



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

August 26, 2016

Mr. Benjamin C. Waldrep  
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 05000400/2016301**

Dear Mr. Waldrep:

During the period July 11 - 15, 2016, 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 July 19, 2016.

All applicants passed both the operating test and written examination. There were no post-administration comments concerning 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 10.

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).

B. Waldrep

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If you have any questions concerning this letter, please contact me at (404) 997-4662.

Sincerely,

*/RA/*

Eugene F. Guthrie, Chief  
Operations Branch 2  
Division of Reactor Safety

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

Enclosures:

1. Report Details
2. Simulator Fidelity Report

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Eugene F. Guthrie, Chief  
Operations Branch 2  
Division of Reactor Safety

Docket No: 50-400  
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Enclosures:

- 1. Report Details
- 2. Simulator Fidelity Report

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>MGD1</b>	<b>EFG</b>				
NAME	MDonithan	EGuthrie				
DATE	8/ 26/2016	8/ 26/2016				
E-MAIL COPY?	YES    NO	YES    NO				

**U.S. NUCLEAR REGULATORY COMMISSION**

REGION II

Docket No.: 50-400

License No.: NPF-63

Report No.: 05000400/2016301

Licensee: Duke Energy Carolinas LLC

Facility: Shearon Harris Nuclear Power Plant

Location: New Hill, NC

Dates: Operating Test – January 11-15, 2016  
Written Examination – July 19, 2016

Examiners: M. Donithan, Chief Examiner, Operations Engineer  
J. D'Antonio, Senior Operations Engineer  
D. Reeser, Operations Engineer

Approved by: Eugene F. Guthrie, Chief  
Operations Branch 2  
Division of Reactor Safety

## **SUMMARY**

ER 05000400/2016301; July 11-15, 2016 & July 19, 2016; Shearon Harris Nuclear Power Plant; Operator License Examinations.

Nuclear Regulatory Commission (NRC) examiners conducted an initial examination in accordance with the guidelines in Revision 10 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 Harris Nuclear Power Plant staff developed both the operating test 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 test during the period July 11-15, 2016, to 4 RO applicants and 6 Upgrade SRO applicants. Members of the Harris training staff administered the written examination on July 19, 2016. All RO and SRO applicants passed both the operating test and written examination. All applicants were issued licenses commensurate with the level of examination administered.

There were no post-examination comments submitted on the written examination.

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. 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 test during the period July 11-15, 2016. NRC examiners evaluated four RO and six SRO applicants using the guidelines contained in NUREG-1021. Members of the Harris training staff administered the written examination on July 19, 2016. Evaluations of applicants and reviews of associated documentation were performed to determine if the applicants, who applied for licenses to operate the Oconee Nuclear Station, 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 Harris training staff developed both the operating test and the written examination. All examination material was developed in accordance with the guidelines contained in Revision 10 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.

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

All applicants passed both the operating test and written examination and 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 did not submit any post-examination comments. A copy of the final RO and SRO written examinations and answer keys may be accessed not earlier than July 26, 2018, in the ADAMS system (ADAMS Accession Numbers ML16218A494 and ML16218A499, respectively).

#### 4OA6 Meetings, Including Exit

##### Exit Meeting Summary

On July 15, 2016, the NRC examination team discussed generic issues associated with the operating test with Mr. B. Waldrep, Site Vice President, and members of the Harris Nuclear Power Plant staff. The examiners asked the licensee if any of the examination material was proprietary; no proprietary information was identified.

### **KEY POINTS OF CONTACT**

#### Licensee personnel

R. Garner, Operations Training Manager  
D. Griffith, Training Manager  
T. Hamilton, Plant General Manager  
R. Horton, Senior Nuclear Operations Instructor  
A. Lucky, Senior Nuclear Operations Instructor  
I. Nordby, Senior Engineer, Regulatory Affairs  
V. Parente, Supervisor Initial License Training  
S. Rua, Regulated Examination Supervisor  
J. Scott, Operations Manager  
R. Vandenberg, Assistant Operations Manager (Shift)  
B. Waldrep, Site Vice President

#### NRC personnel

M. Riches, Resident Inspector

## **SIMULATOR FIDELITY REPORT**

Facility Licensee: Harris Nuclear Power Plant

Facility Docket No.: 50-400

Operating Test Administered: July 11-15, 2016

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.