



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

January 24, 2022

Ms. Kim Maza
Site Vice President
Duke Energy Progress, LLC.
5413 Shearon Harris Rd
Mail Code HNP01
New Hill, NC 27562-9300

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – TRIENNIAL FIRE
PROTECTION INSPECTION REPORT 05000400/2021011

Dear Ms. Maza:

On December 15, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Shearon Harris Nuclear Power Plant and discussed the results of this inspection with you 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,

/RA/

James B. Baptist, Chief
Engineering Br 1
Division of Reactor Safety

Docket No. 05000400
License No. NPF-63

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – TRIENNIAL FIRE
PROTECTION INSPECTION REPORT 05000400/2021011
dated January 24, 2022

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NAME	P. Braaten	E. Coffman	L. Jones	M. Singletary	J. Baptist
DATE	01.21.2022	01.21.2022	01.21.2022	01.21.2022	01.24.2022

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

Docket Number: 05000400

License Number: NPF-63

Report Number: 05000400/2021011

Enterprise Identifier: I-2021-011-0026

Licensee: Duke Energy Progress, LLC.

Facility: Shearon Harris Nuclear Power Plant

Location: New Hill, NC

Inspection Dates: November 29, 2021 to December 17, 2021

Inspectors: P. Braaten, Senior Reactor Inspector
E. Coffman, Reactor Inspector
L. Jones, Senior Reactor Inspector
M. Singletary, Reactor Inspector

Approved By: James B. Baptist, Chief
Engineering Br 1
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 Shearon Harris Nuclear Power Plant, 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) "A" Train 125v Vital DC
- (2) Auxiliary Feedwater
- (3) Cable Spreading Room "B" Suppression System
- (4) Cable Spreading Room "B" Incipient Fire Detection System

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) Transient Combustibles Control Program

Fire Protection Program Changes/Modifications (IP Section 03.03) (1 Sample)

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 419044 - Replacement of Non-Segregated Phase Bus Duct

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, 2021, the inspectors presented the triennial fire protection inspection results to Kim Maza and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date	
71111.21N.05	Calculations	HNP-E/ELEC-0001	SAFE SHUTDOWN ANALYSIS IN CASE OF FIRE	Rev. 09	
		HNP-E/ELEC-0002	NFPA 805 TRANSITION- NON-POWER OPERATIONAL MODES REVIEW	Rev. 06	
		HNP-E/ELEC-0003	Safe Shutdown Analysis Manual Action Feasibility	Rev. 08	
		HNP-F/PSA-0079	Harris Fire PRA - Quantification	12/1/2020	
		HNP-M/MECH-1106	NFPA 805 Transition - Fire Area 12-A-BAL Fire Safety Analysis	Rev. 03	
	Corrective Action Documents	02362644			12/17/2020
		RCE 2362309	Shearon Harris Reactor Trip Due to Fault on Unit Auxiliary 1B		Rev. 02
	Corrective Action Documents Resulting from Inspection	02409451			12/15/2021
		02409532			12/15/2021
	Drawings	6-B-041 0674	125V DC PP DP-1A-SA		Rev. 15
		6-B-041 0678	125V DC Power Panel DP-1B-SB		Rev. 17
		6-B-401 1976	AFW Turb 1X-SB Stop Valve SB		Rev. 12
		6-B-401 1977	Auxiliary Feedwater Turbine 1X-SB Stop Valve SB Solenoid Trip		Rev. 09
		6-G-0029	Main & 6900 Volt Auxiliary One Line Wiring Diagram		Rev. 29
		6-G-0042 S01	250V DC, 125V DC & 120V Uninterruptible AC One Line Wiring Diagram		Rev. 33
		6-G-0042 S01	250V DC, 125V Uninterruptable AC One Line Wiring Diagram		Rev. 33
		CPL-2165-G-1000S02	Safe Shutdown Feedwater and Aux. Feedwater Systems		Rev. 07
		PD5165-BC-01	AC Power Distribution System Unit 1		Rev. 017
	Engineering Changes	EC 419044	Non-Segregated Phase Bus Duct Sections		Rev. 00
	Engineering	51-9089752-000	HNP Communication Study		08/27/08

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Evaluations	EC0000418216	Safe Shutdown (Including NPO) Common Power Supply Coordination and MHIF Study	Rev. 20
	Miscellaneous	DBD-114	Auxiliary Feedwater System	Rev. 17
		DBD-202	Plant Electrical Distribution System	Rev. 43
		DBD-315	Design Basis Document - Fire Detection System	Rev. 18
		DBD-317	Design Basis Document - Water-Based Fire Suppression System	Rev. 15
		Harris NFPA 805 SE	Shearon Harris Safety Evaluation Report for Transition to a Risk-Informed, Performance Based Fire Protection Program	06/28/2010
		VM-PAA	Batteries & Chargers	Rev. 29
		VM-SFD	Air Sampling Fire Detector	Rev. 03
		VM-TDL	Johnson Controls - Fire Detection System	Rev. 10
	Procedures	AD-OP-HNP-0205	HNP Time Critical Actions/Time Sensitive Actions	Rev. 00
		ADG-EL-ALL-1520	Transient Combustible Control Program	Rev. 14
		AOP-004	Remote Shutdown	Rev. 71
		AOP-036	Safe Shutdown Following A Fire	Rev. 52
		CMP-009	Installation of Fire Wrap	Rev. 17
		FPP-001	Fire Protection Program Manuak	Rev. 44
		FPP-002	Fire Emergency	Rev. 46
		FPP-013	Fire Protection - Minimum Requirements, Mitigating Actions, and Surveillance Requirements	Rev. 109
	Work Orders	PLP-400	Post Maintenance Testing	Rev. 64
		2038402301		06/21/2020
		2039918801		08/25/2020
		2041581901		02/18/2021
		2044145901		01/05/2021
			2045164301	