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Georgia Power

the southern electric system

HL-1869  
002313

October 14, 1991

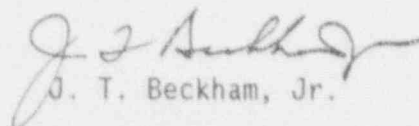
U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

PLANT HATCH - UNIT 1  
NRC DOCKET 50-321  
OPERATING LICENSE DPR-57  
LICENSEE EVENT REPORT  
APPARENT PERSONNEL ERROR RESULTS IN  
ENGINEERED SAFETY FEATURE ACTUATION

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 the unanticipated actuation of an Engineered Safety Feature (ESF). This event occurred at Plant Hatch - Units 1 and 2.

Sincerely,

  
J. T. Beckham, Jr.

SWR/CT/cr

Enclosure: LER 50-321/1991-018

cc: (See next page.)

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U.S. Nuclear Regulatory Commission  
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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. Ebner, Regional Administrator  
Mr. L. D. Wert, Senior Resident Inspector - Hatch

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) PLANT HATCH, UNIT 1										DOCKET NUMBER (2) 05000321				PAGE (3) 1 OF 4		
TITLE (4) APPARENT PERSONNEL ERROR RESULTS IN ENGINEERED SAFETY FEATURE ACTUATION																
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(5)			
									PLANT HATCH, UNIT 2				05000366			
09	17	91	91	018	00	10	14	91					05000			
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR (11)														
1		20.402(b)				20.405(c)				X		50.73(a)(2)(iv)		73.71(b)		
POWER LEVEL		097				20.405(a)(1)(i)						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)		
		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						
STEVEN B. TIPPS, MANAGER NUCLEAR SAFETY AND COMPLIANCE, HATCH										AREA CODE		912 367-7851				
COMPLETE ONE LINE FOR EACH FAILURE DESCRIBED IN THIS REPORT (13)																
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORT TO NPD		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORT TO NPD						
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO						
ABSTRACT (16)																

On 09/17/91, at 0457 CDT, Unit 1 and Unit 2 were both in the Run mode at power levels of 2387 CMWT on Unit 1 (97 percent rated thermal power) and 2436 CMWT on Unit 2 (100 percent rated thermal power). At that time, an Instrument and Control technician performing surveillance procedure 57SV-D11-008-1S, "Reactor Building Exhaust Vent Instrument Functional Test," apparently removed two refueling floor ventilation system exhaust monitors (E11S Code IL) from service instead of the two reactor building ventilation system exhaust monitors as required. This caused the 'B' train of both units' Standby Gas Treatment Systems (SGTS, E11S Code BH) to start and the normal ventilation systems to trip/isolate as designed. The technician immediately realized his mistake and reset one of the monitors, clearing the trip signal. Plant operators secured the SGTS and returned the normal ventilation system to operation by 0502 CDT. The surveillance on the reactor building ventilation system radiation monitors was completed without further incident.

The cause of the event could not be conclusively determined. Although the technician could only recall having manipulated one piece of equipment incorrectly, it is believed that he actually removed two instruments from service during the course of the surveillance, causing the event.

Corrective actions for this event included counseling the technician and conducting a functional test of the involved instrumentation to ensure its operability.

**LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION**

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TEXT

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor  
Energy Industry Identification System codes are identified in the text as (EIIIS Code XX).

DESCRIPTION OF EVENT

On 09/17/91, at 0457 CDT, Unit 1 and Unit 2 were both in the Run mode at power levels of 2387 CMWT on Unit 1 (97 percent rated thermal power) and 2436 CMWT on Unit 2 (100 percent rated thermal power). At that time, a non-licensed Instrument and Control technician was performing surveillance procedure 57SV-D11-008-1S, "Reactor Building Exhaust Vent Radiation Monitor Instrument Functional Test." This procedure requires the technician to remove instruments 1D11-K609C/D from service. These instruments monitor radiation levels in the reactor building ventilation exhaust (EIIIS Code VA). A trip of these instruments results in initiation signals being sent to the 'B' train of both units' Standby Gas Treatment Systems (SGTS, EIIIS Code BH). To prevent trip signals from starting the SGTS, the procedure requires the installation of a jumper. The instruments are located in Control Room panel 1H11-P606 beside two identical instruments, 1D11-K611C/D. The latter two instruments monitor radiation levels in the refueling floor ventilation exhaust and can also send initiation signals to the 'B' train of both units' SGTS.

As the technician was performing this procedure, it is believed that he inadvertently removed both refueling floor exhaust monitors from service rather than removing the reactor building exhaust monitors from service. Although the plant response to a trip is the same whether the trip comes from the refueling floor or the reactor building monitors, the trip signals from these monitors enter the SGTS initiation logic at different points. Therefore, the jumper which had been installed to prevent SGTS from initiating during the functional test of the reactor building exhaust monitors had no effect on a trip emanating from the refueling floor monitors. Thus, when the refueling floor monitors were switched out of the OPERATE mode, the 'B' train of both units' SGTS received an initiation signal and started per design, the normal reactor building and refueling floor supply fans tripped, and the normal reactor building and refueling floor ventilation systems isolated. As soon as the technician committed the error, he realized his mistake, and he reset the trip on 1D11-K611D, which cleared the SGTS trip signal. Subsequently, the surveillance on the reactor building exhaust vent radiation monitors was completed without further incident. Plant operators secured SGTS by 0502 CDT, and operation of the normal reactor building and refueling floor ventilation systems was resumed.

CAUSE OF EVENT

The cause of the event could not be conclusively determined. However, it is believed that the technician who was performing surveillance procedure 57SV-D11-008-1S inadvertently manipulated both refueling floor exhaust vent radiation monitors rather than the reactor building exhaust vent radiation monitors. With both of these monitors out of service, a SGTS initiation and reactor building/refueling floor ventilation system isolation occurred per design.



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Since the exact sequence of personnel actions which led to the actuation could not be conclusively determined, a data history tape from the Safety Parameter Display System (SPDS, EIIIS Code IQ) was reviewed to determine the source of the SGTS initiation signal. The data tape proved that the source of the actuation signal was simultaneous trips occurring in both refueling floor ventilation exhaust monitors. However, the technician could recall having erroneously operated only one of the refueling floor monitors. This raised the suspicion that a latent malfunction in one of the refueling floor monitors might have contributed to the actuation. Therefore, surveillance procedure 57SV-D11-007-1S, "Refueling Floor Exhaust Vent Radiation Monitor Functional Test," was performed on 9/23/91. The procedure was completed satisfactorily with no abnormalities observed; therefore, it was concluded that no malfunctions existed in the instrumentation which would have contributed to the actuation.

REPORTABILITY AND SAFETY ASSESSMENT

This event is reportable per 10 CFR 50.73(a)(2)(iv) because an unplanned actuation of an Engineered Safety Feature (ESF) occurred. Specifically, a personnel error resulted in the initiation of one train of each units' SGTS.

The Standby Gas Treatment System is designed to limit the release of radioactivity to the environment following the leakage of radioactivity into secondary containment. The SGTS trains automatically filter the exhaust air from the secondary containment following an accident and discharge it via the Main Stack (EIIIS Code VL). Each unit's SGTS consists of two identical, redundant, 100 percent capacity parallel air filter trains containing the necessary heaters, filters and exhaust fans.

In this event, two refueling floor radiation monitors were switched out of the OPERATE mode at the same time. This caused the SGTSs to receive a start signal, and also resulted in isolation signals being sent to the normal reactor building and refueling floor ventilation systems, and trip signals being sent to the normal supply fans. All actuations occurred as designed. As a result, the 'B' SBTG trains would have been available to mitigate the consequences of an accident should such have been required. The SGTS was secured after approximately 5 minutes and the normal reactor building and refueling floor ventilation systems were returned to service.

Based on the above analysis it is concluded that this event had no adverse impact on nuclear safety. This analysis is applicable to all power levels.

CORRECTIVE ACTIONS

1. The technician responsible for the error was counseled regarding the need for attentiveness.
2. Surveillance procedure 57SV-D11-007-1S, "Refueling Floor Exhaust Vent Radiation Monitor Functional Test," was performed on 9/23/91 to ensure the operability of the involved instrumentation. No abnormalities were observed during the course of this surveillance.

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ADDITIONAL INFORMATION

1. Other Systems Affected: No systems were affected other than those mentioned in this report.
2. Previous Similar Events: Events reported in the past two years in which personnel errors resulted in ESF actuations were described in the following LERs:

50-321/1989-014, dated 11/08/89  
50-321/1989-018, dated 12/14/89  
50-321/1990-010, Revision 1, dated 08/13/90  
50-321/1990-011, dated 06/22/90  
50-321/1991-006, dated 03/25/91  
50-321/1991-007, dated 03/27/91  
50-321/1991-010, dated 06/14/91  
50-366/1991-005, dated 03/15/91  
50-366/1991-006, dated 04/12/91  
50-366/1991-010, dated 05/13/91

Corrective actions for these events included counseling personnel, issuing memoranda from the Manager of Operations concerning verbal communications, implementing a design change to facilitate easier system operation, conducting training during Maintenance Department Tool Box meetings, describing an event to personnel in an operating experience report, conducting an inspection of panels in the Main Control Room and other areas of the plant, revising procedures, rerouting wiring on improperly installed relays, replacing failed equipment, issuing a departmental directive from the Manager of Operations concerning movement of irradiated materials in the spent fuel pool, and evaluating the appropriateness of certain tools used in the plant.

The majority of the corrective actions listed above would not have prevented this event because they were unique to their respective events. Specifically, no problem with equipment, tools or procedures contributed to this event. The Maintenance Department Tool Box meetings, which are conducted monthly, will continue to include training concerning recent relevant Plant Hatch and industry events to assist in prevention of similar events in the future. Such training generally emphasizes the constant need for attention to detail in the performance of maintenance functions.

3. Failed Components Identification: No failed components contributed to this event.