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HL-2311
003702

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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
BLOWN FUSE RESULTS IN
UNPLANNED ESF SYSTEM ACTUATIONS

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 unplanned Engineered Safety Feature (ESF) system actuations. These actuations resulted from a blown fuse in the Unit 1 reactor building vent exhaust radiation monitoring logic circuit power supply. This event occurred at Plant Hatch - Unit 1.

Sincerely,

J. T. Beckham, Jr.

SRM/cr

Enclosure: LER 50-321/1992-016

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. L. D. Wert, Senior Resident Inspector - Hatch

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) PLANT HATCH UNIT 1	DOCKET NUMBER (2) 0 5 0 0 3 2 1	PAGE (3) 1 OF 4
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TITLE (4)
BLOWN FUSE RESULTS IN UNPLANNED ENGINEERED SAFETY FEATURE SYSTEM ACTUATIONS

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)
0 6	1 6	9 2	9 2	0 1 6	0 0	0 7	1 0	9 2	PLANT HATCH UNIT 2		0 5 0 0 0 3 6 6
											0 5 0 0 0

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

OPERATING MODE (9) 1	20.402(b)	20.405(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL 1 0 0	20.405(a)(1)(i)	50.36(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(ii)	50.36(c)(2)	<input type="checkbox"/>	50.73(a)(2)(vii)	OTHER (Specify in Abstract below)
	20.405(a)(1)(iii)	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)	
	20.405(a)(1)(iv)	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)	
	20.405(a)(1)(v)	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
STEVEN B. TIPPS, MANAGER NUCLEAR SAFETY AND COMPLIANCE, HATCH	912 367-7851

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORT TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORT TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (16)

On 6/16/92 at 1615 CDT, Unit 1 was in the Run mode at a power level of 2436 CMWT (100% rated thermal power). At that time, the "B" train of the Unit 2 Standby Gas Treatment system automatically started, the Unit 1 and Unit 2 Refueling Floor and the Unit 1 Reactor Building ventilation systems automatically isolated, and various Unit 1 Group 2 Primary Containment Isolation System valves automatically closed. These actuations occurred because a fuse in the Unit 1 Reactor Building Vent Exhaust Radiation Monitoring logic circuit power supply blew during the routine performance of a functional test of Unit 1 Reactor Building Vent Exhaust Radiation Monitor 1D11-K609B. The blown fuse caused a loss of power to the logic circuit, placing it in the tripped condition per design and resulting in the above listed actuations. By 1700 CDT, the blown fuse had been replaced, the logic reset, and the affected systems returned to their normal/standby status. At 1710 CDT, the functional test of the Unit 1 Reactor Building Vent Exhaust Radiation Monitors was completed with no further problems.

The cause of the event was a blown fuse. It is believed that a current surge in the logic circuit occurred when the mode switch for monitor 1D11-K609B was returned to the "operate" position.

Immediate corrective action for the event involved replacing the blown fuse. During the next scheduled refueling outage the components in the affected logic circuit will be checked to ascertain whether or not the current surge was the result of problems with the logic circuit components.

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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 (EIIS Code XX).

DESCRIPTION OF EVENT

On 6/16/92 at 1615 CDT, Unit 1 was in the Run mode at a power level of 2436 CMWT (100% rated thermal power). Instrument and Control (I&C) technicians were performing surveillance procedure 57SV-D11-008-1S, "Reactor Building Exhaust Vent Radiation Monitor Instrument FT." At that time, the "S" train of the Unit 2 Standby Gas Treatment (SBGT, EIIS Code BH) system automatically started, the Unit 1 and Unit 2 Refueling Floor and the Unit 1 Reactor Building ventilation systems (EIIS Code VA) automatically isolated, and various Unit 1 Group 2 Primary Containment Isolation System (EIIS Code JM) valves automatically closed. In addition, the "B" train of the Unit 1 SBGT system received an automatic start signal; however, it was already in service for routine drywell venting at the time of the event.

The above listed actuations occurred because a fuse in the Unit 1 Reactor Building Vent Exhaust Radiation Monitoring (EIIS Code TL) logic circuit power supply blew. The fuse blew during the monthly performance of procedure 57SV-D11-008-1S. I&C technicians had completed the functional test of Unit 1 Reactor Building Vent Exhaust Radiation Monitor 1D11-K609A and were performing the test on radiation monitor 1D11-K609B when fuse 1D11A-F14B blew.

This fuse is in the power supply to Trip Auxiliary Units 1C51A-Z2B, which receives signals from radiation monitors 1D11-K609A and B, and 1C51A-Z2D, which receives signals from radiation monitors 1D11-K609C and D. The trip auxiliary units supply actuation signals to the Unit 1 and Unit 2 SBGT systems, the Reactor Building and Refueling Floor ventilation systems, and various Group 2 Primary Containment Isolation System valves. When an I&C technician returned the mode switch for radiation monitor 1D11-K609B to the operate position per the surveillance procedure, fuse 1D11A-F14B blew. This resulted in a loss of power to Trip Auxiliary Unit 1C51A-Z2D and, per design, it assumed the tripped state. The aforementioned systems then actuated per design. (Trip Auxiliary Unit 1C51A-Z2B did not generate a trip signal because, per procedure 57SV-D11-008-1S, a jumper had been placed across its trip contacts in order to perform the functional test of radiation monitors 1D11-K609A and B.)

By 1700 CDT, fuse 1D11A-F14B had been replaced, the logic reset, and the affected systems returned to their normal/standby status. At 1710 CDT, the functional test of the Unit 1 Reactor Building Vent Exhaust Radiation Monitors was completed with no further problems.

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CAUSE OF EVENT

The cause of the event was a blown fuse. It is believed that a current surge in the logic circuit occurred when the mode switch for monitor 1D11-K609B was returned to the "operate" position. It is suspected that a problem with the trip auxiliary unit relays or other component(s) in the logic circuit may have resulted in the current surge.

In addition, investigations excluded personnel error or grounding as the cause of the event.

REPORTABILITY ANALYSIS AND SAFETY ASSESSMENT

This report is required by 10 CFR 50.73(a)(2)(iv) because unplanned actuations of several Engineered Safety Feature (ESF) systems occurred. Specifically, the "B" train of the Unit 1 SBGT system received an automatic start signal (it was already in service at the time of the event), the "B" train of the Unit 2 SBGT system automatically started, the Unit 1 and Unit 2 Refueling Floor and the Unit 1 Reactor Building ventilation systems automatically isolated, and various Unit 1 Group 2 Primary Containment Isolation System valves automatically closed. These actuations occurred when a fuse in the Unit 1 Reactor Building Vent Exhaust Radiation Monitoring logic circuit blew.

The Reactor Building Vent Exhaust Radiation Monitoring system is designed to monitor the Reactor Building vent exhaust and to initiate automatic actions to control the release of radioactive material to the environs when abnormal amounts of radioactive material exist in the vent exhaust. The system consists of four radiation detectors and associated indicator and trip units. The four trip units provide signals to two trip auxiliary units: two indicator and trip units per one trip auxiliary unit. The trip auxiliary units, in turn, provide actuation signals to the Unit 1 and Unit 2 SBGT systems, the Unit 1 and Unit 2 Refueling Floor and the Unit 1 Reactor Building ventilation systems, and selected Unit 1 Group 2 Primary Containment Isolation System valves. These signals will isolate the normal ventilation systems and initiate the SBGT systems on a high vent exhaust radiation condition. This ensures the radioactive material is filtered through the SBGT system trains before release to the environs. The Group 2 isolation signal closes other possible radioactive material leakage paths.

In this event, a loss of power caused by a blown fuse resulted in the actuation of the previously mentioned systems. The trip logic system is designed to fail safe, i.e., generate a trip signal, upon loss of power. The trip system and associated ESF systems functioned per design upon loss of power.

Based on the above analysis, it is concluded that this event had no adverse effect on nuclear safety. This analysis is applicable to all operating conditions.

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TEXT

CORRECTIVE ACTION

The blown fuse was replaced, the logic reset, and the affected systems returned to their normal/standby status.

Maintenance Work Order (MWO) 1-92-2927 was initiated to check the applicable monitors, wiring, and relays in the trip auxiliary units. This MWO will be worked during the next scheduled Unit 1 Refueling Outage, and any problems found will be corrected.

ADDITIONAL INFORMATION

No systems other than those mentioned in this report were affected by this event.

No failed components caused or resulted from this event. The fuse performed its intended protective function in its intended manner as a result of an actual current surge.

Previous similar events in the last two years in which unplanned ESF system actuations were caused by a blown fuse were reported in the following Licensee Event Reports:

- 50-321/1990-016, dated 9/13/90,
- 50-321/1991-003, dated 3/8/91,
- 50-321/1991-016, dated 9/30/91,
- 50-321/1991-021, dated 10/25/91,
- 50-321/1991-023, dated 11/12/91,
- 50-366/1990-008, dated 10/18/90,
- 50-366/1991-002, dated 2/18/91,
- 50-366/1991-003, dated 3/8/91,
- 50-366/1991-010, dated 5/13/91,
- 50-366/1991-011, dated 5/15/91,
- 50-366/1991-017, dated 6/28/91.

Corrective actions for the previous events could not have prevented this event because the previous events involved different systems or were the result of different causes (e.g., grounded jumper, failed relay coil).