FPL

L-2017-208
10 CFR 50.73

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

Re: St. Lucie Unit 2
Docket No. 50-389
Reportable Event: 2017-003-00
Date of Event: October 25, 2017
Improper System Realignment Resulted in Loss of Steam Driven Auxiliary Feedwater Pump Flow Indication

Licensee Event Report 2017-003-00 is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Respectfully,

Daniel DeBoer
Site Director
St. Lucie Plant

DD/KWF

Attachment

cc: USNRC Regional Administrator, Region II
USNRC Senior Resident Inspector, St. Lucie Nuclear Plant

NRC FORM 366 (06-2016) 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 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)

(See Page 2 for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
St. Lucie Unit 2	05000389	1 Of 3

4. TITLE

Improper System Realignment Resulted in Loss of Steam Driven Auxiliary Feedwater Pump Flow Indication

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
10	25	2017	2017	003	0	12	18	2017	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*			
1	☐ 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)
10. POWER LEVEL	☐ 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)
100	☐ 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)*
K. W. Frehafer, Licensing Engineer	(772) 467-7748

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	BA	FT	R369	Y					

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 October 25, 2017, St. Lucie Unit 2 was in Mode 1 operation at 100 percent reactor power when the station discovered that both of the required flow transmitters (indication only) for the 2C steam driven auxiliary feedwater (AFW) pumps had been isolated since October 17, 2017. The transmitters were returned to service and extent of condition walkdowns were completed on the AFW pump flow transmitters for both St. Lucie Units 1 and 2; no other anomalies were noted.

This event was caused by human error because the personnel involved in the AFW flow calibration activities on October 17, 2017 did not adequately perform the system restorative steps in accordance with the governing procedure.

Based on the availability of diverse methods to verify AFW flow delivery to the steam generators, this condition had no effect on the health and safety of the public.

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

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St. Lucie Unit 2	05000389	2017	- 003	- 0

NARRATIVE

Description

On October 25, 2017, St. Lucie Unit 2 was in Mode 1 operation at 100 percent reactor power. Maintenance personnel were troubleshooting indication flow 'spikes' from FT-09-2C1 [EIIS:BA:FT], the flow transmitter for the 2C steam driven auxiliary feedwater (AFW) pump [EIIS:BA:P] discharge. At 1910 hours, the operators declared the 2C AFW flow transmitter FT-09-2C1 inoperable as maintenance reported that the transmitter was isolated. FT-09-2C1 was promptly un-isolated, filled and vented, and restored to service at approximately 1915 hours. During the extent of condition walkdown, maintenance supervision discovered that flow transmitter FT-09-2C2 was also isolated; it was promptly unisolated, filled and vented, and restored to service at approximately 1925 hours.

By 2128 hours on October 25, 2017, the extent of condition walkdowns were completed for the remaining electric driven AFW pumps for Unit 2 and all AFW pumps for Unit 1; no anomalies were noted.

Cause of the Event

Investigation revealed that the individuals that performed an earlier calibration on October 17, 2017 did not properly perform the restoration lineup in accordance with the governing procedure.

Analysis of the Event

This event was reportable under 10 CR 50.73(a)(2)(i)(B) as any operation or condition that was prohibited by the Technical Specifications (TSs).

The AFW system consists of two electric driven pumps and one steam driven pump. Each electric AFW pump is normally aligned to its respective steam generator (SG) [EIIS:SB:SG], and the steam driven AFW pump can feed either SG.

The 2C steam driven AFW pump is provided with two redundant flow transmitters that are used to provide post-accident AFW flow indication. With both 2C AFW pump flow transmitters isolated, the minimum operable channel requirement of TS Table 3.3-10 was not met. Therefore Unit 2 was in the TS 48-hour completion and 6-hour shutdown action statement per TS 3.3.3.6 (Accident Monitoring Instrumentation) action (b). The 2C AFW pump flow transmitters were isolated on October 17, 2017, when maintenance personnel commenced loop calibrations of the Unit 2 AFW flow loops. When the condition was discovered on October 25, 2017, the 54-hour total completion and shutdown time had already been exceeded.

Safety Significance

The subject flow transmitters perform no automatic accident mitigation or control functions; they are used to monitor plant parameters during and following a design basis accident. From October 17 to October 25, 2017, the operators would not have the ability to directly monitor flow from the 2C AFW pump. However, the operators have sufficient diverse means to verify that AFW flow is getting to the SGs, such as SG level and condensate storage tank level trends as well as monitoring the effectiveness of decay heat removal via RCS temperature indication. Loss of the primary method to directly monitor the 2C AFW pump flow would not prevent successful mitigation of any design bases accident. Therefore, this condition had no effect on the health and safety of the public.

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NARRATIVE

Corrective Actions

1. The flow transmitters were immediately returned to service.
2. An extent of condition walkdown identified no other isolated transmitters in the AFW system.
3. The maintenance personnel involved with the earlier calibration that resulted in isolation of the 2C AFW flow transmitters were disqualified pending remediation.

Failed Components

ID: Flow Transmitter for Auxiliary Feedwater Pump 2C Discharge
Tag Nos.: FT-09-2C1, FT-09-2C2
Manufacturer: Rosemount
Model: 1153DB5

Additional Information

None.