FPL

April 27, 2017

L-2017-067
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: 2017-001-00
Date of Event: March 1, 2017
Delay in Initiating Immediate Technical Specification Required Action During Fuel Movements

The attached Licensee Event Report 2017-001-00 is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Sincerely,

Daniel DeBoer
Site Director
St. Lucie Plant

DD/rcs

Attachment

cc: NRC Region II Administrator
St. Lucie Plant NRC Senior Resident Inspector

IE22
NRR

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)

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

4. TITLE

Delay in Initiating Immediate Technical Specification Required Action During Fuel Movements

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
03	01	2017	2017	- 001 -	00	04	27	2017	NA	
									FACILITY NAME: NA	DOCKET NUMBER

9. OPERATING MODE

Defueled

10. POWER LEVEL

0%

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

NAME	TELEPHONE NUMBER (Include Area Code)
Richard Sciscente – Principal Engineer, Licensing	772-467-7156

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURE	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 March 1, 2017, Unit 2 was in a defueled condition during a refueling outage and transitioned to a single operable train of the control room emergency air cleanup system. While in this condition, movement of irradiated fuel is prohibited by Technical Specifications. Approximately 100 minutes after transitioning to the single operable train of the control room emergency air cleanup system, control room operators were informed that irradiated fuel inspections in the Fuel Handling Building were in progress. Operators immediately placed the control room emergency air cleanup system on recirculation to comply with Technical Specifications.

The cause of this event was inadequate procedure instructions for the coordination of fuel handling activities in the spent fuel pool. Corrective actions included revising procedure instructions for the coordination of fuel handling activities.

This licensee event report is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications. This event had no impact on the environment or onsite personnel.

This event had no effect on the health and safety of the public.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
St. Lucie Unit 2	05000389	2017	- 001 -	00

NARRATIVE

Description of the Event

On March 1, 2017, Unit 2 was in a defueled condition during a refueling outage. At 1023 control room operators commenced a scheduled activity for swapping electrical busses that included the planned transition to a single operable train of the control room emergency air cleanup system [VI]. The control room emergency air cleanup system was not in the recirculation mode. While in this condition, the Technical Specification prohibits movement of irradiated fuel assemblies unless operation of the operable control room emergency air cleanup system is immediately maintained in the recirculation mode.

The Unit 2 core offload had been completed during the previous shift. Several fuel assemblies experienced high load indications during the core offload, and an emergent plan was developed to inspect these fuel assemblies in the fuel pool on day shift.

Approximately 100 minutes after transitioning to the single operable train of the control room emergency air cleanup system, control room operators were informed that irradiated fuel inspections were in progress in the Fuel Handling Building. Control room operators then immediately placed the system on recirculation to comply with Technical Specifications. All fuel movements were subsequently suspended.

The reportable condition prohibited by Technical Specifications was not placing the control room ventilation in recirculation prior to moving irradiated fuel in accordance with Technical Specifications. The consequence of operating with a single operable train of the control room emergency air cleanup system decreases the defense in depth protection of the control room envelope.

Cause

The cause of this event was inadequate procedure instructions for the coordination of fuel handling activities in the Fuel Handling Building spent fuel pool. In the approved plant procedure, there was a lack of guidance for obtaining permission prior to moving irradiated fuel assembles.

Analysis of the Event

This licensee event report is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications. The applicable Technical Specification required operators to immediately initiate and maintain operation of the control room emergency air cleanup system in the recirculation mode or immediately suspend movement of irradiated fuel assemblies. Contrary to the above, the station did not comply with the Technical Specification.

Safety Significance

This condition was mitigated by the operator actions implemented immediately upon discovery of the prohibited condition by placing control room ventilation on recirculation. During this period, if there had been a postulated fuel handling accident (FHA) that required isolation of the control room and actuation of filtered recirculation, a concurrent loss of offsite power with a single failure of the 2A Emergency Diesel Generator would have delayed the control room isolation for approximately 25 minutes while alternate power was restored to the motor operated dampers. Operations would also have the option to manually close specific control room ventilation dampers to isolate the control room envelope if appropriate for the priorities of the hypothetical scenario.

The analyses that limit the radiation exposure to operators in the control room are very conservative for the postulated FHA and assume the radioactive release has no dilution as it is transported from the fuel handling building (FHB) to the control room. Additionally, the control room personnel have protection from factors that are not credited in the analyses that limit the radiation exposure to operators in the control room. These are:

- The FHB is maintained at negative pressure. This would slow radioactive release from the FHB during the postulated FHA.
- The control room is maintained at a positive pressure. If the control room is unable to go on recirculation, it will take additional time for the positive pressure to escape the control room envelope before a release from the FHB could be transported into the control room by atmospheric winds.
- The release from the FHA is assumed to have no dilution as it is transported to the control room. However; atmospheric winds that could overcome the negative pressure of the FHB in order to draw out the release and to force it into the control room, would provide significant dilution.

This event included no automatic actuations or equipment performance issues. This event had no impact to onsite personnel, and the health and safety of the public were not affected by this event.

Corrective Actions

1. Procedure instructions were revised to provide additional instructions for the coordination of fuel handling activities to check each shift to ensure specific prerequisites are met and to confirm permission has been obtained from the Unit Supervisor to move irradiated fuel.

Previous Occurrence

A review of previous events for the past three years identified no similar events.