

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) PLANT HATCH, UNIT 2 DOCKET NUMBER (2) 0500003661 OF 05 PAGE (3) 1 OF 05

TITLE (4) COMPONENT FAILURE RESULTS IN GROUP 5 ISOLATION OF PRIMARY CONTAINMENT ISOLATION SYSTEM

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)		
08	31	88	88	021	00	09	28	88		050000		

OPERATING MODE (9) 1 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)

20.402(b)	<input type="checkbox"/>	20.405(e)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	<input type="checkbox"/>	73.71(b)	<input type="checkbox"/>
20.405(a)(1)(i)	<input type="checkbox"/>	50.36(e)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	<input type="checkbox"/>	73.71(c)	<input type="checkbox"/>
20.405(a)(1)(ii)	<input type="checkbox"/>	50.36(e)(2)	<input type="checkbox"/>	50.73(a)(2)(vii)	<input type="checkbox"/>	OTHER (Specify in Abstract below and in Text, NRC Form 386A)	<input type="checkbox"/>
20.405(a)(1)(iii)	<input type="checkbox"/>	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)	<input type="checkbox"/>		
20.405(a)(1)(iv)	<input type="checkbox"/>	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)	<input type="checkbox"/>		
20.405(a)(1)(v)	<input type="checkbox"/>	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(ix)	<input type="checkbox"/>		

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 COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC
X	CE	RV	L265N						

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 08/31/88, at approximately 1730 CDT, Unit 2 was in the run mode at an approximate power level of 2432 CMWT (approximately 100 percent of rated thermal power). The Reactor Water Cleanup system (RWCU, EIIS Code CE) 'B' demineralizer (demin) was being placed into service following backwash and precoat of the demin. At that time, an isolation of the Group 5 Primary Containment Isolation System (PCIS, EIIS Code JM) valves occurred due to a high differential flow condition in the RWCU system.

The cause of the high differential flow condition was a relief valve in the demin loop remaining open for an extended period of time. The open relief valve diverted flow from the process loop to the Reactor Building Equipment Drain sump (EIIS Code IJ) resulting in a high differential flow condition in the RWCU process loop and, consequently, a Group 5 PCIS isolation.

Corrective action for the event was replacement of the relief valve.

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

Plant and System Identification:

General Electric - Boiling Water Reactor

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

Summary of Event

On 08/31/88, at approximately 1730 CDT, Unit 2 was in the run mode at an approximate power level of 2432 CMWT (approximately 100 percent of rated thermal power). The Reactor Water Cleanup system (RWCU, EIIS Code CE) 'B' demineralizer (demin) was being placed into service following backwash and precoat of the dem'n. At that time, an isolation of the Group 5 Primary Containment Isolation System (PCIS, EIIS Code JM) valves occurred due to a high differential flow condition in the RWCU system. The condition was caused by a malfunctioning relief valve. The relief valve was replaced and the 'B' demin was returned to service on 09/05/88, at approximately 0250 CDT.

Description of Event

The RWCU system consists of two RWCU pumps (in parallel) and two demins (in parallel). The normal system line-up consists of one RWCU pump in operation (with the other on standby) and both demins in service. Each of the RWCU demins are periodically isolated from the RWCU process loop to replace the spent resin in the demins. The spent resin is removed and new resin is applied to the filter media during the backwash and precoat activities. Following backwash and precoat of a demin, it is placed in the 'hold' mode at which time it is valved-in to the RWCU process loop.

On 08/31/88, at approximately 1730 CDT, following a backwash and precoat of the RWCU 'B' demin, a non-licensed operator placed the 'B' demin in the 'hold' mode in accordance with procedure 3450-G31-003-2S, Reactor Water Cleanup System. At that time, a RWCU system high differential flow condition occurred. The high differential flow condition resulted in a Group 5 isolation of the PCIS valves 2G31-F001 and 2G31-F004 (RWCU isolation valves). Closure of the isolation valves terminated the flow of reactor water to the RWCU system resulting in a subsequent trip of the RWCU 'B' pump and isolation of both demins.

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TEXT (If more space is required, use additional NRC Form 306A's) (17)

On 09/01/88, at approximately 1705 CDT, the RWCU 'B' pump was returned to service. The 'A' demin was placed in service at approximately 0246 CDT, on 09/02/88, following the completion of planned maintenance on equipment associated with the demin.

Following the Group 5 PCIS isolation, an investigation was initiated to determine the cause of the high differential flow condition. It was concluded from the investigation that at the time the 'B' demin was placed in the 'hold' mode, the RWCU 'B' demin loop relief valve (2G31-F062B) had lifted and remained open for an indeterminate amount of time. The open valve diverted process fluid to the Reactor Building Equipment Drain sump creating a high differential flow condition. The valve was replaced with a similar valve in accordance with a Design Change Request package (DCR 88-279). On 09/05/88, at approximately 0250 CDT, following a backwash and precoat of the demin, the 'B' demin was successfully placed into service.

Cause of Event

The root cause of the event was component failure. Typically, when placing a demin in the 'hold' mode, a pressure transient in the demin loop piping occurs causing the relief valve to open momentarily. A vendor suggested modification (Service Information Letter 159) has been previously implemented to lessen the size of the pressure transient. However, in this event, the RWCU 'B' demin loop relief valve failed to reseal immediately following the demin being placed on 'hold'.

Reportability Analysis and Safety Assessment

This report is required per 10 C.F.R. 50.73 (a)(2)(iv) because an event occurred which resulted in the unplanned automatic actuation of an Engineered Safety Feature (ESF). Specifically, a high differential flow in the RWCU system resulted in an isolation of the Group 5 PCIS valves (or PCIVs) 2G31-F001 and 2G31-F004.

The purpose of the RWCU Leak Detection System (LDS, EIS Code BD) is to detect leakage in the process flow of the RWCU system external to the primary containment and to mitigate the consequences of such leakage. This is accomplished by utilizing leak detection instrumentation which initiates closure of the PCIVs upon detecting a parameter indicative of a system leak.

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

One of the methods used for detecting system leakage is flow comparison of the RWCU system influent and effluent. If the influent exceeds the effluent by at least 56 gpm for 45 seconds, a high differential flow condition exists and an isolation of the Group 5 PCIVs is initiated. In the event addressed in this report, an actual high differential flow condition existed resulting in an isolation of the Group 5 PCIVs. Since the leakage from the process loop was contained in the Reactor Building Equipment Drain sump and since PCIS isolated as designed, it is concluded that these events had no adverse impact on plant safety. Since the reactor was operating at approximately 100 percent power at the time of the event, it is concluded that this event would not have been more severe had it occurred under other operating conditions.

Corrective Action

The relief valve has failed previously resulting in a reportable event. The event was reported in LER 50-366/1988-15, dated on 08/26/88. At that time, the valve was repaired and successfully returned to service. Since the relief valve failure described in this report constitutes a second failure, the valve was replaced with a different valve which was similar and met the applicable design requirements. An exact replacement was not made due to the unavailability of an identical valve.

Additionally, a review of the Nuclear Plant Reliability Data System (NPRDS) records was performed which indicated no history of similar failures of relief valves in the RWCU system. Since each of the RWCU demins undergoes the backwash and precoating process approximately every ten days, the appropriate functioning of the associated relief valve is verified frequently.

Additional Information

No system other than the RWCU system and Group 5 of PCIS were affected by the component failure.

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TEXT (If more space is required, use additional NRC Form 306A's) (17)

As noted earlier, a similar event was reported in LER 50-366/1988-15, dated 08/26/88. In that event, the RWCU demin 'B' loop relief valve (2G31-F062B) also lifted and failed to reseat resulting in a high differential flow condition. The valve failed to reseat because the valve disc bound in the disc guide. The corrective action was repair and satisfactory testing of the valve, since the valve had not failed previously. The repaired valve operated correctly following corrective maintenance as demonstrated by a successful pressure test and by three successful backwash and precoat of the RWCU 'B' demin (i.e., the relief valve did not malfunction when the demin was placed into service following the backwash and precoat activity). Activities were initiated at that time to obtain an exact replacement for the valve. Since the valve has failed a second time as described in this report, the valve was replaced with a similar valve. This action should prevent recurrence of the event.

Failed Component(s) Identification:

MPL (Plant Index Identifier): 2G31-F062B
 Manufacturer: J. E. Lonergan Company
 Model Number: LCT-20
 Type: Pressure Relief Valve
 EIIS: CE

Georgia Power Company
333 Piedmont Avenue
Atlanta, Georgia 30308
Telephone 404 526-6526

Mailing Address:
Post Office Box 4545
Atlanta, Georgia 30302

W. G. Hairston, III
Senior Vice President
Nuclear Operations

the southern electric system

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September 28, 1988

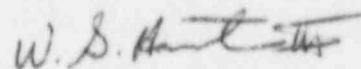
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ATTN: Document Control Desk
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PLANT HATCH - UNIT 2
NRC DOCKET 50-366
OPERATING LICENSE NPF-5
LICENSEE EVENT REPORT
COMPONENT FAILURE RESULTS IN GROUP 5 ISOLATION
OF PRIMARY CONTAINMENT ISOLATION SYSTEM

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. The event occurred at Plant Hatch - Unit 2.

Sincerely,



W. G. Hairston, III

SB/ct

Enclosure: LER 50-366/1988-021

c: (see next page)

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U. S. Nuclear Regulatory Commission
September 28, 1988
Page Two

c: Georgia Power Company
Mr. H. C. Nix, General Manager - Plant Hatch
Mr. L. T. Gucwa, Manager, Licensing and Engineering - Hatch
GO-NORMS

U. S. Nuclear Regulatory Commission, Washington, D. C.
Mr. L. F. Crocker, Licensing Project Manager - Hatch

U. S. Nuclear Regulatory Commission, Region II
Dr. J. N. Grace, Regional Administrator
Mr. J. E. Menning, Senior Resident Inspector - Hatch