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Georgia Power
the southern electric system

C. K. McCoy
Vice President, Nuclear
Vogtle Project

April 7, 1994

LCV-0330

Docket No. 50-424

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

Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT
LICENSEE EVENT REPORT
INADEQUATELY PERFORMED DIFFERENTIAL
TEMPERATURE CHANNEL CHECKS

In accordance with the requirements of 10 CFR 50.73, Georgia Power Company submits the enclosed report related to an event which was discovered on March 11, 1994.

Sincerely,

C. K. McCoy

CKM/NJS

Enclosure: LER 50-424/1994-002

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

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

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NRC FORM 366 (5-92) U.S.NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 5/31/95
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB7714), 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)	DOCKET NUMBER (2)	PAGE (3)
Vogtle Electric Generating Plant - Unit 1	0 5 0 0 0 4 2 4	1 OF 3

TITLE (4)
INADEQUATELY PERFORMED DIFFERENTIAL TEMPERATURE CHANNEL CHECKS

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)
0 3	1 1	9 4	9 4	– 0 0 2	– 0 0	0 4	0 7	9 4	VEGP - UNIT 2	0 5 0 0 0 4 2 5
									FACILITY NAME	0 5 0 0 0

OPERATING MODE (9)	1
POWER LEVEL (10)	1 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR ? : (Check one or more of the following) (11)

	20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)
	20.405(a)(1)(i)		50.36(c)(1)		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)	X	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 (include area code)
Mehdi Sheibani, Nuclear Safety and Compliance	AREA CODE 7 0 6 8 2 6 - 3 2 0 9

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 15 single-space typewritten lines) (16)

On March 11, 1994, the reactor engineering supervisor (RES) was reviewing an industry notice of a concern regarding channel checks for over power delta-T (OPDT) and over temperature delta-T (OTDT) reactor trip instrumentation. The notice identified that the OPDT and OTDT channel checks at another nuclear power plant were not being adequately performed. The channel check consisted of monitoring the variable OPDT and OTDT trip setpoints as stated explicitly in Technical Specification (TS) Table 4.3-1. It did not include monitoring the process variable itself, delta-T. The OPDT and OTDT trips actuate when delta-T from two of the four channels exceeds the setpoints. Therefore, the notice concluded that the four delta-T channels should have been included in the channel checks to ensure the process indications, in addition to the trip setpoints, are properly functioning.

The RES realized that a similar condition existed at both units of Plant Vogtle since delta-T readings were not considered to be part of the OPDT and OTDT surveillance channel checks. At 0845 EST, control room personnel were advised. Prompt action was taken to monitor and log the delta-T values and to enhance the surveillance procedures for both units, in order to more fully comply with the intent of the TS.

A. REQUIREMENT FOR REPORT

This report is being submitted per 10 CFR 50.73 (a)(2)(i). Although the explicit requirements of the Vogtle Electric Generating Plant (VEGP) Technical Specifications (TS) have been met, the intent of the requirement for monitoring the delta-T reactor power parameter was not fully complied with.

B. UNIT STATUS AT TIME OF EVENT

At the time of the discovery of this problem, both Unit 1 and Unit 2 were operating in Mode 1 (power operation) at 100 percent of rated thermal power. There was no inoperable equipment that contributed to the occurrence of this event.

C. DESCRIPTION OF EVENT

On March 11, 1994, the reactor engineering supervisor (RES) was reviewing an industry notice of a concern regarding the channel checks for over power delta-T (OPDT) and over temperature delta-T (OTDT) reactor trip instrumentation. The notice identified that the OPDT and OTDT channel checks at another nuclear power plant were not being adequately performed. The channel check consisted of monitoring the variable OPDT and OTDT trip setpoints as stated explicitly in the VEGP TS Table 4.3-1, functional units 7 and 8. It did not include monitoring the process variable itself, delta-T. The OPDT and OTDT trips actuate when delta-T from two of the four channels exceed the setpoints. Therefore, the notice concluded that the four delta-T channels should have been included in the channel checks to ensure the process indications, in addition to the trip setpoints, are properly functioning.

The RES realized that a similar condition existed at both units of Plant Vogtle since delta-T readings were not considered to be part of the OPDT and OTDT surveillance channel checks. At 0845 EST, control room personnel were advised. Prompt action was taken to monitor and log the delta-T values and to enhance the surveillance procedures for both units, in order to more fully comply with the intent of the TS.

D. CAUSE OF EVENT

The cause of this problem was that the VEGP TS did not explicitly include the delta-T process variable as part of the channel check surveillance. The VEGP TS were developed consistent with the standard TS which was in effect at the time of the plant's licensing. The standard TS did not explicitly include the delta-T process variable as part of the OPDT and OTDT channel check

surveillance. Therefore, the VEGP surveillance procedures developed for the OPDT and OTDT channel checks did not consider the monitoring of the delta-T process variable to be required.

E. ANALYSIS OF EVENT

The OPDT and OTDT reactor trips are initiated when two of the four delta-T channels exceed the trip setpoints. In the event that a delta-T channel failed and a reactor trip was required, the trip signal would still be generated from the remaining three delta-T channels. In addition, an alarm in the control room is generated should the difference between the auctioneered highest delta-T channel as compared to the remaining delta-T channels exceed plus or minus 5 percent. Therefore, this will alert personnel if any channel drifts high or low. Furthermore, meters displaying the OPDT and OTDT trip setpoints are physically adjacent to the meters for delta-T. The process of monitoring the OPDT and OTDT setpoints inherently draws operator attention to the meters for delta-T and it is expected that unusual delta-T values would have been identified. Also, analog channel operational tests and channel calibrations monitor delta-T every 31 days and 18 months, respectively. Finally, the average of the four values of delta-T is verified on each shift during full power operation to be less than or equal to 101 percent. 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.

F. CORRECTIVE ACTIONS

1. The delta-T channels were promptly monitored and the surveillance procedures were enhanced to begin monitoring these channels on each shift .

2. A TS change will be submitted to clarify the surveillance requirements as part of the planned conversion of the VEGP TS to the new standard TS (NUREG-1431).

G. ADDITIONAL INFORMATION

1. Failed Components
   None

2. Previous Similar Events
   None

3. Energy Industry Identification System Code
   Reactor Protection System - JD