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SOUTHERN COMPANY
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Docket No. 50-321

HL-6332

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

Edwin I. Hatch Nuclear Plant - Unit 1
Licensee Event Report
Water Level Transient Following Manual Reactor Scram
Causes Group 2 PCIS Isolation

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(iv)(A), Southern Nuclear Operating Company is submitting the enclosed Licensee Event Report (LER) concerning a Group 2 Primary Containment Isolation System (PCIS) isolation resulting from a water level transient following a manual reactor scram.

Respectfully submitted,

Lewis Sumner

H. L. Sumner, Jr.

IFL/eb

Enclosure: LER 50-321/2002-005

cc: Southern Nuclear Operating Company
Mr. P. H. Wells, Nuclear Plant General Manager
SNC Document Management (R-Type A02.001)

U.S. Nuclear Regulatory Commission, Washington, D.C.
Mr. Joseph Colaccino, Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II
Mr. L. A. Reyes, Regional Administrator
Mr. J. T. Munday, Senior Resident Inspector - Hatch

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IE22

NRC FORM 366 (7-2001) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
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4. TITLE
Water Level Transient Following Manual Reactor Scram Causes Group 2 PCIS Isolation

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER(S)
										05000
10	10	2002	2002	005	0	12	06	2002	FACILITY NAME	DOCKET NUMBER(S) 05000

9. OPERATING MODE (9): 1

10. POWER LEVEL: 48.5

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § : (Check all that apply)

	20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)
	20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)
	20.2203(a)(1)		50.36(c)(1)(i)(A)	X	50.73(a)(2)(iv)(A)		73.71(a)(4)
	20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)		73.71(a)(5)
	20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)		OTHER
	20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)		Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)		
	20.2203(a)(2)(v)		50.73(a)(2)(i)(B)		50.73(a)(2)(vii)		
	20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)		
	20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)		

12. LICENSEE CONTACT FOR THIS LER

NAME	TELEPHONE NUMBER (Include Area Code)
Steven B. Tipps, Nuclear Safety and Compliance Manager, Hatch	(912) 537-5880

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED		15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On 10/10/2002 at 2220 EST, Unit 1 was in the Run mode at an approximate power level of 1341 CMWT (48.5 percent rated thermal power). At that time, Operations personnel manually scrammed the reactor per procedure 34GO-OPS-013-1S, "Normal Plant Shutdown," for a planned Unit outage for the replacement of three Safety Relief Valve (SRV) main bodies. Following the manual scram, water level decreased due to void collapse from the rapid reduction in power, reaching a minimum of approximately minus 10 inches (about 148 inches above the top of the active fuel). The decrease in water level resulted in receipt of a Group 2 Primary Containment Isolation System (PCIS) isolation signal and closure of the Group 2 Primary Containment Isolation Valves per design. The operating Reactor Feedwater Pump restored level to its desired value. Personnel reset the Group 2 isolation signal and restored the isolation valves to normal per procedure 34AB-C71-001-1S, "Scram Procedure."

This event was the result of the expected water level decrease from void collapse and proceduralized operator action following a reactor scram. Operations personnel increased water level to approximately 45.5 inches, about eight to ten inches above the normal operating level, in anticipation of the level decrease. Nevertheless, water level decreased to a point below the Group 2 PCIS isolation setpoint. Personnel actions were in accordance with approved procedures. These procedural instructions will be evaluated for revision, if needed, to improve the methodology used for reactor vessel level control during planned shutdowns.

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

PLANT AND SYSTEM IDENTIFICATION

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

DESCRIPTION OF EVENT

On 10/10/2002 at 2220 EST, Unit 1 was in the Run mode at an approximate power level of 1341 CMWT (48.5 percent rated thermal power). At that time, Operations personnel manually scrammed the reactor per plant procedure 34GO-OPS-013-1S, "Normal Plant Shutdown," to complete a planned reactor shutdown. Three Safety Relief Valves' main bodies, 1B21-F013J, K, and L were being replaced with refurbished main valve bodies. Therefore, the reactor was shut down to allow plant personnel to isolate and replace these valve bodies. Prior to inserting the manual scram signal, Operations personnel increased reactor vessel water level to approximately 45.5 inches, about eight to ten inches above the normal operating level, in anticipation of a level decrease caused by the planned scram.

Following the manual scram, vessel water level decreased due to void collapse from the rapid reduction in power, reaching a minimum of approximately minus ten inches (about 148 inches above the top of the active fuel). The decrease in water level resulted in receipt of Reactor Protection System (EIIS Code JC) actuation and Group 2 Primary Containment Isolation System (PCIS, EIIS Code JM) isolation signals on low reactor vessel water level. The Group 2 Primary Containment Isolation Valves (EIIS Code JM) closed per design. Because the preceding manual scram resulted in the insertion of the control rods (EIIS Code JD), the Reactor Protection System actuation on low water level did not result in control rod movement.

The operating Reactor Feedwater Pump (EIIS Code SJ) automatically restored water level to the desired value. Operations personnel confirmed the Group 2 PCIS isolation valves closed as expected, reset the Group 2 isolation signal, and restored the isolation valves to their normal positions per plant procedure 34AB-C71-001-1S, "Scram Procedure."

CAUSE OF EVENT

This event was the result of the expected water level decrease from void collapse and proceduralized operator action following a reactor scram. Operations personnel increased water level to approximately 45.5 inches, about eight to ten inches above the normal operating level, in anticipation of the level decrease. Nevertheless, water level decreased to a point below the Group 2 PCIS isolation setpoint resulting in receipt of a Group 2 PCIS isolation signal and closure of the Group 2 isolation valves per design. Personnel actions were in accordance with approved procedures. These procedural instructions will be evaluated for revision, if needed, to improve the methodology used for reactor vessel level control during planned shutdowns.

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

REPORTABILITY ANALYSIS AND SAFETY ASSESSMENT

This report is required by 10 CFR 50.73 (a)(2)(iv) because of the unplanned actuation of Engineered Safety Feature systems. Following a manual scram, reactor vessel water level decreased due to void collapse. Level reached a minimum of about minus ten inches (about 148 inches above the top of the active fuel). The decrease in water level resulted in automatic Reactor Protection System actuation and Group 2 PCIS isolation on low water level and closure of the Group 2 Primary Containment Isolation Valves per design. The Reactor Protection System and PCIS are Engineered Safety Feature systems.

The operating Reactor Feedwater Pump automatically restored water to its desired value. Operations personnel verified correct system response and restored the isolation valves to their normal positions.

All systems functioned as expected and per their design given the water level transient. Water level was maintained well above the top of the active fuel throughout the transient and was restored to its desired value without the need for emergency core cooling system actuation. Therefore, it is concluded the event had no adverse impact on nuclear safety. This analysis is applicable to all power levels.

CORRECTIVE ACTIONS

Plant Hatch will take the following actions to prevent recurrence prior to the next Unit 2 scheduled refueling outage:

1. A comprehensive review will be performed to address both operational and engineering aspects of the optimum plant configuration and operational methodology for a planned reactor shutdown. An evaluation will be performed of the applicable operating and abnormal procedures to allow better operation in a broad set of conditions. Procedures will be revised, if needed, to reflect the results of these reviews.

2. The limitations of simulator and other training experience will be factored into the bases for changes in operating procedures to accomplish an optimum plant configuration for a planned reactor shutdown.

ADDITIONAL INFORMATION

Other Systems Affected: No systems other than those already mentioned in this report were affected by this event.

Failed Components Information: No failed components directly caused or resulted from this event.

Commitment Information: This report does not create any permanent licensing commitments.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

Previous Similar Events: There has been one previous similar event in the past two years in which a planned manual reactor scram at low power level resulted in unplanned Engineered Safety Feature system actuations. In this event, reported in Licensee Event Report 50-321/2000-012, dated 12/1/2000, Unit 1 was scrammed manually with power level at approximately 16 percent rated thermal power. The resulting water level transient caused the Group 2 Primary Containment Isolation Valves to close on low reactor vessel water level. During this event, personnel actions, procedural instructions, and equipment operation were considered appropriate for the situation. Therefore, no corrective actions were required.