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SOUTHERN COMPANY
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Docket No. 50-321

HL-6001

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

Edwin I. Hatch Nuclear Plant - Unit 1
Licensee Event Report
Inadequate Procedure Results in
Unplanned Actuation of Engineered Safety Feature

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(iv), Southern Nuclear Operating Company is submitting the enclosed Licensee Event Report (LER) concerning an inadequate procedure which resulted in an unplanned actuation of an engineered safety feature.

Respectfully submitted,

Lewis Sumner

H. L. Sumner, Jr.

OCV/eb

Enclosure: LER 50-321/2000-008

cc: Southern Nuclear Operating Company
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SNC Document Management (R-Type A02.001)

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NRC FORM 366 (06-1998) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

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

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001
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TITLE (4)
Inadequate Procedure 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	DOCKET NUMBER(S)
09	11	2000	2000	008	00	10	02	2000		05000
										DOCKET NUMBER(S) 05000

OPERATING MODE (9)	1
POWER LEVEL (10)	98.3

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

	20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(vii)
	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(ix)
	20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
	20.2203(a)(2)(ii)		20.2203(a)(4)	X	50.73(a)(2)(iv)		OTHER
	20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Steven B. Tipps, Nuclear Safety and Compliance Manager, Hatch	(912) 367-7851

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

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

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

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

On 9/11/2000 at 1020 EDT, Unit 1 was in the Run mode at a power level of 2716 CMWT (98.3 percent rated thermal power). At that time, excess flow check valve 1B21-F051C, a primary containment isolation valve, closed unexpectedly during the performance of procedure 34SV-SUV-026-1S, "Primary Containment Isolation Valves LSFT" when Post-Accident Sampling System inlet isolation valves were opened as required by the procedure. These valves were opened in order to verify their closure on a simulated isolation signal at a later point in the test. However, reactor coolant flowed into the Post-Accident Sampling System to fill and pressurize the inlet tubing when the valves were opened. The flow created when the inlet valves were opened was sufficient to actuate excess flow check valve 1B21-F051C on high flow and the valve closed as designed. Because valve 1B21-F051C is a primary containment isolation valve, its automatic closure represented an unplanned actuation of an engineered safety feature system.

The cause of this event was an inadequate surveillance procedure. Procedure 34SV-SUV-026-1S did not alert licensed Operations personnel to the possibility that excess flow check valve 1B21-F051C could isolate when the Post-Accident Sampling System inlet isolation valves were opened nor did it contain steps to prevent the rapid filling and pressurizing of the sampling system tubing. Operations personnel re-opened the excess flow check valve. Procedure 34SV-SUV-026-1S will be revised prior to its next performance.

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 9/11/2000 at 1020 EDT, Unit 1 was in the Run mode at a power level of 2716 CMWT (98.3 percent rated thermal power). At that time, excess flow check valve 1B21-F051C, a primary containment isolation valve (EIIS Code JM), closed unexpectedly during the performance of procedure 34SV-SUV-026-1S, "Primary Containment Isolation Valves LSFT." Valve 1B21-F051C closed when Post-Accident Sampling System (EIIS Code IP) series inlet isolation valves 1B21-F111 and 1B21-F112 were opened as required by the procedure. These two valves were opened in order to verify their automatic closure on a simulated isolation signal at a later point in the test.

Reactor coolant sample flow is provided to the Post-Accident Sampling System through 3/8-inch tubing that taps off the instrument line from Reactor Recirculation System Jet Pump #20 (EIIS Code AD). The jet pump instrument line is isolated by excess flow check valve 1B21-F051C. The Post-Accident Sampling System sample inlet tubing is isolated by primary containment isolation valves 1B21-F111 and 1B21-F112. These two valves receive automatic containment isolation signals; their ability to isolate automatically upon receipt of an isolation signal is tested periodically as required by Unit 1 Technical Specifications Surveillance Requirement SR 3.3.6.1.6. The test is performed using procedure 34SV-SUV-026-1S.

Prior to simulating containment isolation signals, normally-closed isolation valves 1B21-F111 and 1B21-F121 are opened in step 6.6 of procedure 34SV-SUV-026-1S. Because these valves are normally closed, the Post-Accident Sampling System inlet tubing, over time, will depressurize and partially drain. Therefore, reactor coolant flowed into the normally isolated inlet tubing in order to fill and pressurize the tubing when valves 1B21-F111 and 1B21-F112 were opened. The momentary flow created when the series inlet isolation valves were opened was sufficient to actuate excess flow check valve 1B21-F051C on high flow. The valve closed as designed. Because valve 1B21-F051C is a primary containment isolation valve, its automatic closure represented an unplanned actuation of an engineered safety feature system.

CAUSE OF EVENT

The cause of this event was an inadequate surveillance procedure. Procedure 34SV-SUV-026-1S did not alert licensed Operations personnel to the possibility that excess flow check valve 1B21-F051C could isolate when the Post-Accident Sampling System inlet isolation valves were opened. Alternately, it did not contain steps to prevent the rapid filling and pressurizing of the sampling system inlet tubing thereby preventing the momentary high flow condition that can occur when both inlet valves are opened at the same time.

REPORTABILITY ANALYSIS AND SAFETY ASSESSMENT

This event is reportable per 10 CFR 50.73 (a)(2)(iv) because an unplanned actuation of an engineered safety feature system occurred. Specifically, one primary containment isolation valve, part of the primary containment isolation system, closed in response to a momentary high flow condition. The primary containment isolation system is an engineered safety feature system.

Instrument lines that penetrate the primary containment and form a part of the reactor coolant pressure boundary generally contain a one-quarter inch flow-restricting orifice. The orifice is located as close as feasible to the reactor pressure vessel and is sized to limit the discharge from a downstream line break to within the capacity of the standby gas treatment system without affecting instrument response. Outside of the primary containment, the instrument lines are provided with a manually operated root valve followed by an automatically actuated excess flow check valve. Both valves are located as close to the primary containment as permits servicing of both valves. Should a break occur downstream of the excess flow check valve, the valve closes as the flow rate reaches a two-gallon per minute maximum. Valve position is indicated in the main control room. A remotely operated bypass around the excess flow check valve is available to permit reopening of the valve once the downstream condition is corrected. The isolation design for instrument lines that penetrate the primary containment conforms in general to the requirements of Regulatory Guide 1.11 (March 1971).

In this event, excess flow check valve 1B21-F051C, a primary containment isolation valve, closed unexpectedly during the performance of a surveillance procedure. The valve closed on a momentary high flow signal as reactor coolant filled and pressurized tubing in the Post-Accident Sampling System when two system inlet isolation valves were opened. Although no actual coolant leak existed, the excess flow check valve responded as designed to the high flow signal and would have isolated a leak had one existed. Based on this, it is concluded that this event had no adverse impact on nuclear safety. This analysis applies to all operating conditions.

CORRECTIVE ACTIONS

Operations personnel re-opened the excess flow check valve at 1022 EDT.

Logic system testing performed per procedure 34SV-SUV-026-1S was completed satisfactorily, and without further incident, at 1750 EDT.

Procedure 34SV-SUV-026-1S will be revised prior to its next performance. The revision either will state that closure of excess flow check valve 1B21-F051C is an expected occurrence when valves 1B21-F111 and 1B21-F112 are opened or will allow only one valve to be opened, and tested, at a time. The latter change would prevent the rapid filling and pressurizing of the inlet sample tubing, and the resulting momentary high flow condition, that can occur when both valves are opened at the same time.

The corresponding Unit 2 logic system function test procedure, 42SV-SUV-001-2S, "Isolation Valves LSFT," also is deficient. It likewise does not alert licensed Operations personnel to the possibility that excess flow check valve 2B21-F051C could isolate when Post-Accident Sampling System inlet isolation valves 2B21-F111 and 2B21-F112 are opened nor does it contain steps to prevent the rapid filling and pressurizing of the sampling system inlet tubing. Therefore, this procedure will be revised prior to its next performance. The revision either will state that closure of excess flow check valve 2B21-F051C is an expected occurrence when valves 2B21-F111 and 2B21-F112 are opened or will allow only one valve to be opened, and tested, at a time.

ADDITIONAL INFORMATION

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

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

3. Commitments: No permanent commitments are created as a result of this report.

4. Previous Similar Events: Only one previous similar event has been reported in the last two years in which an inadequate procedure resulted in an unplanned engineered safety feature system actuation. In this event, reported in Licensee Event Report 50-366/2000-003, dated 04/18/2000, an unexpected actuation of the reactor protection system (EIIS Code JC) on high scram discharge volume level occurred during the performance of a logic system functional test procedure. The procedure failed to caution Operations personnel to allow the volume to drain before moving the high level scram bypass switch to the "normal" position. When the switch was moved to the "normal" position before the volume had drained, an unplanned actuation of the reactor protection system occurred.

   Corrective action for this event was to revise the testing procedure to require that personnel verify that the volume is drained before moving the switch. However, this action would not have prevented the event that is the subject of this Licensee Event Report because the procedures involved in the two events were different. Furthermore, the actions leading to the unplanned actuations were different: moving a logic bypass switch and opening valves. Finally, the logic systems being tested were different. Therefore, the corrective action for the previous event could not have been reasonably expected to have detected the error in testing procedure 34SV-SUV-026-1S and corrected it, thereby preventing this event.