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C. K. McCoy
Vice President, Nuclear
Vogtle Project



December 22, 1994

LCV-0532

Docket No. 50-424

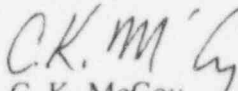
U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Ladies and Gentlemen:

**VOGTLE ELECTRIC GENERATING PLANT
LICENSEE EVENT REPORT - DEGRADED STANDBY DECAY
HEAT REMOVAL CAPABILITY VIA NATURAL CIRCULATION**

In accordance with 10 CFR 50.73, Georgia Power Company (GPC) submits the enclosed report associated with an event which was discovered on November 29, 1994.

Sincerely,


C. K. McCoy

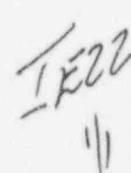
CKM/AFS/afs

Enclosure: LER 1-94-9

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

U. S. Nuclear Regulatory Commission
Mr. S. D. Ebner, 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)

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 (MNSB7714), 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

FACILITY NAME (1)

Vogtle Electric Generating Plant - Unit 1

DOCKET NUMBER (2)

500004241 OF 4

PAGE (3)

TITLE (4)

DEGRADED STANDBY DECAY HEAT REMOVAL CAPABILITY VIA NATURAL CIRCULATION

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	16	94	94	009	00	12	22	94		050000
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 2: (Check one or more of the following) (11)							
5			20.402(b)			20.405(c)			50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)	73.71(c)
000			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vi)	
			20.405(a)(1)(iii)		X	50.73(a)(2)(i)			50.73(a)(2)(vii)(A)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
			20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(vii)(B)	
			20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

Mehdi Sheibani, Nuclear Safety and Compliance

TELEPHONE NUMBER (include area code)

AREA CODE

706 826-3209

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)

X NO

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

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

On September 11, 1994, Unit 1 entered a refueling outage. On September 16, 1994, the unit was in mode 5 (cold shutdown) with the reactor coolant system (RCS) being drained down for reactor vessel head disassembly. Residual heat removal (RHR) Train B was in service and RHR Train A was operating intermittently but had been administratively removed from service to allow limit switch adjustment and local valve stroking. During this time period the steam generators (SGs) when filled to greater than 17 percent were relied on to meet the Technical Specification (TS) requirement as the second source of decay heat removal.

On November 29, 1994, as a result of a self-assessment performed by the independent safety engineering group (ISEG), it was determined that although all TS conditions were met, the ability to remove decay heat via the SGs may have been degraded during the time period involved.

The cause of this event was a lack of understanding of the TS bases and corresponding lack of procedural guidance regarding the use of SGs as an effective heat removal component in a "loops-filled" condition. Therefore the intent of the bases was not adequately provided to operators who incorrectly took credit for the SGs as an adequate source for decay heat removal while "loops-filled" and the pressurizer safeties were removed. Guidance will be provided to operators to clearly indicate the conditions required to maintain the desired natural circulation configuration.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION
AND RECORDS MANAGEMENT BRANCH (MNB87714), U.S.
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0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104),
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FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (6)

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Vogtle Electric Generating Plant - Unit 1

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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 10 CFR 50.73 (a)(2)(i)(B). Technical Specification (TS) 3.4.1.4.1 requires at least one train of residual heat removal (RHR) to be in operation while in Mode 5 (cold shutdown) with "loops-filled". Furthermore, it requires either an additional RHR train or two SGs with adequate inventory available for decay heat removal. On September 16, 1994, RHR Train A was declared inoperable while still operating, and continued to remove heat from the reactor core for most of the time involved. Although all TS conditions were being met, the redundant ability to remove decay heat via the SGs may have been degraded during the period of time the RCS was drained down and vented.

B. UNIT STATUS AT TIME OF EVENT

At the time of the discovery of this event, Unit 1 was operating in Mode 1 (power operations) at 100 percent of rated thermal power. At the time of the event, Unit 1 was in Mode 5 (cold shutdown). Other than that described herein, there was no inoperable equipment that contributed to the occurrence of this event.

C. DESCRIPTION OF EVENT

On September 11, 1994, Unit 1 entered a refueling outage. On September 16, 1994, the unit was in mode 5 (cold shutdown) with the reactor coolant system (RCS) being drained down in preparation for reactor vessel head disassembly. The reactor coolant pumps were tagged out of service and RHR Train B was in service to provide decay heat removal. RHR Train A had been administratively declared inoperable due to maintenance/testing of the RCS-to-RHR suction valve 1HV-1701A, but was operating intermittently and was actually removing decay heat from the reactor core. Guidance provided to operators defined the unit condition of RCS level greater than 192 ft. elevation as "loops-filled," which allows the option of maintaining SGs instead of the second RHR train as a backup means for decay heat removal. Therefore, during this period of time, SGs filled to greater than 17 percent were relied on to meet the TS requirement as the second source of decay heat removal. At 0220 EST, the RCS was opened to the containment atmosphere when the pressurizer was vented via the removal of the code safety valves, and at 1628 EST, a conoseal on the reactor vessel head was disassembled. At 2350 EST, RHR Train A was declared operable and the SGs were no longer relied upon for TS compliance.

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DOCKET NUMBER (2)

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PAGE (3)

Vogtle Electric Generating Plant - Unit 1

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

On November 29, 1994, as a result of a self-assessment performed by the independent safety engineering group (ISEG), it was determined that, although all TS conditions were met, the ability to remove decay heat via the SGs may have been degraded during the period the RCS was drained down and vented. A review of the last Unit 2 refueling outage found that both RHR trains had remained operable during the corresponding times of opening the RCS.

D. CAUSE OF EVENT

The cause of this event was a lack of understanding of the TS bases for using the SGs as a source for decay heat removal. In addition to being in a "loops-filled" condition, for the SGs to be available as a heat removing component as specified in the TS basis, the RCS must be capable of being pressurized for natural circulation to occur. Therefore the removal of the pressurizer safeties caused the heat removal capability, via natural circulation, to be degraded since only one train of RHR was operable. The plant conditions necessary to support the use of the SGs as a heat removal component were not clearly understood nor included in plant procedures.

E. ANALYSIS OF EVENT

RHR Train B provided forced circulation to the core during the time period involved and no event occurred that required a second source of cooling for the RCS. If such an event had occurred RHR Train A was operating intermittently for valve testing during this time and if needed, could have promptly been put into service. In fact, during most of the time period involved RHR Train A was actually removing decay heat from the core. An engineering review based on conservative assumptions determined that adequate natural circulation flow was questionable when relying on the SGs to provide decay heat removal without the capability, during venting, to pressurize the reactor coolant system. However, natural circulation would have occurred but it could have been at a reduced magnitude and quite possibly interrupted repeatedly. 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

Appropriate procedures will be revised by 2-15-95 to ensure the guidance provided to rely upon natural circulation is adequate for TS compliance in appropriate plant conditions. These revisions will

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

also provide guidance to operators to clearly indicate the conditions required to maintain the desired natural circulation configuration.

G. ADDITIONAL INFORMATION

- 1) Failed Components:
None
- 2) Previous Similar Events:
None
- 3) Energy Industry Identification System Code:
Reactor Coolant System - AB
Residual Heat Removal System - BP