



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

December 27, 2022

Bob Coffey
Executive Vice President, Nuclear
and Chief Nuclear Officer
Florida Power & Light Company
700 Universe Blvd.
Mail Stop: EX/JB
Juno Beach, FL 33408

SUBJECT: ST. LUCIE – TRIENNIAL FIRE PROTECTION INSPECTION REPORT
05000335/2022011 AND 05000389/2022011

Dear Bob Coffey:

On December 15, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at St. Lucie and discussed the results of this inspection with Mr. Robert Craven and other members of your staff. The results of this inspection are documented in the enclosed report.

No findings or violations of more than minor significance were identified during this inspection.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

A handwritten signature in blue ink that reads "Gerald J. McCoy".

Signed by McCoy, Gerald
on 12/27/22

Gerald J. McCoy, Chief
Engineering Br 2
Division of Reactor Safety

Docket Nos. 05000335 and 05000389
License Nos. DPR-67 and NPF-16

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV

SUBJECT: ST. LUCIE – TRIENNIAL FIRE PROTECTION INSPECTION REPORT
05000335/2022011 AND 05000389/2022011 Dated December 27, 2022

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OFFICE	RII/DRS	RII/DRS	RII/DRS	RII/DRS	RII/DRS
NAME	D. Strickland	W. Monk	J. Montgomery	P. Braaten	G. McCoy
DATE	12/23/22	12/26/22	12/22/22	12/23/22	12/27/22

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**U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report**

Docket Numbers: 05000335 and 05000389

License Numbers: DPR-67 and NPF-16

Report Numbers: 05000335/2022011 and 05000389/2022011

Enterprise Identifier: I-2022-011-0019

Licensee: Florida Power & Light Company

Facility: St. Lucie

Location: Jensen Beach, FL

Inspection Dates: November 28, 2022 to December 15, 2022

Inspectors: P. Braaten, Senior Reactor Inspector
W. Monk, Senior Reactor Inspector
J. Montgomery, Senior Reactor Inspector
D. Strickland, Reactor Inspector

Approved By: Gerald J. McCoy, Chief
Engineering Br 2
Division of Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a triennial fire protection inspection at St. Lucie, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information.

List of Findings and Violations

No findings or violations of more than minor significance were identified.

Additional Tracking Items

None.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.21N.05 - Fire Protection Team Inspection (FPTI)

Structures, Systems, and Components (SSCs) Credited for Fire Prevention, Detection, Suppression, or Post-Fire Safe Shutdown Review (IP Section 03.01) (4 Samples)

The inspectors verified that components and/or systems will function as required to support the credited functions stated for each sample. Additional inspection considerations are located in the fire hazards analysis (FHA) or safe shutdown analysis (SSA).

- (1) Unit 2 Auxiliary Feedwater System
- (2) Unit 2 4160V Electrical Distribution System
- (3) Preaction Sprinkler System in Unit 2 FA I/FZ 2-23 (2B Electrical Penetration Room)
- (4) Preaction sprinkler system in Unit 1 FA C/FZ 1-55W (Main Hallway West, Cable Loft Area)

Fire Protection Program Administrative Controls (IP Section 03.02) (1 Sample)

The inspectors verified that the selected control or process is implemented in accordance with the licensee's current licensing basis. If applicable, ensure that the licensee's FPP contains adequate procedures to implement the selected administrative control. Verify that the selected administrative control meets the requirements of all committed industry standards.

- (1) Combustible Control Program

Fire Protection Program Changes/Modifications (IP Section 03.03) (2 Samples)

The inspectors verified the following:

- a. Changes to the approved FPP do not constitute an adverse effect on the ability to safely shutdown.
- b. The adequacy of the design modification, if applicable.
- c. Assumptions and performance capability stated in the SSA have not been degraded through changes or modifications.
- d. The FPP documents, such as the Updated Final Safety Analysis Report, fire protection report, FHA, and SSA were updated consistent with the FPP or design change.
- e. Post-fire SSD operating procedures, such as abnormal operating procedures, affected by the modification were updated.

- (1) EC 294966, Unit 1 ECCS Pump Room Incipient Fire Detection System Replacement
- (2) EC 294227, Revise PSL-FPER-11-002 To Change the Actions For MV-08-19A
(Atmospheric Dump Valve for SG 2A)

INSPECTION RESULTS

No findings were identified.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On December 15, 2022, the inspectors presented the triennial fire protection inspection results to Mr. Robert Craven and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.21N.05	Calculations	PSL-1FJF-98-024	Retran Analysis of PSL1 Appendix R Scenarios (CRI/Non CRI Cases)	Rev. 0
	Corrective Action Documents	AR 02281179	Potential concern that incorrect Cat ID fuses SWS0LQV 09/19/2018 were used for 2A3 & 2B3 4160V Switchgear trip & close fuse SWS0LQV 09/19/2018 replacements	09/22/2018
		AR 02441855	During a review of post fire recovery actions, it was discovered that there are several [inconsistencies] between the fire protection DBD (DBD-FP-1) and the Nuclear Safety Capability Assessment (NSCA) with respect to recovery actions.	11/15/2022
		CR 2320738	2019 NRC TFPI: The Testing and Inspection of Fire Dampers	07/11/2019
	Corrective Action Documents Resulting from Inspection	AR 2442728	2022 FPTI: Smoldering Cigarette Found in 1 TGB	11/30/2022
		AR 2442772	2022 FPTI: ADM-19, Fire Protection Plan Contains Legacy Guidance	11/30/2022
		AR 2442814	2022 FPTI: Inspection Team Questions Securing of Delay Gate	12/01/2022
		AR 2443111	2022 FPTI: U1 -0.50 Aerosol Smoke Check Canisters Found Unattended	12/05/2022
		AR 2443648	2022 FPTI: TC Adjacent to Energized Electrical Equipment	12/12/2022
		AR 2443791	2022 FPTI: U1 ECCS IFD PMCR Incomplete	12/13/2022
		AR 2443874	2022 FPTI: U1 RAB 19.5 1B Elec Pen Room Transient Combustible	12/14/2022
		PCR 2442771	ADM-19 - Fire Protection Plan	11/30/2022
	Drawings	2998-B-327, Sheet 1629	Control Wiring Diagram for Relieve Valve V-1474	Rev. 11
		2998-B-327, Sheet 1763	Control Wiring Diagram for SAS Isolation CAB Interconnection	Rev. 2
		2998-B-327, Sheet 1766	Control Wiring Diagram for SAS Isolation CAB. Interconnection	Rev. 1
		2998-B-327, Sheet 610	Control Wiring Diagram for AUX FWP 2A Discharge to STM GEN 2B MV-09-13	Rev. 17

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		2998-G-079, Sheet 1	Flow Diagram Main Steam System	Rev. 46
		2998-G-080, Sheet 28	Flow Diagram Feedwater and Condensate System	Rev. 39
		2998-G-080, Sheet 2A	Flow Diagram Feedwater and Condensate Systems	Rev. 47
		8770-B-327	Control Wiring Diagram for Relieve Valves V-1402 and V-1404	Rev. 21
		PCI FD-1	Type 1 Fire Damper Sleeve Details	Rev. 3
	Engineering Changes	294227	REVISE PSL-FPER-11-002 TO CHANGE THE ACTIONS FOR MV-08-19A	06/15/2020
		294966	Unit 1 ECCS Pump Room Incipient Fire Detection System Replacement	Rev. 0
	Engineering Evaluations		St. Lucie Unit 2 Updated Final Safety Analysis Report	
		0027-0009-003-001	Expert Panel for Addressing Multiple Spurious Operations	Rev. 1
		DBD-FP-1	Fire Protection Design Basis Document	Rev. 07
		PSL-ARCPLUS-001	St. Lucie Nuclear Safety Capability Assessment	Rev. 0
		PSL-BFJR-16-040	St. Lucie NFPA 805 - Tasks 1 & 6 Plant Partitioning and Ignition Frequencies	Rev. 03
		PSL-BFJR-16-041	St. Lucie NFPA 805 - Human Failure Evaluation Report	Rev. 02
		PSL-BFJR-16-042	St. Lucie NFPA 805 - Scenario Development	Rev. 03
		PSL-BFJR-16-043	St. Lucie NFPA 805 - Summary Report	Rev. 05
		PSL-BFJR-16-047	St. Lucie NFPA 805 - Evaluation of the Unit 2 Control Room Abandonment Times at the St. Lucie Nuclear Power Plant	Rev. 0
		PSL-FPER-11-002	St Lucie Nuclear Power Plant Units 1 and 2 NFPA 805 Recovery Action Feasibility Evaluation	Rev. 03
	Fire Plans	PFP-1-RAB-19.5	UNIT 1 REACTOR AUXILIARY BUILDING	Rev. 2
		PFP-1RAB-(-0.5)	Pre-Fire Plan U1 Reactor Auxiliary Building	Rev. 2
		PFP-2-ST	Pre-Fire Plan U2 Steam Trestle/Aux Feed Water Pumps	Rev. 2

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Miscellaneous	8770-14298	ECCS Pump Room Incipient Fire Detection System Vendor Manual	Rev. 02
	Operability Evaluations	2-ADM-09.23	Time Critical Operator Actions and Time Sensitive Operator Actions Program	Rev. 22
	Procedures	1-AOP-01.10	Pressurizer Pressure and Level	Rev. 19
		1-AOP-100.02	Control Room Inaccessibility	Rev. 08
		1-FME-15.02	12 Month Operability Test of the Fire Protection Sprinkler System for the Unit 1 RAB	Rev. 7
		1-FMM-99.11	FIRE DAMPER INSPECTION	Rev. 2
		1-PMI-15.04	Unit 1 Incipient Fire Detector Testing and Maintenance	Rev. 08
		2-AOP-01.10	Pressurizer Pressure and Level	Rev. 18
		2-AOP-09.02	Auxiliary Feedwater	Rev. 19
		2-AOP-100-12	Response to Fire - Fire Areas	Rev. 12
		2-AOP-100.01	Response to Fire	Rev. 12
		2-AOP-100.02	Control Room Inaccessibility	Rev. 11
		2-AOP-100.11	Response to Fire - Fire Zones	Rev. 18
		2-FME-15.02	18 Month Operability Test of the Fire Protection Sprinkler System for the Unit 2 RAB	Rev. 8
		ADM-19.00	FIRE PROTECTION PLAN	Rev. 24
		ADM-19.03	Transient Combustible Control	Rev. 17
		ADM-19.07	CONTROL OF IGNITION SOURCES AND HOT WORK	Rev. 8
		MA-AA-100-1008	STATION HOUSEKEEPING AND MATERIAL CONTROL	Rev. 30
		MA-AA-203-1000	Maintenance Testing	Rev. 19
		PSL-ENG-LRAM-00-094	FIRE PROTECTION PROGRAM LICENSE RENEWAL BASIS DOCUMENT	Rev. 11
		PSL-ENG-SEMS-98-067	Nuclear Safety Capability Assessment Basis Document-Unit 2	Rev. 7
	Work Orders	40628055	Remote Shutdown Panel 18 Month Functional Test	02/17/2020
		4071073901	Remote Shutdown Components 18 Month Functional Test	10/04/2021
		WO 40592245-01	FP LCL CNTL PNL 1F:12M SPRINKLER TEST	07/06/2019
		WO 40671831-01	U2: RAB SPRINKLER SYSTEM TEST	06/19/2020
		WO 40695623-01	FP LCL CNTL PNL 1F:12M SPRINKLER TEST	08/13/2020
		WO 40757982-01	FP LCL CNTL PNL 1F:12M SPRINKLER TEST	11/09/2021

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		WO 40764946-01	U2: RAB SPRINKLER SYSTEM TEST	04/22/2022
		WO 4083374401	U1 IFD ECCS PP RM, Vesda Det ZN-2D - In Alarm	12/14/2022
		WO 4083374601	U1 DGP D, ECCS Pump Room IFD Zone 1D - In Alarm Status	12/14/2022