granted.

D. CAUSE OF EVENT

The cause of this event is the failure of the architect/engineer to consider the nominal terminal voltage at the load when specifying the original TS requirements. Although the heaters are rated for 80 kW at 480 volts, a lower wattage would be expected at lower voltages and the TS requirement should have reflected this.

E. ANALYSIS OF EVENT

The design basis requirement to maintain the relative humidity of the airstream through the filters at 70 percent or less was met at all times. Based on this consideration, there was no adverse impact on plant safety or the health and safety of the public as a result of this event.

F. CORRECTIVE ACTION

1. A request for a TS change has been submitted which reflects the need to maintain the relative humidity of the airstream through the filters at 70 percent or less. This will be an interim change until such time as a permanent change can be implemented.
2. An engineering study has been initiated to review the heater requirements for various filter units. As a result of this study, any necessary hardware changes and changes to the TS will be determined. All changes are expected to be completed by the end of the Spring 1992 refueling outage for Unit 2 and by the end of the Spring 1993 refueling outage for Unit 1.

G. ADDITIONAL INFORMATION

1. Failed Components:

None.

2. Previous Similar Events:

None.

3. Energy Industry Identification System Code:

Piping Penetration Area Filtration and Exhaust System - VA
Control Room Emergency Filtration System - VI