



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

November 2, 2022

Thomas Haaf, Site Vice President  
Duke Energy Progress, LLC  
Shearon Harris Nuclear Power Plant  
5413 Shearon Harris Rd.  
Mail Code HNP01  
New Hill, NC 27562-9300

**SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – NRC OPERATOR LICENSE  
EXAMINATION REPORT 05000400/2022301**

Dear Mr. Haaf:

During the period September 19 – 22, 2022, the Nuclear Regulatory Commission (NRC) administered operating tests to employees of your company who had applied for licenses to operate the Shearon Harris Nuclear Plant. On September 22, 2022, the examiners discussed preliminary findings related to the operating tests with you and other members of your staff. The written examination was administered by your staff on September 27, 2022.

Five Reactor Operator (RO) and four Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. There were no post-administration comments concerning the operating test or the written examination. A Simulator Fidelity Report is included in this report as Enclosure 2.

The initial examination submittal was within the range of acceptability expected for a proposed examination. All examination changes agreed upon between the NRC and your staff were made according to NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 12.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm.adams.html> (the Public Electronic Reading Room).

If you have any questions concerning this letter, please contact me at (404) 997-4703.

Sincerely,

/RA/

Thomas A. Stephen, Chief  
Operations Branch 1  
Division of Reactor Safety

Docket Nos: 50-400

License Nos: NPF-63

Enclosures:

1. Report Details
2. Simulator Fidelity Report

cc: Distribution via Listserv

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – NRC OPERATOR LICENSE EXAMINATION REPORT 05000400/2022301

**DISTRIBUTION:**

J. Bundy, RII  
T. Stephen, RII

\*See previous page for concurrence

PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE     SENSITIVE       NON-SENSITIVE

ADAMS:  Yes    ACCESSION NUMBER **ML22307A214**     SUNSI REVIEW COMPLETE     FORM 665 ATTACHED

OFFICE	RII/ DRS/OBI	RII/ DRS/OBI	RII/ DRS/OBI		
NAME	DEgelstad	JBundy	TStephen		
DATE	10/26/2022	10/27/ 2022	11/2 / 2022		

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Examination Report

Docket No.: 05000400

License No.: NPF-63

Report No.: 05000400/2022301

Enterprise Identifier: L-2022-OLL-0037

Licensee: Duke Energy Progress, LLC

Facility: Shearon Harris Nuclear Power Plant

Location: New Hill, NC

Dates: Operating Test – September 19 - 22, 2022  
Written Examination – September 27, 2022

Examiners: J. Bundy, Chief Examiner, Senior Operations Engineer  
M. Bates, Senior Operations Engineer  
M. Kennard, Senior Operations Engineer  
N. Lacy, Operations Engineer  
R. Fanner, Reactor Inspector (observation/training only)

Approved by: Thomas A. Stephen, Chief  
Operations Branch 1  
Division of Reactor Safety

## SUMMARY

ER 05000400/2022301; September 19 - 22, 2022 & September 27, 2022; Shearon Harris Nuclear Power Plant; Operator License Examinations.

Nuclear Regulatory Commission (NRC) examiners conducted an initial examination in accordance with the guidelines in Revision 12 of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." This examination implemented the operator licensing requirements identified in 10 CFR §55.41, §55.43, and §55.45, as applicable.

Members of the Shearon Harris Nuclear Power Plant staff developed both the operating tests and the written examination. The initial operating test, written Reactor Operator (RO) examination, and written Senior Reactor Operator (SRO) examination submittals met the quality guidelines contained in NUREG-1021.

The NRC administered the operating tests during the period September 19 - 22, 2022. Members of the Shearon Harris Nuclear Plant training staff administered the written examination on September 27, 2022. Five RO and four SRO applicants passed both the operating test and written examination. Nine (9) applicants were issued licenses commensurate with the level of examination administered.

There were no post-examination comments.

No findings were identified.

## REPORT DETAILS

### 4. OTHER ACTIVITIES

#### 4OA5 Operator Licensing Examinations

##### a. Inspection Scope

The NRC evaluated the submitted operating test by combining the scenario events and JPMs in order to determine the percentage of submitted test items that required replacement or significant modification. The NRC also evaluated the submitted written examination questions (RO and SRO questions considered separately) in order to determine the percentage of submitted questions that required replacement or significant modification, or that clearly did not conform with the intent of the approved knowledge and ability (K/A) statement. Any questions that were deleted during the grading process, or for which the answer key had to be changed, were also included in the count of unacceptable questions. The percentage of submitted test items that were unacceptable was compared to the acceptance criteria of NUREG-1021, "Operator Licensing Standards for Power Reactors."

The NRC reviewed the licensee's examination security measures while preparing and administering the examinations in order to ensure compliance with 10 CFR §55.49, "Integrity of examinations and tests."

The NRC performed an audit of license applications during the preparatory site visit in order to confirm that they accurately reflected the subject applicants' qualifications in accordance with NUREG-1021.

The NRC administered the operating tests during the period September 19 – 22, 2022. The NRC examiners evaluated five Reactor Operator (RO) and four Senior Reactor Operator (SRO) applicants using the guidelines contained in NUREG-1021. Members of the Shearon Harris Nuclear Power Plant training staff administered the written examination on September 27, 2022. Evaluations of applicants and reviews of associated documentation were performed to determine if the applicants, who applied for licenses to operate the Shearon Harris Nuclear Power Plant met the requirements specified in 10 CFR Part 55, "Operators' Licenses."

The NRC evaluated the performance or fidelity of the simulation facility during the preparation and conduct of the operating tests.

##### b. Findings

No findings were identified.

The NRC developed the written examination sample plan outline. Members of the Shearon Harris Nuclear Power Plant training staff developed both the operating tests and the written examination. All examination material was developed in accordance with the guidelines contained in Revision 12 of NUREG-1021. The NRC examination team reviewed the proposed examination. Examination changes agreed upon between the NRC and the licensee were made per NUREG-1021 and incorporated into the final version of the examination materials.

The NRC determined, using NUREG-1021, that the licensee's initial examination submittal was within the range of acceptability expected for a proposed examination.

One error was identified by the NRC examiners during the administration of the operating test. While administering an in-plant systems JPM to one SRO applicant, an examiner mistakenly provided the applicant with a previously marked up copy of the procedure from another applicant's performance. The examiners applied the guidance in NUREG-1021 ES-1.3 B and received Operator Licensing Branch Chief approval to administer a different in-plant JPM to the affected SRO applicant.

Five RO applicants and four SRO applicants passed both the operating test and written examination. Five RO applicants and four SRO applicants were issued licenses.

Copies of all individual examination reports were sent to the facility Training Manager for evaluation of weaknesses and determination of appropriate remedial training.

The licensee submitted no post-examination comments concerning the operating test or the written examination. A copy of the final written examination and answer key may be accessed not earlier than September 30, 2024--two years after administration of the written exam, in the ADAMS system -- ADAMS Accession Number(s) ML22291A432 and ML22291A163.

#### 4OA6 Meetings, Including Exit

##### Exit Meeting Summary

On September 22, 2022, the NRC examination team discussed generic issues associated with the operating test with Mr. T. Haaf, Shearon Harris Site Vice President, and other members of the Shearon Harris Nuclear Power Plant staff. The examiners asked the licensee if any of the examination material was proprietary. No proprietary information was identified.



## **SIMULATOR FIDELITY REPORT**

Facility Licensee: Shearon Harris Nuclear Power Plant

Facility Docket No.: 05000400

Operating Test Administered: September 19 - 22, 2022

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and, without further verification and review in accordance with Inspection Procedure 71111.11 are not indicative of noncompliance with 10 CFR 55.46. No licensee action is required in response to these observations.

While conducting the simulator portion of the operating test, examiners observed sufficient simulator fidelity. No performance deficiencies were observed during administration of the operating test.