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SOUTHERN COMPANY
Energy to Serve Your World℠

November 23, 2004

Docket No.: 50-366

NL-04-2305

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Edwin I. Hatch Nuclear Plant – Unit 2
Licensee Event Report
Unplanned Group 2 PCIS Isolation Results From a Water Level Transient
Following a Manual Reactor Scram

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 concerning an unplanned Group 2 isolation which resulted from a water level transient following a manual reactor scram.

This letter contains no NRC commitments.

If you have any questions, please advise.

Sincerely,

H. L. Sumner, Jr.

HLS/OCV/daj

Enclosures: LER 2-2004-002

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. G. R. Frederick, General Manager – Plant Hatch
RTYPE: CHA02.004

U. S. Nuclear Regulatory Commission
Dr. W. D. Travers, Regional Administrator
Mr. C. Gratton, NRR Project Manager – Hatch
Mr. D. S. Simpkins, Senior Resident Inspector – Hatch

IE22

NRC FORM 366 (6-2004) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 06/30/2007

Estimated burden per response to comply with this mandatory collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

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
Unplanned Group 2 PCIS Isolation From a Water Level Transient Following Manual Reactor Scram

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)
09	25	2004	2004	002	0	11	23	2004		05000
									FACILITY NAME	DOCKET NUMBER(S)
										05000

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
Mode 1	20.2201(b)	20.2203(a)(3)(i)	50.73(a)(2)(i)(C)	50.73(a)(2)(vii)
	20.2201(d)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(A)
	20.2203(a)(1)	20.2203(a)(4)	50.73(a)(2)(ii)(B)	50.73(a)(2)(viii)(B)
	20.2203(a)(2)(i)	50.36(c)(1)(i)(A)	50.73(a)(2)(iii)	50.73(a)(2)(ix)(A)
10. POWER LEVEL	20-2203(a)(2)(ii)	50.36(c)(1)(ii)(A)	X 50.73(a)(2)(iv)(A)	50.73(a)(2)(x)
35%	20-2203(a)(2)(iii)	50.36(c)(2)	50.73(a)(2)(v)(A)	73.71(a)(4)
	20.2203(a)(2)(iv)	50.46(a)(3)(ii)	50.73(a)(2)(v)(B)	73.71(a)(5)
	20.2203(a)(2)(v)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(C)	OTHER
	20.2203(a)(2)(vi)	50.73(a)(2)(i)(B)	50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER (Include Area Code)
Edwin I. Hatch / Kathy A. Underwood, Performance Analysis Supervisor	(912) 537-5931

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 15. EXPECTED SUBMISSION DATE)	X	NO				

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

On 9/25/2004 at 0106 EST, Unit 2 was in the Run mode at an approximate power level of 981 CMWT (35 percent rated thermal power). At that time, Operations personnel manually scrammed the reactor per procedure 34GO-OPS-013-2, "Normal Plant Shutdown," for a planned Unit outage for the repair of the "L" Safety Relief Valve (SRV). Following the manual scram, water level decreased due to void collapse from the rapid reduction in power, reaching a minimum of approximately minus 6 inches above instrument zero (about 152 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 Pumps restored level to its desired value. Personnel reset the Group 2 isolation signal and restored the isolation valves to normal per procedure 34AB-C71-001-2, "Scram Procedure."

The receipt of the unplanned Group 2 PCIS isolation was the result of a vessel water level decrease due to void collapse from the rapid reduction in power following the planned insertion of a manual scram. Procedure 34GO-OPS-013-2, "Normal Plant Shutdown," failed to inform the operators that the receipt of a Group 2 signal was expected. Upon inserting the scram water level decreased to a point approximately equal to the Group 2 PCIS isolation setpoint. The Normal Plant Shutdown procedure will be revised to provide guidance to preclude reaching the Group 2 Isolation setpoint as well as provide guidance to state when the Group 2 isolation is expected.

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

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 9/25/2004 at 0106 EST, Unit 2 was in the Run mode at an approximate power level of 981 CMWT (35 percent rated thermal power). At that time, Operations personnel manually scrammed the reactor per plant procedure 34GO-OPS-013-2, "Normal Plant Shutdown," to complete a planned reactor shutdown. Safety Relief Valve, 2B21-F013L, was scheduled to be repaired due to pilot valve leakage. Therefore, the reactor was shut down to allow plant personnel to isolate and repair the 2B21-F013L pilot valve assembly.

Following the manual scram, vessel water level decreased due to void collapse from the rapid reduction in power, reaching a minimum of approximately minus six inches above instrument zero (about 152 inches above the top of the active fuel). The decrease in water level resulted in receipt of a Reactor Protection System (EIIS Code JC) actuation and Group 2 Primary Containment Isolation System (PCIS, EIIS Code JM) 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 Pumps (EIIS Code SJ) automatically restored water to its 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-C71-001-2, "Scram Procedure."

CAUSE OF EVENT

The unplanned Group 2 PCIS isolation was the result of a vessel water level decrease due to void collapse from the rapid reduction in power following the planned insertion of a manual scram. Upon insertion of the manual reactor scram at 35 percent power, water level decreased to a point just 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. Procedure 34GO-OPS-013-2, "Normal Plant Shutdown," failed to inform the operators that the receipt of a Group 2 PCIS isolation signal was expected during these conditions. During a controlled shutdown from a lower power level (e.g., during a soft shutdown), plant conditions would preclude reaching the Group 2 isolation setpoint.

REPORTABILITY ANALYSIS AND SAFETY ASSESSMENT

This report is required by 10 CFR 50.73 (a)(2)(iv) because of the unplanned actuation of containment isolation valves in more than one system. Following a manual scram, reactor vessel water level decreased due to void collapse. Level reached a minimum of about minus six inches above instrument zero (about 152 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 Pumps 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

The Normal Plant Shutdown procedure will be revised to provide guidance to preclude reaching the Group 2 Isolation setpoint as well as provide guidance to state when the Group 2 isolation is expected.

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.

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 50-321/2002-005, dated 12/6/2002, Unit 1 was scrammed manually with power level at approximately 48.5 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. From this event, procedural instructions were reviewed and revised as required to improve the methodology used for reactor vessel level control during planned shutdowns.