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Vice President - Farley

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Docket Nos.: 50-348

NL-16-0738

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


Joseph M. Farley Nuclear Plant – Unit 1
Licensee Event Report 2016-001-00
Condition Prohibited by Technical Specifications Due to 600V Load Center
Inoperable Longer than Allowed by Technical Specifications

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) for Unit 1.

This letter contains no NRC commitments. If you have any questions regarding the submittal, please contact Ms. Julie Collier at (334) 814-4639.

Sincerely,


Ms. C. A. Gayheart
Vice President – Farley

CAG/JAC

Enclosure: Unit 1 Licensee Event Report 2016-001-00

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
Mr. C. R. Pierce, Regulatory Affairs Director
Ms. B. L. Taylor, Regulatory Affairs Manager – Farley
Mr. J. E. Purcell, Operating Experience Coordinator - Farley
RTYPE: CFA04.054

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 1

Unit 1 Licensee Event Report 2016-001-00

Condition Prohibited by Technical Specifications Due to 600V Load Center
Inoperable Longer than Allowed by Technical Specifications



LICENSEE EVENT REPORT (LER)

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 Infocollections.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.

1. FACILITY NAME		2. DOCKET NUMBER		3. PAGE	
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4. TITLE

Condition Prohibited by Technical Specifications Due to 600V Load Center Inoperable Longer than Allowed by Technical Specifications

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
04	13	2016	2016	- 001 -	00	6	9	2016	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE	1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)							
		<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(I)	<input type="checkbox"/> 50.73(a)(2)(II)(A)	<input type="checkbox"/> 50.73(a)(2)(VIII)(A)				
		<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(II)	<input type="checkbox"/> 50.73(a)(2)(II)(B)	<input type="checkbox"/> 50.73(a)(2)(VIII)(B)				
		<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(III)	<input type="checkbox"/> 50.73(a)(2)(IX)(A)				
10. POWER LEVEL	100%	<input type="checkbox"/> 20.2203(a)(2)(I)	<input type="checkbox"/> 50.36(c)(1)(I)(13A)	<input type="checkbox"/> 50.73(a)(2)(IV)(A)	<input type="checkbox"/> 50.73(a)(2)(X)				
		<input type="checkbox"/> 20.2203(a)(2)(II)	<input type="checkbox"/> 50.36(c)(1)(II)(A)	<input type="checkbox"/> 50.73(a)(2)(V)(A)	<input type="checkbox"/> 73.71(a)(4)				
		<input type="checkbox"/> 20.2203(a)(2)(III)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(V)(B)	<input type="checkbox"/> 73.71(a)(5)				
		<input type="checkbox"/> 20.2203(a)(2)(IV)	<input type="checkbox"/> 50.46(a)(3)(II)	<input type="checkbox"/> 50.73(a)(2)(V)(C)	<input type="checkbox"/> 73.77(a)(1)				
		<input type="checkbox"/> 20.2203(a)(2)(V)	<input type="checkbox"/> 50.73(a)(2)(I)(A)	<input type="checkbox"/> 50.73(a)(2)(V)(D)	<input type="checkbox"/> 73.77(a)(2)(I)				
		<input type="checkbox"/> 20.2203(a)(2)(VI)	<input checked="" type="checkbox"/> 50.73(a)(2)(I)(B)	<input type="checkbox"/> 50.73(a)(2)(VII)	<input type="checkbox"/> 73.77(a)(2)(II)				
		<input type="checkbox"/> 50.73(a)(2)(I)(C)	<input type="checkbox"/> OTHER	Specify in Abstract below or in NRC Form 366A					

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT	TELEPHONE NUMBER (Include Area Code)
Julie Collier	334-814-4639

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
E	EC	BKR	W121	Y					

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 4/12/2016 at 0312 CDT, with Unit 1 (U1) at 100 percent power and Unit 2 (U2) in Mode 5, the U2 supply breaker for 1-2R 600V Load Center (LC) was racked out and the control power fuses removed for both U2 supply breaker and U1 supply breaker to support replacing an agastat relay on the U2 supply breaker. On 4/13/2016 at 0456 CDT the U1 supply breaker for the 1-2 R 600V LC, tripped open when the control power fuses were restored and would not reclose. Technical Specifications (TS) 3.8.9 Condition A was entered for Unit 1 at 0456 on 4/13/2016 and exited at 0938 on 4/13/2016. Investigation attributed the cause to dirty contacts on the cell switch located in the U2 supply breaker cubicle. This condition would have prevented the U1 supply breaker from reclosing if a loss of offsite power had occurred between 04/12/2016 at 0312 and 4/13/2016 at 0938, leaving the 1-2R LC de-energized. This caused the LC to be inoperable for Unit 1 for more than the time allowed by TS 3.8.9 and is reportable per 10 CFR 50.73(a)(2)(I)(B). This is not reportable for Unit 2 due to the unit being in Mode 5 and having the necessary portion of the electrical power distribution subsystems operable.

Corrective Action: The U2 supply breaker cell switch was cycled which cleaned the contacts and the U1 supply breaker closed. Post maintenance testing verified operability. Until replacement of the U2 supply breaker cell switch, administrative controls are in place to declare U1 supply breaker inoperable when racked out until the interlock feature is verified.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

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		YEAR	SEQUENTIAL NUMBER	REV NO
Joseph M. Farley Nuclear Plant, Unit 1	05000- 348	2016	- 001 -	00

NARRATIVE**A. PLANT AND SYSTEM IDENTIFICATION**

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

B. DESCRIPTION OF EVENT

On 4/12/2016 at 0312 CDT, with Unit 1 (U1) at 100 percent power and Unit 2 (U2) in Mode 5, the U2 supply breaker (ER05-2) for 1-2R 600V Load Center (LC), which can supply power for both U1 and U2, was racked out and the control power fuses removed for both U2 supply breaker and U1 supply breaker (ER02-1) to support replacing an agastat relay on ER05-2. The removal of the fuses for ER02-1 caused all of the protective relays for that breaker to be in a de-energized state. On 4/13/2016 at 0456 CDT, ER02-1 tripped open when the control power fuses were reinstalled. An attempt to reclose the breaker was unsuccessful.

Breakers ER02-1 and ER05-2 contain permissive interlocks that prevent these breakers from being closed at the same time. A contact on the ER05-2 cell switch was dirty/degraded preventing continuity between the two sides of the contact. The cell switch failed to send a signal to indicate that ER05-2 was in the racked-out position, which prevented breaker ER02-1 from reclosing.

Technical Specifications (TS) 3.8.9 Condition A was entered for Unit 1 at 0456 on 4/13/2016 when the breaker tripped open and exited at 0938 on 4/13/2016 after the contacts were cleaned on the cell switch, the control power fuses replaced and the 1-2R LC was restored to operable status.

At the time of this event Unit 2 was in Mode 5 in a refueling outage. The TS is not applicable in Mode 5. Unit 2 had the necessary portion of the electrical power distribution subsystems operable to support the equipment required to be operable.

C. UNIT STATUS AT TIME OF EVENT

Unit 1, Mode 1, 100 percent power
Unit 2, Mode 5, 0 percent power

D. CAUSE OF EVENT

The cause of the supply breaker being unable to reclose was determined to be a dirty/degraded contact in the cell switch of ER05-2 relay, preventing the interlock from reclosing.

E. REPORTABILITY ANALYSIS AND SAFETY ASSESSMENT

If a loss of offsite power had occurred between 4/12/2016 at 0312 and 4/13/2016 at 0938, ER02-1 would have opened but would not have reclosed due to the contact on the cell switch on ER05-2, leaving the 1-2R LC de-energized. Therefore an LER is required based on the 1-2R Load Center being inoperable for Unit 1 for longer than the TS 3.8.9 required action completion time. The breaker was in an inoperable condition for approximately 30 hours. This is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B).

**LICENSEE EVENT REPORT (LER)
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1. FACILITY NAME

Joseph M. Farley Nuclear Plant, Unit 1

2. DOCKET NUMBER

05000- 348

3. LER NUMBER

YEAR	SEQUENTIAL NUMBER	REV NO.
2016	- 001	- 00

NARRATIVE

The Farley onsite standby power source is provided from four Emergency Diesel Generators (EDG) (1-2A, 1B, 2B, and 1C). The 1C EDG has a continuous service rating of 2,850 kW and the 1-2A, 1B, 2B EDGs have ratings of 4,075 kW. EDGs 1-2A and 1C are the A-train and EDGs 1B and 2B are the B-train. Farley also has a fifth diesel generator (2C), rated at 2,850 kW, that serves as a station blackout diesel and can be manually aligned to supply B-train power to either unit and supply power to loss-of-site-power (LOSP) loads.

During the time the 1-2R Load Center was inoperable for Unit 1, the EDGs 1-2A (A-train) and the 1B (B-train) were operable and available to support any event on Unit 1, and the 2C station blackout EDG was functional and available. For Unit 2 the 2B EDG was operable.

No other systems or components were affected by the condition described in this report. During the time of the inoperable LC no events occurred which challenged the offsite power supplies, and there was no loss of safety function. Therefore, the safety and health of the public was not adversely affected.

F. CORRECTIVE ACTION

The cell switch was cycled which cleaned the contacts, allowing ER02-1 to close. The cell switch function which failed is electrically bypassed when ER05-2 is racked-in. Post maintenance testing with ER05-2 in the racked-in position verified Operability of ER02-1. Administrative controls are in place to declare ER02-1 inoperable when ER05-2 is racked out until the interlock is verified or ER05-2 cell switch is replaced. The ER05-2 cell switch is scheduled for replacement in the next Unit 2 Refueling Outage. A preventive maintenance task is being developed for more frequent replacement of this component and other similar breakers.

G. ADDITIONAL INFORMATION

Failed Components:
Low-Voltage Power System [EC], Westinghouse

Other system affected:
None

Commitment Information:
None

Previous Similar Events:
None