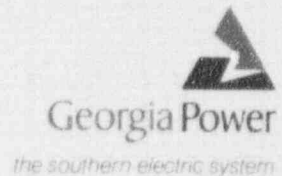


Georgia Power Company
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Post Office Box 1295
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Telephone 205 877-7279

J. T. Beckham, Jr.
Vice President - Nuclear
Hatch Project

September 6, 1994



Docket No. 50-321

HL-4681

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

Edwin I. Hatch Nuclear Plant - Unit 1
Licensee Event Report
Work in Control Room Panel with Limited Access
Leads to Actuation Of Engineered Safety Feature

Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(iv), Georgia Power Company is submitting the enclosed Licensee Event Report (LER) concerning work in a control room panel with limited access which resulted in actuation of an Engineered Safety Feature.

Sincerely,

J. T. Beckham, Jr.

OCV/et

Enclosure: LER 50-321/1994-010

cc: Georgia Power Company

Mr. H. L. Sumner, General Manager - Nuclear Plant
NORMS

U.S. Nuclear Regulatory Commission, Washington, D.C.
Mr. K. Jabbour, Licensing Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II
Mr. S. D. Ebnetter, Regional Administrator
Mr. B. L. Holbrook, Senior Resident Inspector - Hatch

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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 (MNB87714), 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)

Edwin I. Hatch Nuclear Plant - Unit 1

DOCKET NUMBER (2)

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PAGE (3)

TITLE (4)

Work in Control Room Panel with Limited Access Leads to Actuation of Engineered Safety Feature

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
YEAR	MONTH	DAY	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER(S)	
08	08	94	94	0110	00	09	06	94		050000	
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 2: (Check one or more of the following) (11)											
OPERATING MODE (9)			20.402(b)			20.405(c)			X 50.73(a)(2)(iv)		
POWER LEVEL (10)			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)		
100			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vi)		
			20.405(a)(1)(iii)			50.73(a)(2)(i)			50.73(a)(2)(vii)(A)		
			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)		

OTHER (Specify in Abstract below and in Text, NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12)

NAME

Steven B. Tipps, Nuclear Safety and Compliance Manager

TELEPHONE NUMBER (include area code)

AREA CODE

912 367-7851

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

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 8/8/94 at 2345 EDT, Unit 1 was in the Run mode at a power level of 2436 CMWT (100 percent rated thermal power). At that time, the Reactor Water Cleanup (RWC) system isolated spuriously. Electricians were subsequently requested to troubleshoot the logic system, which required them to enter Control Room panel 1H11-P623. While they were working in this panel at 0540 EDT on 8/9/94, valve 1E51-F105 isolated. This valve is a Primary Containment Isolation System (PCIS) valve in the Reactor Core Isolation Cooling (RCIC) system. No valid isolation signal for this valve was present. Since the isolation logic for this valve is installed in the panel where troubleshooting activities were underway, licensed personnel concluded that the isolation had occurred as a result of troubleshooting activities. Therefore, they immediately reopened the valve. No further actuations occurred. The isolation of the RWC system is believed to have been spurious. The cause of the isolation of 1E51-F105 was limited working conditions in Control Room panel 1H11-P623. The clearance between relay 1E51-K48 and the side of the panel is too small to pass through without contacting the relay. When the relay was bumped, the valve received an isolation signal and responded by closing, per design. As stated previously, the affected valve, 1E51-F105, was reopened immediately after it closed. GPC is investigating the possibility of relocating the relay.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor

Energy Industry Identification System codes are identified in the text as (EIIS Code XX).

DESCRIPTION OF EVENT

On 8/8/94 at 2345 EDT, Unit 1 was in the Run mode at a power level of 2436 CMWT (100 percent rated thermal power). At that time, licensed Control Room operators observed that the Reactor Water Cleanup (RWCU, EIIS Code CE) system tripped and the outboard Group 5 Primary Containment Isolation System (PCIS EIIS Code JM) valve, 1G31-F004, automatically closed. Licensed personnel observed no valid cause for the RWCU system trip. Nevertheless, they conservatively chose to leave the RWCU system isolated while maintenance personnel investigated further.

No valid cause for the RWCU isolation was found. However, as electricians performed troubleshooting on the RWCU isolation logic system, they entered Control Room panel 1H11-P623, and at 0345 EDT on 8/9/94, discovered a discrepancy in the wiring in the panel. The discrepancy involved a difference between the actual wiring of a relay and the wiring diagram and did not affect the operation of any logic system. At 0540 EDT, as the electricians were correcting the wiring discrepancy in panel 1H11-P623, licensed Control Room operators received indication that valve 1E51-F105 had closed automatically. This valve is one of two steam exhaust line vacuum breaker isolation valves in the Reactor Core Isolation Cooling (RCIC, EIIS Code BN) system. It is designed to close on high drywell pressure in conjunction with low RCIC steamline pressure. Since some of the isolation logic for valve 1E51-F105 is also located in panel 1H11-P623, and the signals for this isolation were not present, licensed operators concluded that work in the panel had resulted in an inadvertent actuation. Therefore, they immediately reopened the valve. There were no subsequent actuations.

CAUSE OF EVENT

The isolation of the RWCU system is believed to have been spurious. Operators observed no annunciators in the Control Room or process conditions in the RWCU system which would have resulted in a valid isolation, and troubleshooting on the logic system did not identify any hardware failure which would have contributed to the isolation. The isolation of valve 1E51-F105 occurred when relay 1E51-K48 was bumped during maintenance activities in panel 1H11-P623. The root

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AND RECORDS MANAGEMENT BRANCH (MNB87714), 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.

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

cause of the event is limited access in panel 1H11-P623. Relay 1E51-K48 is located at the entrance of the panel, and the clearance between the relay and the opposite side of the entrance is approximately 11 inches. An individual entering the panel to work must position himself in this space between the relay and the opposite wall. It is thus difficult for an average size person to work in the panel without coming in contact with the relay.

REPORTABILITY ANALYSIS AND SAFETY ASSESSMENT

This event is reportable per 10 CFR 50.73 (a)(2)(iv) because an unplanned actuation of an engineered safety feature occurred. Specifically, valve 1E51-F105 went closed when a relay in its isolation logic was bumped during troubleshooting activities. There were no indications that the isolation of 1G31-F004 occurred because of a valid signal.

PCIS valves are designed to limit the release of radioactive material to the environment in the event of an accident by automatically isolating the lines entering and leaving the Primary Containment (EIS Code NH). The Reactor Core Isolation Cooling system, in which valve 1E51-F105 is located, provides high pressure core cooling during reactor shutdown by injecting water into the reactor pressure vessel in case of a loss of flow from the feed water system (EIS Code SD). RCIC automatically initiates on low low reactor water level (Level 2).

PCIS valve 1E51-F105 is designed to close under the conditions of high drywell pressure in conjunction with low RCIC system steamline pressure. These conditions did not exist at the time of this event. Instead, the contact fingers of relay 1E51-K48 were moved when the relay was bumped during troubleshooting unrelated to the RCIC system, and this resulted in the isolation. The only function of this relay is to close the affected valve, which occurred. No other actuations occurred as a result of this event. When operators observed that no valid cause for the isolation was present, the valve was immediately reopened.

In the event that the RCIC system had been required to operate during the time the valve was isolated, it would have done so. The effect of the closed valve was to isolate the vacuum breakers in the steam exhaust line. Following termination of a postulated injection using the RCIC system, steam condensing in the turbine exhaust line could create a suction. With the vacuum breakers isolated, this could draw a column of water from the Suppression Pool up into the exhaust line. Should a subsequent RCIC turbine start occur with the water present, some water hammer could result. However, this condition did not render the RCIC system inoperable.

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

During this event, the High Pressure Coolant Injection (HPCI, EIIS Code BJ) system was operable and available to provide high pressure makeup to the reactor vessel. The HPCI system receives an automatic start signal on low low reactor water level (Level 2) just as the RCIC system does. The HPCI system flow capacity is approximately ten times greater than that of the RCIC system; therefore, the makeup capacity to the vessel would have been sufficient even if the RCIC system had been inoperable.

Based on this analysis, it is concluded that this event did not result in any degradation in nuclear safety. This analysis is applicable to all power levels.

CORRECTIVE ACTIONS

GPC is investigating the feasibility of relocating this relay to another location within panel 1H11-P623.

ADDITIONAL INFORMATION

1. Other Systems Affected: No systems other than those mentioned in this report were affected by this event.
2. Failed Component Identification: No failed components contributed to or resulted from this event.
3. Previous Similar Events: One event was reported in the past two years in which poor human factors was a contributing factor, LER 50-366/1994-005, dated 5/23/94. Corrective actions for this event included making the involved individual aware of the consequences of an inappropriate action. This corrective action would not have prevented the event which is the subject of this report because it did not address the human factors problem which contributed to this event, i.e., the size of the opening in panel 1H11-P623.