Cheryl A. Gayheart
Vice President - Farley

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SOUTHERN COMPANY

January 8, 2016

Docket Nos.: 50-364 NL-15-2313

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

Joseph M. Farley Nuclear Plant – Unit 2
Licensee Event Report 2015-002-00
Entry into Condition Prohibited by Technical Specifications Due to All Containment Cooling Level Monitoring Systems Inoperable

Ladies and Gentlemen:

This Licensee Event Report is being submitted pursuant to the requirements of the Code of Federal Regulations, 10 CFR 50.73(a)(2)(i)(B).

This letter contains no NRC commitments. If you have any questions regarding the submittal, please contact Mr. Greg Bell at (334) 814-4765.

Sincerely,

Ms. C. A. Gayheart
Vice President – Farley

CAG/JAC

Enclosure: Unit 2 Licensee Event Report 2015-002-00

cc: Southern Nuclear Operating Company
Mr. S. E. Kuczynski, Chairman, President & CEO
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer
Mr. M. D. Meier, Vice President – Regulatory Affairs
Mr. D. R. Madison, Vice President – Fleet Operations
Mr. B. J. Adams, Vice President – Engineering
Ms. B. L. Taylor, Regulatory Affairs Manager – Farley
Mr. J. E. Purcell, Operating Experience Coordinator - Farley
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U. S. Nuclear Regulatory Commission
Ms. C. Haney, Regional Administrator
Mr. S. A. Williams, NRR Project Manager - Farley
Mr. P. K. Niebaum, Senior Resident Inspector - Farley

Enclosure

Joseph M. Farley Nuclear Plant – Unit 2

Unit 2 Licensee Event Report 2015-002-00

Entry into Condition Prohibited by Technical Specifications Due to All Containment Cooling Level Monitoring Systems Inoperable

NRC FORM 366 (11-2015) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 10/31/2018

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 FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to Infocollects.Resource@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

Entry into Condition Prohibited by Technical Specifications Due to All Containment Cooling Level Monitoring Systems Inoperable

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
									N/A	05000-
08	07	2015	2015	- 002 -	00	01	08	2016	FACILITY NAME	DOCKET NUMBER
									N/A	05000-

9. OPERATING MODE

1

10. POWER LEVEL

100

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)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(C)	☐ 73.77(a)(1)
☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(i)
☐ 20.2203(a)(2)(vi)	☒ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(ii)
	☐ 50.73(a)(2)(i)(C)	☐ OTHER Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT	TELEPHONE NUMBER *(Include Area Code)*
Gregory Bell	334-814-4765

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
A	BD	LI	E234	NO					

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 12, 2015 at approximately 02:00 CDT, Farley Unit 2 was operating in Mode 5 at zero percent power in a planned maintenance outage when evidence from troubleshooting became available which led to the discovery that all of the Reactor Coolant System (RCS) Leakage Detection Instrumentation had been inoperable on August 7, 2015 for a period longer than allowed by Technical Specifications (TS). Troubleshooting discovered that the A, B, and D channels of the Containment Cooling Level Monitoring System (CCLMS) had been inoperable since July 6, 2015. On August 7, 2015 the C CCLMS was tagged out at the same time as both the R11 and R12 Containment Radiation Detectors were taken out of service for a period longer than allowed by TS 3.4.15 Condition E and Limiting Condition for Operation (LCO) 3.0.3. This is a condition prohibited by Technical Specifications and is reportable in accordance with 10 CFR 50.73 (a)(2)(i)(B).

The cause of this event was an incorrect conclusion regarding the operating conditions of the four Containment Cooler Level Indicators. Corrective actions included the repair of the containment coolers' sensing lines for full restoration of the CCLMS. Repairs were also made to the components associated with the steam leak in containment

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		YEAR	SEQUENTIAL NUMBER	REV NO.
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NARRATIVE

A. REQUIREMENT FOR REPORT

For a period of seven hours and 54 minutes on August 7, 2015 all required Reactor Coolant System Leakage Detection Instrumentation monitors required by Technical Specifications (TS) 3.4.15 were out of service and the required action per TS 3.4.15 Condition E and Limiting Condition for Operation (LCO) 3.0.3 to place the unit in Mode 3 within 7 hours was not met. This is a condition prohibited by TS and is reportable in accordance with 10 CFR 50.73 (a)(2)(i)(B).

B. UNIT STATUS AT TIME OF EVENT

Unit 2, Mode 1, 100 percent power

C. DESCRIPTION OF EVENT

On November 12, 2015 at approximately 02:00 CDT, Farley Unit 2 was operating in Mode 5 at zero percent power and was in a planned maintenance outage to investigate a leak inside of containment. A troubleshooting effort was initiated to investigate numerous maintenance issues that had been occurring with the A, B, and D Containment Cooler Level Indicators (EIIS Code LI). The troubleshooting work revealed that the A, B, and D Containment Cooler Level Indicators were inoperable and were considered to have been inoperable since July 6, 2015, when drainage into the containment sump had exceeded one gallon per minute. During this time frame the plant conducted extensive investigations into the source of the leakage, including multiple containment walkdowns and observations, maintenance troubleshooting activities, and detailed chemistry sample results of the containment sump, all of which led to the conclusion of a Service Water leak from the C Containment Cooler. The plant also prepared for a maintenance outage in the event that the leakage approached shutdown thresholds and implemented measures to protect the plant from the consequences of increased leakage.

During the November 2015 maintenance outage a steam leak was found in Containment and was verified as the cause of the Containment Cooling Level Monitoring System (CCLMS) alarms. The A, B, and D containment coolers' sensing lines were found to be clogged and therefore the level transmitters were unable to perform their function.

A subsequent review of operator logs showed that on August 7, 2015 the B and C Containment Cooler Level Indicators were declared inoperable to perform troubleshooting. On the same day, containment radiation monitors R11 and R12 were taken out of service for calibration surveillance. Since A and D CCLMS were discovered to have been inoperable, this created an unrealized entry into Tech Spec 3.4.15 Condition E (all detection inoperable) for a period of seven hours and 54 minutes, and the required action of immediate entry into Limiting Condition for Operation (LCO) 3.0.3 requiring the plant to be in MODE 3 in 7 hours was not met.

The CCLMS and the steam leak were repaired prior to exiting the maintenance outage.

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NARRATIVE

D. CAUSE OF EVENT

The cause of the unrealized entry into Tech Spec 3.4.15 Condition E was an incorrect conclusion that the A, B, and D Containment Cooler Level Indicators, which had not been alarming, were operable, and that the C Containment Cooler Level Indicator was improperly alarming. This conclusion was reinforced by performance of multiple containment walkdowns and observations, maintenance troubleshooting activities, and detailed chemistry sample results of the containment sump that were strongly indicative of Service Water.

E. SAFETY ASSESSMENT

The leak in containment migrated to the containment sump which was monitored by radiation detectors. The sump level was trended by a level monitoring indication. The site planned a maintenance outage to repair the leak. This condition had no significant effect on the health and safety of the public.

The loss of all CCLMS, along with a planned removal from service of R11 and R12 for calibration, represented an unplanned entry into Tech Spec 3.4.15 Condition E. The Condition requires an immediate entry into LCO 3.0.3 and entry into Mode 3 in 7 hours. The August 7, 2015 event lasted 7 hours and 54 minutes which exceeded the 7 hour time limit and therefore constitutes a condition that is reportable pursuant to 10CFR50.73 (a)(2)(i)(B), "Any operation or condition which was prohibited by the plant's Technical Specifications."

F. CORRECTIVE ACTION

During the November 2015 planned maintenance outage repairs were completed on the containment coolers' sensing lines for full restoration of the CCLMS. Repairs were also made to the components associated with the steam leak in containment.

G. ADDITIONAL INFORMATION

1) Failed Components: Level Indicator [LI]

2) Previous Similar Events: A search did not reveal any similar reported events for Plant Farley.

3) Energy Industry Identification System Code: Containment Leakage Control System [BD]

4) Other systems affected: There were no other systems, structures, or components that were affected by or contributed to the event.

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