J. R. Johnson
Vice President - Farley

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SOUTHERN COMPANY
Energy to Serve Your World™

June 17, 2010

Docket No.: 50-364 NL-10-1151

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

Joseph M. Farley Nuclear Plant – Unit 2
Licensee Event Report 2010-001-00
Unplanned LOSP during SI with LOSP Testing

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(iv)(A), Southern Nuclear Operating Company (SNC) is submitting the enclosed Licensee Event Report.

This letter contains no NRC commitments. If you have any questions, please contact Doug McKinney at (205)992-5982.

Sincerely,

J. R. Johnson
Vice President – Farley

JRJ/WDO

Enclosure: Unit 2 Licensee Event Report 2010-001-00

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. J. R. Johnson, Vice President – Farley
Ms. P. M. Marino, Vice President – Engineering
RTYPE: CFA04.054

U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator
Mr. R. E. Martin, NRR Project Manager – Farley
Mr. E. L. Crowe, Senior Resident Inspector – Farley
Mr. P. Boyle, NRR Project Manager

Joseph M. Farley Nuclear Plant – Unit 2
Licensee Event Report 2010-001-00
Unplanned LOSP during SI with LOSP Testing

Enclosure

Unit 2 Licensee Event Report 2010-001-00

NRC FORM 366 (9-2007) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 08/31/2010

Estimated burden per response to comply with this mandatory collection request: 80 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)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Joseph M Farley Nuclear Plant – Unit 2	05000 364	1 of 3

4. TITLE
Unplanned LOSP during SI with LOSP 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
04	30	2010	2010	- 001 -	00	06	17	2010	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE: 6

10. POWER LEVEL: 000

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

☐ 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)
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☒ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 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

NAME	TELEPHONE NUMBER (Include Area Code)
J. R. Johnson – Vice President	(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		15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)*	☒ NO				

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

On April 30, 2010 at 21:00, an unplanned Loss of Off-Site Power (LOSP) on A-train 4160 volt emergency Bus 2F occurred during a scheduled outage test, Safety Injection (SI) with LOSP. The Emergency Diesel Generator (EDG) 1-2A was being shutdown following the actuation portion of the test. When the B2F Sequencer was reset, the EDG output breaker (DF08-2) unexpectedly opened to generate the LOSP signal on the 2F Bus. As a result, the B2F Sequencer functioned to automatically re-close DF08-2, and start both the 2A Motor Driven Auxiliary Feedwater (MDAFW) pump and 2A High Head Safety Injection (HHSI) pump. All systems functioned as designed for this condition and core cooling was maintained throughout by the B-train 2B Residual Heat Removal (RHR) pump. Unit 1 remained at 100 % power during the event.

A recent design change was implemented to assure EDG sequencer reliability during all modes of EDG operation. Subsequent to this design change, the necessary procedure change had not been properly incorporated in the test procedure. Test guidance relied upon transitioning to the System Operating Procedure (SOP) for operating the newly installed Test Trip Override Switch (TTOS) located on the B2F Sequencer. However, the transition was not at the correct location in the test procedure. Once recognized, the SOP guidance was used and the B2F Sequencer TTOS was operated before resetting the sequencer; and the restoration section was completed without further complications.

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

Description of Event

On April 30, 2010 at 21:00, an unplanned Loss of Off-Site Power (LOSP) on A-train 4160 volt emergency Bus 2F [EB] occurred during a scheduled outage test, Safety Injection (SI) with LOSP. The Emergency Diesel Generator (EDG) 1-2A [EK] was being shutdown following the actuation portion of the test. When the B2F Sequencer (A-train) was reset, the EDG output breaker (DF08-2) unexpectedly opened to generate the LOSP signal on 4160 volt Bus 2F. As a result, the B2F Sequencer functioned to automatically re-close DF08-2 and start both the 2A Motor Driven Auxiliary Feedwater (MDAFW) [BA] pump and 2A High Head Safety Injection (HHSI) [BQ] pump. All systems functioned as designed for this condition, and core cooling was maintained throughout by the B-train 2B Residual Heat Removal (RHR) [BP] pump. Flow to the reactor core was maintained. Unit 1 was not affected and remained at 100 % power during the event.

A recent design change was implemented to assure EDG sequencer reliability during all modes of EDG operation. Subsequent to this design change, the necessary procedure change had not been properly incorporated in the test procedure. Test guidance relied upon transitioning to the System Operating Procedure (SOP) for operating the newly installed Test Trip Override Switch (TTOS) located on the B2F Sequencer. However, the transition was not at the correct location in the test procedure. Once recognized, SOP procedure guidance was used and the B2F Sequencer TTOS was operated before resetting the sequencer, and the restoration section was completed without further complications.

In accordance with 10 CFR 50.72(b)(3)(iv)(A) for a valid actuation of the auxiliary feedwater and emergency core cooling systems, an eight hour non-emergency report was issued on May 1, 2010 at 01:01, Event Notification number 45889.

Cause of Event

A recent design change was implemented to assure EDG sequencer reliability during all modes of EDG operation. Subsequent to this design change, the necessary procedure change had not been properly incorporated in the test procedure. Test guidance relied upon transitioning to the System Operating Procedure (SOP) for operating the newly installed Test Trip Override Switch (TTOS) located on the B2F Sequencer. However, the transition was not at the correct location in the test procedure.

Safety Assessment

This event had no adverse effect on the safety and health of the public. There were no safety system functional failures and all systems functioned as designed.

The Farley onsite standby power source is provided from four EDGs (1-2A, 1B, 2B, and 1C). The continuous service rating of 1C EDG is 2,850 kW and 4,075 kW for EDGs 1-2A, 1B, and 2B. EDG 1-2A and 1C are A-Train and EDGs 1B and 2B are B-Train. Farley also has a fifth diesel generator (2C) that serves as a station blackout diesel, which can be manually aligned to supply B-Train power to either unit and power LOSP loads.

During the restoration portion of the test procedure, EDG 1-2A was operating and tied to the 2F Emergency Bus. When resetting the B2F Sequencer, the failure to operate the TTOS on the B2F Sequencer caused the EDG output breaker (DF08-2) to open. Sensing the LOSP condition, the B2F Sequencer properly functioned to re-close DF08-2 and sequentially start and connect loads on emergency Bus 2F. Both the 2A MDAFW pump and 2A HHSI pump sequentially started as designed to prevent overloading of the EDG. The EDG output breaker closure and sequencing of shutdown loads are required functions of an EDG and therefore had no adverse effect on the safety and health of the public. The B-train 2B EDG was operable and the 2B RHR pump was in operation throughout the event.

Corrective Action

The SI with LOSP test procedure was completed satisfactorily once the TTOS was properly operated. MDAFW Pump 2A and HHSI Pump 2A were secured. The 4160 volt Bus 2F was aligned to the normal offsite power supply.

An enhanced Apparent Cause Determination was performed and corrective actions developed to address the failure to properly revise the test procedure after the design change.

SNC Operating Experience (OE) on the event has been issued.

Additional Information

Previous Similar Events:

LER 2009-001-00 Unit 1 and 2 - EDG 1C Auto Start due to Inadvertent Relay Actuation