



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

May 15, 2018

Ms. Tanya Hamilton  
Site Vice President  
Shearon Harris Nuclear Power Plant  
Duke Energy Corporation  
5413 Shearon Harris Rd  
M/C HNP01  
New Hill, NC 27562-0165

**SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – NRC OPERATOR LICENSE  
EXAMINATION REPORT 05000400/2018301**

Dear Ms. Hamilton:

During the period March 5 – 9, 2018, the Nuclear Regulatory Commission (NRC) administered operating tests to employees of your company who had applied for licenses to operate the Harris Nuclear Power Plant. At the conclusion of the tests, the examiners discussed preliminary findings related to the operating tests and the written examination submittal with those members of your staff identified in the enclosed report. The written examination was administered by your staff on March 14, 2018.

Three Reactor Operator (RO) and seven Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. One RO applicant passed the operating test, but failed the written examination. There were no post-administration comments. 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 11.

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) 997-4551.

Sincerely,

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Gerald J. McCoy, Chief  
Operations Branch 1  
Division of Reactor Safety

Docket No: 50-400  
License No: NPF-63

Enclosures:

1. Report Details
2. Simulator Fidelity Report

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – NRC OPERATOR LICENSE EXAMINATION REPORT 05000400/2018301

Distribution:

D. Bacon, RII  
G. McCoy, RII

PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE  
ADAMS:  Yes      ACCESSION NUMBER: \_\_\_\_\_       SUNSI REVIEW COMPLETE       FORM 665 ATTACHED

OFFICE	RII:DRS	RII:DRS					
SIGNATURE	<b>DXB2 EMAIL</b>	<b>GJM1</b>					
NAME	DBACON	GMCCOY					
DATE	5/15/2018	5/15/2018					
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY      DOCUMENT NAME: G:\OLEXAMS\HARRIS EXAMINATIONS\INITIAL EXAM 2018-301\CORRESPONDENCE\HARRIS 2018-301 EXAM REPORT.DOCX

**U.S. NUCLEAR REGULATORY COMMISSION**

REGION II

Docket No.: 50-400

License No.: NPF-63

Report No.: 05000400/2018301

Licensee: Duke Energy Carolinas LLC

Facility: Shearon Harris Nuclear Power Plant

Location: Hartsville, SC

Dates: Operating Test – March 5 – 9, 2018  
Written Examination – March 14, 2018

Examiners: D. Bacon, Chief Examiner, Senior Operations Engineer  
M. Meeks, Senior Operations Engineer  
M. Donithan, Operations Engineer

Approved by: Gerald J. McCoy, Chief  
Operations Branch 1  
Division of Reactor Safety

## **SUMMARY**

ER 05000400/2018301; operating test March 5 – 9, 2018 & written exam March 14, 2018; Shearon Harris Nuclear Power Plant; Operator License Examinations.

Nuclear Regulatory Commission (NRC) examiners conducted an initial examination in accordance with the guidelines in Revision 11 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 NRC developed the written examination outlines. 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 March 5 – 9, 2018. Members of the Shearon Harris Nuclear Power Plant staff administered the written examination on March 14, 2018. Three RO and seven SRO applicants passed both the operating test and written examination. One RO applicant passed the operating test, but failed the written examination. Ten applicants were issued licenses commensurate with the level of examination administered.

There was 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 (Reactor Operator (RO) and Senior Reactor Operator (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 administered the operating tests during the period March 5 – 9, 2018. NRC examiners evaluated four RO and seven SRO applicants using the guidelines contained in NUREG-1021. Members of the Shearon Harris Nuclear Power Plant staff administered the written examination on March 14, 2018. 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 staff developed both the operating tests and the written examination. All examination material was developed in accordance with the guidelines contained in Revision 11 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.

Three Reactor Operator (RO) and seven Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. One RO applicant passed the operating test, but failed the written examination. Three RO applicants and seven 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 facility licensee and applicants submitted no post-examination comments. A copy of the final RO and SRO written examinations and answer keys, with all changes incorporated, may be accessed not earlier than March 16, 2020, in the ADAMS system (ADAMS Accession Number(s) ML18121A438 and ML18121A442).

#### 40A6 Meetings, Including Exit

##### Exit Meeting Summary

On March 9, 2018, the NRC examination team discussed generic issues associated with the operating test with Ms. Tanya Hamilton, Site Vice President, and 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. On May 1, 2018, the NRC discussed the results of the examination with members of the Shearon Harris Nuclear Power Plant staff.

### **KEY POINTS OF CONTACT**

#### Licensee personnel

T. Hamilton, Site Vice President  
S. Scott, Operations Manager  
D. Griffith, Training Manager  
R. Garner, Operations Training Manager  
S. Rua, Operations Training Supervisor (AOT, Regulated Exams)  
V. Parente, Operations Training Supervisor (ILT)  
A. Lucky, Operations Training Instructor

## **SIMULATOR FIDELITY REPORT**

Facility Licensee: Shearon Harris Nuclear Power Plant

Facility Docket No.: 05000400

Operating Test Administered: March 5 – 9, 2018

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.

No simulator fidelity or configuration issues were identified.