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SOUTHERN COMPANY
Energy to Serve Your World℠

December 29, 2004

Docket No.: 50-348

NL-04-2523

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

Joseph M. Farley Nuclear Plant – Unit 1
Licensee Event Report 2004-002-00
B Train LOSP During Surveillance Testing

Ladies and Gentlemen:

Joseph M. Farley Nuclear Plant – Unit 1 Licensee Event Report (LER) No. 2004-002-00 is being submitted in accordance with 10 CFR 50.73(a)(2)(iv)(A).

This letter contains no NRC commitments. If you have any questions, please advise.

Sincerely,

L. M. Stinson

LMS/WAS/sdl

Enclosure: Licensee Event Report 2004-002-00

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. J. R. Johnson, General Manager – Plant Farley
RTYPE: CFA04.054; LC# 14195

U. S. Nuclear Regulatory Commission
Dr. W. D. Travers, Regional Administrator
Mr. S. E. Peters, NRR Project Manager – Farley
Mr. C. A. Patterson, Senior Resident Inspector – Farley

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
Joseph M. Farley Nuclear Plant – Unit 1	05000 348	1 OF 4

4. TITLE

B Train LOSP During Surveillance Testing

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
										05000
11	05	2004	2004	- 002 -	00	12	29	2004	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE

6

10. POWER LEVEL

0

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

- ☐ 20.2201(b)
- ☐ 20.2201(d)
- ☐ 20.2203(a)(1)
- ☐ 20.2203(a)(2)(i)
- ☐ 20.2203(a)(2)(ii)
- ☐ 20.2203(a)(2)(iii)
- ☐ 20.2203(a)(2)(iv)
- ☐ 20.2203(a)(2)(v)
- ☐ 20.2203(a)(2)(vi)
- ☐ 20.2203(a)(3)(i)
- ☐ 20.2203(a)(3)(ii)
- ☐ 20.2203(a)(4)
- ☐ 50.36(c)(1)(i)(A)
- ☐ 50.36(c)(1)(ii)(A)
- ☐ 50.36(c)(2)
- ☐ 50.46(a)(3)(ii)
- ☐ 50.73(a)(2)(i)(A)
- ☐ 50.73(a)(2)(i)(B)
- ☐ 50.73(a)(2)(i)(C)
- ☐ 50.73(a)(2)(ii)(A)
- ☐ 50.73(a)(2)(ii)(B)
- ☐ 50.73(a)(2)(iii)
- ☒ 50.73(a)(2)(iv)(A)
- ☐ 50.73(a)(2)(v)(A)
- ☐ 50.73(a)(2)(v)(B)
- ☐ 50.73(a)(2)(v)(C)
- ☐ 50.73(a)(2)(v)(D)
- ☐ 50.73(a)(2)(vii)
- ☐ 50.73(a)(2)(viii)(A)
- ☐ 50.73(a)(2)(viii)(B)
- ☐ 50.73(a)(2)(ix)(A)
- ☐ 50.73(a)(2)(x)
- ☐ 73.71(a)(4)
- ☐ 73.71(a)(5)
- ☐ OTHER

Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER (Include Area Code)
J. R. Johnson, General Manager Nuclear Plant	334-899-5156

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☒ NO

15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR

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

On November 5, 2004, at 0911, with the reactor in Mode 6, Unit 1 experienced a B Train Loss of Site Power (LOSP) due to inadvertent actuation of B Train bus undervoltage relays during surveillance testing. Establishment of initial conditions for performance of the B Train LOSP, Load Shedding, and Station Black Out (SBO) Diesel Generator (DG) Start Test was in progress, with jumpers installed that allowed load shed and 1B DG start relays to energize with the sequencer in test mode. A separate monthly undervoltage relay functional test, normally performed at power and which does not normally actuate Engineered Safety Feature (ESF) Equipment, was being performed at the same time. When the monthly relay test was initiated, an undervoltage condition was detected by the sequencer which initiated the load shed and 1B DG start sequence. The LOSP caused a loss of 1B Residual Heat Removal (RHR) pump. The operating crew immediately restored shutdown cooling by starting the 1A RHR pump in accordance with Abnormal Operating Procedures. This event was caused by inadequate work scheduling and procedures. Additionally, the incompatibility between these tests was not realized by Operations Shift Supervision. The Unit 1 and Unit 2, A Train and B Train LOSP, Load Shedding, and DG Start Test procedures (4 procedures) have been revised to caution tag the sequencer test switch when jumpers are installed, and to add amplifying information to clarify the function of the jumpers. A Training Notice will be sent to licensed personnel explaining the event sequence, root causes and actions to prevent recurrence by January 30, 2005. Outage management procedure changes and additional training reviews will be completed by May 31, 2005.

Westinghouse -- Pressurized Water Reactor
Energy Industry Identification Codes are identified in the text as [XX]

Description of Event

On November 5, 2004, at 0911, with the reactor in Mode 6, Unit 1 experienced a B Train Loss of Site Power (LOSP) due to inadvertent actuation of B Train bus undervoltage relays [EB] during surveillance testing. Establishment of initial conditions for performance of the B Train LOSP, Load Shedding, and Station Black Out (SBO) Diesel Generator (DG)[EK] Start Test (STP 80.15) was in progress. Jumpers were installed for performance of this test that allowed the 27XG and 2G relays to energize with the sequencer in test mode. Relay 27XG actuates the Load Shed relays and provides the start signal to the 1B DG. Relay 2G removes the Load Shed and DG start signal from relay 27XG after 2 seconds has elapsed.

At the same time as these test preparations were in progress, the monthly Degraded Grid Voltage and Loss of Voltage Protection Relays Operability Test (STP 80.16) was due. This monthly test was not in the outage schedule. This relay functional test is intended to be performed with the sequencer in test mode, in which the 27XG and 2G relays are de-energized. This monthly test normally does not actuate any Engineered Safety Feature (ESF) equipment.

Operations Shift Supervision concurred with performance of STP-80.16 along with the continued preparations for the performance of STP-80.15, and did not realize the incompatibility of these two tests. Depressing the test pushbuttons in accordance with the monthly undervoltage relay operability test (STP 80.16) caused an undervoltage condition to be detected by the sequencer relays. Since the jumpers were installed for the performance of the B Train LOSP Test (STP 80.15), these relays were energized and therefore initiated the load shed and 1B DG start sequence.

By design, the LOSP sequencers do not start the Residual Heat Removal (RHR)[BP] pumps. Therefore, the LOSP caused a loss of the previously running 1B RHR pump. The operating crew immediately restored shutdown cooling by starting the 1A RHR pump, in accordance with Abnormal Operating Procedures, in less than one minute. All actions of the Abnormal Operating Procedure for loss of shutdown cooling were completed by 0926. Offsite power was restored to the B Train safeguards busses at 0959, and the 1B DG was subsequently shut down.

Additionally, the 1B Motor Driven Auxiliary Feed Water (MDAFW)[BA] pump, which had not undergone post maintenance testing following overhaul, started as designed, but tripped on overcurrent.

All other equipment operated as designed following the LOSP and sequencer operation.

LICENSEE EVENT REPORT (LER)

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

Cause of Event

This event was caused by inadequate work scheduling and procedures. Additionally, Operations Shift Supervision did not make themselves fully aware of the conditions previously established for the performance of STP- 80.15 and did not realize the incompatibility of these two tests.

Safety Assessment

The health and safety of the public were unaffected by this event.

Since the B Train LOSP, Load Shedding, and SBO DG Start Test (STP 80.15) is only conducted during refueling outages, this event does not represent an at power concern.

The 1B MDAFW pump trip occurred in a mode in which the pump was not required, prior to post maintenance testing, and therefore has no safety significance.

This event does not represent a Safety System Functional Failure since the opposite train of all required equipment was operable throughout the event.

Corrective Action

The Unit 1 and Unit 2, A Train and B Train LOSP, Load Shedding, and DG Start Test procedures (4 procedures) have been revised to caution tag the sequencer test switch when jumpers are installed adding amplifying information to clarify the function of the jumpers and to increase operators' awareness. In addition, the pre-job briefing template for this activity has been revised to include this operating experience and purpose of the test jumper.

Outage management procedures will be changed to require a review of all non-outage surveillances coming due during an outage and to assess their impact on outage plant configuration, by May 31, 2005.

A Training Notice will be sent to licensed personnel explaining the event sequence, root causes, and actions to prevent recurrence, by January 30, 2005.

Applicable training committees will review this event for potential inclusion in additional training, by May 31, 2005.

Following troubleshooting and repair, the 1B MDAFW pump was tested satisfactorily and returned to service.

LICENSEE EVENT REPORT (LER)

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

Additional Information

As an enhancement already planned prior to this event, the daily surveillance schedule will be incorporated into the integrated work planning schedule by May 1, 2005.

The 1B MDAFW pump is not being reported as a failure in this LER since it had not been returned to service following maintenance activities.

The following LER has been submitted in the past two years concerning unplanned ESF actuations other than reactor trips:

LER 2003-003-00 Unit 1, Unplanned Auxiliary Feedwater Actuation upon Trip of Steam Generator Feed Pump.