

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) EDWIN I. HATCH, UNIT I DOCKET NUMBER (2) 050003211 PAGE 13 OF 04

TITLE (4) HIGH TURBINE BUILDING TEMPERATURE CAUSES ENGINEERED SAFETY FEATURE ACTUATIONS

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 NAMES		DOCKET NUMBER(S)								
0	5	21	86	86	018	0	0	6	2	0	8	6	0	5	0	0	0		
														0	5	0	0	0	

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

OPERATING MODE (9)	1	20.402(b)		20.408(e)	X	50.73(a)(2)(iv)		73.71(b)
POWER LEVEL (10)	0910	20.408(a)(1)(i)		50.38(c)(1)		50.73(a)(7)(v)		73.71(e)
		20.408(a)(1)(ii)		50.38(c)(2)		50.73(a)(2)(iv)(A)		OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.408(a)(1)(iii)		50.73(a)(2)(ii)		50.73(a)(2)(iv)(B)		
		20.408(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(x)		
		20.408(a)(1)(v)		50.73(a)(2)(iii)				

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Raymond D. Baker, Nuclear Licensing Manager - Hatch	404 526-1701

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
X	S	B	V						
			H	037	N				

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)  NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

On 05/21/86 at approximately 1330 CDT, with the reactor mode switch in the run position, a valve Group I isolation occurred which resulted in a reactor scram on a "Main Steam Isolation Valve (MSIV) not full open" signal.

When the reactor scrammed, all control rods entered the core. Reactor pressure increased initially and level decreased which caused valve isolations in Primary Containment Isolation System valve Groups II and V. The level decrease caused auto-starts of both the High Pressure Coolant Injection (HPCI) and the Reactor Core Isolation Cooling (RCIC) systems. The recirculation pumps tripped either on low level or high-pressure signals. The reactor water level was initially maintained by the feedwater system and RCIC and later only by RCIC. Reactor pressure was controlled by using the Low Low Set of the Automatic Depressurization System and by routing steam through the HPCI and RCIC turbines.

An investigation determined that the probable cause of the Group I isolation was high temperature in the turbine building steam chase caused by a steam leak around the packing of main steam line drain valve 1N11-F019.

Valve 1N11-F019 was repaired on 05/24/86.

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TEXT (If more space is required, use additional NRC Form 365A's) (17)

A. REQUIREMENT FOR REPORT

This LER is required per 10 CFR 50.73(a)(2)(iv) because of the unplanned actuations of the following engineered safety features (ESFs): Group I isolation, Group II isolation, Group V isolation, High Pressure Coolant Injection (HPCI), Automatic Depressurization System (ADS), and a reactor scram.

B. UNIT(S) STATUS AT TIME OF EVENT

On 05/21/86 at approximately 1330 CDT, the unit was operating at 2200 MWt (approximately 90% of rated thermal power).

C. DESCRIPTION OF EVENT

A Group I isolation caused the Main Steam Line Isolation Valves (MSIVs) to close. MSIV closure caused a reactor scram on a "Main Steam Isolation Valve not full open" signal. Item 10 of Technical Specifications Table 3.1-1 requires this signal to occur at less than or equal to 10% valve closure from the full open position.

The plant's scram response was as expected with no major problems. The control rods went "full in." When the MSIVs isolated, reactor pressure increased and reactor water level decreased to approximately -45 inches (referenced to instrument zero, which is 164.5 inches above the top of the fuel). This corresponds to approximately +472" from vessel zero. The low level caused isolations in Primary Containment Isolation System (PCIS) valve Groups II and V [Reactor Water Cleanup (RWCU) system]; auto-start of both the High Pressure Coolant Injection (HPCI) system, and the Reactor Core Isolation Cooling (RCIC) system; and a trip of both recirculation pumps. The pumps could have also tripped on high pressure, since both signals (low level and high pressure) were present. Following both pump trips, the bottom head temperature decreased and prevented restart of the pumps due to Technical Specifications limitations on reactor coolant temperature differences between the reactor vessel dome and bottom head drain.

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TEXT (If more space is required, use additional NRC Form 388A's) (17)

The reactor water level was increased using the reactor feed pumps and RCIC. As the reactor water level increased, the reactor operator manually tripped one reactor feed pump. However, level continued to increase and reached the high water level trip setpoint which tripped the inservice reactor feed pump, RCIC, and HPCI. As the water level began to decrease, operators manually placed RCIC in service and used it to control the water level for the remainder of the transient.

The highest reactor pressure noted during this event was 1100 psig. Reactor pressure was initially decreased by routing steam to both the RCIC and HPCI turbines. RCIC was aligned to inject water into the vessel. HPCI was aligned to take its suction from the Condensate Storage Tank (CST) and discharge to the same source. However, pressure began to increase, and at approximately 1090 psig, the reactor operator manually armed the Low Low Set (LLS) of the Automatic Depressurization System (ADS) by opening a safety relief valve (SRV). This automatically armed the remaining LLS SRVs which opened upon reaching their setpoints. Reactor pressure decreased to approximately 900 psig, and the SRVs closed. Reactor pressure increased again and the "H" LLS SRV automatically re-opened to lower the pressure.

At approximately 1410 CDT, in preparation for opening the MSIVs for pressure control, equalization around the MSIVs began. At 1454 CDT, the inboard MSIVs and bypass valves were opened, and reactor pressure was decreased to 360 psig to enable restart of the recirculation pumps. After pressure was reduced, the "A" and "B" recirculation pumps were restarted at 1523 and 1544 CDT, respectively.

During the transient, the operation of HPCI, RCIC, and the SRVs increased the torus water temperature to approximately 100 degrees Fahrenheit. The torus temperature was reduced by placing the "B" loop of Residual Heat Removal (RHR) in the torus cooling mode.

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TEXT (If more space is required, use additional NRC Form 388A's) (17)

D. CAUSE OF EVENT

An investigation determined that the probable cause of the Group I isolation was high temperature in the turbine building steam chase. The high temperature is not annunciated in the main control room. However, a high temperature signal from detectors in the turbine building steam chase will generate a Group I isolation signal.

The high temperature condition was caused by steam leaking around the packing of main steam line drain valve 1N11-F019, thereby activating temperature monitors and generating a trip signal to the Group I logic.

E. ANALYSIS OF EVENT

The reactor scram, primary containment valve isolations, core cooling injections and SRV actuations occurred as required per the plant design. Normal scram response placed the plant in a safe shutdown configuration. This event had no adverse effect on plant safety or the health and safety of the public.

F. CORRECTIVE ACTIONS

Valve 1N11-F019 was repaired on 05/24/86.

G. ADDITIONAL INFORMATION

1. FAILED COMPONENT(S) IDENTIFICATION

MPL: 1N11-F019; Manufacturer: Hancock Dresser; Model: 5500W-201; Type: 1/2" 600# globe; and EIIS: SB

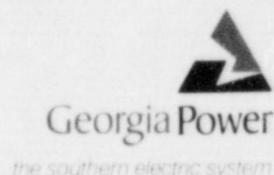
2. PREVIOUS SIMILAR EVENTS

A similar event was reported by LER 2-86-009.

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Atlanta, Georgia 30308  
Telephone 404 526-6526

Mailing Address:  
Post Office Box 4545  
Atlanta, Georgia 30302

L. T. Gucwa  
Manager Nuclear Safety  
and Licensing



SL-898  
0166C

June 20, 1986

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

Attached is Licensee Event Report 50-321/1986-018. This report meets the reporting requirements of 10 CFR 50.73(a)(2)(iv).

Sincerely,

L. T. Gucwa

LGB/lc

Enclosure

c: Georgia Power Company  
Mr. J. P. O'Reilly  
Mr. J. T. Beckham, Jr.  
Mr. H. C. Nix, Jr.  
GO-NORMS

Nuclear Regulatory Commission  
Dr. J. N. Grace, Regional Administrator  
Senior Resident Inspector

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