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W. G. Hairston, III
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the southern electric system

HL-1164
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June 26, 1990

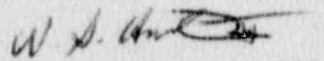
U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

PLANT HATCH - UNIT 1
NRC DOCKET 50-321
OPERATING LICENSE DPR-57
LICENSEE EVENT REPORT
PERSONNEL ERROR RESULTS IN UNPLANNED
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 a personnel error which resulted in an unplanned actuation of an engineered safety feature. This event occurred at Plant Hatch - Unit 1.

Sincerely,


W. G. Hairston, III

SRB/JKB/et

Enclosure: LER 50-321/1990-010

c: (See next page.)

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U.S. Nuclear Regulatory Commission

June 26, 1990

Page Two

c: Georgia Power Company

Mr. H. C. Nix, General Manager - Nuclear Plant

Mr. J. D. Heidt, Manager Engineering and Licensing - Hatch

GO-NORMS

U.S. Nuclear Regulatory Commission, Washington, D.C.

Mr. L. P. Crocker, Licensing Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II

Mr. S. D. Ebnetter, Regional Administrator

Senior Resident Inspector - Hatch

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) PLANT HATCH, UNIT 1 DOCKET NUMBER (2) 0500032111 OF 015

TITLE (4)

PERSONNEL ERROR RESULTS IN UNPLANNED ACTUATION OF ENGINEERED SAFETY FEATURE

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 NAME(S)	DOCKET NUMBER(S)				
0	5	3	0	9	0	0	1	0		050000				
0	5	3	0	9	0	0	0	6	2	6	9	0		050000

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																														
5	<table border="1"><tr><td>20.402(h)</td><td>20.405(e)</td><td>X</td><td>50.73(a)(2)(iv)</td><td>73.71(b)</td></tr><tr><td>20.406(a)(1)(i)</td><td>50.36(e)(1)</td><td></td><td>50.73(a)(2)(v)</td><td>73.71(c)</td></tr><tr><td>20.406(a)(1)(ii)</td><td>50.36(e)(2)</td><td></td><td>50.73(a)(2)(vii)</td><td>OTHER (Specify in Abstract below and in Text, NRC Form 366A)</td></tr><tr><td>20.406(a)(1)(iii)</td><td>50.73(a)(2)(i)</td><td></td><td>50.73(a)(2)(viii)(A)</td><td></td></tr><tr><td>20.406(a)(1)(iv)</td><td>50.73(a)(2)(ii)</td><td></td><td>50.73(a)(2)(viii)(B)</td><td></td></tr><tr><td>20.406(a)(1)(v)</td><td>50.73(a)(2)(iii)</td><td></td><td>50.73(a)(2)(ix)</td><td></td></tr></table>	20.402(h)	20.405(e)	X	50.73(a)(2)(iv)	73.71(b)	20.406(a)(1)(i)	50.36(e)(1)		50.73(a)(2)(v)	73.71(c)	20.406(a)(1)(ii)	50.36(e)(2)		50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)	20.406(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		20.406(a)(1)(iv)	50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		20.406(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(ix)	
20.402(h)	20.405(e)	X	50.73(a)(2)(iv)	73.71(b)																											
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20.406(a)(1)(ii)	50.36(e)(2)		50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)																											
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20.406(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(ix)																												

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME	AREA CODE	AREA CODE	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

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO				

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

On 5/30/90, at approximately 0014 CDT, Unit 1 was in the Refuel mode with reactor coolant pressure atmospheric and reactor coolant temperature at approximately 160°F. At that time, Instrumentation and Control (I&C) technicians were calibrating the Main Steam Line Radiation Monitors (MSLRMs, master parts list number 1D11-K603A/B/C/D, EIIS Code IL) per procedure 57SV-CAL-005-OS, "GE NUMAC Logarithmic Radiation Monitor Calibration," and had the "B" MSLRM removed from service. Licensed control room Operations Personnel then requested the I&C technicians to remove the "A" MSLRM from service prior to resetting the isolation signal caused by the "B" MSLRM. When the I&C technicians removed the "A" MSLRM from service, licensed Operations Personnel observed annunciation that a full Group 1 isolation signal had been generated. The Main Steam Isolation Valves (MSIVs, master parts list number 1B21-F022A/B/C/D, 1B21-F028A/B/C/D, EIIS Code JM) were already closed, and therefore did not move as a result of the isolation signal. Also, in accordance with Group 1 isolation logic design, no other Group 1 valves closed.

The cause of this event is personnel error. Proper administrative controls were not followed to temporarily revise the procedure in use at the time. Specifically, contrary to procedure prerequisites, the licensed Shift Supervisor and licensed Plant Operators requested I&C technicians to generate a full Group 1 isolation signal by removing a second MSLRM from service before the half-group isolation signal remaining from a previous MSLRM calibration was reset.

Corrective actions for this event included counseling the involved licensed personnel.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
PLANT HATCH, UNIT 1	0 5 0 0 0 3 2 1 9 0	— 0	1 0	— 0 0	0	2 OF	0 5

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 Code XX).

SUMMARY OF EVENT

On 5/30/90, at approximately 0014 CDT, Unit 1 was in the Refuel mode with reactor coolant pressure atmospheric and reactor coolant temperature at approximately 160°F. At that time, Instrumentation and Control (I&C) technicians were calibrating the Main Steam Line Radiation Monitors (MSLRMs, master parts list number 1D11-K603A/B/C/D, EIIS Code IL) per procedure 57SV-CAL-005-OS, "GE NUMAC Logarithmic Radiation Monitor Calibration," and had the "B" MSLRM removed from service. Licensed control room Operations Personnel then requested the I&C technicians to remove the "A" MSLRM from service prior to resetting the isolation signal caused by the "B" MSLRM. When the I&C technicians removed the "A" MSLRM from service, licensed Operations Personnel observed annunciation that a full Group 1 isolation signal had been generated. The Main Steam Isolation Valves (MSIVs, master parts list number 1B21-F022A/B/C/D, 1B21-F028A/B/C/D, EIIS Code JM) were already closed, and therefore did not move as a result of the isolation signal. Also, in accordance with Group 1 isolation logic design, no other Group 1 valves closed.

The cause of this event is personnel error. Proper administrative controls were not followed to temporarily revise the procedure in use at the time. Specifically, contrary to procedure prerequisites, the licensed Shift Supervisor and licensed Plant Operators requested I&C technicians to generate a full Group 1 isolation signal by removing a second MSLRM from service before the half-group isolation signal remaining from a previous MSLRM calibration was reset.

Corrective actions for this event included counseling the involved licensed personnel.

DESCRIPTION OF EVENT

On 5/29/90, at approximately 2125 CDT, I&C technicians began performing surveillance procedure 57SV-CAL-005-OS, "GE NUMAC Logarithmic Radiation Monitor Calibration." This surveillance requires I&C technicians to remove each of four Main Steam Line Radiation Monitors (MSLRMs) in order to facilitate calibration. Per the procedure, when a MSLRM is removed from service, it is temporarily replaced with a spare MSLRM. Thus, each time a monitor is calibrated, two half-group isolation signals are generated and reset sequentially, the first when the monitor is removed from service and replaced with a spare, and the second when the spare monitor is removed and replaced with the original. To avoid generating full Group 1 isolation signals, the procedure requires I&C technicians to verify that no half-group signals are present in the opposite channel prior to removing an instrument from service. If such a half-group signal is present, the I&C technicians are procedurally required to stop the procedure and notify the Shift Supervisor.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) PLANT HATCH, UNIT 1	DOCKET NUMBER (2) 0 5 0 0 0 3 2 1 9 0	LER NUMBER (6)			PAGE (3)		
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Because the repeated half-group isolation signals demanded constant operator attention, licensed Plant Operators and the licensed Shift Supervisor elected to permit the I&C technicians to generate a full Group 1 isolation signal by removing a second MSLRM from service without resetting the first isolation signal. Although this was contrary to the prerequisites of the procedure in use at the time, their decision was based on the fact that the Main Steam Isolation Valves and one of the Reactor Water Sample Valves were already closed. The other three Group 1 isolation valves (the other Reactor Water Sample Valve and the two Reactor Water Sample Valves) are small bore valves and licensed shift personnel considered it permissible to close them via an isolation signal. Their decision was further based on the fact that once a full Group 1 signal was received, further half-group signals would not result in further valve actuations, thus reducing the amount of operator attention required to monitor them.

Therefore, when the "B" channel radiation monitor was replaced with a spare at 0014 CDT on 5/30/90, the resulting half-group isolation signal was intentionally not reset by licensed Plant Operators. Next, licensed Plant Operators requested the I&C technicians to take the "A" MSLRM mode switch to the INOPERABLE position, inducing a trip in that channel. The fact that a full Group 1 isolation signal was about to be generated was not clearly communicated to the I&C technicians who were requested to manipulate the switch. When the second MSLRM was taken out of service, Group 1 isolation logic received a partial half-group isolation signal in each channel. This signal actuated the "GROUP 1 SYSTEM A/B TRIP" annunciator in both channels and would have satisfied sufficient logic to close the MSIVs had they been open. However, it did not activate sufficient logic to cause the other Group 1 isolation valves to close, per design. The licensed shift personnel were not aware of the differences in Group 1 isolation logic between the MSIVs and the other four Group 1 isolation valves. Therefore, they initiated a deficiency card against what appeared to them to have been an unsuccessful Group 1 isolation.

The calibration procedure was completed by 0300 CDT on 5/30/90 without further incident. Initial information did not indicate conclusively that a reportable Engineered Safety Feature (ESF) actuation had occurred. Further investigation of the event revealed additional information which indicated that this event was reportable per 10 CFR 50.72 and 73. The NRC was notified by phone pursuant to 10 CFR 50.72(b)(2)(ii) at 1057 CDT on 5/31/90.

CAUSE OF THE EVENT

The root cause of the event is personnel error. Specifically, the licensed Plant Operator did not obtain approval for a temporary change to the procedure in use at the time. Contrary to the prerequisites of the surveillance procedure in use at the time, the licensed Shift Supervisor and Plant Operators elected to permit a full Group 1 isolation signal to be generated. This was done by requesting I&C technicians to remove a MSLRM from service while a half-group isolation signal (left from a previous iteration of the procedure) remained in the opposite channel.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1) PLANT HATCH, UNIT 1	DOCKET NUMBER (2) 0 5 0 0 0 3 2 1 9 0	LER NUMBER (6)			PAGE (3) 0 4 OF 0 5
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

REPORTABILITY ANALYSIS AND SAFETY ASSESSMENT

This report is required per 10 CFR 50.73(a)(2)(iv) because an unplanned actuation of an ESF occurred. Specifically, a full Group 1 isolation signal was received during performance of surveillance procedure 57SV-CAL-05-05, "GE NUMAC Logarithmic Radiation Monitor Calibration." Even though no valve motion occurred, "actuation of enough channels to complete the minimum actuation logic" for the MSIVs did occur and is therefore reportable in accordance with definitions provided in NUREG 1022.

The MSLRMs are designed to detect an increase in radiation in the main steam lines, and upon detecting such a condition, to initiate closure of the MSIVs. There are four MSLRMs, one monitoring each main steam line. The four monitors are arranged in two channels of Group 1 isolation valve actuation logic. Actuation logic for MSIV closure is "one out of two taken twice," such that one instrument in each channel's logic (i.e., two instruments) will cause closure of all eight MSIVs. There are four other valves in the Group 1 isolation system. They are the following small bore primary containment isolation valves (PCIVs); the Main Steam Line Drain Valves (1B21-F016 and 1B21-F019, EIIS Code JM) and the Reactor Water Sample Valves (1B31-F019 and 1B31-F020, EIIS Code JM). These valves are also designed to close upon detection of high radiation in the main steam lines. The logic which actuates the small bore Group 1 valves differs from the logic which closes the MSIVs. Instead of "one out of two taken twice," the logic is designed to actuate one drain valve and one sample valve per channel upon receiving a trip from both monitors in their respective channel. This would isolate both primary containment penetrations with at least one PCIV provided both monitors in at least one channel tripped successfully.

In the event addressed in this report, the "B" MSLRM was taken out of service inducing a half-group isolation signal in the "B" channel of the logic. Before this signal was reset, a trip was induced in the "A" logic channel. This satisfied the actuation logic to initiate closure of the MSIVs (which were already closed with the plant in the Refuel mode) and illuminate both Group 1 isolation annunciators. The logic required to actuate the small bore valves was not satisfied, and therefore, as designed, they did not close. Thus all involved portions of the Group 1 isolation logic functioned as designed given the manner in which the signal was generated.

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

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1) PLANT HATCH, UNIT 1	DOCKET NUMBER (2) 0 5 0 0 0 3 2 1 7 9 0	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

CORRECTIVE ACTIONS

Corrective actions for this event included counseling the involved licensed Shift Supervisor and Plant Operators.

ADDITIONAL INFORMATION

1. Previous Similar Events:

No previous similar events were identified in which licensed Shift Supervisors or Plant Operators deviated from approved plant procedures with the result that an unplanned ESF actuation was generated.

2. Failed Component Identification:

No failed components contributed to this event.

3. Other Affected Equipment:

No systems or valves other than those mentioned in the report were affected by the event.